As filed with the Securities and Exchange Commission on October 23, 2014

Registration No. 333-199069

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Amendment No. 2
to
Form S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

FibroGen, Inc.

(Exact name of registrant as specified in its charter)

Delaware	2834	77-0357827
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

409 Illinois St.
San Francisco, CA 94158
(415) 978-1200
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Thomas B. Neff
Chief Executive Officer
FibroGen, Inc.
409 Illinois Street
San Francisco, CA 94158
(415) 978-1200
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Glen Sato	Michael Lowenstein	John L. Savva
Michael E. Tenta	Vice President, Legal Affairs	Sullivan & Cromwell LLP
Cooley LLP	FibroGen, Inc.	1870 Embarcadero Road
3175 Hanover Street	409 Illinois Street	Palo Alto, CA 94303
Palo Alto, CA 94304	San Francisco, CA 94158	(650) 461-5600
(650) 843-5000	(415) 978-1200	

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐

(1) Estimated solely for the purpose of computing the amount of registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Includes shares the underwriters have the option to purchase.
(3) Calculated pursuant to Rule 457(o) under the Securities Act of 1933, as amended, based on an estimate of the proposed maximum aggregate offering price.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 2 to the Registration Statement on Form S-1 (Commission File No. 333-199069) is being filed solely for the purposes of filing certain new exhibits and amending the disclosures in Items 15 and 16 of Part II of such Registration Statement. No changes or additions are being made hereby to the Prospectus constituting Part I of the Registration Statement (not included herein) or to Items 13, 14 or 17 of Part II of the Registration Statement.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth all expenses, other than the underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All the amounts shown are estimates except the SEC registration fee, the FINRA filing fee and the NASDAQ Global Market listing fee.

	Amount to be Paid
SEC registration fee	$ 16,100
FINRA filing fee	*
NASDAQ listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Blue Sky fees and expenses	*
Miscellaneous fees and expenses	*
Total	$

* To be provided by Amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

Our amended and restated certificate of incorporation that will be in effect upon the completion of this offering provides for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws that will be in effect upon the completion of this offering provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law.

We have entered into indemnification agreements with our directors and officers whereby we have agreed to indemnify our directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director, officer, employee or agent of FibroGen, provided that such director or officer acted in good faith and in a manner that the director or officer reasonably believed to be in, or not opposed to, the best interest of FibroGen. At present, there is no pending litigation or proceeding involving a director or officer of FibroGen regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

The underwriters are obligated, under certain circumstances, pursuant to the underwriting agreement to be filed as Exhibit 1.1 hereto, to indemnify us, our officers and directors against liabilities under the Securities Act.

Item 15. Recent Sales of Unregistered Securities

Since January 1, 2011, we have made the following sales of unregistered securities:

(1) We granted stock options under our 2005 Plan to purchase an aggregate of 13,902,573 shares of our common stock having exercise prices ranging from $1.16 to $5.83 per share to our employees, directors and consultants.

(2) We have issued and sold to our employees an aggregate of 1,368,977 shares of our common stock upon the exercise of options under our 2005 Plan at exercise prices ranging from $0.80 to $5.83 per share, for an aggregate amount of approximately $1,735,166.

(3) We have granted stock appreciation rights for an aggregate of 45,000 shares of our common stock under our 2005 Plan to our employees, directors and consultants.

(4) We have issued and sold to our employees an aggregate of 125,845 shares of our common stock upon the exercise of options under our 1999 Plan at exercise prices ranging from $0.55 to $0.80 per share, for an aggregate amount of approximately $92,051.

The offers, sales and issuances of the securities described in paragraphs (1), (2), (3) and (4) were exempt from registration under either (a) Section 4(a)(2) of the Securities Act in that the transactions were by an issuer not involving any public offerings or under (b) compensatory benefit plans and contracts relating to compensation as provided under Rule 701 promulgated under the Securities Act.

Item 16. Exhibits and Financial Statement Schedule

(a) Exhibits.

The following exhibits are included herein or incorporated herein by reference:

Exhibit Number	Description of Document
1.1*	Form of Underwriting Agreement.
3.1**	Certificate of Incorporation of the Registrant, as amended and as presently in effect.
3.2**	Bylaws of the Registrant, as amended and as presently in effect.
3.3	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect upon completion of this offering.
3.4	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon completion of this offering.
4.1*	Form of Common Stock Certificate
4.2**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of December 1995.
4.3**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of February 20, 1998.
4.4**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of May 12, 2000, as amended in December 2004 and September 2005.
4.5**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of December 22, 2004, as amended in September 2005.
4.6**	Investor Rights Agreement by and among the Registrant and certain of its warrant holders, dated as of June 3, 1999.

Exhibit Number	Description of Document
4.7**	Investor Rights Agreement by and among the Registrant and certain of its warrant holders, dated as of February 8, 2000.
4.8**	Warrant to Purchase 67,200 Shares of Common Stock issued to Lease Management Services, Inc., dated as of June 6, 1995; as amended by Amendment to Warrant to Purchase 67,200 Shares of Common Stock by and between the Registrant and Phoenixcor, Inc. (as successor in interest to Lease Management Services, Inc.), dated as of June 5, 2001.
4.9**	Warrant to Purchase 43,140 Shares of Common Stock issued to Lease Management Services, Inc., dated as of December 11, 1997; as amended by Amendment to Warrant to Purchase 43,140 Shares of Common Stock by and between the Registrant and General Electric Capital Corporation (as successor in interest to Lease Management Services, Inc.), dated as of December 9, 2003.
4.10**	Warrant to Purchase 4,000 Shares of Common Stock issued to Laurence S. Shushan and Magdalena Shushan, Trustees of The Laurence and Magdalena Shushan Family Trust, dated as of June 3, 1999.
4.11**	Warrant to Purchase 180,000 Shares of Common Stock issued to Slough Estates USA, Inc., dated as of June 3, 1999.
4.12**	Warrant to Purchase 11,076 Shares of Common Stock issued to Bristow Investments, L.P, dated as of February 8, 2000.
4.13**	Warrant to Purchase 2,769 Shares of Common Stock issued to Laurence S. Shushan and Magdalena Shushan, Trustees of The Laurence and Magdalena Shushan Family Trust, dated as of February 8, 2000.
4.14**	Warrant to Purchase 124,605 Shares of Common Stock issued to Slough Estates USA, Inc., dated as of February 8, 2000.
4.15**	Shareholders' Agreement by and among FibroGen China Anemia Holdings, Ltd. and certain of its shareholders, dated as of July 11, 2012.
4.16**	Share Purchase Agreement by and among FibroGen China Anemia Holdings, Ltd. and the purchasers party thereto, dated as of July 11, 2012.
4.17*	Common Stock Purchase Agreement by and between the Registrant and AstraZeneca AB, dated as of October 20, 2014.
5.1*	Opinion of Cooley LLP regarding legality.
10.1+**	FibroGen, Inc. Amended and Restated 1994 Stock Plan, and forms of agreement thereunder.
10.2(i)+**	FibroGen, Inc. Amended and Restated 1999 Stock Plan.
10.2(ii)+**	Form of incentive stock option agreement under the FibroGen, Inc. Amended and Restated 1999 Stock Plan.
10.2(iii)+**	Forms of 2010 and 2013 amendments to the form of incentive stock option agreement under the FibroGen, Inc. Amended and Restated 1999 Stock Plan applicable to options amended pursuant to the Registrant's 2010 amendment and exchange offer.
10.3(i)+**	FibroGen, Inc. Amended and Restated 2005 Stock Plan.
10.3(ii)+**	Forms of stock option agreement, restricted stock purchase agreement and stock appreciation right agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan.
10.3(iii)+**	Form of stock option agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan applicable to options exchanged pursuant to the Registrant's 2010 amendment and exchange offer.

Exhibit Number	Description of Document
10.3(iv)+**	Form of 2010 amendment to the form of stock option agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan applicable to options amended pursuant to the Registrant's 2010 amendment and exchange offer.
10.3(v)+**	Form of 2013 amendment to the form of stock option agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan applicable to options amended or exchanged pursuant to the Registrant's 2010 amendment and exchange offer.
10.4+*	FibroGen, Inc. 2014 Equity Incentive Plan, and forms of agreement thereunder, to be in effect upon completion of this offering.
10.5+*	FibroGen, Inc. 2014 Employee Stock Purchase Plan, to be in effect upon completion of this offering.
10.6+	FibroGen, Inc. Non-Employee Director Compensation Policy.
10.7+*	FibroGen, Inc. 2014 Employee Compensation and Bonus Plan.
10.8**	Lease Agreement by and between the Registrant and X-4 Dolphin LLC, dated as of September 22, 2006; as amended by First Amendment to Lease by and between the Registrant and X-4 Dolphin LLC, dated as of October 10, 2007; as amended by Second Amendment to Lease by and between the Registrant and X-4 Dolphin LLC, dated as of June 29, 2009; as amended by Third Amendment to Lease by and between the Registrant and Are-San Francisco No. 43, LLC (as successor in interest to X-4 Dolphin LLC), dated as of May 19, 2011; as amended by Fourth Amendment to Lease by and between the Registrant and Are-San Francisco No. 43, LLC, dated as of September 8, 2011.
10.9**	Lease for Premises in Beijing BDA Biomedical Park by and among Beijing FibroGen Medical Technology Development Co., Ltd., Beijing Economic and Technology Investment Development Parent Company and Beijing BDA International Biological Pharmaceutical Investment Management Co., Ltd., effective as of February 1, 2013, as supplemented by the Supplementary Agreement to Lease of Premises in Beijing BDA Biomedical Park by and among Beijing FibroGen Medical Technology Development Co., Ltd., Beijing Economic Technology Investment Development Parent Company and Beijing BDA International Biological Pharmaceutical Investment Management Co., Ltd., dated as of January 30, 2013.
10.10+**	Form of Employment Offer Letter.
10.11†**	Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of June 1, 2005.
10.12†**	Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of April 28, 2006.
10.13†**	Amendment to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of August 31, 2006.
10.14**	Amendment No. 2 to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of December 1, 2006.
10.15†**	Supplement to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of April 28, 2006.
10.16†**	Amendment No. 3 to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., dated as of May 10, 2012.
10.17†	Amended and Restated License, Development and Commercialization Agreement (China) by and among FibroGen China Anemia Holdings, Ltd., Beijing FibroGen Medical Technology Development Co., Ltd., FibroGen International (Hong Kong) Limited and AstraZeneca AB, effective as of July 30, 2013.

Exhibit Number	Description of Document
10.18†**	Amended and Restated License, Development and Commercialization Agreement by and between Registrant and AstraZeneca AB, effective as of July 30, 2013.
10.19†**	License Agreement by and between the Registrant and the University of Miami and its School of Medicine, dated as of May 23, 1997.
10.20†**	First Amendment to May 23, 1997 License Agreement by and between the Registrant and University of Miami, effective as of July 29, 1999.
10.21**	Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of July 9, 1998.
10.22**	Amendment No. 1 to Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of June 30, 2001.
10.23†**	Amendment No. 2 to Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of January 28, 2002.
10.24†**	License Agreement by and between the Registrant and the Dana-Farber Cancer Institute, Inc., effective as of March 29, 2006.
10.25**	Amendment No. 1 to License agreement by and between the Registrant and Dana-Farber Cancer Institute, Inc., effective as of February 28, 2006.
10.26**	Amendment No. 2 to License Agreement by and between the Registrant and Dana-Farber Cancer Institute, Inc., effective as of March 14, 2006.
10.27+	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.28(i)†**	Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 29, 2007.
10.28(ii)†**	Letter Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of June 26, 2008.
10.28(iii)†**	Letter Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of August 18, 2008.
10.28(iv)†**	Amendment No. 1 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of May 28, 2009.
10.28(v)†**	Amendment No. 3 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 5, 2010.
10.28(vi)†**	Amendment No. 4 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of January 24, 2011.
10.28(vii)†**	Amendment No. 5 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of April 15, 2011.
10.28(viii)†**	Amendment No. 6 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of May 26, 2011.

Exhibit Number	Description of Document
10.28(ix)†**	Amendment No. 7 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of January 1, 2012.
10.28(x)†**	Amendment No. 8 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of July 10, 2012.
10.28(xi)†**	Amendment No. 9 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 26, 2012.
10.28(xii)†**	Amendment No. 10 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of June 21, 2013.
10.28(xiii)†**	Amendment No. 11 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of July 9, 2013.
10.28(xiv)†**	Amendment No. 12 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of August 1, 2013.
10.28(xv)†**	Amendment No. 13 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of March 6, 2014.
10.28(xvi)†**	Amendment No. 14 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of February 5, 2014.
10.29+**	Offer Letter, by and between the Registrant and Frank Valone, dated as of November 3, 2008.
10.30+**	Offer Letter, by and between the Registrant and K. Peony Yu, dated as of November 21, 2008.
10.31+**	Offer Letter, by and between the Registrant and Pat Cotroneo, dated as of October 23, 2000.
21.1**	Subsidiaries of the Registrant.
23.1**	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Cooley LLP (included in Exhibit 5.1).
24.1**	Power of Attorney (included in signature pages).

* To be filed by Amendment.
** Previously filed.
† Confidential Treatment Requested.
\+ Indicates a management contract or compensatory plan.

(b) Financial Statement Schedules.

See index to Consolidated Financial Statements on page F-1. All other schedules have been omitted because they are not required or are not applicable.

Item 17. Undertakings

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post- effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Francisco, State of California on the 23rd day of October, 2014.

FIBROGEN, INC.

By: /S/ THOMAS B. NEFF
Name: Thomas B. Neff
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature	Title	Date
/S/ THOMAS B. NEFF **Thomas B. Neff**	Chief Executive Officer and Chairman of the Board *(Principal Executive Officer)*	October 23, 2014
/S/ PAT COTRONEO **Pat Cotroneo**	Vice President, Finance, and Chief Financial Officer *(Principal Financial and Accounting Officer)*	October 23, 2014
* **Thomas F. Kearns Jr.**	Director	October 23, 2014
* **Kalevi Kurkijärvi, Ph.D.**	Director	October 23, 2014
* **Miguel Madero**	Director	October 23, 2014
* **Rory B. Riggs**	Director	October 23, 2014
* **Roberto Pedro Rosenkranz, Ph.D. M.B.A**	Director	October 23, 2014
* **Jorma Routti, Ph.D.**	Director	October 23, 2014
* **James A. Schoeneck**	Director	October 23, 2014
* **Julian N. Stern**	Director	October 23, 2014

Signature	Title	Date
*	Director	October 23, 2014
Toshinari Tamura, Ph.D.		

* Pursuant to Power of Attorney

By: **/S/ THOMAS B. NEFF**
Thomas B. Neff
Attorney-in-Fact

EXHIBIT INDEX

Exhibit Number	Description of Document
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3.2**	Bylaws of the Registrant, as amended and as presently in effect.
3.3	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect upon completion of this offering.
3.4	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon completion of this offering.
4.1*	Form of Common Stock Certificate
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4.3**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of February 20, 1998.
4.4**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of May 12, 2000, as amended in December 2004 and September 2005.
4.5**	Investor Rights Agreement by and among the Registrant and certain of its stockholders, dated as of December 22, 2004, as amended in September 2005.
4.6**	Investor Rights Agreement by and among the Registrant and certain of its warrant holders, dated as of June 3, 1999.
4.7**	Investor Rights Agreement by and among the Registrant and certain of its warrant holders, dated as of February 8, 2000.
4.8**	Warrant to Purchase 67,200 Shares of Common Stock issued to Lease Management Services, Inc., dated as of June 6, 1995; as amended by Amendment to Warrant to Purchase 67,200 Shares of Common Stock by and between the Registrant and Phoenixcor, Inc. (as successor in interest to Lease Management Services, Inc.), dated as of June 5, 2001.
4.9**	Warrant to Purchase 43,140 Shares of Common Stock issued to Lease Management Services, Inc., dated as of December 11, 1997; as amended by Amendment to Warrant to Purchase 43,140 Shares of Common Stock by and between the Registrant and General Electric Capital Corporation (as successor in interest to Lease Management Services, Inc.), dated as of December 9, 2003.
4.10**	Warrant to Purchase 4,000 Shares of Common Stock issued to Laurence S. Shushan and Magdalena Shushan, Trustees of The Laurence and Magdalena Shushan Family Trust, dated as of June 3, 1999.
4.11**	Warrant to Purchase 180,000 Shares of Common Stock issued to Slough Estates USA, Inc., dated as of June 3, 1999.
4.12**	Warrant to Purchase 11,076 Shares of Common Stock issued to Bristow Investments, L.P, dated as of February 8, 2000.
4.13**	Warrant to Purchase 2,769 Shares of Common Stock issued to Laurence S. Shushan and Magdalena Shushan, Trustees of The Laurence and Magdalena Shushan Family Trust, dated as of February 8, 2000.
4.14**	Warrant to Purchase 124,605 Shares of Common Stock issued to Slough Estates USA, Inc., dated as of February 8, 2000.

Exhibit Number	Description of Document
4.15**	Shareholders' Agreement by and among FibroGen China Anemia Holdings, Ltd. and certain of its shareholders, dated as of July 11, 2012.
4.16**	Share Purchase Agreement by and among FibroGen China Anemia Holdings, Ltd. and the purchasers party thereto, dated as of July 11, 2012.
4.17*	Common Stock Purchase Agreement by and between the Registrant and AstraZeneca AB, dated as of October 20, 2014.
5.1*	Opinion of Cooley LLP regarding legality.
10.1+**	FibroGen, Inc. Amended and Restated 1994 Stock Plan, and forms of agreement thereunder.
10.2(i)+**	FibroGen, Inc. Amended and Restated 1999 Stock Plan.
10.2(ii)+**	Form of incentive stock option agreement under the FibroGen, Inc. Amended and Restated 1999 Stock Plan.
10.2(iii)+**	Forms of 2010 and 2013 amendments to the form of incentive stock option agreement under the FibroGen, Inc. Amended and Restated 1999 Stock Plan applicable to options amended pursuant to the Registrant's 2010 amendment and exchange offer.
10.3(i)+**	FibroGen, Inc. Amended and Restated 2005 Stock Plan.
10.3(ii)+**	Forms of stock option agreement, restricted stock purchase agreement and stock appreciation right agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan.
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10.3(v)+**	Form of 2013 amendment to the form of stock option agreement under the FibroGen, Inc. Amended and Restated 2005 Stock Plan applicable to options amended or exchanged pursuant to the Registrant's 2010 amendment and exchange offer.
10.4+*	FibroGen, Inc. 2014 Equity Incentive Plan, and forms of agreement thereunder, to be in effect upon completion of this offering.
10.5+*	FibroGen, Inc. 2014 Employee Stock Purchase Plan, to be in effect upon completion of this offering.
10.6+	FibroGen, Inc. Non-Employee Director Compensation Policy.
10.7+*	FibroGen, Inc. 2014 Employee Compensation and Bonus Plan.
10.8**	Lease Agreement by and between the Registrant and X-4 Dolphin LLC, dated as of September 22, 2006; as amended by First Amendment to Lease by and between the Registrant and X-4 Dolphin LLC, dated as of October 10, 2007; as amended by Second Amendment to Lease by and between the Registrant and X-4 Dolphin LLC, dated as of June 29, 2009; as amended by Third Amendment to Lease by and between the Registrant and Are-San Francisco No. 43, LLC (as successor in interest to X-4 Dolphin LLC), dated as of May 19, 2011; as amended by Fourth Amendment to Lease by and between the Registrant and Are-San Francisco No. 43, LLC, dated as of September 8, 2011.

Exhibit Number	Description of Document
10.9**	Lease for Premises in Beijing BDA Biomedical Park by and among Beijing FibroGen Medical Technology Development Co., Ltd., Beijing Economic and Technology Investment Development Parent Company and Beijing BDA International Biological Pharmaceutical Investment Management Co., Ltd., effective as of February 1, 2013, as supplemented by the Supplementary Agreement to Lease of Premises in Beijing BDA Biomedical Park by and among Beijing FibroGen Medical Technology Development Co., Ltd., Beijing Economic Technology Investment Development Parent Company and Beijing BDA International Biological Pharmaceutical Investment Management Co., Ltd., dated as of January 30, 2013.
10.10+**	Form of Employment Offer Letter.
10.11†**	Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of June 1, 2005.
10.12†**	Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of April 28, 2006.
10.13†**	Amendment to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of August 31, 2006.
10.14**	Amendment No. 2 to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of December 1, 2006.
10.15†**	Supplement to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., effective as of April 28, 2006.
10.16†**	Amendment No. 3 to Anemia License and Collaboration Agreement, by and between the Registrant and Astellas Pharma Inc., dated as of May 10, 2012.
10.17†	Amended and Restated License, Development and Commercialization Agreement (China) by and among FibroGen China Anemia Holdings, Ltd., Beijing FibroGen Medical Technology Development Co., Ltd., FibroGen International (Hong Kong) Limited and AstraZeneca AB, effective as of July 30, 2013.
10.18†**	Amended and Restated License, Development and Commercialization Agreement by and between Registrant and AstraZeneca AB, effective as of July 30, 2013.
10.19†**	License Agreement by and between the Registrant and the University of Miami and its School of Medicine, dated as of May 23, 1997.
10.20†**	First Amendment to May 23, 1997 License Agreement by and between the Registrant and University of Miami, effective as of July 29, 1999.
10.21**	Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of July 9, 1998.
10.22**	Amendment No. 1 to Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of June 30, 2001.
10.23†**	Amendment No. 2 to Research and Commercialization Agreement by and among the Registrant, GenPharm International Inc., Medarex, Inc. and FibroPharma, Inc., effective as of January 28, 2002.
10.24†**	License Agreement by and between the Registrant and the Dana-Farber Cancer Institute, Inc., effective as of March 29, 2006.
10.25**	Amendment No. 1 to License agreement by and between the Registrant and Dana-Farber Cancer Institute, Inc., effective as of February 28, 2006.
10.26**	Amendment No. 2 to License Agreement by and between the Registrant and Dana-Farber Cancer Institute, Inc., effective as of March 14, 2006.

Exhibit Number	Description of Document
10.27+	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.28(i)†**	Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 29, 2007.
10.28(ii)†**	Letter Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of June 26, 2008.
10.28(iii)†**	Letter Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of August 18, 2008.
10.28(iv)†**	Amendment No. 1 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of May 28, 2009.
10.28(v)†**	Amendment No. 3 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 5, 2010.
10.28(vi)†**	Amendment No. 4 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of January 24, 2011.
10.28(vii)†**	Amendment No. 5 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of April 15, 2011.
10.28(viii)†**	Amendment No. 6 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of May 26, 2011.
10.28(ix)†**	Amendment No. 7 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of January 1, 2012.
10.28(x)†**	Amendment No. 8 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of July 10, 2012.
10.28(xi)†**	Amendment No. 9 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of November 26, 2012.
10.28(xii)†**	Amendment No. 10 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of June 21, 2013.
10.28(xiii)†**	Amendment No. 11 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of July 9, 2013.
10.28(xiv)†**	Amendment No. 12 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of August 1, 2013.
10.28(xv)†**	Amendment No. 13 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of March 6, 2014.

Exhibit Number	Description of Document
10.28(xvi)†**	Amendment No. 14 to the Process Development and Clinical Supply Agreement by and between the Registrant and Boehringer Ingelheim Pharma GmbH & Co. KG, effective as of February 5, 2014.
10.29+**	Offer Letter, by and between the Registrant and Frank Valone, dated as of November 3, 2008.
10.30+**	Offer Letter, by and between the Registrant and K. Peony Yu, dated as of November 21, 2008.
10.31+**	Offer Letter, by and between the Registrant and Pat Cotroneo, dated as of October 23, 2000.
21.1**	Subsidiaries of the Registrant.
23.1**	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Cooley LLP (included in Exhibit 5.1).
24.1**	Power of Attorney (included in signature pages).

* To be filed by Amendment.
** Previously Filed.
† Confidential Treatment Requested.
+ Indicates a management contract or compensatory plan.

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF FIBROGEN, INC.

Thomas B. Neff hereby certifies that:

ONE: The original name of this corporation is FibroGen, Inc. and the date of filing the original Certificate of Incorporation of this corporation with the Secretary of State of the State of Delaware was September 29, 1993.

TWO: He is the duly elected and acting Chief Executive Officer of FibroGen, Inc., a Delaware corporation.

THREE: The Certificate of Incorporation of this corporation is hereby amended and restated to read as follows:

I.

The name of this corporation is **FIBROGEN, INC.** (the "***Company***").

II.

The address of the registered office of the Company in the State of Delaware is 2711 Centerville Road Suite 400, Wilmington, DE 19808, County of New Castle, and the name of the registered agent of the Company in the State of Delaware at such address is The Prentice-Hall Corporation System, Inc.

III.

The purpose of the Company is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of the State of Delaware (the "***DGCL***").

IV.

A. The Company is authorized to issue two classes of stock to be designated, respectively, "***Common Stock***" and "***Preferred Stock***." The total number of shares that the Company is authorized to issue is Three Hundred Fifty Million (350,000,000) shares. Two Hundred Twenty-Five Million (225,000,000) shares shall be Common Stock, each having a par value of $0.01 per share. One Hundred Twenty-Five Million (125,000,000) shares shall be Preferred Stock, each having a par value of $0.01 per share.

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the "***Board of Directors***") is hereby expressly authorized to provide for the issue of all of any of the shares of the Preferred Stock in one or more series, and

to fix the number of shares and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such shares and as may be permitted by the DGCL. The Board of Directors is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the stock of the Company entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock (a "***Certificate of Designation***").

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the Company for their vote; *provided, however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (the "***Restated Certificate***") (including any Certificate of Designation) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Restated Certificate (including any Certificate of Designation).

V.

For the management of the business and for the conduct of the affairs of the Company, and in further definition, limitation and regulation of the powers of the Company, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. BOARD OF DIRECTORS

1. Generally. The management of the business and the conduct of the affairs of the Company shall be vested in its Board of Directors. The number of directors that shall constitute the Board of Directors shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board of Directors.

2. Election.

a. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances and for so long as permitted by applicable law, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the

first annual meeting of stockholders following the filing of this Restated Certificate, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the filing of this Restated Certificate, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the filing of this Restated Certificate, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting. Directors shall be elected in accordance with this Restated Certificate and the Bylaws.

b. At any time that applicable law prohibits a classified board as described in Article V, Section (A)(2)(a), all directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

c. Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

3. Removal of Directors.

a. Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

b. Subject to any limitations imposed by applicable law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least 66 2/3% of the voting power of all then-outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors.

4. Vacancies. Subject to any limitations imposed by applicable law and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even with less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director’s successor shall have been elected and qualified.

B. STOCKHOLDER ACTIONS. No action shall be taken by the stockholders of the Company except at an annual or special meeting of stockholders called in accordance with the Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission. Advance notice of stockholder nominations for the election of directors and of

business to be brought by stockholders before any meeting of the stockholders of the Company shall be given in the manner provided in the Bylaws of the Company.

C. BYLAWS. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the Company. Any adoption, amendment or repeal of the Bylaws of the Company by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Company; provided, however, that, in addition to any vote of the holders of any class or series of stock of the Company required by law or by this Restated Certificate, such action by stockholders shall require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class.

VI.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law.

B. To the fullest extent permitted by applicable law, the Company is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Company (and any other persons to which applicable law permits the Company to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise in excess of the indemnification and advancement otherwise permitted by such applicable law. If applicable law is amended after approval by the stockholders of this Article VI to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director to the Company shall be eliminated or limited to the fullest extent permitted by applicable law as so amended.

C. Any repeal or modification of this Article VI shall only be prospective and shall not affect the rights or protections or increase the liability of any director under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

D. Unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for: (1) any derivative action or proceeding brought on behalf of the Company; (2) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders; (3) any action asserting a claim against the Company arising pursuant to any provision of the DGCL, the Certificate of Incorporation or the Bylaws of the Company; or (5) any action asserting a claim against the Company governed by the internal affairs doctrine.

E. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Company shall be deemed to have notice of and to have consented to the provisions of this Certificate of Incorporation, including Section D of Article VI.

VII.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Restated Certificate, in the manner now or hereafter prescribed by statute, except as provided in Article VII, Section B, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Restated Certificate or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Company required by law or by this Restated Certificate or any Certificate of Designation, the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI, and VII.

* * * *

FOUR: This Amended and Restated Certificate of Incorporation has been duly approved by the Board of Directors of this corporation.

FIVE: This Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the DGCL. This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 242 and 245 of the DGCL by the stockholders of this corporation.

FibroGen, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its Chief Executive Officer this _____ day of _____, 2014.

FIBROGEN, INC.

By: _____

Thomas B. Neff,
Chief Executive Officer

AMENDED AND RESTATED BYLAWS

OF

FIBROGEN, INC.
(A DELAWARE CORPORATION)

AMENDED AND RESTATED BYLAWS
OF
FIBROGEN, INC.
(A DELAWARE CORPORATION)

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. If adopted, the corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law ("DGCL").

Section 5. Annual Meeting.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the

time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "1934 Act")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting in accordance with the procedures below.

(1) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a), the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee, (2) the principal occupation or employment of such nominee, (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (4) the date or dates on which such shares were acquired and the investment intent of such acquisition and (5) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(4). The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(2) Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14(a)-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a), the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3), and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(4).

(3) To be timely, the written notice required by Section 5(b)(1) or 5(b)(2) must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting; *provided, however,* that, subject to the last sentence of this Section 5(b)(3), in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(4) The written notice required by Section 5(b)(1) or 5(b)(2) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "Proponent" and collectively, the "Proponents"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(1)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(2)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(1)) or to carry such proposal (with respect to a notice under Section 5(b)(2)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve (12) month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

(c) A stockholder providing written notice required by Section 5(b)(1) or (ii) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five (5) business days prior to the meeting and, in the event of any adjournment or postponement thereof, five (5) business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five (5) business days after the

record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(3) to the contrary, in the event that the number of directors in an Expiring Class is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(3), a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(1), other than the timing requirements in Section 5(b)(3), shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation. For purposes of this section, an "Expiring Class" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a), or in accordance with clause (iii) of Section 5(a). Except as otherwise required by law, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(4)(D) and 5(b)(4)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii).

(g) For purposes of Sections 5 and 6,

(1) "affiliates" and "associates" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "1933 Act");

(2) "Derivative Transaction" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial: (A) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation, (B) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation, (C) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes, or (D) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation, which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member; and

(3) "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act.

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairperson of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(1). In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written

notice setting forth the information required by Section 5(b)(1) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the ninetieth (90th) day prior to such meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

Section 7. Notice of Meetings. Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under any provision of the DGCL, the Certificate of Incorporation, or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given in accordance with Section 232 of the DGCL. Notice given by electronic transmission shall be deemed given: (a) if by facsimile telecommunication, when directed to a facsimile telecommunication number at which the stockholder has consented to receive notice; (b) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (c) if by posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (i) such posting and (ii) the giving of such separate notice; and (d) if by any other form of electronic transmission, when directed to the stockholder. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his or her attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairperson of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

Section 9. Stockholder Action. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. A proxy shall be valid if such stockholder duly authorizes the person or persons to act for such stockholder, including in accordance with Section 212(c) of the DGCL. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by statute, by applicable stock exchange rules or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute, by applicable stock exchange rules or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 10. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairperson of the meeting or by the vote of the holders of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 11. Voting Rights. The number of votes a stockholder may have, if any, is set forth in the Certificate of Incorporation. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only

persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 13 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period.

Section 12. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, his or her act binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 13. List of Stockholders. The Secretary shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. The list of stockholders may be as of a specific record date, fixed pursuant to Section 40 of these Bylaws. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 14. Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or by electronic transmission.

Section 15. Organization.

(a) At every meeting of stockholders, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed or is absent, the Chief Executive Officer, or, if the Chief Executive Officer is absent, the President, or, if the President is absent, a chairperson of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairperson. The Chairperson of the Board may appoint the Chief Executive Officer as chairperson of the meeting. The Secretary, or, in his or

her absence, an Assistant Secretary directed to do so by the chairperson of the meeting, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairperson of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairperson, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairperson shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairperson of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 16. Number and Term of Office. The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

Section 17. Powers. The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

Section 18. Classes of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the initial classification of the Board of Directors, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following such initial classification, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following such initial classification, the term of office of the Class III directors shall expire and Class III directors shall

be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 19. Vacancies. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock or as otherwise provided by applicable law, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even with less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided*, *however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships subject to such class or series election rights shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

Section 20. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, the Secretary, in his or her discretion, may either (a) require confirmation from the director prior to deeming the resignation effective, in which case the resignation will be deemed effective upon receipt of such confirmation, or (b) deem the resignation effective at the time of delivery of the resignation to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his successor shall have been duly elected and qualified.

Section 21. Removal.

(a) Subject to the rights of holders of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by applicable law, any individual director or directors may only be removed from office with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors, voting together as a single class.

Section 22. Meetings

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system, or by any other system designed to record and communicate messages, including facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairperson of the Board, the Chief Executive Officer or a majority of the authorized number of directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be communicated to all directors orally or in writing, by telephone, including a voice messaging system, or by any other system or technology designed to record and communicate messages, including facsimile, telegraph or telex, or by electronic mail or other electronic means, at least twenty-four (24) hours before the date and time of the meeting. If notice is sent by US mail, it shall be sent by first class mail, postage prepaid at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 23. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 46 for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however,* at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined and all actions made by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 24. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 25. Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 26. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one (1) or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one (1) or more members of the Board of Directors and shall have and may exercise such powers and authority and perform such duties of the Board of Directors in the management of the business and affairs of the corporation as may be prescribed by the Board of Directors resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Membership. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 26 may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 26 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 27. Duties of Chairperson of the Board of Directors. The Chairperson of the Board of Directors, if appointed and when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairperson of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

Section 28. Lead Independent Director. The Chairperson of the Board of Directors, or if the Chairperson is not an independent director, one of the independent directors, may be designated by the Board of Directors as lead independent director to serve until replaced by the Board of Directors ("Lead Independent Director"). The Lead Independent Director will: with the Chairperson of the Board of Directors, establish the agenda for regular Board meetings and serve as chairperson of Board of Directors meetings in the absence of the Chairperson of the Board of Directors; establish the agenda for meetings of the independent directors; coordinate with the committee chairs regarding meeting agendas and informational requirements; preside over meetings of the independent directors; preside over any portions of meetings of the Board of Directors at which the evaluation or compensation of the Chief Executive Officer is presented or discussed; preside over any portions of meetings of the Board of Directors at which the performance of the Board of Directors is presented or discussed; and perform such other duties as may be established or delegated by the Chairperson of the Board or the Board of Directors.

Section 29. Organization. At every meeting of the directors, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed or is absent, the Lead Independent Director, of if the Lead Independent Director is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairperson of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary or other officer, director or other person directed to do so by the person presiding over the meeting, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 30. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairperson, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors or committee thereof to which the Board of Directors has delegated such responsibility.

Section 31. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors (if a director), unless the Chairperson of the Board of Directors or the Lead Independent Director has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors (if a director), unless the Chairperson of the Board of Directors, the Lead Independent Director, or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. A Vice President may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. A Vice President shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The Chief Executive Officer, or if no Chief Executive Officer is then serving, the President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as

required by the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the controller or any assistant controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each controller and assistant controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President and Chief Financial Officer (if not Treasurer) shall designate from time to time.

Section 32. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 33. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 34. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or by other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 35. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation. All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do. Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 36. Voting of Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairperson of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 37. Form and Execution of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock in the corporation represented by certificate shall be entitled to have a certificate signed by or in the name of the corporation by the Chairperson of the Board of Directors, or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 38. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or

destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 39. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon the corporation's books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares. As a condition precedent to the transfer, the corporation or its designee may require the transferor or the transferor's legal representative to provide evidence of transfer or agree to indemnify the corporation or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the stock transferred.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

Section 40. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however,* that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 41. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 42. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 37), may be signed by the Chairperson of the Board of Directors, the Chief Executive Officer, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided*, *however,* that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 43. Declaration of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 44. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property

of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 45. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 46. Indemnification of Directors, Officers, Employees and Other Agents.

(a) Directors and Officers. The corporation shall indemnify its directors and officers to the fullest extent not prohibited by the DGCL or any other applicable law; *provided*, *however*, that the corporation may modify the extent of such indemnification by individual contracts with its directors and officers; and, *provided*, *further*, that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under paragraph (d) of this Section 46.

(b) Employees and other Agents. The corporation shall have power to indemnify its employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or officer, of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking (hereinafter an “undertaking”), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a “final adjudication”) that such indemnitee is not entitled to

be indemnified for such expenses under this Section 46 or otherwise. Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section 46, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation in which event this sentence shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and officers under this Section 46 shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or officer. Any right to indemnification or advances granted by this Section 46 to a director or officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his or her conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Section 46 or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Section 46 shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws,

agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL or any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Section 46 shall continue as to a person who has ceased to be a director, officer, employee or other agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Section 46.

(h) Amendments. Any repeal or modification of this Section 46 shall only be prospective and shall not affect the rights under this Section 46 in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Section 46 or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and officer to the full extent not prohibited by any applicable portion of this Section 46 that shall not have been invalidated, or by any other applicable law. If this Section 46 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and executive officer to the full extent under any other applicable law.

(j) Certain Definitions. For the purposes of this Section 46, the following definitions shall apply:

(1) The term “proceeding” shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(2) The term “expenses” shall be broadly construed and shall include, without limitation, court costs, attorneys’ fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(3) The term the “corporation” shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in

the same position under the provisions of this Section 46 with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(4) References to a "director," "executive officer," "officer," "employee," or "agent" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(5) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.

ARTICLE XII

NOTICES

Section 47. Notices.

(a) Notice to Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by United States mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in subsection (a) or as otherwise provided in these Bylaws. If such notice is not delivered personally, it shall be sent to such number or address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known number or address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected or other agent, specifying the name and number or address or the names and numbers or addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice to Person with Whom Communication is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within sixty (60) days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 48. Amendments. Subject to the limitations set forth in Section 46(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; provided, however, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

FibroGen, Inc.
Non-Employee Director Compensation Policy
Adopted: September 17, 2014

Effective as of: The effective date of the initial public offering

This Non-Employee Director Compensation Policy (the "***Policy***") documents the terms and conditions of the cash and equity compensation that non-employee members of the Board of Directors (the "***Board***") of FibroGen, Inc. ("***FibroGen***") may earn for their service on the Board from and after the initial public offering of the common stock of FibroGen.

Eligible Directors

Only members of the Board who are not concurrently employees of FibroGen are eligible for compensation under this Policy (each such member, a "***Director***"). Any director may also decline compensation per policy of their affiliated entity or for any other reason prior to the start of the period of service to which the compensation relates.

Annual Cash Compensation

The annual cash compensation set forth below is payable in equal quarterly installments, in arrears, on the last day of each quarter in which the service occurred, pro-rated for any partial quarters of service. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
   All Directors: $35,000

2. Annual Committee Chair Service Fee:
   a. Chairman of the Audit Committee: $20,000
   b. Chairman of the Compensation Committee: $15,000
   c. Chairman of the Nominating and Governance Committee: $10,000

3. Annual Committee Member (non-Chair) Service Fee:
   a. Audit Committee: $10,000
   b. Compensation Committee: $7,500
   c. Nominating and Governance Committee: $5,000

Equity Compensation

Equity awards will be granted under the FibroGen, Inc. 2014 Equity Incentive Plan (or any successor thereto, the "***Plan***"). All stock options granted under this policy will be non-statutory stock options, with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying Company common stock on the date of grant, and a term of ten (10) years from the date of grant (subject to earlier termination in connection with a termination of service or a corporate transaction as provided in the Plan). All equity awards

granted under this Policy will be documented on the applicable form of equity award agreement most recently approved for use by the Board (or a duly authorized committee thereof) for Directors. The terms of the equity awards described in this Policy will be automatically adjusted upon any Capitalization Adjustment (as defined and provided for under the Plan).

1. Initial Grant: On the date of the Director's initial election or appointment to the Board (or, if such date is not a market trading day, the first market trading day thereafter), the Director will be automatically, and without further action by the Board, granted stock options covering 30,000 shares of FibroGen's common stock (pre-split). Such options will vest in equal quarterly installments over three years from the grant date, subject to the Director's Continuous Service. A Director who, in the one year prior to his or her initial election to serve on the Board as a Director, served as an employee of FibroGen or one of its subsidiaries, will not be eligible for an initial grant.

2. Annual Grant: On the date of each Company annual shareholder meeting, each person who is elected or appointed as a Director, and each other Director who continues to serve as a Director immediately after such annual shareholder meeting, will be automatically, and without further action by the Board, granted stock options covering 30,000 shares of FibroGen's common stock (pre-split). Such options will vest in equal quarterly installments over two years following the vesting commencement date, subject to the Director's Continuous Service.

2. Prorated Annual Grants. If a Director is elected or appointed to the Board at a time other than at the annual shareholder meeting, then on the date of such election or appointment (or, if such date is not a market trading day, the first market trading day thereafter), the Director will be automatically, and without further action by the Board, granted stock options covering the number of shares of FibroGen's common stock equal to the product of (x) 30,000 shares and (y) the Applicable Fraction (a "***Prorated Annual Grant***"). The Applicable Fraction means a fraction with (a) a numerator equal to the number of days between the date of the Director's initial election or appointment to the Board and the date which is the first anniversary of the date of the most recent annual shareholder meeting occurring before the Director is elected or appointed to the Board, and (b) a denominator equal to 365.

4. Vesting. Vesting of awards granted under this Policy will cease if the Director resigns from the Board or otherwise ceases to serve as a Director, unless the Board determines that the circumstances warrant continuation of vesting. All equity awards granted under this Policy will vest in full immediately prior to a Change in Control (as defined in the Plan), subject to the Director's Continuous Service (as defined in the Plan) as of the day prior to the closing of the Change in Control.

Reimbursement of Expenses

The Company will reimburse Directors for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board meetings.

Philosophy

This Policy is designed to attract and retain experienced, talented individuals to serve on the Board. The Board anticipates that the Board, or a duly authorized committee thereof, will generally review Director compensation on an annual basis following the initial public offering. The Policy, as amended from time to time, may take into account the time commitment expected of Directors, best practices and market rates in Director compensation, the economic position of FibroGen, broader economic conditions, historical compensation structure, the advice of the compensation consultant that the Compensation Committee or the Board may retain from time to time, and the potential dilutive effect of equity awards on our stockholders.

Under this Policy, Directors receive cash compensation in the form of retainers to recognize their day to day contributions, the level of responsibility as well as the necessary time commitment involved in serving in a leadership role and/or on committees. Directors also receive equity compensation because we believe that stock ownership provides an incentive to act in ways that maximize long-term stockholder value. Further, we believe that stock-based awards are essential to attracting and retaining talented Board members. When options are granted, these options have an exercise price equal to not less than the fair market value of FibroGen's Common Stock on the date of grant, so that options provide a return only if the fair market value appreciates over the period in which the option vests and remains exercisable. We believe that the vesting acceleration provided in the case of a change in control is consistent with market practices and is critical to attracting and retaining high quality Directors.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 10.17

AMENDED AND RESTATED

LICENSE, DEVELOPMENT AND COMMERCIALIZATION AGREEMENT

(CHINA)

between

FIBROGEN CHINA ANEMIA HOLDINGS, LTD.; BEIJING FIBROGEN MEDICAL TECHNOLOGY DEVELOPMENT CO., LTD.; FIBROGEN INTERNATIONAL (HONG KONG) LIMITED

and

ASTRAZENECA AB (PUBL)

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[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

LICENSE, DEVELOPMENT AND COMMERCIALIZATION AGREEMENT (CHINA)

THIS AMENDED AND RESTATED LICENSE, DEVELOPMENT AND COMMERCIALIZATION AGREEMENT (CHINA) (the **"Agreement"**) is entered into as of October 16, 2014 (the "***Execution Date***") and effective as of July 30, 2013 (the **"Effective Date"**), by and between FibroGen China Anemia Holdings, Ltd., having a registered office at c/o Ogier Fiduciary Services (Cayman) Limited, 89 Nexus Way, Camana Bay, Grand Cayman, Cayman Islands KY1-9007 ("**FibroGen Cayman**"), Beijing FibroGen Medical Technology Development Co., Ltd., a wholly foreign owned limited liability company having its principal place of business at No. 88 Building Kechuang Street 6 Building 2, Floor 4, Room 503, Beijing Economic-Technological Development Area, Beijing, 100000, the People's Republic of China ("**FibroGen WFOE**") and FibroGen International (Hong Kong) Limited, having a registered office at 18th Floor, Edinburgh Tower, The Landmark, 15 Queen's Road Central, Hong Kong ("**FibroGen HK**") (FibroGen WFOE, FibroGen Cayman and FibroGen HK, collectively, **"FibroGen China"**), on the one hand, and AstraZeneca AB, a company incorporated in Sweden under no. 556011-7482 with offices at Pepparredsleden 1, 431 83 Mölndal, Gothenburg, Sweden ("**AstraZeneca**"), on the other hand. FibroGen China and AstraZeneca are sometimes referred to herein individually as a **"Party"** and collectively as the **"Parties"**; provided that with respect to FibroGen China, the term "Party" may refer to FibroGen Cayman if the context requires.

BACKGROUND

A. FibroGen WFOE, a wholly-owned subsidiary of FibroGen Cayman, is a biotechnology company that has expertise in the discovery and development of various prolyl hydroxylase inhibitor compounds for the treatment of anemia. FibroGen WFOE is exclusively dedicated to addressing unmet medical needs of the Chinese population by introducing first-in-class, novel medicines that are affordable and accessible to the Chinese population. FibroGen WFOE is pursuing a Class 1.1 Innovative Drug pathway in China to develop, manufacture and commercialize such compounds in China, including FG-4592, to which FibroGen WFOE has certain intellectual property rights.

B. AstraZeneca is an enterprise with expertise in the commercialization of human therapeutic products in China and with significant sales and marketing resources on-the-ground in China.

C. To ensure that the cost-effective and effective therapies developed by FibroGen WFOE are made accessible to Chinese patients, FibroGen China is entering into this Agreement with AstraZeneca to commercialize the therapies developed by FibroGen WFOE. FibroGen WFOE will retain the rights to the technology, and will be responsible for registration, clinical trials, manufacturing and physician education with respect to the Products. FibroGen China will grant certain co-exclusive license rights to AstraZeneca with respect to such technology under the terms of this Agreement.

D. FibroGen, Inc. ("**FibroGen**") and AstraZeneca have entered into a License, Development and Commercialization Agreement of even date herewith, for development, manufacture and commercialization activities for certain of such human therapeutic compounds for certain countries outside of China (the "**U.S. and RoW Agreement**"), which agreement includes a portion of the governance structure for China related to this Agreement.

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NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this Agreement, the Parties agree as follows:

ARTICLE 1

DEFINITIONS

As used in this Agreement, the following initially capitalized terms, whether used in the singular or plural form, shall have the meanings set forth in this Article 1. Except where the context otherwise requires, the use of any gender shall be applicable to all genders and the word "or" is used in the inclusive sense (and/or). Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. In addition, the terms "includes," "including," "include" and derivative forms of them shall be deemed followed by the phrase "without limitation" (regardless of whether it is actually written there (and drawing no implication from the actual inclusion of such phrase in some instances after such terms but not others)).

1.1 "Acquiror" has the meaning set forth in Section 15.5.

1.2 "Affiliate" means, with respect to a particular Party, a person, corporation, partnership, or other entity that controls, is controlled by or is under common control with such Party. For the purposes of this definition, the word "control" (including, with correlative meaning, the terms "controlled by" or "under the common control with") means the actual power, either directly or indirectly through one or more intermediaries, to direct or cause the direction of the management and policies of such entity, whether by the ownership of more than fifty percent (50%) of the voting stock of such entity, or by contract or otherwise.

1.3 "Alliance Manager" has the meaning set forth in Section 2.4.

1.4 "**Anti-Corruption Laws**" means the U.S. Foreign Corrupt Practices Act, as amended, the UK Bribery Act 2010, as amended, Chinese anti-corruption legislation, including the Anti-Unfair Competition Law, the Interim Provisions on Prohibition of Commercial Bribery, and Articles 164, 389 and 391 of the Criminal Law, and any other applicable anti-corruption laws and laws for the prevention of fraud, racketeering, money laundering or terrorism.

1.5 "Astellas" means Astellas Pharma, Inc.

1.6 "Astellas Agreements" means the Astellas EU Agreement and the Astellas Japan Agreement.

1.7 "Astellas EU Agreement" means the Anemia License and Collaboration Agreement between FibroGen and Astellas effective April 28, 2006, as amended from time to time.

1.8 "Astellas Japan Agreement" means the Collaboration Agreement between FibroGen and Astellas effective June 1, 2005, as amended from time to time.

1.9 "AstraZeneca Know-How" means all Information Controlled as of the Effective Date or thereafter during the Term by AstraZeneca or its Affiliates that is reasonably necessary or useful for the research, development, manufacture, use, importation or sale of Products in the Field. For clarity, the use of "Affiliate" in this definition shall exclude any Third Party that becomes an Affiliate due to such Third Party's acquisition of or by, AstraZeneca, except as provided in Section 15.5. For additional clarity, AstraZeneca Know-How shall exclude rights under any AstraZeneca Patents and AstraZeneca's interest in the Joint Patents and Joint Inventions.

1.10 "AstraZeneca Patents" means all Patents that are Controlled as of the Effective Date or thereafter during the Term by AstraZeneca or its Affiliates and that claim the composition of matter, manufacture or use of one or more Collaboration Compounds or Products or that would otherwise be infringed (or with respect to patent applications, would be infringed if issued or granted with the then-currently pending claims), absent a license, by the manufacture, use or sale of any Collaboration Compounds or Product. For clarity, the use of "Affiliate" in this definition shall exclude any Third Party that becomes an Affiliate due to such Third Party's acquisition of or by, AstraZeneca except as provided in Section 15.5.

1.11 "**AstraZeneca Anti-Corruption Rules and Policies**" means the key principles from AstraZeneca's ABAC and External Interactions Policies regarding anti-bribery and corruption issues, attached as **Exhibit H** to this Agreement, as the same may be amended, modified or supplemented from time to time as notified by AstraZeneca to FibroGen China.

1.12 "AstraZeneca Technology" means the AstraZeneca Patents, AstraZeneca Know-How, and AstraZeneca's and its Affiliates' interest in Joint Patents and Joint Inventions.

1.13 "Audit" has the meaning set forth in Section 10.4(e).

1.14 "Auditor" has the meaning set forth in Section 8.11(c).

1.15 "Business Day" means a day other than a Saturday, Sunday or bank or other public holiday in China, the Cayman Islands or Sweden.

1.16 "Calendar Quarter" means each successive period of three (3) calendar months commencing on January 1, April 1, July 1 and October 1.

1.17 "Calendar Year" means each successive period of twelve (12) calendar months commencing on January 1.

1.18 "CFDA" means the China Food and Drug Administration or its successor.

1.19 "China Committee" means the committee formed by the Parties as described in Section 2.2.

1.20 "Clinical Trial" means any human clinical trial of a Product.

1.21 "Collaboration Compound" means any of the following: (a) FG-4592, (b) any HIF Compound (other than FG-4592) that is added to this Agreement pursuant to Section 3.5 and (c) any salts, esters, complexes, chelates, crystalline and amorphous morphic forms, pegylated forms, enantiomers (excluding regioisomers), prodrugs, solvates, metabolites and catabolites of any of the foregoing ((a) or (b)).

1.22 "Collaboration Inventions" has the meaning set forth in Section 9.2.

1.23 "Commercialization" means the commercial manufacture, marketing, promotion, sale and/or distribution of Products in the Territory. Commercialization includes Phase 4 Clinical Trials, Mandatory Post-Approval Safety Studies, and commercial activities conducted in preparation for Product launch in each indication. **"Commercialize"** has a correlative meaning.

1.24 "Commercialization Budget" has the meaning set forth in Section 5.2.

1.25 "Commercialization Costs" means (a) all Marketing and Sales Expenses, Phase 4 Clinical Costs and Mandatory Post-Approval Safety Study Costs incurred in the performance of the Parties' activities under the Commercialization Plan, in each case to be incurred by a Party as set forth in the Commercialization Plan and Commercialization Budget (or constituting a permitted overage thereto under Section 3.3), and all non-creditable and non-recoverable Indirect Taxes and duties, or (b) other costs approved by the China Committee as Commercialization Costs (i) prior to the date on which the Commercialization Plan and the initial Commercialization Budget are approved by the China Committee or (ii) as part of Commercialization Budget. Notwithstanding the foregoing, Commercialization Costs will not include Development Costs. For clarity, Third Party costs included in Commercialization Costs shall be billed directly without markup.

1.26 "Commercialization Plan" has the meaning set forth in Section 5.2.

1.27 "Commercially Reasonable Efforts" means, with respect to a Party's obligations under this Agreement to Develop or Commercialize a Product, the carrying out of such obligations or tasks with a level of efforts and resources consistent with the commercially reasonable practices of (a) in the case of AstraZeneca, a pharmaceutical company the size and geographical scope of AstraZeneca and (b) in the case of FibroGen China, a biotechnology company the size and geographical scope of FibroGen China, in each case (a) and (b) for the development or commercialization of similarly situated pharmaceutical products as such Product and at a similar stage of development or commercialization, taking into consideration their safety and efficacy, their cost to develop, the nature and extent of their market exclusivity (including patent coverage and regulatory exclusivity), the likelihood of Regulatory Approval, their expected profitability, including the amounts of marketing and promotional expenditures with respect to such products and generic products, and the competitiveness of alternative compounds and products. Commercially Reasonable Efforts requires that the Party: (a) promptly assign responsibility for such obligations or tasks to specific employee(s) who are held accountable for progress and monitor such progress on an on-going basis, (b) set and consistently seek to achieve specific and meaningful objectives for carrying out such obligations, and (c) consistently make and implement decisions and allocate resources designed to advance progress with respect to

such objectives. For the avoidance of doubt, the commitment to use "Commercially Reasonable Efforts" shall not preclude the suspension or discontinuance by AstraZeneca of any Product, if appropriate, based on the foregoing considerations.

1.28 "Committee" means the China Committee or any subcommittee established under Article 2, as applicable.

1.29 "Confidential Information" means, with respect to a Party, all Information of such Party that is disclosed to the other Party under this Agreement, which may include, without limitation, specifications, know-how, trade secrets, technical information, models, business information, inventions, discoveries, methods, procedures, formulae, protocols, techniques, data, and unpublished patent applications, whether disclosed in oral, written, graphic, or electronic form. All confidential Information disclosed by either Party or its Affiliate pursuant to the Existing Confidentiality Agreement shall be deemed to be Confidential Information of the disclosing Party hereunder (with the mutual understanding and agreement that any use or disclosure thereof that is authorized under Article 12 shall not be restricted by, or be deemed a violation of, such Existing Confidentiality Agreement).

1.30 "Control" means, with respect to any material, Information, or intellectual property right, that a Party (a) owns such material, Information, or intellectual property right, or (b) has a license or right to use to such material, Information, or intellectual property right, in each case with the ability to grant to the other Party access, a right to use, or a license, or a sublicense (as applicable) to such material, Information, or intellectual property right on the terms and conditions set forth herein, without violating the terms of any agreement or other arrangement with any Third Party.

1.31 "Co-Promote" means to perform jointly those Detailing and related activities normally undertaken by a pharmaceutical company's sales force to Commercialize a product under a single trademark in the Territory.

1.32 "Co-Promotion Agreement" has the meaning set forth in Section 5.1.

1.33 "Co-Promotion Fee" has the meaning set forth in **Exhibit D**.

1.34 "**Core Commercial Provinces**" means the top ten (10) provinces that, at the applicable time, have the largest annual market share for pharmaceutical products in China. As of the Effective Date, the top six (6) Core Commercial Provinces are Beijing, Shanghai, Guangdong, Zhejiang, Jiangsu and Shandong.

1.35 "**Core Indication**" means any of the following: (a) treatment of anemia in patients with chronic kidney disease undergoing dialysis, (b) treatment of anemia in patients with chronic kidney disease not undergoing dialysis (collectively with (a), the "**CKD Indications**"), (c) [*].

1.36 "CRO" has the meaning set forth in Section 3.2(e)(i).

1.37 "CTA" means a Clinical Trial Application or other equivalent application to a Regulatory Authority in the Territory, the filing of which is necessary to initiate or conduct clinical testing of a pharmaceutical product in humans in such jurisdiction.

1.38 "Detail" has the meaning set forth in **Exhibit D**.

1.39 "Development" means all activities that relate to (a) obtaining, maintaining or expanding Regulatory Approval of a Product for one or more indications or (b) developing the process for the manufacture of clinical and commercial quantities of drug substance or drug Product. This includes: (i) preclinical and non-clinical testing, toxicology and Clinical Trials; (ii) preparation, submission, review, statistical analysis, report writing and development of data or information for the purpose of submission to a Governmental Authority to obtain, maintain and/or expand Regulatory Approval of a Product, and outside counsel regulatory legal services related thereto; and (iii) manufacturing process development and scale-up for drug substance and drug product, test method development, packaging development, stability testing, qualification and validation, production of drug substance and drug product, in bulk for preclinical and clinical studies, and related quality assurance technical support activities; provided, however, that Development shall exclude Commercialization. **"Develop"** has a correlative meaning.

1.40 "Development Budget" means the budget associated with the activities conducted under a Development Plan for the Territory, detailing the anticipated Development Costs.

1.41 "Development Costs" means all costs incurred by or on behalf of a Party that are reasonably allocable to the Development of Products in the Territory in accordance with the Development Plan or are otherwise incurred or accrued under the Development Budget (including costs incurred prior to the Effective Date and paid under Section 8.2). For clarity, Third Party costs included in Development Costs shall be billed directly without markup.

1.42 "Development Plan" has the meaning set forth in Section 3.2(a).

1.43 "Distribution Agreement" means the distribution agreement to be entered into between FibroGen China and AstraZeneca or AstraZeneca's designated Affiliate, as set forth in Section 5.3.

1.44 "Dollar" or **"$"** means United States dollar.

1.45 "**Drug Administration Law"** means the Drug Administration Law of the PRC and its implementing regulations, as amended from time to time.

1.46 "ESA Approved Indications" means the following indications: (a) treatment of anemia in patients with chronic kidney disease undergoing dialysis, (b) treatment of anemia in patients with chronic kidney disease not undergoing dialysis, (c) [*].

1.47 "Executive Officer" means, in the case of AstraZeneca, AstraZeneca's Chief Executive Officer or any senior executive designated by and who reports directly to the Chief Executive Officer of AstraZeneca, and in the case of FibroGen China, FibroGen Cayman's Chief Executive Officer.

1.48 "Existing Confidentiality Agreement" means, collectively, the Non-Disclosure Agreement between FibroGen and AstraZeneca dated June 21, 2012, as amended February 7, 2013, and May 23, 2013, and the Non-Disclosure Agreement between FibroGen and AstraZeneca dated April 1, 2013.

1.49 "FG-4592" means the molecule with the chemical structure set forth on **Exhibit A.**

1.50 "FG-6874" means the molecule in Development by FibroGen currently identified by FibroGen as "FG-6874".

1.51 "FibroGen Contracting Parties" means FibroGen HK, FibroGen Cayman, and FibroGen WFOE.

1.52 "FibroGen China Know-How" means all Information Controlled as of the Effective Date or thereafter during the Term by FibroGen China and/or its Affiliate(s) and reasonably necessary or useful for the development, manufacture, use, importation or sale of Collaboration Compounds or Products in the Field; including, without limitation, any such Information made or generated by or on behalf of FibroGen China or its Affiliate in the course of performing FibroGen China's obligations or exercising FibroGen China's rights under this Agreement. The use of "Affiliate" in this definition shall exclude any Third Party that becomes an Affiliate due to such Third Party's acquisition of FibroGen China, except as provided in Section 15.5. FibroGen China Know-How shall exclude (a) rights under any FibroGen China Patents and (b) FibroGen's interest in the Joint Patents and Joint Inventions.

1.53 "FibroGen China Patents" means (i) the Listed Patents and (ii) all other Patents (excluding any Joint Patents) that are Controlled as of the Effective Date or thereafter during the Term by FibroGen China and/or its Affiliate(s) and that claim the composition of matter, manufacture or use of one or more Collaboration Compounds or Products in the Field or that would otherwise be infringed (or with respect to patent applications, would be infringed if issued or granted with the then-currently pending claims), absent a license, by the manufacture, use or sale of any Collaboration Compound or Product in the Field. The use of "Affiliate" in this definition shall exclude any Third Party that becomes an Affiliate due to such Third Party's acquisition of FibroGen China except as provided in Section 15.5.

1.54 "FibroGen China Technology" means the FibroGen China Patents, FibroGen China Know-How, and FibroGen China's interest in Joint Patents and Joint Inventions.

1.55 "Field" means the treatment of anemia in humans and non-human animals, which means any treatment intended to increase hemoglobin levels or utilization or to increase hematocrit, as measured by acceptable clinical parameters, including unit volume concentrations of hemoglobin, red blood cell volume, or red blood cell count. For the avoidance of doubt, the Core Indications and the ESA Approved Indications are included in the Field.

1.56 "Finance Subcommitee" has the meaning set forth in **Exhibit D**.

1.57 "First Commercial Sale" means, with respect to a Product, the first arm's length sale for monetary value by AstraZeneca, its Affiliates or its Sublicensees to a Third Party intended for end use or consumption by the general public (regardless of when actual consumption occurs) of such Product after Regulatory Approval (and any pricing or reimbursement approvals, if reasonably necessary to commence regular commercial sales) has been obtained.

1.58 "FTE Rate" has the meaning set forth in **Exhibit D**.

1.59 "Governmental Authority" means any multi-national, national, federal, state, local, municipal or other government authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, court or other tribunal).

1.60 "Government Official" means (i) any individual or entity employed by or acting on behalf of a government, government-controlled agency or entity or public international organization, (ii) any political party, party official or candidate, (iii) any individual or entity that holds or performs the duties of an appointment, office or position created by custom or convention or (iv) any individual or entity that holds himself, herself or itself out to be the authorized intermediary of any of the foregoing.

1.61 "HIF Compound" means any compound that stabilizes hypoxia-inducible factor ("HIF") or that modulates HIF prolyl hydroxylase activity.

1.62 "Indirect Taxes" means VAT, sales taxes, consumption taxes and other similar taxes required by law to be disclosed on the invoice.

1.63 "Information" means any data, results and information of any type whatsoever, in any tangible or intangible form, including, without limitation, know-how, trade secrets, practices, techniques, methods, processes, inventions, developments, specifications, formulations, formulae, compositions of matter of any type or kind, software, algorithms, marketing reports, clinical and non-clinical study reports, regulatory submission documents and summaries, expertise, stability, technology, test data including pharmacological, biological, chemical, biochemical, toxicological and clinical test data, analytical and quality control data, stability data, studies and procedures, in all cases, patentable or otherwise.

1.64 "Initial Development Plan" has the meaning set forth in Section 3.2(b).

1.65 "Innovation Indication" has the meaning set forth in Section 3.4(a)(i).

1.66 "Inventions" has the meaning set forth in Section 9.2.

1.67 "IP Committee" has the meaning set forth in Section 9.1.

1.68 "Joint Inventions" has the meaning set forth in Section 9.2.

1.69 "Joint Operating Subcommittee" or **"JOS"** has the meaning set forth in Section 6.8.

1.70 "Joint Patent" has the meaning set forth in Section 9.2.

1.71 [Deliberately left blank]

1.72 "Listed Patents" means the Patents listed on **Exhibit G.** The Parties may update such exhibit from time to time upon mutual written agreement, e.g., to update the status of the Listed Patents, to add newly filed FibroGen China Patents, or to make other agreed revisions.

1.73 "Mandatory Post-Approval Safety Study" means a Clinical Trial of a Product conducted after Regulatory Approval of such Product has been obtained from an appropriate Regulatory Authority, which trial is conducted due to a requirement of a Regulatory Authority.

1.74 "Mandatory Post-Approval Safety Study Costs" has the meaning set forth in **Exhibit D.**

1.75 "Manufacturing Approval" means a Product License (yao pin sheng chan xu ke zheng □□□□□□□) or any other license issued by a Governmental Authority in the Territory that authorizes a party to conduct manufacturing of the Product for commercial sale.

1.76 "Marketing and Sales Expenses" has the meaning set forth in **Exhibit D**.

1.77 "Marks" has the meaning set forth in Section 9.11.

1.78 "Material Anti-Corruption Law Violation" means a violation of an Anti-Corruption Law relating to the subject matter of this Agreement which [*] a material adverse effect on either Party or on the reputation of either Party because of its relationship with the other Party.

1.79 "Medical Scientific Liaison" or **"MSL"** means a field-based professional with scientific, medical and clinical expertise who provides medical and scientific support for marketed products, new indications and compounds in development. A MSL engages in scientific exchange with medical and scientific experts including investigators, key opinion leaders, physicians and other medical professionals and customers.

1.80 "NDA" means an application to the CFDA for Regulatory Approval in the Territory.

1.81 "Net Loss" has the meaning set forth in **Exhibit D.**

1.82 "Net Profit" has the meaning set forth in **Exhibit D.**

1.83 "Net Sales" means (solely for use in Section 8.4, it being understood that Net Sales are different from Product Revenue) the gross invoiced amount on sales of a Product by AstraZeneca or Sublicensees to Third Parties (including sub-distributors) in the Territory, after deduction of the following amounts:

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(a) normal and customary trade, quantity or prompt settlement discounts (including chargebacks and allowances) actually allowed;

(b) amounts repaid or credited by reason of rejection, returns or recalls of goods, rebates or bona fide price reductions determined by AstraZeneca in good faith;

(c) rebates and similar payments made with respect to sales paid for by managed care organizations, hospitals, other buying groups or any governmental or regulatory authority;

(d) any invoiced amounts that are not collected by AstraZeneca or its Affiliates, including bad debts (provided that such amounts will be added to Net Sales if and when recovered), up to an amount not to exceed [*] of Net Sales;

(e) excise taxes, Indirect Taxes, customs duties, customs levies and import fees imposed on the sale, importation, use or distribution of the Products; and

(f) as an allowance for transportation costs, distribution expenses, special packaging and related insurance charges, [*].

For clarity, any deduction made pursuant to one subsection above, shall not be additionally deducted in the event that such deduction may also apply in a separate subsection (i.e., no double-counting).

In the event that a Product is sold in any country in the form of a Combination Product (as defined below), Net Sales of such Combination Product shall be adjusted by multiplying actual Net Sales of such Combination Product in such country calculated pursuant to the foregoing definition of "Net Sales" by the fraction A/(A+B), where A is the average invoice price in such country of any Product that contains the same Collaboration Compound(s) as such Combination Product as its sole active ingredient(s), if sold separately in such country, and B is the average invoice price in such country of each product that contains active ingredient(s) other than the Collaboration Compound(s) contained in such Combination Product as its sole active ingredient(s), if sold separately in such country; *provided* that the invoice price in a country for each Product that contains only the Collaboration Compound(s) and each product that contains solely active ingredient(s) other than the Collaboration Compound(s) included in the Combination Product shall be for a quantity comparable to that used in such Combination Product and of substantially the same class, purity and potency or functionality, as applicable. If either such Product that contains the Collaboration Compound(s) as its sole active ingredient or a product that contains the active ingredient(s) (other than the Product) in the Combination Product as its sole active ingredient(s) is not sold separately in a particular country, the Parties shall negotiate in good faith a reasonable adjustment to Net Sales in such country that takes into account the medical contribution to the Combination Product of and all other factors, including patent coverage, reasonably relevant to the relative value of the Collaboration Compound(s) on the one hand and all of the other active ingredient(s), collectively, on the other hand. As used above, "**Combination Product**" means a Product that is comprised of or contains a Collaboration Compound as an active ingredient together with one (1) or more other active ingredients and is sold either as a fixed dose/unit or as separate doses/units in a single package.

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Net Sales will be calculated using AstraZeneca's internal audited systems consistently applied to report such sales as adjusted for any of the deductions set forth above not taken into account in such systems. Deductions pursuant to item (d) above will be taken in the Calendar Quarter in which such sales are no longer recorded as a receivable.

1.84 "**Nonclinical Studies**" means all *in vivo* and *in vitro* non-human studies of Collaboration Compounds and Products including non-clinical pharmacology, toxicology, tumor and teratogenicity studies.

1.85 "**NRDL**" means National Reimbursement Drug List or its equivalent.

1.86 "Patent" means (i) all national, regional and international patents and patent applications, including provisional patent applications, (ii) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from any of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals, and continued prosecution applications, (iii) any and all patents that have issued or in the future issue from the foregoing patent applications ((i) and (ii)), including utility models, petty patents and design patents and certificates of invention, (iv) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((i), (ii) and (iii)), and (v) any similar rights, including so-called pipeline protection, or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any such foregoing patent applications and patents.

1.87 "Pharmacovigilance Agreement" has the meaning set forth in Section 4.3.

1.88 "Phase 4 Clinical Trial" means a Clinical Trial of a Product conducted after Regulatory Approval of such Product has been obtained from an appropriate Regulatory Authority in the Territory, which trial is conducted voluntarily by a Party to enhance marketing or scientific knowledge of the Product. For clarity, Phase 4 Clinical Trials do not include Mandatory Post-Approval Safety Studies.

1.89 "Phase 4 Clinical Costs" has the meaning set forth in **Exhibit D**.

1.90 [Deliberately left blank]

1.91 "Probe Compound" means (a) FG-6874 and (b) any HIF Compound other than FG-4592 that is designated by FibroGen China from time to time.

1.92 "Product" means any pharmaceutical product (including all forms, presentations, dosage strengths and formulations) containing as an active ingredient a Collaboration Compound alone or in combination with one or more other therapeutically active ingredients.

1.93 "Product Infringement" has the meaning set forth in Section 9.6(a).

1.94 "Product Liability Losses" has the meaning set forth in **Exhibit D**

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1.95 "**Product Reimbursement**" means first inclusion of a Product into the NRDL or any Provincial Reimbursement Drug List in the Territory.

1.96 "**Product Revenues**" has the meaning set forth in **Exhibit D**.

1.97 "Promotional Materials" means all sales representative training materials and all written, printed, graphic, electronic, audio or video matter, including, without limitation, journal advertisements, sales visual aids, formulary binders, reprints, direct mail, direct-to-consumer advertising, internet postings and sites and broadcast advertisements intended for use or used by either Party or its Affiliates or sublicensees in connection with any promotion of a Product.

1.98 "Publication" has the meaning set forth in Section 12.4(b).

1.99 "Regulatory Approval" means all approvals necessary for the manufacture, marketing, importation and sale of a Product for one or more indications in the Field and in a country or regulatory jurisdiction, which may include, without limitation, satisfaction of all applicable regulatory and notification requirements, but which shall exclude any pricing and reimbursement approvals.

1.100 "Regulatory Authority" means, in a particular country or regulatory jurisdiction, any applicable Governmental Authority involved in granting Regulatory Approval and/or, to the extent required in such country or regulatory jurisdiction, pricing or reimbursement approval of a Product in such country or regulatory jurisdiction.

1.101 "Regulatory Materials" means regulatory applications, submissions, notifications, registrations, Regulatory Approvals and/or other material filings or correspondence submitted to or received from Regulatory Authorities (including minutes and official contact reports relating to any communications with any Regulatory Authority), or other approvals granted by, a Regulatory Authority that are necessary or reasonably desirable in order to Develop, manufacture, market, sell or otherwise Commercialize a Product in a particular country or regulatory jurisdiction. Regulatory Materials include, without limitation, CTAs and NDAs.

1.102 "Royalty Fees" has the meaning set forth in **Exhibit D**.

1.103 "Royalty Withholding Tax" has the meaning set forth in **Exhibit D**.

1.104 "Sublicensee" means any Third Party granted a sublicense by AstraZeneca or any of its Affiliates under the rights licensed to AstraZeneca pursuant to Article 7.

1.105 "**Technical Product Failure**" means (a) a [*] of a Collaboration Compound or Product under Development or Commercialization under this Agreement, as determined (i) by a consensus decision by the China Committee or the JSC (if the China Committee cannot reach consensus) or (ii) following referral of the matter to the Executive Officers pursuant to Section 2.2(e) and Section 2.6(c) of the U.S. and RoW Agreement, by a consensus decision by the Executive Officers, or (iii) in the event that a consensus decision by the Executive Officers has not been attained within twenty (20) Business Days after the JSC's submission of the matter to them, by expedited resolution in accordance with Section 14.8; or (b) a Regulatory Authority action or decision [*].

1.106 "Term" has the meaning set forth in Section 13.1.

1.107 "Territory" or "**China**" or "**PRC**" means the People's Republic of China (including Hong Kong SAR.

1.108 "Third Party" means any entity other than FibroGen China or AstraZeneca or an Affiliate of either of them.

1.109 "Tier 1 Cities" means those cities designated, at the applicable time, as tier 1 cities by the applicable Governmental Authority in the Territory based on gross domestic product and population. As of the Effective Date, the Tier 1 Cities are Beijing, Shanghai and Guangzhou.

1.110 "U.S." means the United States of America (including all possessions and territories thereof).

ARTICLE 2

COLLABORATION; GOVERNANCE

2.1 Collaboration Overview. The Parties desire and intend to collaborate with respect to the Development and Commercialization of Products in the Field in the Territory, including, without limitation, as described in the Co-Promotion Agreement, and as and to the extent set forth in this Agreement (the **"Collaboration"**). It is intended that the Collaboration utilize AstraZeneca's Development and Commercialization capabilities, while recognizing FibroGen China's current experience and expertise in and aspirations to further develop its clinical development, manufacturing and commercialization capabilities with respect to HIF Compounds. In addition, it is a goal of the Collaboration to facilitate innovation with HIF Compounds in the Field in the Territory.

2.2 China Committee

(a) Purpose; Formation. The Parties hereby establish the China Committee (the **"China Committee"**) to oversee Development and Commercialization of Product(s) in the Territory in accordance with the Development Plan(s) and Commercialization Plans for such Product(s) and to coordinate the Development and Commercialization activities of the Parties. Each Party shall initially appoint three (3) representatives of such Party or its Affiliates to the China Committee, with each representative having knowledge and expertise in the development and/or commercialization of pharmaceutical products in the Territory and having sufficient seniority within the applicable Party or Affiliate to make decisions arising with the scope of the China Committee's responsibilities. The China Committee may change its size from time to time by mutual consent of its members, provided that the China Committee shall consist at all

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times of an equal number of representatives of each of FibroGen China and AstraZeneca. Each Party may replace its China Committee representatives at any time upon written notice to the other Party. The China Committee may invite non-members (including consultants and advisors of a Party who are under an obligation of confidentiality consistent with this Agreement) to participate in the discussions and meetings of the China Committee, provided that such participants shall have no voting authority at the China Committee. Each Party shall appoint one co-chairperson to the China Committee. The role of the co-chairpersons shall be to convene and preside at meetings of the China Committee, but the co-chairpersons shall have no additional powers or rights beyond those held by the other China Committee representatives.

(b) Meetings. The China Committee shall meet at least once per Calendar Quarter during the Term unless the Parties mutually agree in writing to a different frequency for such meetings as reasonably necessary. The meetings shall be scheduled in advance of any meeting of the Joint Steering Committee established under the U.S. and RoW Agreement (the "**JSC**") scheduled during the same Calendar Quarter as much as practicable. Notwithstanding the foregoing, at least two (2) meetings per Calendar Year shall be in person unless the Parties mutually agree in writing to waive such requirement in lieu of a videoconference or teleconference. In-person China Committee meetings will be held at locations alternately selected and hosted by FibroGen and by AstraZeneca. The host Party shall be responsible for the costs and expenses of the China Committee meeting hosted, provided that each Party will bear the expense of its respective members' and other attendees' participation in meetings. The secretariat of the host Party shall be responsible for keeping reasonably detailed written minutes of all China Committee meetings that reflect all decisions made at such meetings. The secretariat of the host Party shall send meeting minutes to the other Party's secretariat, and each secretariat shall seek and obtain review and approval of such minutes from its respective Party's members of the China Committee within ten (10) Business Days after each China Committee meeting. Minutes will be deemed approved unless one or more members of the China Committee objects to the accuracy of such minutes within ten (10) Business Days of receipt.

(c) Relationship to U.S. and RoW Agreement Joint Steering Committee. The China Committee shall at all times be subject to oversight by the JSC on all matters (unless expressly indicated otherwise in this Agreement). The JSC shall be responsible for (i) reviewing and finally approving the Development Plans and Commercialization Plans for the Products, including any amendments thereto; (ii) resolving any disputes within the China Committee; and (iii) providing strategic guidance with respect to the Development and Commercialization of Products in the Territory.

(d) Specific Responsibilities of the China Committee. In addition to its general responsibilities, the China Committee shall have the following responsibilities in particular for the Territory, certain of which shall be subject to approval by the JSC:

(i) The following responsibilities of the China Committee shall require submission to the JSC for approval:

(1) discuss, prepare and approve for submission to the JSC for approval annual and interim amendments to the Development Plan for each Product;

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(2) propose indications for Development of Products to the JSC for approval;

(3) prepare the Development Strategy for submission to the JSC for approval;

(4) propose to the JSC for approval particular studies to be conducted;

(5) design all Clinical Trials and Nonclinical Studies recommended to the JSC to be conducted under each Development Plan, for approval by the JSC, including Phase 4 Clinical Trials and Mandatory Post-Approval Safety Studies;

(6) recommend to the JSC whether and when to initiate or discontinue any Clinical Trial and any Nonclinical Study under each Development Plan, for approval by the JSC;

(7) discuss proposals to Develop Products for other indications and submit such proposals to the JSC for approval;

(8) recommend to the JSC a publication strategy for publications and presentations related to the Product in the Territory;

(9) discuss, review and approve for submission to the JSC for approval the Commercialization Plan for each Product in the Territory, including any amendments thereto;

(10) discuss and prepare, for approval by the JSC, the calculation of Net Profit as prepared by the Finance Subcommittee, as set forth in **Exhibit D**; and

(11) subject to JSC approval, determine the amount of Product to be distributed free of charge in the Territory annually for regulatory or marketing purposes or investigator-initiated trials.

(ii) The following responsibilities of the China Committee shall be conducted and approved at the China Committee level and not subject to JSC approval (but may, for clarity, be submitted to the JSC for resolution of disputes pursuant to Section 2.2(e)):

(1) implement the Development Plan;

(2) oversee the conduct of Development according to the Development Plan;

(3) allocate budgeted resources and determine priorities for each Clinical Trial and Nonclinical Study under each Development Plan, including Phase 4 Clinical Trials;

(4) oversee the conduct of (A) all Clinical Trials and Nonclinical Studies under each Development Plan, including Phase 4 Clinical Trials, and (B) Mandatory Post-Approval Safety Studies;

(5) review the qualifications of Third Party contractors selected by FibroGen China to conduct Clinical Trials of Products (provided that such review does not include an approval right);

(6) facilitate the flow of Information between the Parties with respect to the Development of Products;

(7) allocate primary responsibility as between the Parties for tasks relating to Development of Products where not already specified in the Development Plan;

(8) discuss the requirements for Regulatory Approval in the Territory and oversee and coordinate regulatory matters with respect to Products in the Territory pursuant to the Development Plan;

(9) facilitate the flow of Information between the Parties with respect to obtaining Regulatory Approval for Products;

(10) form subcommittees and task forces for Development and Commercialization as required to facilitate implementation of Development and Commercialization Plans;

(11) oversee implementation of each Commercialization Plan;

(12) coordinate the Commercialization activities of FibroGen China and AstraZeneca with respect to Products, including pre-launch and post-launch activities and all activities set forth in the Co-Promotion Agreement;

(13) allocate primary responsibility as between the Parties for tasks relating to Commercialization of Products in the Territory pursuant to the Commercialization Plan;

(14) coordinate global harmonization of the Product with respect to the Territory; and

(15) attempt to resolve issues presented to it by, and disputes within, the Joint Operations Subcommittee.

(iii) In addition, the China Committee will perform such other functions as appropriate to further the purposes of this Agreement, as directed by the JSC.

(e) Decision-Making. The China Committee shall act by consensus. The representatives from each Party will have, collectively, one (1) vote on behalf of that Party. If the China Committee cannot reach consensus on an issue that comes before the China Committee and over which the China Committee has oversight, then the Parties shall refer such

matter to (A) during the term of the U.S. and RoW Agreement, the JSC for resolution in accordance with the U.S. and RoW Agreement (including escalation to the Executive Officers pursuant to Section 2.6(c) thereof) and (B) after the expiration or termination of the U.S. and RoW Agreement, the Executive Officers; provided that:

(i) the Executive Officer of FibroGen will have final say with respect to (1) Development of Products in China (including the Development Budget) and (2) conduct of the Mandatory Post-Approval Safety Studies, including the Mandatory Post-Approval Safety Study Costs included in the Commercialization Budget and (3) governmental pricing negotiations to establish the maximum allowable retail price; and

(ii) the Executive Officer of AstraZeneca will have final say with respect to Commercialization of Products in China (including the Commercialization Budget and management of commercial discounting process), subject to Article 6, other than the Mandatory Post-Approval Safety Studies and Mandatory Post-Approval Safety Study Costs; and

(iii) disputes with respect to whether a Technical Product Failure as defined in Section 1.106(a) has occurred will be resolved pursuant to Section 14.8 if the Executive Officers fail to reach consensus.

(f) Good Faith. In conducting themselves on the China Committee, and in exercising their rights under this Section 2.2, all representatives of both Parties shall consider diligently, reasonably and in good faith all input received from the other Party, and shall use reasonable efforts to reach consensus on all matters before them.

2.3 Finance Subcommittee. Through the Finance Subcommittee, FibroGen China shall provide AstraZeneca with regular updates of the financial condition of FibroGen WFOE in accordance with **Exhibit D**.

2.4 Appointment of Alliance Managers. Each Party shall appoint a single person(s) who shall oversee contact between the Parties for all matters between meetings of the China Committee and shall have such other responsibilities as the Parties may agree in writing after the Effective Date (such person, the "**Alliance Manager**"). Each Party may replace its Alliance Manager at any time by notice in writing to the other Party. The Alliance Managers shall work together to manage and facilitate the communication between the Parties under this Agreement, including the resolution (in accordance with the terms of this Agreement) of issues between the Parties that arise in connection with this Agreement. The Alliance Managers shall not have final decision-making authority with respect to any matter under this Agreement.

2.5 General Committee Authority. Each Committee shall have solely the powers expressly assigned to it in this Article 2 (or as delegated to it by the JSC or China Committee) and elsewhere in this Agreement. No Committee shall have any power to amend, modify, or waive compliance with this Agreement (or any agreement entered into in connection with this Agreement). It is expressly understood and agreed that the control of decision-making authority pursuant to Section 2.2(e), so as to resolve a disagreement or deadlock on the China Committee for any matter will not authorize either Party to perform any function not delegated to the China Committee, and that neither FibroGen China nor AstraZeneca shall have any right to unilaterally modify or amend, or waive its own compliance with, the terms of this Agreement or the approval requirements of the JSC.

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2.6 Executive Meetings. No less than once per Calendar Year, FibroGen Cayman's Chief Executive Officer and AstraZeneca's Marketing Company President will meet in advance of the occurrence of key scheduled Development and Commercialization events or in connection with key decisions, to review and discuss the status and direction of the collaboration in the Territory.

2.7 Discontinuation of Participation on a Committee. Each Committee shall continue to exist until the first to occur of (a) the Parties mutually agreeing to disband the Committee, or (b) FibroGen China providing to AstraZeneca written notice of its intention to disband and no longer participate in such Committee, which FibroGen China retains the right to do at any time during the Term, in its sole discretion; provided, however, that doing so shall not relieve FibroGen China of any of its obligations under this Agreement (save from the obligation to participate at the relevant Committee meetings). Once FibroGen China has provided written notice as referred to in subsection (b) above, such Committee shall have no further obligations under this Agreement and AstraZeneca shall have the right to solely decide, without consultation, any matters previously before such Committee, subject to the other terms of this Agreement.

ARTICLE 3

DEVELOPMENT

3.1 Overview. The Parties agree to undertake a development program to further Develop the Collaboration Compounds and Products in the Territory as provided in this Article 3 under plans and budgets approved by the JSC and implemented under the direction of the China Committee.

3.2 Development Plans.

(a) General. All Development of any given Product pursuant to this Agreement for the Territory shall be conducted pursuant to a development plan (the **"Development Plan"**) that describes (i) the proposed overall program of Development for the applicable Product and indications in the Territory, including Clinical Trials and Nonclinical Studies, toxicology, formulation, and packaging development, process and analytical development, regulatory plans and other elements of obtaining Regulatory Approval(s); (ii) the anticipated start dates and data availability dates of such Clinical Trials and Nonclinical Studies and chemistry, manufacturing and controls development activities, and timelines for key Regulatory Authority meetings, filing of applications for Regulatory Approval, and the receipt of Regulatory Approvals; and (iii) the respective roles and responsibilities of each Party in connection with such activities. The Development Plan will be associated with a detailed budget for all such activities proposed to be conducted by FibroGen China and AstraZeneca. In the event of any inconsistency between the Development Plan and this Agreement, the terms of this Agreement shall prevail.

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(b) Initial Development Plan. The initial Development Plan, along with the associated Development Budget (which includes amounts reimbursed under Section 8.2), describing the Development of the Product for the CKD Indications for the Territory, is attached hereto as **Exhibit E** (the **"Initial Development Plan"**). The Parties acknowledge and agree that they will not withhold approval to any amendments to the Initial Development Plan resulting from requirements or recommendations of the CFDA or any other Governmental Authority in the Territory.

(c) Development Strategy. Within one (1) year after the Effective Date or at such other time as the Parties may mutually agree, the China Committee will prepare an overall development strategy for the Product in the Field in the Territory including the indications (or other life cycle management) the Parties are considering to develop (or conduct) throughout the Territory, which strategy will include the anticipated dates (estimated based on the date of completion of certain development events) for preparing detailed descriptions of applicable events for inclusion in an amended Development Plan (the **"Development Strategy**"). The Development Strategy will include reasonable timelines for any additional indications to be developed hereunder, with the understanding that not all such indications will be developed concurrently.

(d) Amendments to the Development Plan.

(i) On an annual basis (no later than September 30th of the preceding Calendar Year), or more often as the Parties deem appropriate, the China Committee shall prepare amendments to the then-current Development Plan and budget for approval of the JSC as appropriate. Each such amended Development Plan shall specify, with a reasonable level of detail, the items described in Section 3.2(a). Such amended Development Plan shall cover the next Calendar Year (and additional periods as reasonably determined by the Parties) and shall contain a corresponding budget. Such updated and amended Development Plan shall reflect any changes, re-prioritization of studies within, reallocation of resources with respect to, or additions to the then-current Development Plan. In addition, the China Committee may prepare amendments for approval of the JSC to the Development Plan and corresponding Development Budget from time to time during the Calendar Year in order to reflect changes in such plan and budget for such Calendar Year, in each case, in accordance with the foregoing. At the request of either Party, but no more frequently than quarterly, the China Committee shall review the Development Budget and propose any necessary amendments to the JSC for approval. Once approved by the JSC, the amended annual Development Plan and Development Budget shall become effective for the applicable period on the date approved by the JSC (or such other date as the JSC shall specify). Any JSC-approved amended Development Plan and Development Budget shall supersede the previous Development Plan and Development Budget for the applicable period.

(ii) Each Party shall notify the other Party promptly upon becoming aware that it is likely to exceed, or has exceeded, the budget for a particular Calendar Year or Calendar Quarter in the Development Budget. Thereafter, the China Committee shall promptly

meet and determine whether to submit to the JSC an amendment to the Development Plan or Development Budget accordingly, provided that the China Committee and the JSC shall not unreasonably withhold agreement to any budget amendment proposed by either Party that results from causes outside of such Party's reasonable control or that the Parties agree includes expenses reasonably incurred in the performance of the Development Plan.

(iii) The Parties agree that the total amount of the Development Budget in the Initial Development Plan from January 1, 2013 through expected launch in the second half of 2016 (including those amounts reimbursed under Section 8.2), may not be increased without the approval of the Parties or by the JSC.

(e) Development Responsibilities. Unless the Parties agree in writing upon an alternate allocation of responsibility, FibroGen China shall be responsible for conducting the Clinical Trials under the Development Plan in accordance with GCP and all applicable laws and regulations. The Development Plan shall specify success criteria and a timetable for the completion of such Clinical Trials.

(i) CROs. FibroGen China shall ensure any such Clinical Trials are conducted through a FibroGen China Affiliate incorporated in the Territory. In the event that FibroGen China engages a Third Party contract research organization ("**CRO**") to undertake any Clinical Trial (or any portion of any Clinical Trial), FibroGen China shall ensure that such CRO is qualified in the Territory and capable of producing data acceptable to the CFDA and other applicable Regulatory Authorities in the Territory. FibroGen China shall discuss any possible engagement of a CRO with the China Committee. FibroGen China shall ensure that any Clinical Trials conducted in China shall be conducted only at hospitals that are accredited by the CFDA.

(ii) Medical Scientific Liaisons. FibroGen China shall be responsible for conducting activities related to the education of physicians regarding the Field and the Products in the Territory in accordance with the Development Plan and, following Regulatory Approval, Commercialization Plan. The costs associated with such activities shall be deemed Development Costs or Commercialization Costs, as applicable.

(iii) Decision Making. Except as otherwise expressly provided in this Agreement, all matters regarding the Development Plan shall be decided by consensus by the China Committee.

(f) Additional Indications in the Field. If either Party desires to develop a Product in an indication in the Field not then included in the Development Plan or Development Strategy, such Party shall propose such indication to the other Party. The Parties shall thereafter discuss such indication in good faith and, if so agreed, prepare a proposed development plan and budget for development in such indication for submission to the JSC. Upon approval by the JSC, such plan and budget shall be included in the Development Plan and Development Budget. For clarity, the Parties shall not have the right to develop a Product for the Territory in any indication outside the Field.

3.3 Development Costs. The Parties shall share equally all Development Costs the Parties incur in the conduct of the Development Plan (to the extent that such Development Costs

are not reimbursed by Astellas under the Astellas Agreements) as provided in Section 8.5, including costs for supply of Collaboration Compound or Product as provided in Section 6.6. Notwithstanding the foregoing, unless otherwise agreed by the China Committee or by the Parties, either before or after the applicable expense is incurred (which agreement shall not be unreasonably withheld for any budget overage outside of a Party's reasonable control and reasonably incurred in the performance of the Development Plan), for any Calendar Quarter, each Party will be solely responsible for Development Costs in excess of one hundred [*] percent ([*]%) of the total amount allocated to such Party's activities in such Calendar Quarter in the Development Budget, and for any Calendar Year, each Party will be solely responsible for Development Costs in excess of one hundred [*] percent ([*]%) of the total amount allocated to such Party's activities in such Calendar Year in the Development Budget; provided that Development Costs incurred in excess of one hundred [*] percent ([*]%) for the Calendar Quarter or one hundred [*] percent ([*]%) for the Calendar Year, as applicable, of the amounts so budgeted shall also be included in Development Costs and shared by the Parties if the Parties determine in good faith that such development costs were reasonably incurred in the performance of activities under the Development Plan and that such budget overage was caused by circumstances outside of such Party's reasonable control.

3.4 Probe Compounds.

(a) Subject to AstraZeneca's option as described below in this Section 3.4, FibroGen China shall have the sole right and responsibility for Development and Commercialization of all Probe Compounds in the Field, subject to the remainder of this Section 3.4; provided that FibroGen China shall have the right to Develop and Commercialize Probe Compounds as set forth below notwithstanding Section 7.5:

(i) With respect to the first two indications in the Field that are neither (1) Core Indications nor (2) any other indications being developed under the U.S. and RoW Agreement, but including [*] (the "**Innovation Indications**"), FibroGen China shall notify AstraZeneca in writing before conducting the first Clinical Trial of a Probe Compound in such Innovation Indication, including providing data and information in support of such Clinical Trial. AstraZeneca may elect within thirty (30) days after such notice either (y) to have the [*] such Probe Compound shall become a Collaboration Compound under this Agreement; or (z) [*], AstraZeneca may elect to have such Probe Compound become a Collaboration Compound hereunder (the "**Probe Compound Option**") by providing FibroGen Cayman a notice of exercise and [*] such Probe Compound shall become a Collaboration Compound under this Agreement. Any such Probe Compound in the Innovation Indications that becomes a Collaboration Compound shall thereafter be subject to (A) sharing of Development Costs and Commercialization Costs under Sections 8.5 and 8.6 and (B) [*]. In addition, AstraZeneca shall reimburse FibroGen China for its development costs that are reasonably allocable to the development of the Probe Compound in the applicable indication and incurred prior to the date of amendment of this Agreement adding the Probe Compound as a Collaboration Compound plus [*] of such Development Costs. If AstraZeneca does not timely exercise the Probe Compound Option for a Probe Compound in an Innovation Indication, then FibroGen China shall be free to further Develop and Commercialize such Probe Compound alone or with or through a Third Party licensee in the Territory; provided however that if FibroGen China has not licensed such Probe Compound to a Third Party within [*] after expiration of the Probe

Compound Option, then the Probe Compound Option shall be reinstated for such Probe Compound with respect to any subsequent Clinical Trials then being conducted or planned to be conducted at the time of reinstatement of the Probe Compound Option.

(b) With respect to Probe Compounds (including, for clarity, a Probe Compound that has become Collaboration Compound as a result of AstraZeneca's exercise of the Probe Compound Option) being developed for indications other than the two (2) Innovation Indications (the **"Remaining Innovation Indications"**), following completion and delivery to AstraZeneca from FibroGen China of a reasonably detailed data and information package regarding either: (A) a proof of concept study or (B) a dose-defining Clinical Trial, for a Probe Compound in any Remaining Innovation Indication, AstraZeneca shall have ninety (90) days following delivery of such data and information package to review, request additional information regarding such Clinical Trial results and negotiate and agree with FibroGen China upon a proposed Development Plan and Development Budget for such Probe Compound, as well as milestones for further Development and Commercialization of such Probe Compound as a Product. If the Parties reach agreement upon the Development Plan and Development Budget and such additional milestones within such ninety (90)-day period, then the Parties shall amend this Agreement accordingly, and AstraZeneca shall reimburse FibroGen China for its development costs that are reasonably allocable to the development of the Probe Compound in the applicable indication and incurred prior to the date of amendment of this Agreement adding the Probe Compound as a Collaboration Compound plus [*] of such Development Costs. If the Parties are unable to reach agreement in the ninety (90) days following the triggering of the Probe Compound Option, then FibroGen China shall be free to further Develop and Commercialize such Probe Compound alone or with or through a Third Party Sublicensee in the Territory; provided however that such Probe Compound shall not in any event be further Developed or Commercialized in any indication prohibited under Section 7.5(a)(ii).

3.5 Additional HIF Compounds. If AstraZeneca wishes to include additional HIF Compounds that are not Probe Compounds as Collaboration Compounds under this Agreement, it may make such a request to FibroGen China. Upon receipt of such request, FibroGen China shall make good faith and diligent efforts to present to the JSC for review all reasonably relevant data and other information (excluding chemical structures) Controlled by FibroGen China that is related to those HIF Compounds from its library of HIF Compounds, including results from any Clinical Trial conducted in the Field. For clarity, the foregoing does not impose any obligation on FibroGen China to identify or generate any additional HIF Compounds. If AstraZeneca and FibroGen China, through the China Committee and JSC, agree upon a development program for any such HIF Compounds, then the Parties shall negotiate upfront and milestone payment terms for inclusion of such additional HIF Compounds as Collaboration Compounds, and upon agreement, will amend this Agreement accordingly.

3.6 Diligence; Standards of Conduct. Each Party shall use Commercially Reasonable Efforts to carry out the tasks assigned to it under the Development Plan in a timely and effective manner. Each Party shall conduct its activities under the Development Plan in a good scientific manner and in compliance in all material respects with all applicable laws and regulations. Without prejudice to the aforesaid, the Party responsible for the conduct of any Clinical Trials hereunder shall perform such Clinical Trials in a good scientific manner, in compliance with all applicable laws and regulations, GCP, this Agreement, the Development

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Plan as well as the relevant protocol and investigator's brochure. Such Party shall further require the principal investigators, study sites and any contractors involved in the performance of such Clinical Trials to comply with all safety reporting procedures set forth in the Pharmacovigilance Agreement in connection with their performance of such Clinical Trials.

3.7 Development Data.

(a) Ownership and Disclosure. FibroGen Cayman shall solely own all data, records and reports generated by or on behalf of either Party in the conduct of Development activities under this Agreement (collectively, the "**Development Data**"), and AstraZeneca hereby assigns, and shall assign, to FibroGen Cayman, all of its right, title and interest in and to the Development Data. Each Party shall provide access to and, where practical, copies of the Development Data it (or its Affiliates or Sublicensees, or Third Parties acting on their behalf) generates to the other Party promptly upon receipt or development thereof, including nonclinical and clinical data (including raw data), analysis, reports and protocols. Each Party will reasonably respond to the other Party's request for access to and questions about the Development Data. Such Development Data will be provided in electronic form if requested by the other Party or reasonably convertible to such electronic form.

(b) Use. Each Party shall have the right to use the Development Data for the purpose of Developing and Commercializing Products in the Field in the Territory in accordance with the terms of this Agreement. In addition, FibroGen China will have the right to use the Development Data for the purpose of developing and commercializing Products outside the Territory, and to transfer such Development Data to its licensees outside the Territory, and to grant such licensees the right to use the Development Data for such purpose outside the Territory. AstraZeneca hereby grants FibroGen China and its Affiliates and licensees a right of access, a right of reference and a right to use and incorporate all Development Data and relevant Regulatory Materials in any regulatory filings for Products outside the Territory. AstraZeneca will take all actions reasonably requested by FibroGen China, at FibroGen China's cost, to enable FibroGen China and its licensees to practice such rights.

3.8 Development Records and Reports. Each Party shall maintain or cause to be maintained complete and accurate records (in the form of technical notebooks and/or electronic files where appropriate) of all work conducted by it or on its behalf under the Development Plan and all Information resulting from such work. Such records, including any electronic files where such Information may also be contained, shall fully and properly reflect all work done and results achieved in the performance of the Development Plan in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes. Such records shall be retained by such Party for at least five (5) years after the term of this Agreement or such longer period as may be required by applicable laws. Each Party shall have the right to review and copy such records maintained by the other Party at reasonable times and to obtain access to originals to the extent needed for patent or regulatory purposes or for other legal proceedings. Each Party shall provide the China Committee with quarterly reports detailing its Development activities under the Development Plan and the results of such activities.

3.9 Subcontracts. Each Party may perform any of its Development Program obligations under this Agreement through one or more subcontractors or consultants, including

CROs in accordance with Section 3.2(e)(i), provided that (a) such Party remains responsible for the work allocated to, and payment to, such subcontractors and consultants as it selects to the same extent it would if it had done such work itself; (b) the subcontractor undertakes in writing obligations of confidentiality and non-use regarding Confidential Information, that are substantially the same as those undertaken by the Parties pursuant to Article 12 hereof, and (c) the subcontractor agrees in writing to assign all intellectual property developed in the course of performing any such work under the Development Program to the Party retaining such subcontractor. A Party may also subcontract work on terms other than those set forth in this Section 3.9, with the prior approval of the China Committee.

ARTICLE 4

REGULATORY MATTERS

4.1 Regulatory Filings and Approvals.

(a) In General. The Parties intend that the Development Plan will set forth the regulatory strategy for seeking Regulatory Approvals (including any pricing and reimbursement approvals) in the Territory for all Products being Developed.

(b) Responsibilities. FibroGen China shall be responsible for preparing and filing all Regulatory Materials, including CTAs, shall be the holder of all Regulatory Approvals in the Territory and will have primary operational responsibility for interactions with Regulatory Authorities, including taking the lead role at all meetings with Regulatory Authorities, subject to the right of AstraZeneca to participate as an observer in such activities and provide input, which FibroGen China will consider in good faith. Without limitation, this observer right includes participation in all regulatory activities, including development of regulatory strategy and review of regulatory submissions, observer status at all meetings with Regulatory Authorities that may potentially impact the Development Plan or registration package for a particular Product, and review of outcomes of such meetings.

(c) Reporting and Review.

(i) The China Committee shall develop and implement procedures for drafting and review of Regulatory Materials for Products in the Territory, which shall provide sufficient time (at least one week) for each Party to provide substantive comments prior to the filing of such Regulatory Materials.

(ii) Each Party shall promptly notify the other Party of all Regulatory Materials that it submits for Products in the Territory and shall promptly (and in any event within one week) provide the non-responsible Party with a copy (which may be wholly or partly in electronic form) of such Regulatory Materials throughout the Territory. The Party primarily responsible for such Regulatory Materials will provide the non-responsible Party with reasonable advance notice of any scheduled meeting with any Regulatory Authority and/or any Regulatory Materials with respect to Products throughout the Territory, and the non-responsible Party shall have the right to participate as an observer in any such meeting, except to the extent prohibited under applicable law and regulations. Representatives of the Party primarily responsible for such

Regulatory Materials will be the primary spokespeople at any such meeting. The Party primarily responsible for such Regulatory Materials also shall promptly furnish the non-responsible Party with copies of all material correspondence to or from, and minutes of material meetings with, any Regulatory Authority relating to Development of such Product.

4.2 Notification of Threatened Action. Each Party shall immediately notify the other Party of any information it receives regarding any threatened or pending action, inspection or communication by or from any Third Party, including a Regulatory Authority, which may materially affect the Development, Commercialization or regulatory status of a Product in the Territory. Upon receipt of such information, the Parties shall consult with each other in an effort to arrive at a mutually acceptable procedure for taking appropriate action.

4.3 Adverse Event Reporting and Safety Data Exchange. At a time determined by the JSC, but in any event prior to the commencement of any Clinical Trial or any other activities that would generate safety data required to be reported to Regulatory Authorities that are conducted by AstraZeneca, the Parties shall define and finalize the methods and procedures (based on and consistent with those methods and procedures used by Astellas and FibroGen under the Astellas Agreements) that the Parties shall employ with respect to Products and to Probe Compounds independently Developed and Commercialized by FibroGen China to protect patient safety and promote the appropriate treatment of safety information of such products in a written pharmacovigilance agreement (the "**Pharmacovigilance Agreement**"). For clarity, the Pharmacovigilance Agreement shall include all relevant safety data regarding the Product, irrespective of territory or indication. These responsibilities shall include mutually acceptable guidelines and procedures for the receipt, investigation, recordation, communication, and exchange (as between the Parties) of adverse event reports, pregnancy reports, and any other information concerning the safety of any such product in the Territory. Such guidelines and procedures shall be in accordance with, and enable the Parties to fulfill, local and national regulatory reporting obligations under applicable laws and regulations. Furthermore, such agreed procedure shall be consistent with GCP and relevant ICH guidelines, except where such guidelines may conflict with existing local regulatory reporting or safety reporting requirements, in which case the local reporting requirements shall prevail. FibroGen China shall maintain a safety database for the Products in the Territory, the expenses for which will be included in Development Costs. FibroGen China shall be responsible for reporting quality complaints, adverse events and safety data related to Products to applicable Regulatory Authorities in the Territory, as well as responding to safety issues and to all requests of Regulatory Authorities relating to Products in the Territory. Each Party hereby agrees to comply with its respective obligations under such Pharmacovigilance Agreement and to cause its Affiliates and permitted Sublicensees to comply with such obligations.

4.4 Product Withdrawals and Recalls. If any Regulatory Authority in the Territory (a) threatens, initiates or advises any action to remove any Product from the market or (b) requires or advises FibroGen China, AstraZeneca, or any of their respective Affiliates or Sublicensees to distribute a "Dear Doctor" letter or its equivalent regarding use of such Product, then FibroGen China or AstraZeneca, as applicable, shall notify the other Party of such event within three (3) Business Days (or sooner if required by law) after such Party becomes aware of the action, threat, advice or requirement (as applicable). The JSC will discuss and attempt to agree upon whether to recall or withdraw a Product in the Territory; provided, however, that if

the Parties fail to agree within an appropriate time period, the Party who is the then-holder of the Regulatory Approval for the Product at issue shall decide whether to recall or withdraw such Product and shall be responsible for such recall or withdrawal, with the associated costs being deemed Development Costs.

ARTICLE 5

COMMERCIALIZATION

5.1 Overview. The Parties agree to Co-Promote the Products in the Field in the Territory as provided in this Article 5 under the direction of the China Committee, and pursuant to the Commercialization Plan applicable to each Product. Within twelve (12) months after the Effective Date or at such other time as the Parties may mutually agree, the Parties or their designated Affiliates in the Territory will negotiate and enter into an agreement (the "**Co-Promotion Agreement**") governing the Parties' conduct of activities for Commercializing the Product in the Territory, including the terms set forth on **Exhibit C** hereto.

5.2 Commercialization Plans and Budget. As further described in this Section 5.2, the strategy for the Commercialization of each Product in the Territory shall be described in a comprehensive plan that describes the pre-launch, launch and subsequent Commercialization of such Product in the Territory (including without limitation messaging, branding, pricing, advertising, planning, marketing, sales force training and allocation, and reimbursement/managed care), key tactics for implementing those activities and the relative responsibilities of the Parties (each such plan, a **"Commercialization Plan"**), and the associated budget for such activities (each such budget, a **"Commercialization Budget"**). The Mandatory Post-Approval Safety Study Costs in the Commercialization Budget shall be reasonably determined by FibroGen WFOE in light of the applicable requirements for the Mandatory Post-Approval Safety Studies. All Commercialization Plans and Commercialization Budgets with respect to Products in the Territory and subsequent revisions thereto will contain such information as the China Committee believes necessary for the successful Commercialization of such Product in the Territory. Within thirty (30) days after the Effective Date, the Parties shall prepare an initial high-level Commercialization Plan for review and approval by the China Committee and JSC. Within twelve (12) months after the Effective Date (or at another time as soon as reasonably practicable thereafter as the Parties may mutually agree), the Parties shall prepare a detailed Commercialization Plan for review and approval by the China Committee and JSC.

5.3 Responsibilities. Except as otherwise described in the Commercialization Plan or the Co-Promotion Agreement, AstraZeneca or its designated Affiliate shall have the sole right and responsibility for distribution of Products in the Territory on behalf of FibroGen China pursuant to the terms of the Distribution Agreement to be entered into by the Parties as soon as practicable after the Effective Date. The key terms of the Distribution Agreement are described in **Exhibit F**. In addition, the Distribution Agreement will contain representations, warranties and covenants by AstraZeneca and its applicable Affiliates that are equivalent to the representations, warranties and covenants in Section 10.4. FibroGen China shall have the right to conduct commercial activities related to Product containing FG-4592 to the extent sufficient to demonstrate substance in Hong Kong in order to benefit from preferential tax treatment on withholding taxes under the applicable China–Hong Kong tax treaties; provided that such activities shall not include Product distribution.

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5.4 Commercialization Reports. Each Party shall keep the China Committee fully informed regarding the progress and results of Commercialization activities for Products in the Territory, including an annual review of results versus plans (as set forth in the Commercialization Plan(s)).

5.5 Samples. Neither Party shall distribute any samples of Products without the prior written consent of the other Party.

5.6 Diligence; Subcontracts. Each Party shall use Commercially Reasonable Efforts to carry out the tasks assigned to it under the Commercialization Plan and the Co-Promotion Agreement in a timely and effective manner and in compliance with all applicable laws and regulations. Each Party may perform any of its obligations under the Commercialization Plan through one or more subcontractors or consultants, provided that (a) such Party remains responsible for the work allocated to, and payment to, such subcontractors and consultants as it selects to the same extent it would if it had done such work itself; (b) the subcontractor undertakes in writing obligations of confidentiality and non-use regarding Confidential Information, that are substantially the same as those undertaken by the Parties pursuant to Article 12 hereof, and (c) the subcontractor agrees in writing to assign all intellectual property developed in the course of performing any such work under the Commercialization Plan to the Party retaining such subcontractor.

5.7 Regulatory Compliance.

(a) Each of FibroGen China and AstraZeneca shall reasonably cooperate with the other Party in its efforts toward ensuring that all government reporting (including price and gift reporting), sales, marketing and promotional practices in respect of each Product meet the standards required by (A) the Drug Administration Law, (B) the Anti-unfair Competition Law of the PRC, (C) the Advertising Law of the PRC, the Standards for the Review and Publication of Drug Advertisement issued by the CFDA and the State Administration of Industry and Commerce, (D) the Code of Practice of the China Association of Enterprise with Foreign Investment R&D-Based Pharmaceutical Association Committee, (E) the Anti-Corruption Laws, and (F) other applicable laws and regulations.

(b) In accordance with Section 5.7(a), each Party shall provide its sales representatives appropriate training on proper marketing and sales techniques. Such training will include, among other topics, CFDA requirements and other national and local regulations and industry guidelines, including those set forth in clause (a) above. If requested by a Party, the other Party shall provide a written description of the training to the requesting Party no less frequently than on an annual basis.

(c) Each of FibroGen China and AstraZeneca shall reasonably cooperate with the other Party to provide the other Party access to any and all information, data and reports required by the other in order to comply with the relevant provisions of any applicable laws and regulations, including without limitation reporting requirements, in a timely and appropriate

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manner. Each Party shall ensure that its reporting to the state and local healthcare programs related to the Products is true, complete and correct in all respects; provided however, that a Party shall not be held responsible for submitting erroneous reports if such deficiencies result from information provided by the other Party which itself was not true, complete and correct.

(d) AstraZeneca shall, so far as practicable, provide to FibroGen China in advance any submission containing any information provided by FibroGen China pursuant to this Section 5.7 that AstraZeneca proposes to submit to any Regulatory Authority. AstraZeneca further agrees to seek confidential treatment of any such information related to FibroGen China that it submits to any governmental entity to the extent permitted under any applicable laws and regulations.

(e) FibroGen China and AstraZeneca shall confer with each other on a regular basis to discuss and compare their respective procedures and methodologies relating to each Party's compliance to any applicable laws or regulations or fulfillment of any other obligation contained in this Section 5.7. In the event that the Parties have different understandings or interpretations of this Section 5.7 or of the applicability of, or standards required by, any applicable laws or regulations, then the Parties shall confer and seek to reach common agreement on such matters.

(f) Each Party agrees that:

(i) it will instruct its sales representatives to use, and will use Commercially Reasonable Efforts to train and monitor its sales representatives to ensure that such sales representatives use, only Promotional Materials and literature approved for use under Section 5.7 for the promotion of the Products in the Territory;

(ii) it will instruct its sales representatives not to misbrand, change, alter or adulterate any Promotional Materials supplied to it in any way prior to or during their distribution or use; and

(iii) it will instruct its sales representatives to do, and will use Commercially Reasonable Efforts to train its sales representatives to do, and will establish appropriate internal systems, policies and procedures for the monitoring of its sales representatives with the goal of ensuring that such personnel do, the following:

(1) limit claims of efficacy and safety for the Products to those that are (A) consistent with approved promotional claims in, and not add, delete or modify claims of efficacy and safety in the promotion of such Products in any respect from those claims of efficacy and safety that are contained in, the then effective Commercialization Plan, (B) consistent with applicable laws and regulations, and (C) consistent with the Product labeling approved by the Regulatory Authorities;

(2) not make any changes in Promotional Materials, and use Promotional Materials within the Territory only in a manner that is consistent with (A) the then effective Commercialization Plan, (B) applicable laws and regulations and (C) the Product labeling approved by the Regulatory Authorities;

(3) promote the Products in compliance with applicable legal and professional standards that are generally accepted by the pharmaceutical industry in the applicable market, including applicable laws and regulations and the applicable guidelines concerning the advertising and promotion of prescription drug products described in Section 5.7; and

(4) not to, directly or indirectly, pay, promise to pay, or authorize the payment of any money, or give, promise to give, or authorize the giving of anything of value to any healthcare professional, official or employee of any Governmental Authority, or to any political party, or official thereof, or to any candidate for political office (including any party, official, or candidate) for the purpose of promoting the sale or improper use of a Product.

ARTICLE 6

MANUFACTURE AND SUPPLY

6.1 Supply Commitment. AstraZeneca agrees to purchase, and FibroGen WFOE agrees to supply, all of AstraZeneca's and its Sublicensees' requirements of Product for Development and Commercialization in the Territory under the terms of this Article 6 and in accordance with this Agreement. All Product supplied to AstraZeneca by or on behalf of FibroGen WFOE under this Agreement will be supplied as finished product.

6.2 Covenant. Except as expressly set forth in this Article 6 or the Supply and Quality Agreement or the U.S. and RoW Agreement, AstraZeneca shall not have the right to manufacture any Product anywhere in the world.

6.3 Second Source for Drug Substance. At a time to be determined by the JSC, FibroGen WFOE will complete activities to establish and secure Regulatory Approval for a second source for drug substance for Product using a Third Party supplier reasonably acceptable to AstraZeneca, and will thereafter maintain two separate, validated manufacturing sites for such drug substance, one of which will be FibroGen WFOE's Beijing plant.

6.4 Selection of Contract Manufacturer for Drug Product. Upon AstraZeneca's written request to FibroGen WFOE, which request shall not be submitted earlier than six (6) months after the Effective Date, the Parties will discuss in good faith the selection of a contract manufacturer to be used by FibroGen WFOE to conduct formulation and packaging (using drug substance supplied by FibroGen WFOE) for supply under this Agreement. The Parties shall discuss in good faith the introduction of such contract manufacturer into the supply chain when capacity at FibroGen WFOE's Beijing plant becomes fully occupied. Such selection will be conducted in accordance with the following process: As soon as reasonably practicable following AstraZeneca's request, the Parties will afford an opportunity for at least two (2) different Third Party contract manufacturers that are mutually acceptable to the Parties, consent not to be unreasonably withheld, to submit bids to conduct such manufacture. Such bids shall be based on a request for quotation, the contents of which shall be agreed by the Parties in good faith (and

shall contain such specifications and forecasts as are reasonably necessary for a contract manufacturer to submit a bid with respect to such manufacture). AstraZeneca shall be afforded an opportunity to submit a bid on the same basis as the Third Party contract manufacturers. The Parties shall review and assess in good faith the bids submitted by the Third Party manufacturers and by AstraZeneca and shall recommend to the China Committee the bid that, on the whole, offers the most favorable terms for such manufacture of Product for supply to AstraZeneca under this Agreement, based on a reasonable assessment of the relevant factors, including price, capital requirements, quality, capacity and capability to maintain continuity of supplies. FibroGen WFOE will enter into a supply and quality contract with the Third Party contract manufacturer or (as the case may be) with AstraZeneca, whichever submitted the bid selected by the China Committee, on terms consistent with the selected bid and otherwise reasonably acceptable to FibroGen WFOE. In the event FibroGen WFOE shall contract with AstraZeneca in accordance with this Section 6.4, FibroGen WFOE shall, as soon as reasonably practicable after the completion of the selection process, provide the necessary technology transfer and royalty free licenses (if any) as well as all necessary assistance to obtain required Regulatory Approvals, all to enable AstraZeneca to conduct the formulation and packaging (using drug substance supplied by FibroGen WFOE) for supply of Product under this Agreement. If AstraZeneca is not selected as the contract manufacturer, then at any time after the [*], then AstraZeneca may request that the selection process set out above in this Section 6.4 shall be repeated. If AstraZeneca so requests, the Parties shall repeat such process, but only after the end of the then-current term of the then-current supply agreement with the Third Party manufacturer.

6.5 Supply and Quality Agreement. At a time agreed by the Parties that is reasonably sufficiently early enough to meet the objectives under this Section 6.5, the Parties will negotiate in good faith and enter into separate supply and quality agreements governing the commercial supply of finished product from FibroGen WFOE to AstraZeneca (the "**Supply and Quality Agreement**"). Such agreements will reflect the terms and conditions set forth on **Exhibit K** of the U.S. and RoW Agreement and contain such further commercially reasonable terms governing similar supply arrangements and other terms as the Parties may agree, including appropriate forecasting and firm purchase order lead times, taking into consideration the reasonable notice requirements of FibroGen WFOE and its Third Party manufacturers as well as any other terms set forth in this Article 6. In the event of any inconsistency between the Supply and Quality Agreement and Article 6 of this Agreement with regard to matters relating to supply, quality control and quality assurance, the terms of the Supply and Quality Agreement shall prevail.

6.6 Product Price. As further described in the Supply and Quality Agreement, prior to establishment of a Product price as approved by the applicable Regulatory Authority, the Parties will determine in good faith an estimated price per unit of Product for the supply of Product to AstraZeneca based on the then-current Commercialization Plan. Once such price is established, the price approved by the applicable Regulatory Authority will be used for such supply, and the Parties shall reconcile the estimated price with the actual price by means of a credit or additional payment, as applicable. Thereafter, COGS will be calculated based on [*] as set forth in the Supply and Quality Agreement.

6.7 Potential Cost Reductions. At either Party's request during the Term (without prejudice to AstraZeneca's right to participate in the contract manufacturer selection process

pursuant to Section 6.4), the Parties shall discuss and explore potential means of collaborating to reduce the overall costs of manufacture and supply of Products as drug substance or bulk drug product under this Agreement, with the understanding that the Parties shall share the financial benefits of any such cost reductions achieved in a reasonable manner taking into account to what extent each Party has contributed to such cost reductions.

6.8 Joint Operations Subcommittee. The Parties shall, within thirty (30) days following the Effective Date, establish a Joint Operations Subcommittee ("the **JOS"**) with equal representation from each Party to oversee the establishment and operation of the commercial supply chain for the Products in the Territory. The JOS shall meet each Calendar Quarter, or as otherwise agreed between the Parties. Decision making shall be by consensus and the team members from each Party shall jointly have one (1) vote. Disputes at the JOS shall be handled by the China Committee. The JOS shall have a chair selected by FibroGen China. The role of the chair shall be to convene and preside at meetings of the JOS, to prepare and circulate agendas and to ensure the preparation of minutes. The JOS' responsibilities shall include:

(i) Overseeing the construction and qualification of the FibroGen WFOE Beijing plant;

(ii) Identifying any additional resource or capabilities needed to deliver the plant;

(iii) Defining a China supply strategy for the Products in the Territory;

(iv) Carrying out the supplier selection process and recommending suitable CMOs to the China Committee;

(v) Overseeing supply chain performance for the Products in the Territory; and

(vi) Identifying, where practicable, performance improvement opportunities and agreeing, in good faith, an appropriate and equitable allocation of any financial benefits arising from such performance improvement opportunities.

ARTICLE 7

LICENSES AND EXCLUSIVITY

7.1 License to AstraZeneca. Subject to the terms and conditions of this Agreement, FibroGen Cayman hereby grants AstraZeneca a co-exclusive (with FibroGen Cayman, who retains a licensable right to develop, use, sell, offer for sale, import and Commercialize Products in the Field in the Territory), royalty-bearing, sublicensable (solely as permitted in accordance with Section 7.3) license under the FibroGen China Technology and the Marks to Develop (solely in accordance with the applicable Development Plan), use, sell, offer for sale, import and Commercialize, but not manufacture, Products in the Field in the Territory. With respect to any Product hereunder, notwithstanding the foregoing, AstraZeneca shall (a) not exercise any of the co-exclusive rights to Develop granted hereunder until FibroGen WFOE has sole ownership of and is the sole named party for the regulatory licenses in the Territory, which shall include without limitation the (i) New Drug License, (ii) Product Approval Code, (iii) Manufacturing License, and (iv) GMP License, and for such licenses any other necessary, related or successor licenses, and (b) take all actions and execute all documents reasonably necessary to ensure that FibroGen WFOE shall solely hold such licenses. FibroGen shall promptly notify AstraZeneca upon the issuance of such licenses.

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7.2 Licenses to FibroGen China. Subject to the terms and conditions of this Agreement, AstraZeneca hereby grants FibroGen Cayman a non-exclusive, sublicensable, royalty-free, fully-paid license, under the AstraZeneca Technology during the Term, to conduct any and all activities assigned to FibroGen China under the Development Plans and Commercialization Plans, and to Develop and Commercialize Products outside of the Territory.

7.3 Sublicensing. For clarity, the license granted by FibroGen Cayman to AstraZeneca in Section 7.1 may be sublicensed by AstraZeneca to: (i) an Affiliate of AstraZeneca without any requirement of consent, provided that such sublicense to an Affiliate of AstraZeneca shall immediately terminate if and when such party ceases to be an Affiliate of AstraZeneca or (ii) a Third Party only with the prior written consent of FibroGen Cayman, except where such sublicensing is permitted under an applicable Development Plan or Commercialization Plan, in which case consent shall not be required.

7.4 Co-Promotion. Except for the co-promotion rights expressly granted to the Parties under this Agreement and except as otherwise permitted under an applicable Commercialization Plan or Co-Promotion Agreement, neither Party shall be permitted to Co-Promote the Products in the Territory with any Third Party.

7.5 Covenants by FibroGen China.

(a) Except as provided in this Agreement, including the right to Develop and Commercialize Probe Compounds in accordance with Section 3.4, during the Term, FibroGen China and its Affiliates shall not, and shall not license or authorize any Third Party to, (i) Commercialize any Product in the Territory outside the Field or (ii) develop or commercialize any HIF Compound in any ESA Approved Indication in the Territory or any indication for which a "Product" is being Developed or Commercialized under the U.S. and RoW Agreement.

(b) During the Term, the applicable Affiliate of FibroGen China shall not make any amendment to any of the Astellas Agreements that has a material adverse impact on AstraZeneca's rights under this Agreement without the prior written consent of AstraZeneca.

7.6 Cross-Territorial Restriction.

(a) Except as permitted under the U.S. and RoW Agreement, AstraZeneca hereby covenants and agrees that it shall not, and will ensure that its Sublicensees will not, either directly or indirectly, actively promote, market, distribute, import, sell or have sold Product into countries outside the Territory. As to such countries outside the Territory: (i) AstraZeneca shall not, and will ensure that its Sublicensees will not, engage in any advertising or promotional activities relating to the Product directed primarily to customers or other buyers or users of the Product located in such countries; and (ii) AstraZeneca shall not, and will ensure that its Sublicensees will not, solicit orders for Products from any prospective purchaser located in such countries. If AstraZeneca receives any order for Products from a prospective purchaser located in a country outside the Territory from which re-imports into the Territory are unlikely, AstraZeneca shall immediately refer that order to FibroGen Cayman. AstraZeneca shall not accept any such orders. AstraZeneca may not deliver or tender (or cause to be delivered or tendered) any Product into a country outside of the Territory from which re-imports into the

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Territory are unlikely. AstraZeneca shall not, and will ensure that its Affiliates and Sublicensees will not, restrict or impede in any manner FibroGen Cayman's exercise of its retained rights outside the Territory, provided that any such exercise of rights by FibroGen Cayman shall comply with the terms of this Agreement. For clarity, nothing in this Section 7.6(a) restricts or limits AstraZeneca's rights under the U.S. and RoW Agreement.

(b) Except as permitted under the U.S. and RoW Agreement, FibroGen China hereby covenants and agrees that it shall not, and will ensure that its Affiliates and Sublicensees will not, either directly or indirectly, actively promote, market, distribute, import, sell or have sold Product into countries outside the Territory. As to such countries outside the Territory: (i) FibroGen China shall not, and will ensure that its Affiliates and Sublicensees will not, engage in any advertising or promotional activities relating to the Product directed primarily to customers or other buyers or users of the Product located in such countries; and (ii) FibroGen China shall not, and will ensure that its Affiliates and Sublicensees will not, solicit orders for Products from any prospective purchaser located in such countries. If FibroGen China receives any order for Products from a prospective purchaser located in a country outside the Territory from which re-imports into the Territory are unlikely, FibroGen China shall immediately refer that order to AstraZeneca. FibroGen China shall not accept any such orders. FibroGen China may not deliver or tender (or cause to be delivered or tendered) any Product into a country outside of the Territory from which re-imports into the Territory are unlikely. FibroGen China shall not, and will ensure that its Affiliates and Sublicensees will not, restrict or impede in any manner AstraZeneca's rights within the Territory, provided that any such exercise of rights by AstraZeneca shall comply with the terms of this Agreement. For clarity, nothing in this Section 7.6(b) restricts or limits FibroGen China's rights under the U.S. and RoW Agreement.

7.7 Negative Covenant. Each Party covenants that it will not knowingly use or practice any of the other Party's intellectual property rights licensed to it under this Article 7 except for the purposes expressly permitted in the applicable license grant.

7.8 No Implied Licenses. Except as explicitly set forth in this Agreement, neither Party grants to the other Party any license, express or implied, under its intellectual property rights.

7.9 Exclusivity. AstraZeneca hereby covenants that during the Term and the term of the U.S. and RoW Agreement, except pursuant to this Agreement or the U.S. and RoW Agreement, neither it nor its Affiliates will, directly or indirectly, by itself or with a Third Party, research, manufacture, develop, sell, market or otherwise commercialize any HIF Compound in the Territory, and neither it nor its Affiliates will license or authorize a Third Party to conduct any such activity in the Territory. Notwithstanding the foregoing, AstraZeneca shall not be in breach of this Section 7.9 solely as a result of its conduct of preclinical research on HIF Compounds if such research is not part of a research program conducted by AstraZeneca.

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ARTICLE 8

FINANCIALS

8.1 License Fees. AstraZeneca shall pay to FibroGen Cayman each of the following non-refundable, non-creditable license fees on or before the applicable date set forth below, provided that with respect to payment 1, FibroGen Cayman has provided an invoice on the Effective Date, and with respect to payment 2, FibroGen Cayman has provided an invoice at least forty-five (45) days before the applicable due date:

License Fees. Number	Due Date	Payment
1	15th Business Day after the Effective Date	$[*] million
2	[*]	$[*] million

If this Agreement is terminated prior to the due date of payment 2, then payment 2 shall remain due and payable. Each such payment shall be made by wire transfer of immediately available funds into an account designated by FibroGen China. Each such payment is nonrefundable and non-creditable against any other payments due hereunder.

8.2 Upfront Development Reimbursement. Within fifteen (15) Business Days after the Effective Date, AstraZeneca will pay FibroGen Cayman a one-time, non-refundable, non-creditable payment of [*] to reimburse the expenses incurred by FibroGen China to develop the Product from January 1, 2013 until the Effective Date. The applicable FibroGen China entity shall provide an invoice for such payment on the Effective Date.

8.3 Development Milestone Payments.

(a) Development Milestone Payments. AstraZeneca shall make milestone payments to FibroGen Cayman based on achievement by AstraZeneca or a Sublicensee (or, if applicable, by FibroGen China) of the substantive development and regulatory milestones in the Territory as set forth in this Section 8.3.

Number	Milestone	Payment
[*]	[*]	[*]

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Each milestone in Section 8.3(a) shall be paid only once, without regard to whether two or more Products ultimately achieve any such milestone event.

[*].

(b) Notice; Payment. FibroGen Cayman or AstraZeneca, as applicable, will notify the other Party of the achievement of the applicable milestone event by such Party or its Affiliate or Sublicensee within forty-five days after achievement thereof. Thereafter, FibroGen Cayman shall submit an invoice to AstraZeneca, and within forty five (45) days after receipt of invoice, AstraZeneca shall pay the amounts set forth in Section 8.3(a). Each such payment shall be made by wire transfer of immediately available funds into an account designated by FibroGen Cayman. Each such payment is nonrefundable and noncreditable against any other payments due hereunder.

8.4 Sales Milestone Payments.

(a) Milestones. AstraZeneca shall make each of the substantive sales milestone payments indicated below to FibroGen Cayman when aggregate annual Net Sales of all Products across all indications in the Field in the Territory first reach the Dollar values indicated below.

Aggregate Annual Net Sales	Payment
[*]	[*]

Each milestone in this Section 8.4(a) shall be paid only once on the first achievement of such milestone without regard to whether two or more Products ultimately achieve any such milestone event or how many times such milestone may be achieved once paid.

(b) Notice; Payment. AstraZeneca shall notify FibroGen Cayman of the achievement of each of the milestone events in Section 8.4(a) within forty-five (45) days after the end of the Calendar Quarter in which achieved. Thereafter, FibroGen Cayman shall invoice AstraZeneca, and AstraZeneca will pay to FibroGen Cayman the applicable amount within forty-five (45) days after AstraZeneca's receipt of an invoice from FibroGen Cayman. Each such payment shall be made by wire transfer of immediately available funds into an account designated by FibroGen Cayman. Each such payment is nonrefundable and non-creditable against any other payments due hereunder.

8.5 Development Reimbursement Payments.

(a) Reimbursement for Development. With respect to Development Costs for the Products in the Territory not already reimbursed under Section 8.2, FibroGen China and AstraZeneca shall share equally (fifty percent (50%) each) the costs and expenses of the Development efforts of the Parties under the Development Plan and Development Budget, as well as the capital and equipment costs for the manufacturing plant in the Territory for the Products (including [*] for such capital and equipment costs).

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(b) Payments and Reports. All amounts payable to FibroGen China or AstraZeneca pursuant to this Section 8.5 shall be paid in Dollars on a Calendar Quarter basis, unless FibroGen China requests that any such payment to FibroGen China be made in RMB, in which case such payments will be made in RMB. Within twenty (20) days if reasonably possible for AstraZeneca using reasonable endeavors to meet such timeline and in no event later than twenty five (25) days after the end of each Calendar Quarter after the Effective Date, AstraZeneca shall submit to FibroGen Cayman and FibroGen Cayman or FibroGen WFOE, as applicable, shall within fifteen (15) days if reasonably possible for FibroGen Cayman or FibroGen WFOE, as applicable, using reasonable endeavors to meet such timeline and in no event later than twenty (20) days after the end of each Calendar Quarter submit to AstraZeneca a statement setting forth the Development Costs incurred by it during such Calendar Quarter. As soon as practicable, and not later than within thirty two (32) days of the end of the Calendar Quarter, the Parties shall discuss and shall use best efforts to resolve any issues with respect to such statements, provided, however that each Party shall generate any questions and respond to any inquiries regarding the invoices as promptly as reasonably possible following receipt, including within forty-eight (48) hours for response to ordinary inquiries. Following the reconciliation process for the applicable Calendar Quarter, each of FibroGen and AstraZeneca shall provide an invoice to the other Party reflecting fifty percent (50%) of their respective Development Costs incurred. Within forty five (45) days after its receipt of such invoices, the Party who incurred less Development Costs in the Calendar Quarter shall pay to the other Party an amount equal to fifty percent (50%) of the difference between the invoices so that each Party bears fifty percent (50%) of the total Development Costs incurred by the Parties in such Calendar Quarter (subject to the provisions on budget overages in Section 3.3), except as set forth on Exhibit D.

8.6 Net Profit and Net Loss Share.

(a) General. AstraZeneca and FibroGen Cayman shall receive fifty percent (50%) of any Net Profit and Royalty Payments, and bear fifty percent (50%) of any Net Loss, as applicable, for the Products in the Territory as set forth in **Exhibit D**.

(b) Profits Payments and Reports. Details with respect to Net Profit and Royalties and related payments are as set forth in **Exhibit D**.

8.7 Taxes.

(a) Taxes on Income. Subject to **Exhibit D**, each Party shall be solely responsible for the payment of all taxes imposed on its share of income arising directly or indirectly from the collaborative efforts of the Parties under this Agreement.

(b) Withholding Tax. The Party making payments under this Agreement (the "**Payor**") to the other Party (the "**Payee**") shall deduct or withhold from the payments any Taxes that it is required by applicable law to deduct or withhold. The Payee shall provide the Payor any tax forms or appropriate governmental authorization that may be reasonably necessary

in order for Payor to not withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty. The Payee shall use Commercially Reasonable Efforts to provide any such tax forms to the Payor at least thirty (30) days prior to the due date for any payment for which the Payee desires that Payor apply a reduced withholding rate and in any event at least fifteen (15) days prior to the time the applicable payment is due. Each Party shall provide the other with reasonable assistance to enable the recovery, as permitted by applicable laws and regulations, of withholding taxes, Indirect Taxes, or similar obligations resulting from payments made under this Agreement, such recovery to be for the benefit of the Party bearing such withholding tax or Indirect Taxes.

(c) Payment of Tax. To the extent the Payor is required by applicable law or regulations to deduct and withhold taxes on any payment to the Payee, the Payor shall pay the amounts of such taxes to the proper Governmental Authority in a timely manner and promptly transmit to the Payee an official tax certificate or other evidence of such withholding sufficient to enable the Payee to claim such payment of taxes.

(d) Indirect Tax. All payments to be made by one Party to another Party, pursuant to the terms of this Agreement, are stated exclusive of Indirect Taxes. If any Indirect Taxes are chargeable in respect of such payments, the Party making shall payment shall pay such Indirect Taxes at the applicable rate following the receipt where applicable of an Indirect Taxes invoice in the appropriate form issued. Each Party shall issue valid invoices for all amounts payable under this Agreement consistent with all applicable Laws and irrespective of whether such amounts may be netted for settlement purposes. The Parties shall cooperate in accordance with applicable law to minimize Indirect Taxes

8.8 Blocked Currency. In each country where the local currency is blocked and cannot be removed from the country, reimbursements or other payments in that country that are to be under this Agreement in RMB shall instead be paid to FibroGen China or AstraZeneca, as the case may be, in the equivalent amount in Dollars.

8.9 Foreign Exchange. With the exception of Co-Promotion Fees and payments from Product purchases which shall be paid in RMB, all amounts payable and all calculations under this Agreement shall be made in Dollars. Sales or costs and expenses recorded in any foreign currency shall be converted into Dollars in a manner consistent with FibroGen China's and AstraZeneca's customary and usual conversion procedures used to prepare such Party's audited financial statement for external reporting purposes, provided always that such practices use a widely accepted source of published exchange rates.

8.10 Late Payments. Except as set forth in **Exhibit D**, if a Party does not receive payment of any sum due to it on or before the due date therefor, simple interest shall thereafter accrue on the sum due to such Party from the due date until the date of payment at a rate equal to the U.S. Prime Rate for the date payment was due as reported by the *Wall Street Journal*.

8.11 Financial Records; Audits.

(a) Records. Each Party shall maintain complete and accurate records in sufficient detail to permit the other Party to confirm the accuracy of the amount to be

reimbursed, pursuant to Section 8.5 or 8.6, with respect to Development Costs or Commercialization Costs and in relation to the calculation of Net Profit and Net Loss and related payments as described in Section 8.6 above and **Exhibit D**, or other amounts to be reimbursed or shared hereunder incurred or generated (as applicable) by such Party, achievement of sales milestones and other compensation payable under this Agreement. Each Party shall keep or cause its Affiliates to keep such records for a period of the later of (i) six (6) years after the end of the period to which such books, records and accounts pertain and (ii) the expiration of the applicable tax statute of limitations (or any extensions thereof), or for such longer period as may be required by applicable law.

(b) Procedure. Upon reasonable prior notice, such records shall be open during regular business hours for a period of three (3) years from the creation of individual records, in each case, for examination at the auditing Party's expense, and not more often than once each Calendar Year, by an independent certified public accountant selected by the auditing Party and reasonably acceptable to the audited Party for the sole purpose of verifying for the auditing Party the accuracy of the financial reports or sales milestone notices furnished by the audited Party pursuant to this Agreement or of any payments made, or required to be made, by or to the audited Party to the other pursuant to this Agreement. Any such auditor shall not disclose the audited Party's Confidential Information to the auditing Party, except to the extent such disclosure is necessary to verify the accuracy of the financial reports furnished by the audited Party or the amount of payments due by the audited Party under this Agreement. Any amounts shown to be owed but unpaid, or overpaid and in need of reimbursement, shall be paid or refunded (as the case may be) within thirty (30) days after the accountant's report, plus interest (as set forth in Section 8.10) from the original due date (unless challenged in good faith by the audited Party in which case any dispute with respect thereto shall be resolved in accordance with Article 14). The auditing Party shall bear the full cost of such audit unless such audit reveals an overcharge or underpayment by the audited Party that resulted from a discrepancy in a report that the audited Party provided to the other Party during the applicable audit period, which underpayment or overcharge was more than five percent (5%) of the amount set forth in such report, in which case the audited Party shall bear the full cost of such audit.

(c) Audit Dispute. In the event of a dispute with respect to any audit under Section 8.11(b), FibroGen China and AstraZeneca shall work in good faith to resolve the disagreement. If the Parties are unable to reach a mutually acceptable resolution of any such dispute within thirty (30) days, the dispute shall be submitted for resolution to a certified public accounting firm jointly selected by each Party's certified public accountants or to such other entity or individual as the Parties shall mutually agree (the **"Auditor**"). The decision of the Auditor shall be final and the costs of such arbitration as well as the initial audit shall be borne between the Parties in such manner as the Auditor shall determine. Not later than ten (10) days after such decision and in accordance with such decision, the audited Party shall pay the additional amounts, with interest from the date originally due as provided in Section 8.10 or the auditing Party shall reimburse the excess payments, as applicable.

8.12 Manner and Place of Payment. Except as otherwise expressly provided under this Agreement, all payments owed under this Agreement shall be made by wire transfer in immediately available funds to a bank and account designated in writing by FibroGen WFOE, FibroGen Cayman or AstraZeneca (as applicable), unless otherwise specified in writing by such Party. All payments hereunder shall be invoiced by the Payee to the Payor. Each invoice to AstraZeneca shall fulfill the requirements set forth on **Exhibit I**.

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8.13 Estimated Sales and Accruals. To the extent that any amounts used in the calculation of Development Costs or Commercialization Costs are based on estimates or accruals with respect to the Products in the Territory, FibroGen China shall notify AstraZeneca of any such estimates or accruals or adjustments or changes based on a revision in estimates and accruals or true-up of such amounts within thirty (30) days of any such adjustment or reconciliation by FibroGen China.

ARTICLE 9

INTELLECTUAL PROPERTY

9.1 Intellectual Property Committee. The Parties shall, promptly after the Effective Date, establish an intellectual property committee (the "**IP Committee**") comprised of at least one senior patent attorney from each Party, together with such representatives of the Parties as the Parties may determine to be appropriate from time to time, to review and discuss, in each case with respect to FibroGen China Patents and Joint Patents, the patent prosecution strategy (including whether and where to file patent applications), applications for patent term extension and notices of infringement, as well as the selection, registration, maintenance and defense of Marks and interest in Third Party intellectual property. The IP Committee will serve solely an advisory purpose and shall not have authority to approve or disapprove any actions with respect to patent filing, prosecution and maintenance under this Agreement.

9.2 Ownership of Inventions. Ownership of Information and inventions, whether or not patentable, made during the Term in the course of conducting activities under this Agreement, including all intellectual property rights therein (collectively, "**Inventions**") shall be as follows: (a) FibroGen Cayman shall own all Inventions [*], whether made solely by employees, agents or independent contractors of either Party or its respective Affiliates, or jointly by employees, agents or independent contractors of both Parties or their respective Affiliates, (collectively, "**Collaboration Inventions**"), (b) AstraZeneca shall own all Inventions that are made solely by employees, agents or independent contractors of AstraZeneca or its Affiliates that are not Collaboration Inventions, (c) FibroGen Cayman shall own all Inventions that are made solely by employees, agents or independent contractors of FibroGen China or its Affiliates that are not Collaboration Inventions, and (d) AstraZeneca and FibroGen Cayman shall jointly own all Inventions that are made jointly by employees, agents, or independent contractors of each Party or its Affiliates that are not Collaboration Inventions ("**Joint Inventions**"). Except to the extent either Party is restricted by the licenses granted to the other Party under this Agreement, each of AstraZeneca and FibroGen Cayman shall be entitled to practice, grant licenses to, assign and exploit the Joint Inventions and Patents claiming Joint Inventions ("**Joint Patents**") without the duty of accounting or seeking consent from the other Party. AstraZeneca hereby assigns to FibroGen Cayman all of its and its Affiliates' right, title and interest in and to the Collaboration Inventions, and agrees to take such further actions reasonably requested by FibroGen Cayman to evidence such assignment, except where such Collaboration Inventions

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have been made by an independent contractor retained by AstraZeneca without such contractor having agreed to assign such Collaboration Inventions to AstraZeneca, as approved by the China Committee.

9.3 Disclosure of Inventions. Each Party shall promptly disclose to the other all Inventions promptly after becoming aware of them, including all invention disclosures or other similar documents submitted to such Party by its, or its Affiliates', employees, agents or independent contractors describing such Inventions. Such Party shall also respond promptly to reasonable requests from the other Party for more Information relating to such Inventions.

9.4 AstraZeneca Independent Inventions. In the event that AstraZeneca develops, during the Term, independently of its activities under this Agreement, any inventions or intellectual property rights that [*], AstraZeneca [*] with respect to HIF Compounds.

9.5 Prosecution of Patents.

(a) FibroGen China Patents. Except as otherwise provided in this Section 9.5(a), as between the Parties, FibroGen Cayman shall have the sole right and authority to manage all FibroGen China Patent prosecution activities under this Agreement. This includes the right and authority to prepare, file, prosecute and maintain all FibroGen China Patents in any jurisdiction in the world, including defending such FibroGen China Patents in any patent office proceedings, pre- or post-grant or issuance, including reissue, reexamination, limitation or invalidation proceedings, or any opposition- or interference-type proceeding or challenge. FibroGen Cayman shall provide AstraZeneca reasonable opportunity to review and comment on filing and prosecution efforts regarding the FibroGen China Patents in the Territory. FibroGen Cayman shall, if requested by AstraZeneca, provide AstraZeneca with copies of material communications from any patent authority in the Territory regarding any FibroGen China Patents so designated by the IP Committee, and shall, if requested, provide drafts of any material filings or material responses to be made to such patent authorities a reasonable amount of time in advance of submitting such filings or responses so that AstraZeneca may have the opportunity to review and comment thereon. FibroGen Cayman shall further take into account and may include, at FibroGen Cayman's sole discretion, any reasonable comments provided by AstraZeneca prior to submission of any such filings or responses. Each Party shall bear its own internal and out-of-pocket costs in respect of the prosecution of FibroGen China Patents.

(b) Joint Patents. With respect to any potentially patentable Joint Invention, AstraZeneca shall have the first right, but not the obligation, to prepare patent applications based on such Joint Invention, to file and prosecute (including defense of any oppositions, interferences, reissue proceedings and reexaminations) such patent applications, and to maintain any Joint Patents in any jurisdictions throughout the Territory. If AstraZeneca determines in its sole discretion to abandon, cease prosecution or otherwise not file or maintain any Joint Patent anywhere in the Territory, then AstraZeneca shall provide FibroGen Cayman written notice of such determination at least thirty (30) days before any deadline for taking action to avoid abandonment (or other loss of rights) and shall provide FibroGen Cayman with the opportunity to prepare, file, prosecute and maintain such Joint Patent. The Party that is responsible for preparing, filing, prosecuting, and maintaining a particular Joint Patent (the **"Prosecuting Party"**) shall provide the other Party reasonable opportunity to review and comment on such

prosecution efforts regarding such Joint Patent, and such other Party shall provide the Prosecuting Party reasonable assistance in such efforts. The Prosecuting Party shall provide the other Party with a copy of all material communications from any patent authority in the applicable jurisdictions regarding the Joint Patent being prosecuted by such Party, and shall provide drafts of any material filings or responses to be made to such patent authorities a reasonable amount of time in advance of submitting such filings or responses. In particular, each Party agrees to provide the other Party with all information necessary or desirable to enable the other Party to comply with the duty of candor/duty of disclosure requirements of any patent authority. Either Party may determine that it is no longer interested in supporting the continued prosecution or maintenance of a particular Joint Patent in a country or jurisdiction, in which case: (i) the disclaiming Party shall, if requested in writing by the other Party, assign its ownership interest in such Joint Patent in such country or jurisdiction to the other Party for no additional consideration; and (ii) if such assignment is effected, any such Joint Patent would thereafter be deemed a FibroGen China Patent in the case of assignment to FibroGen Cayman, or a AstraZeneca Patent in the case of assignment to AstraZeneca; provided, however, that the disclaiming party would have an immunity from suit under such FibroGen China Patent or AstraZeneca Patent, as the case may be, in the applicable country or jurisdiction. In addition, any Joint Patent that becomes a FibroGen China Patent pursuant to the preceding sentence shall be excluded from the license granted to AstraZeneca in Section 7.1. Each Party shall bear its own internal costs in respect of the prosecution of Joint Patents. Out-of-pocket costs incurred in respect of the prosecution and maintenance of Joint Patents in the Territory shall be borne equally by AstraZeneca and FibroGen Cayman. In the event a Party elects to disclaim its interest in a Joint Patent, the costs incurred with respect to such Patent after the date of such disclaimer shall thereafter be borne exclusively by the other Party, without reimbursement or credit.

(c) Cooperation in Prosecution and Extensions. Each Party shall through the IP Committee provide the other Party all reasonable assistance and cooperation in the Patent prosecution efforts provided above in this Section 9.5, including providing any necessary powers of attorney and executing any other required documents or instruments for such prosecution.

9.6 Infringement of FibroGen China Patents by Third Parties.

(a) Notification. If there is any infringement, threatened infringement, imminent infringement or alleged infringement of any of the FibroGen China Patents on account of a Third Party's manufacture, use, offer for sale, or sale of a Collaboration Compound or Product in the Field in the Territory (in each case, a **"Product Infringement"**), then each Party shall promptly notify the other Party in writing of any such Product Infringement of which it becomes aware, and shall provide evidence in such Party's possession demonstrating such Product Infringement.

(b) Enforcement Rights. FibroGen China shall have the first right, but not the obligation, to bring an appropriate suit or other action against any person or entity allegedly engaged in any Product Infringement of the FibroGen China Patents in the Territory (and to defend any related counterclaim) and the costs and expenses shall be shared equally by the Parties. FibroGen China shall have a period of one hundred eighty (180) days after its receipt or delivery of notice and evidence pursuant to Section 9.6(a) above, to elect to enforce such FibroGen China Patent in the Territory (or to settle or otherwise secure the abatement of such

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Product Infringement). In the event that FibroGen China does not so elect (or settle or otherwise secure the abatement of such Product Infringement), it shall so notify AstraZeneca in writing, and AstraZeneca shall have the right to commence a suit or take action to enforce the applicable FibroGen China Patent with respect to a Product Infringement in the Field in the Territory (and to defend any related counterclaim) at AstraZeneca's expense. The IP Committee shall take the necessary actions to ensure that AstraZeneca has proper standing to bring suit under this Section 9.6(b).

(c) Cooperation. In any action, suit or proceeding instituted under this Section 9.6, the Parties shall cooperate with and assist each other in all reasonable respects. Upon the reasonable request of the Party instituting such action, suit or proceeding, the other Party shall join such action, suit or proceedings and shall be represented using counsel of its own choice, at the requesting Party's expense. If a Party with the right to initiate legal proceedings under this Section 9.6 lacks standing to do so and the other Party has standing to initiate such legal proceedings, then the Party with standing shall initiate such legal proceedings at the request and expense of the other Party (including reasonable internal personnel costs).

(d) Settlement. Without the prior written consent of the other Party, neither Party shall settle any claim, suit or action that it brought under this Section 9.6 involving FibroGen China Patents in any manner that would negatively impact such intellectual property or that would limit or restrict the ability of either Party to sell Products anywhere in or outside the Territory.

(e) Expenses and Recoveries. Any expenses incurred by such Party as a result of any claim, suit or action under Section 9.6(b) against any person or entity engaged in Product Infringement or any other infringement of the FibroGen China Patents shall be treated as a shared expense of the Parties under this Agreement. If such Party recovers monetary damages from such Third Party in such suit or action, such recovery shall be allocated first to the reimbursement of any expenses incurred by the Parties in such litigation (including, for this purpose, a reasonable allocation of expenses of internal counsel) and any remaining amount shall be designated as Product Revenue at the FibroGen Cayman level and subject to restrictions on payments to FibroGen as dividends under **Exhibit D**.

(f) Other Infringements. For clarity, as between the Parties, FibroGen China shall have the sole right to enforce the FibroGen China Patents in the Territory against any infringement, imminent infringement, threatened infringement or alleged infringement that is not a Product Infringement in the Field.

(g) Patents Licensed from Third Parties. Each Party's rights under this Section 9.6 with respect to any FibroGen China Patent licensed from a Third Party shall be subject to the rights of such Third Party to enforce such FibroGen China Patent and/or defend against any claims that such FibroGen China Patent is invalid or unenforceable.

(h) Joint Patents. Each Party shall promptly notify the other Party upon becoming aware of any infringement, imminent infringement, threatened infringement or alleged infringement of any Joint Patent ("**Joint Patent Infringement**"). The Parties will promptly thereafter meet to discuss in good faith how and whether to proceed to enforce the applicable Joint Patent against such Joint Patent Infringement. If the Parties fail to agree within sixty (60) days, then either Party shall have the right to take any action permitted under applicable law.

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(i) Defense of FibroGen China Patents. To the extent any Party receives notice by counterclaim, or otherwise, alleging the invalidity or unenforceability of any FibroGen China Patent in the Territory, it shall bring such fact to the attention of the other Party, including all relevant information related to such claim. FibroGen China shall have the sole right to defend such action, at FibroGen China's expense, and AstraZeneca will cooperate with FibroGen China in such defense. All costs and expenses incurred in such activities shall be a shared expense of the Parties and reconciled as part of the FibroGen Cayman reconciliation in accordance with **Exhibit D**. FibroGen China shall keep AstraZeneca regularly informed of the status and progress of such efforts, and shall reasonably consider AstraZeneca's comments on any such efforts.

9.7 Third Party Patents. FibroGen China shall have the sole right and authority to initiate and/or pursue at its sole expense any patent office proceedings, pre- or post-grant or issuance, including reissue, reexamination, limitation, or invalidation proceedings, or any opposition- or interference-type proceeding or challenge against any Third Party Patent that relates or that may potentially relate to the manufacture, use, or sale of a HIF Compound or a Product.

9.8 Defense of Infringement Actions. During the Term, each Party shall bring to the attention of the other Party all information regarding potential infringement or any claim of infringement of Third Party intellectual property rights in the Territory in connection with the development, manufacture, production, use, importation, offer for sale, or sale of Products in the Territory. Subject to Article 11, each Party shall be solely responsible for defending any action, suit, or other proceeding brought against it alleging infringement of Third Party intellectual property rights in connection with its activities under this Agreement, provided that if both Parties are named in such action, then FibroGen China shall have the first right to defend such action and the costs and expenses shall be a shared expense of the Parties and reconciled as part of the FibroGen Cayman reconciliation in accordance with **Exhibit D**. This Section 9.8 shall not be interpreted as placing on either Party a duty of inquiry regarding Third Party intellectual property rights.

9.9 Patent Marking. FibroGen China shall, and shall require its Affiliates and Sublicensees, to mark Products sold by it hereunder (in a reasonable manner consistent with industry custom and practice) with appropriate patent numbers or indicia to the extent permitted by applicable law and regulations, in those countries in which such markings or such notices impact recoveries of damages or equitable remedies available with respect to infringements of patents.

9.10 Personnel Obligations. Prior to beginning work under this Agreement relating to any research, Development or Commercialization of a Collaboration Compound or a Product, to HIF or in the Field, each employee, agent or independent contractor of AstraZeneca or FibroGen China or of either Party's respective Affiliates shall be bound by non-disclosure and invention assignment obligations which are consistent with the obligations of AstraZeneca or FibroGen China, as appropriate, in this Article 9, including without limitation: (a) promptly reporting any

invention, discovery, process or other intellectual property right; (b) assigning to AstraZeneca or FibroGen China, as appropriate, all of his or her right, title and interest in and to any invention, discovery, process or other intellectual property right, such that AstraZeneca or FibroGen China, as appropriate, can then comply with its obligations under this Agreement with respect to such invention, discovery, process or other intellectual property right; (c) cooperating in the preparation, filing, prosecution, maintenance and enforcement of any patent and patent application; (d) performing all acts and signing, executing, acknowledging and delivering any and all documents required for effecting the obligations and purposes of this Agreement; and (e) abiding by the obligations of confidentiality and non-use set forth in Article 13. It is understood and agreed that such non-disclosure and invention assignment agreement need not reference or be specific to this Agreement.

9.11 Trademarks. The Parties shall use Commercially Reasonable Efforts to develop a trademark consistent with the worldwide trademarks for Products selected under the U.S. and RoW Agreement. FibroGen China shall be responsible for the selection, registration, maintenance and defense of, and FibroGen Cayman (or its Affiliate designated by FibroGen Cayman) will own, all trademarks for use in connection with the sale or marketing of Products in the Field in the Territory (the **"Marks"**) and such costs shall be a shared expense of the Parties and reconciled as part of the FibroGen WFOE reconciliation in accordance with **Exhibit D**. All uses of the Marks shall be reviewed by the China Committee and shall comply with all applicable laws and regulations (including those laws and regulations particularly applying to the proper use and designation of trademarks in the applicable countries). Neither Party shall, without the other Party's prior written consent, use any trademarks or house marks of the other Party (including the other Party's corporate name), or marks confusingly similar thereto, in connection with such Party's marketing or promotion of Products under this Agreement, except as may be expressly authorized in connection with activities under Article 6 and except to the extent required to comply with applicable laws and regulations. FibroGen Cayman grants (and shall cause any of its Affiliates owning any such Marks or names to grant) to AstraZeneca a non-exclusive, sub-licensable license, free of charge, to use the Marks and the FibroGen China names and logos in the Territory pursuant to the Commercialization Plan solely for the purpose of Commercializing the Products in accordance with the terms of this Agreement, provided that such rights shall be exercised, and all Products bearing such names and/or logos shall be manufactured, in accordance with the quality standards for such logos and trademarks established by the JSC. AstraZeneca shall remain the owner of the AstraZeneca name and logo and the trademarks and the goodwill pertaining thereto. FibroGen Cayman shall remain the owner of the FibroGen China names and logos and the trademarks and the goodwill pertaining thereto.

9.12 Patent Term Extension. The Parties shall discuss via the IP Committee responsibility for the selection of the appropriate FibroGen China Patents to obtain any patent term extensions that are now or become available in the future in the Territory.

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ARTICLE 10

REPRESENTATIONS AND WARRANTIES

10.1 Mutual Representations and Warranties. Each Party hereby represents, warrants, and covenants (as applicable) to the other Party as follows, as of the Effective Date:

(a) Corporate Existence and Power. It is a company or corporation duly organized, validly existing, and in good standing under the laws of the jurisdiction in which it is incorporated, and has full corporate power and authority and the legal right to own and operate its property and assets and to carry on its business as it is now being conducted and as contemplated in this Agreement, including, without limitation, the right to grant the licenses granted by it hereunder.

(b) Authority and Binding Agreement. (i) It has the corporate power and authority and the legal right to enter into this Agreement and perform its obligations hereunder; (ii) it has taken all necessary corporate action on its part required to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder; and (iii) this Agreement has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, and binding obligation of such Party that is enforceable against it in accordance with its terms.

(c) No Conflict. It is not a party to and will not enter into any agreement that would prevent it from granting the rights granted to the other Party under this Agreement or performing its obligations under this Agreement.

(d) No Debarment. In the course of the Development of Products, such Party has not used prior to the Effective Date and shall not use, during the Term, any employee, agent or independent contractor who has been debarred by any Regulatory Authority, or, to the best of such Party's knowledge, is the subject of debarment proceedings by a Regulatory Authority.

10.2 Representations and Warranties by FibroGen China. FibroGen China hereby represents and warrants to AstraZeneca, as of the Effective Date, as follows:

(a) Title; Encumbrances. Except for the Information licensed to FibroGen under the Astellas Agreements, FibroGen Cayman is the sole and exclusive owner of the entire right, title and interest in (a) the Listed Patents and (b) the FibroGen China Know-How existing as of the Effective Date. Neither the Listed Patents nor the FibroGen China Know-How owned by FibroGen Cayman is subject to any mortgage, pledge, lien, security interest, conditional and installment sale agreement, encumbrance or charge or claim of any kind.

(b) No Other Patents other than those listed. The Listed Patents represent all Patents that, as of the Effective Date, are Controlled by FibroGen China and which, to FibroGen China's knowledge, cover or claim any invention necessary or useful for the Development or Commercialization of Collaboration Compounds or Products in the Territory as contemplated as of the Effective Date.

(c) Prosecution of Patents etc. To FibroGen China's knowledge, the Listed Patents are being diligently prosecuted before the respective patent authorities in accordance with applicable law. All applicable fees due to patent authorities with respect to the filing and prosecution of the Listed Patents existing as of the Effective Date have been paid on or before

the due date for payment (as such due date may be extended in accordance with applicable laws or patent authority rules and regulations). FibroGen China has not received any written notice alleging that the Listed Patents existing as of the Effective Date, if issued, would be invalid or unenforceable or that the Patent applications included in such Listed Patents will not proceed to grant. To FibroGen China's knowledge, in respect of any pending patent applications included in the Listed Patents, FibroGen China has submitted all material prior art of which it is aware in accordance with the requirements of the State Intellectual Property Office. To its knowledge, FibroGen China has properly identified each and every inventor of the claims of the Listed Patents existing as of the Effective Date.

(d) Notice of Infringement or Misappropriation. FibroGen China has not received any written notice from any Third Party asserting or alleging that any research or development of Collaboration Compounds or Products by FibroGen China or by Astellas prior to the Effective Date infringed or misappropriated the intellectual property rights of such Third Party and FibroGen China has no reason to suspect that any such infringement or misappropriation has occurred. To FibroGen China's knowledge, the conception, development and reduction to practice of the Listed Patents and the FibroGen China Know-How existing as of the Effective Date have not constituted or involved the misappropriation of trade secrets or other proprietary rights of any person or entity.

(e) Non-infringement of Third Party Rights. To FibroGen China's knowledge, the research, development, manufacture, use and sale after the Effective Date of FG-4592 in the CKD Indications can be carried out in the manner reasonably contemplated as of the Effective Date without infringing any published Patents owned or controlled by a Third Party.

(f) No Proceedings. There are no pending actions, suits or proceedings against FibroGen China or any of its Affiliates involving the FibroGen China Technology, Collaboration Compounds or Products.

(g) Third-Party Activities. To FibroGen China's knowledge, except as disclosed in a writing of even date herewith by FibroGen China to AstraZeneca, there are no activities by Third Parties that would constitute infringement or misappropriation of the FibroGen China Technology (in the case of pending claims, evaluating them as if issued).

(h) Astellas Agreements. Nothing in the Astellas Agreements prevents FibroGen Cayman from granting the rights to AstraZeneca granted under this Agreement or prevents either FibroGen China or AstraZeneca from performing their rights under this Agreement.

(i) Documentation Made Available to AstraZeneca. FibroGen China has made available to AstraZeneca all material Regulatory Material, FibroGen China Know-How and other Information in its possession or Control regarding or related to any Collaboration Compound and Product. All Regulatory Material, FibroGen China Know-How and other Information in FibroGen China's possession and Control provided to AstraZeneca regarding or related to any Collaboration Compound or Product are, to FibroGen China's knowledge, true, complete and correct in all material respects. As of the Effective Date, FibroGen China has prepared, maintained and retained in all material respects all material Regulatory Material that FibroGen China is required to maintain or report pursuant to and in accordance with GLP, GCP, regulations and other applicable law.

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10.3 Additional Covenants of FibroGen HK, FibroGen Cayman and FibroGen WFOE. FibroGen HK, FibroGen Cayman and FibroGen WFOE each separately covenants to AstraZeneca, as of the Effective Date and during the Term that:

(a) Calculation of Net Profit and Net Loss. In calculating Net Profit and Net Loss for the Product, no account shall be taken of any costs, expenses or activities conducted outside the scope of this Agreement, including with respect to the development and commercialization of other products, in or outside the Territory.

(b) No material harm. During the Term, it shall not, and its Affiliates shall not, engage in any activities or practices or prioritization of cash flows that would materially harm the Collaboration, including any activities or practices or prioritization of cash flows that would deprive or artificially reduce the calculation of any Net Profit or increase the Royalty Payments above the level approved by the tax authorities in the Territory under this Agreement.

10.4 Anti-Bribery and Anti-Corruption Compliance.

(a) Each Party agrees, on behalf of itself, its officers, directors and employees and on behalf of its Affiliates, agents, representatives, consultants and subcontractors hired in connection with the subject matter of this Agreement (together with such Party, the "**Representatives**") that for the performance of its obligations hereunder:

(i) The Representatives shall not directly or indirectly pay, offer or promise to pay, authorize the payment of any money or give, offer or promise to give, or authorize the giving of anything else of value, to: (a) any Government Official in order to influence official action; (b) any individual or entity (whether or not a Government Official) (1) to influence such individual or entity to act in breach of a duty of good faith, impartiality or trust ("acting improperly"), (2) to reward such individual or entity for acting improperly or (3) where such individual or entity would be acting improperly by receiving the money or other thing of value; (c) any individual or entity (whether or not a Government Official) while knowing or having reason to know that all or any portion of the money or other thing of value will be paid, offered, promised or given to, or will otherwise benefit, the individuals or entities for the purposes listed in clauses (a) and (b) above.

(ii) The Representatives shall not, directly or indirectly, solicit, receive or agree to accept any payment of money or anything else of value in violation of the Anti-Corruption Laws.

(b) The Representatives shall comply with the Anti-Corruption Laws plus the AstraZeneca Anti-Corruption Rules and Policies and shall not take any action that will, or would reasonably be expected to, cause either Party or its Affiliates to be in violation of any such laws or policies.

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(c) Each Party, on behalf of itself and its other Representatives, represents and warrants to the other Party that to the best of such Party's and its Affiliates' knowledge, no Representative that will participate or support its performance of its obligations hereunder has, directly or indirectly, (i) paid, offered or promised to pay or authorized the payment of any money, (ii) given, offered or promised to give or authorized the giving of anything else of value or (iii) solicited, received or agreed to accept any payment of money or anything else of value, in each case ((i), (ii) and (iii)), in violation of the Anti-Corruption Laws during the three (3) years preceding the date of this Agreement.

(d) Each Party shall promptly provide the other Party with written notice of the following events: (i) upon becoming aware of any breach or violation by such Party or its Representative of any representation, warranty or undertaking set forth in Sections 10.4(a)-(c); or (ii) upon receiving a formal notification that it is the target of an investigation by a Governmental Authority for a Material Anti-Corruption Law Violation or upon receipt of information from any of the Representatives connected with this Agreement that any of them is the target of an investigation by a Governmental Authority for a Material Anti-Corruption Law Violation.

(e) Without prejudice to any auditing or inspection rights set forth elsewhere in this Agreement, each Party shall for the term of this Agreement and six (6) years thereafter, for the purpose of allowing the other Party to audit and monitor the performance of its compliance with this Agreement and particularly this Section 10.4 permit the other Party, its Affiliates, any auditors of any of them and any Governmental Authority to have access to any premises of such Party or other Representatives used in connection with this Agreement, together with a right to access personnel and records that relate to this Agreement ("**Audit**").The results of any such audit shall constitute Confidential Information of the audited Party, in respect of which the other Party shall comply with the provisions contained in Article 12 (subject to the terms and exceptions set forth therein or in this Section 10.4).

(i) To the extent that any Audit by a Party requires access and review of any commercially or strategically sensitive information of the other Party or any of its other Representatives relating to the business of such Party or any other Representatives (including information about prices and pricing policies, cost structures and business strategies), such activity shall be carried out by a Third Party professional advisor appointed by the other Party and such professional advisors shall only report back to the other Party such information as is directly relevant to informing the other Party on such Party's compliance with the particular provisions of the Agreement being Audited.

(ii) Each Party shall, and shall cause its Representatives to, provide all cooperation and assistance during normal working hours as reasonably requested by the other Party for the purposes of an Audit. Such other Party shall ensure that any Third Party auditor enters into a confidentiality agreement consistent with applicable requirements of Article 12 hereof in all material respects. Such other Party shall instruct any Third Party auditor or other Person given access in respect of an Audit to cause the minimum amount of disruption to the business of the audited Party and its Affiliates and to comply with relevant building and security regulations.

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(iii) The costs and fees of any Audit shall be paid by the auditing Party, except that if an inspection or Audit reveals any breach or violation by the audited Party (including through its other Representatives) of any representation, warranty or undertaking set forth in Sections 10.4(a)-(c), the costs of such inspection or Audit shall be paid by the audited Party. The audited Party shall bear its own costs of rendering assistance to the Audit.

(f) On the occurrence of any of the following events: (A) A Party becomes aware of, whether or not through an Audit, that the other Party (or any other Representative) is in breach or violation of any representation, warranty or undertaking in Sections 10.4(a)-(c) or of the Anti-Corruption Laws; or (B) notification is received under Section 10.4(d) relating to any suspected or actual Material Anti-Corruption Law Violation by a Party or its Representative, in either case ((A) or (B)), the other Party shall have the right, in addition to any other rights or remedies under this Agreement or to which such other Party may be entitled in law or equity, to (x) take such steps as are reasonably necessary in order to avoid a potential violation or continuing violation by such other Party or any of its Affiliates of the Anti-Corruption Laws, including by requiring that the Party agrees to such additional measures, representations, warranties, undertakings and other provisions as such other Party believes in good faith are reasonably necessary ("**Provisions**") and (y) terminate any or all of the activities conducted by the Party pursuant to this Agreement or this Agreement in its entirety, immediately in the event that:

(i) A Party refuses to agree to all of the Provisions required by the other Party pursuant to this clause; *provided* that such other Party has (a) provided the Party an explanation in reasonable detail as to why such other Party considers such provisions necessary, (b) given the Party a reasonable opportunity to review and comment on the proposed Provisions and to provide its view as to the necessity or usefulness of these to address the event concerned and (c) considered such comments in good faith, or

(ii) A Party reasonably concludes that there is no Provision available that would enable such Party or its Affiliates to avoid a potential violation or continuing violation of applicable Anti-Corruption Laws.

(g) Any termination of this Agreement pursuant to Section 10.4(f) shall be treated as a termination for breach and the consequences of termination set forth in Sections 13.6 and 13.7, as applicable, shall apply and additionally: (i) subject to the accrued rights of the Parties prior to termination, the terminating Party shall have no liability to the other Party for any fees, reimbursements or other compensation or for any loss, cost, claim or damage resulting, directly or indirectly, from such termination; and (ii) any amounts that would otherwise be payable with respect to such terminated activities or pursuant to this Agreement in its entirety, as applicable, including any then outstanding and unpaid claims for payment shall be null and void to the extent permissible under applicable laws or the payment of which will subject the terminating Party to liabilities under the Anti-Corruption Laws.

(h) Each Party shall be responsible for any breach of any representation, warranty or undertaking in this Section 10.4 or of the Anti-Corruption Laws by any of its Representatives.

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(i) Each Party may disclose the terms of this Agreement or any action taken under this Section 10.4 to prevent a potential violation or continuing violation of applicable Anti-Corruption Laws, including the identity of the other Party and the payment terms, to any Governmental Authority if such Party determines, upon advice of counsel, that such disclosure is necessary.

(j) Each Party represents and warrants that (i) it has reviewed its internal programs in relation to the Anti-Corruption Laws and the ability of the Representatives to adhere to the AstraZeneca Anti-Corruption Rules and Policies in performance of its obligations hereunder in advance of the signing of this Agreement, (ii) it and the other Representatives can and will continue to comply with such Anti-Corruption Laws and the AstraZeneca Anti-Corruption Rules and Policies in performance of its obligations hereunder. Should either Party identify in writing to the other Party any measures that should be reasonably taken to improve the Representatives' compliance with such Anti-Corruption Laws and the AstraZeneca Anti-Corruption Rules and Policies for the performance of its obligations hereunder (the "**Improvement Plan**"), the other Party shall implement such Improvement Plan within an agreed reasonable timeframe (which shall in any event not be in excess of three (3) calendar months) from the date the Improvement Plan is delivered to the receiving Party or otherwise the requesting Party shall be entitled to (x) terminate this Agreement, upon written notice to the other Party with immediate effect, (y) be relieved of any obligations hereunder and (z) seek compensation from the other Party.

10.5 Disclaimer. Each Party understands that the Collaboration Compounds and Products are the subject of ongoing clinical research and development and that the other Party cannot assure the safety or usefulness of the Collaboration Compounds or Products. In addition, FibroGen China makes no warranties except as set forth in this Article 10 concerning the FibroGen China Technology, and AstraZeneca makes no warranties except as set forth in this Article 10 concerning the AstraZeneca Technology.

10.6 No Other Representations or Warranties. EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR NON-MISAPPROPRIATION OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS, IS MADE OR GIVEN BY OR ON BEHALF OF A PARTY. EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, ALL REPRESENTATIONS AND WARRANTIES, WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE, ARE HEREBY EXPRESSLY EXCLUDED.

ARTICLE 11

INDEMNIFICATION

11.1 Indemnification by FibroGen China. FibroGen China shall defend, indemnify, and hold AstraZeneca, its Affiliates, and their respective officers, directors, employees, and

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agents (the **"AstraZeneca Indemnitees"**) harmless from and against any and all damages or other amounts payable to a Third Party claimant, as well as any reasonable attorneys' fees and costs of litigation incurred by such AstraZeneca Indemnitees (collectively, "**AstraZeneca Damages**"), all to the extent resulting from claims, suits, proceedings or causes of action brought by such Third Party ("**AstraZeneca Claims**") against such AstraZeneca Indemnitee that arise from or are based on: (a) a breach of any FibroGen Contracting Party's representations, warranties, and obligations under this Agreement; (b) the willful misconduct or grossly negligent acts or omissions of FibroGen China, its Affiliates, or the officers, directors, employees, or agents of FibroGen China or its Affiliates in the performance of activities under this Agreement; (c) the research or Development of Collaboration Compounds or Products by FibroGen China before the Effective Date; or (d) the Development, testing, manufacture, storage, handling, use, sale, offer for sale, distribution and importation of Products by FibroGen China or its Affiliates or licensees (excluding, for clarity AstraZeneca). The foregoing indemnity obligation shall not apply if the AstraZeneca Indemnitees materially fail to comply with the indemnification procedures set forth in Section 11.3, or to the extent that such AstraZeneca Claim is based on or alleges: (i) a breach of any of AstraZeneca's representations, warranties, and obligations under this Agreement or the U.S. and RoW Agreement; or (ii) the willful misconduct or grossly negligent acts or omissions of AstraZeneca or its Affiliates, or the officers, directors, employees, or agents of AstraZeneca or its Affiliates in the performance of activities under this Agreement or the U.S. and RoW Agreement.

11.2 Indemnification by AstraZeneca. AstraZeneca shall defend, indemnify, and hold each FibroGen Contracting party, their Affiliates, and each of their respective officers, directors, employees, and agents, (the **"FibroGen China Indemnitees"**) harmless from and against any and all damages or other amounts payable to a Third Party claimant, as well as any reasonable attorneys' fees and costs of litigation incurred by such FibroGen China Indemnitees (collectively, **"FibroGen China Damages"**), all to the extent resulting from any claims, suits, proceedings or causes of action brought by such Third Party (collectively, **"FibroGen China Claims"**) against such FibroGen China Indemnitee that arise from or are based on: (a) the Development, testing, manufacture, storage, handling, use, sale, offer for sale, distribution and importation of Products by AstraZeneca or its Affiliates, Sublicensees, or distributors; (b) a breach of any of AstraZeneca's representations, warranties, and obligations under the Agreement; or (c) the willful misconduct or grossly negligent acts or omissions of AstraZeneca or its Affiliates, or the officers, directors, employees, or agents of AstraZeneca or its Affiliates in the performance of activities under this Agreement. The foregoing indemnity obligation shall not apply if the FibroGen China Indemnitees materially fail to comply with the indemnification procedures set forth in Section 11.3, or to the extent that any FibroGen China Claim is based on or alleges: (i) a breach of any FibroGen Contracting Party's representations, warranties, and obligations under this Agreement or FibroGen's breach of the U.S. and RoW Agreement; or (ii) the willful misconduct or grossly negligent acts or omissions of FibroGen China, its Affiliates, or their officers, directors, employees, or agents in the performance of activities under this Agreement or the U.S. and RoW Agreement.

11.3 Indemnification Procedures. The Party claiming indemnity under this Article 11 (the **"Indemnified Party"**) shall give written notice to the Party from whom indemnity is being sought (the **"Indemnifying Party"**) promptly after learning of the claim, suit, proceeding

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or cause of action for which indemnity is being sought ("**Claim**"). The Indemnified Party shall provide the Indemnifying Party with reasonable assistance, at the Indemnifying Party's expense, in connection with the defense of the Claim for which indemnity is being sought. The Indemnified Party may participate in and monitor such defense with counsel of its own choosing at its sole expense; provided, however, the Indemnifying Party shall have the right to assume and conduct the defense of the Claim with counsel of its choice. The Indemnifying Party shall not settle any Claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld, unless the settlement involves only the payment of money. So long as the Indemnifying Party is actively defending the Claim in good faith, the Indemnified Party shall not settle any such Claim without the prior written consent of the Indemnifying Party. If the Indemnifying Party does not assume and conduct the defense of the Claim as provided above, (a) the Indemnified Party may defend against, and consent to the entry of any judgment or enter into any settlement with respect to the Claim in any manner the Indemnified Party may deem reasonably appropriate (and the Indemnified Party need not consult with, or obtain any consent from, the Indemnifying Party in connection therewith), and (b) the Indemnifying Party will remain responsible to indemnify the Indemnified Party as provided in this Article 11.

11.4 Insurance. Each Party shall self insure or procure and maintain insurance, including product liability insurance, with respect to its activities hereunder and which are consistent with normal business practices of prudent companies similarly situated at all times during which any Product is being clinically tested in human subjects or commercially distributed or sold, and for four (4) years after the expiration or termination of this Agreement. It is understood that such insurance shall not be construed to create a limit of either Party's liability with respect to its indemnification obligations under this Article 11. Each Party shall provide the other with written evidence of such insurance upon request. Each Party shall provide the other with written notice at least thirty (30) days prior to the cancellation, non-renewal or material change in such insurance or self-insurance which materially adversely affects the rights of the other Party hereunder.

ARTICLE 12

CONFIDENTIALITY

12.1 Confidentiality. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the Parties, each Party agrees that, during the Term and for ten (10) years thereafter, it shall keep confidential and shall not publish or otherwise disclose and shall not use for any purpose other than as provided for in this Agreement or the U.S. and RoW Agreement (which includes the exercise of any rights or the performance of any obligations hereunder or thereunder) any Confidential Information furnished to it by the other Party pursuant to this Agreement except for that portion of such information or materials that the receiving Party can demonstrate by competent written proof:

(a) was already known to the receiving Party or its Affiliate, other than under an obligation of confidentiality, at the time of disclosure by the other Party;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the receiving Party;

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(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the receiving Party in breach of this Agreement;

(d) is subsequently disclosed to the receiving Party or its Affiliate by a Third Party without obligations of confidentiality with respect thereto; or

(e) is independently discovered or developed by the receiving Party or its Affiliate without the aid, application, or use of the disclosing Party's Confidential Information;

Notwithstanding the definition of "Confidential Information" in Article 1, all Information generated under this Agreement or the U.S. and RoW Agreement, whether generated by one or both Parties, shall be deemed the Confidential Information of FibroGen China.

12.2 Authorized Disclosure. Each Party may disclose Confidential Information belonging to the other Party to the extent such disclosure is reasonably necessary in the following situations:

(a) filing or prosecuting FibroGen China Patents in accordance with Article 9;

(b) regulatory filings and other filings with Governmental Authorities (including Regulatory Authorities), including filings with the U.S. SEC or CFDA, with respect to a Product;

(c) prosecuting or defending litigation;

(d) complying with applicable laws and regulations, including regulations promulgated by securities exchanges;

(e) disclosure to its Affiliates, employees, agents, and independent contractors, and any licensees or Sublicensees, in each case only on a need-to-know basis and solely in connection with the performance of this Agreement (and in the case of FibroGen China, the Astellas Agreements or other agreements with licensees of Products), provided that each disclosee must be bound by obligations of confidentiality and non-use at least equivalent in scope to those set forth in this Article 12 prior to any such disclosure;

(f) disclosure of the material terms of this Agreement to any bona fide potential or actual investor, investment banker, acquirer, merger partner, or other potential or actual financial partner, and in the case of FibroGen China, to any licensee of Products; provided that in connection with such disclosure, the disclosing Party shall inform each disclosee of the confidential nature of such Confidential Information and cause each disclosee to treat such Confidential Information as confidential; and

(g) disclosure of any Collaboration Inventions or status reports (including data from any Clinical Trials) to any bona fide potential or actual investor, investment banker, acquirer, merger partner, or other potential or actual financial partner, and in the case of FibroGen China, to any licensee of Products; provided that each disclosee must be bound by obligations of confidentiality and non-use at least as restrictive as those set forth in this Article 12 prior to any such disclosure.

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Notwithstanding the foregoing, in the event a Party is required to make a disclosure of the other Party's Confidential Information pursuant to Sections 12.2(a), 12.2(b), 12.2(c) or 12.2(d), it will, except where impracticable, give reasonable advance notice to the other Party of such disclosure and use Commercially Reasonable Efforts to secure confidential treatment of such information. In any event, the Parties agree to take all reasonable action to avoid disclosure of Confidential Information hereunder.

12.3 Publicity; Terms of Agreement.

(a) The Parties agree that the material terms of this Agreement are the Confidential Information of both Parties, subject to the special authorized disclosure provisions set forth in Section 12.2 and this Section 12.3. The Parties have agreed to make a joint public announcement of the execution of this Agreement and the U.S. and RoW Agreement on or promptly after the Effective Date.

(b) After release of such press release, if either Party desires to make a public announcement concerning the material terms of this Agreement or any activities under this Agreement, such Party shall give reasonable prior advance notice of the proposed text of such announcement to the other Party for its prior review and approval (except as otherwise provided herein), such approval not to be unreasonably withheld, except that in the case of a press release or governmental filing required by law, the disclosing Party shall provide the other Party with such advance notice as it reasonably can and shall not be required to obtain approval therefor. A Party commenting on such a proposed press release shall provide its comments, if any, within five (5) Business Days after receiving the press release for review. FibroGen China shall have the right to make a press release announcing the achievement of each material milestone under this Agreement as it is achieved, and the achievements of Regulatory Approvals as they occur, subject only to the review procedure set forth in the preceding sentence. In relation to AstraZeneca's review of such an announcement, AstraZeneca may make specific, reasonable comments on such proposed press release within the prescribed time for commentary, but shall not withhold its consent to disclosure of the information that the relevant milestone or Regulatory Approval has been achieved and triggered a payment hereunder. Neither Party shall be required to seek the permission of the other Party to repeat any information regarding the terms of this Agreement that have already been publicly disclosed by such Party, or by the other Party, in accordance with this Section 12.3.

(c) The Parties acknowledge that either or both Parties may be obligated to file a copy of this Agreement with Government Authorities. Each Party shall be entitled to make such a required filing, provided that it requests confidential treatment of at least the commercial terms and sensitive technical terms hereof and thereof to the extent such confidential treatment is reasonably available to such Party. In the event of any such filing, each Party will provide the other Party with a copy of the Agreement marked to show provisions for which such Party intends to seek confidential treatment and shall reasonably consider and incorporate the other Party's comments thereon to the extent consistent with the legal requirements governing redaction of information from material agreements that must be publicly filed.

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12.4 Publications.

(a) Subject to the International Committee of Medical Journal Editors ("ICMJE") Uniform Requirements for Manuscripts Submitted to Biomedical Journals and applicable legal requirements, the China Committee (with approval of the JSC or its designee for such responsibility) will determine the overall strategy for publishing and presenting results of studies pertaining to the Products and the JSC or its designee shall approve all publications in the Territory prior to publication.

(b) Neither Party shall publicly present or publish results of studies carried out under this Agreement (each such presentation or publication a "**Publication**") without the opportunity for prior review by the other Party, except to the extent otherwise required by applicable laws or regulations, in which case Section 12.3(c) shall apply with respect to disclosures required by applicable securities laws and Section 12.2(b) shall apply with respect to disclosures required for regulatory filings. The submitting Party shall provide the other Party the opportunity to review any proposed Publication at least thirty (30) days prior to the earlier of its presentation or intended submission for publication. The submitting Party agrees, upon request by the other Party, not to submit or present any Publication until the other Party has had thirty (30) days to comment on any material in such Publication. The submitting Party shall consider the comments of the other Party in good faith and no Publication shall be submitted for publication without the approval of the JSC. The submitting Party shall provide the other Party a copy of the Publication at the time of the submission or presentation. Notwithstanding the foregoing, AstraZeneca shall not have the right to publish or present FibroGen China's Confidential Information without FibroGen China's prior written consent, and FibroGen China shall not have the right to publish or present AstraZeneca's Confidential Information without AstraZeneca's prior written consent. Each Party agrees to acknowledge the contributions of the other Party, and the employees of the other Party, in all publications as scientifically appropriate.

ARTICLE 13

TERM AND TERMINATION

13.1 Term. This Agreement shall become effective on the Effective Date and, unless earlier terminated pursuant to this Article 13, shall remain in effect until the date that AstraZeneca is no longer Developing or selling Products in the Territory (the **"Term"**).

13.2 Termination by AstraZeneca at Will. AstraZeneca shall have the right to terminate this Agreement upon one hundred eighty (180) days prior written notice to FibroGen China. During such one hundred eighty (180) day period, AstraZeneca shall continue to perform all of its obligations under this Agreement and shall continue to be responsible for all costs incurred under the Agreement during such one hundred eighty (180) day period. In addition, AstraZeneca shall not take any action that would reasonably be expected to materially adversely affect or impair the further development and commercialization of the Products during such one hundred eighty (180) day period.

13.3 Termination by AstraZeneca for Technical Product Failure. AstraZeneca may terminate this Agreement in its entirety at any time after the Effective Date upon written notice

to FibroGen China in the event of Technical Product Failure; provided, however, that AstraZeneca shall not be entitled to terminate this Agreement pursuant to this Section 13.3 if such Technical Product Failure pertains only to one or several specific Collaboration Compound(s) or Product(s) but does not affect (a) FG-4592 (if FG-4592 is then still being Developed or Commercialized under this Agreement) or (b) any other Collaboration Compound or Product then in a Phase 2 Clinical Trial or later stage of Development or Commercialization under this Agreement.

13.4 Termination by Either Party for Breach.

(a) Breach. Subject to Section 13.4(b), FibroGen China shall have the right to terminate this Agreement upon written notice to AstraZeneca if AstraZeneca materially breaches its obligations under this Agreement and, after receiving written notice from FibroGen China identifying such material breach by AstraZeneca in reasonable detail, fails to cure such material breach within ninety (90) days from the date of such notice (or within thirty (30) days from the date of such notice in the event such material breach is solely based upon AstraZeneca's failure to pay any material amounts due to FibroGen China hereunder). Subject to Section 13.4(b), AstraZeneca shall have the right to terminate this Agreement upon written notice to FibroGen China if FibroGen China materially breaches its obligations under this Agreement and, after receiving written notice from AstraZeneca identifying such material breach by FibroGen China in reasonable detail, fails to cure such material breach within ninety (90) days from the date of such notice (or within thirty (30) days from the date of such notice in the event such material breach is solely based upon FibroGen China's failure to pay any material amounts due to AstraZeneca hereunder).

(b) Disputed Breach. If the alleged breaching Party disputes in good faith the existence or materiality of a breach specified in a notice provided by the other Party in accordance with Section 13.4(a), and such alleged breaching Party provides the other Party notice of such dispute within such ninety (90) day (or thirty (30) day, as the case may be) period, then the non-breaching Party shall not have the right to terminate this Agreement under Section 13.4(a) unless and until the arbitral tribunal, in accordance with Article 14, has determined that the alleged breaching Party has materially breached the Agreement and such Party fails to cure such breach within ninety (90) days following such arbitral tribunal's decision (except to the extent such breach is solely based on the failure to make a payment when due, which breach must be cured within thirty (30) days following such arbitral tribunal's decision); provided that with respect to a failure to pay amounts due, arbitration shall be conducted in accordance with Article 14, except that it shall be conducted by only one arbitrator and shall be resolved within ninety (90) days. It is understood and agreed that during the pendency of such dispute, all of the terms and conditions of this Agreement shall remain in effect and the Parties shall continue to perform all of their respective obligations hereunder.

13.5 Termination for Patent Challenge. FibroGen China may terminate this Agreement in its entirety immediately upon written notice to AstraZeneca if AstraZeneca or its Affiliates or sublicensees (directly or indirectly, individually or in association with any other person or entity) challenges the validity, enforceability or scope of any FibroGen China Patent in the Territory and such challenge is not permanently withdrawn within ninety (90) days.

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13.6 Effects of Termination of the Agreement. Upon any termination of this Agreement, the following shall apply (in addition to any other rights and obligations under Section 13.8 or otherwise under this Agreement with respect to such termination):

(a) Licenses. The licenses granted in Article 7 shall terminate. Notwithstanding the foregoing, AstraZeneca hereby grants to FibroGen Cayman, effective only upon such termination, a non-exclusive, worldwide, fully-paid, perpetual, irrevocable, royalty-free license, with the right to grant multiple tiers of sublicenses, under the AstraZeneca Technology, to research, develop, make, have made, use, import, export, offer for sale, and sell Products as in existence as of the termination date in the Territory; provided that FibroGen Cayman shall indemnify, defend and hold harmless AstraZeneca and each of the AstraZeneca Indemnitees as set forth in Section 11.1 from and against any AstraZeneca Damages arising out of or resulting from AstraZeneca Claims that arise or result from FibroGen Cayman's, its Affiliates' or licensees' activities performed under the foregoing license

(b) Regulatory Materials. AstraZeneca shall transfer and assign to the FibroGen Contracting Party(ies) as directed by FibroGen China all Regulatory Materials and Regulatory Approvals for Products in the Territory, if any, that are Controlled by AstraZeneca or its Affiliates or Sublicensees.

(c) Transition Assistance. AstraZeneca shall, at no cost to FibroGen China, provide reasonable consultation and assistance for a period of no more than one hundred eighty (180) days following the effective date of termination for the purpose of transferring or transitioning to FibroGen China, all AstraZeneca Know-How related to a Product not already in FibroGen China's possession, and, at FibroGen China's request, all then-existing commercial arrangements relating specifically to Products in the Territory to the extent reasonably necessary or useful for FibroGen China to commence or continue developing, manufacturing, or commercializing Products, and further to the extent AstraZeneca is contractually able to do so. The foregoing consultation and assistance shall include, without limitation, assigning, upon request of FibroGen China, any agreements with Third Party suppliers or vendors that specifically cover the supply or sale of Products in the Territory, to the extent such agreements are assignable by AstraZeneca. If any such contract between AstraZeneca and a Third Party is not assignable to FibroGen China (whether by such contract's terms or because such contract does not relate specifically to Products) but is otherwise reasonably necessary or useful for FibroGen China to commence or continue developing, manufacturing, or commercializing Products, then AstraZeneca shall reasonably cooperate with FibroGen China to negotiate for the continuation of such license and/or supply from such entity. In any event, if AstraZeneca is manufacturing bulk or finished Product under an agreement entered into pursuant to Section 6.4, then AstraZeneca shall supply such bulk or finished Product, as applicable, to FibroGen China and Astellas, for a reasonable transitional period (not to exceed twelve (12) months) from the effective date of the termination, subject to reasonable extension by FibroGen China if AstraZeneca is unable to timely effect the technology transfer required to have a Third Party manufacturer designated by FibroGen China undertake the manufacturing responsibilities) under the terms of such agreement until FibroGen China either enters into a separate agreement with such Third Party supplier or vendor or establishes an alternate, validated source of supply for the Products. FibroGen China shall pay to AstraZeneca a price equal to AstraZeneca's actual cost to manufacture or acquire such supplies, provided that where termination is by AstraZeneca

pursuant to Section 13.4(a), FibroGen China shall pay to AstraZeneca a price equal to AstraZeneca's actual cost to manufacture or acquire such supplies plus a mark-up of [*] of such actual cost.

(d) Ongoing Clinical Trials. As soon as practicable and subject to applicable law, including GCP, AstraZeneca shall transfer to FibroGen China the management and continued performance of all Clinical Trials for Products for the Territory ongoing as of the effective date of such termination that are being conducted by AstraZeneca at such time.

(e) Remaining Inventories. FibroGen China shall have the right to purchase from AstraZeneca any or all of the inventory of Products held by AstraZeneca as of the effective date of termination (that are not committed to be supplied to any Third Party in the ordinary course of business as of the date of termination) at a price equal to AstraZeneca's actual cost to acquire such inventory. FibroGen China shall notify AstraZeneca within sixty (60) days after the date of termination whether FibroGen China elects to exercise such right. In the event FibroGen China does not elect to exercise such right AstraZeneca shall be entitled to dispose of such inventory as it sees fit in compliance with applicable law, subject to all applicable payments under Article 8.

(f) Effect of Termination by AstraZeneca at Will. If AstraZeneca terminates this Agreement under Section 13.2 (but not in the event of any other termination), AstraZeneca shall remain responsible for all Development Costs and all Commercialization Costs incurred by FibroGen China under the respective Development Plans and Commercialization Plans during the [*]. If AstraZeneca terminates this Agreement under Section 13.2 (but not in the event of any other termination), then AstraZeneca shall additionally pay (i) to FibroGen Cayman or FibroGen WFOE, as applicable, all reasonable costs to transition any then-ongoing Clinical Trials of Products in the Territory and (ii) to FibroGen Cayman a payment of ten million Dollars ($10,000,000).

(g) Post-Termination Restriction. If this Agreement is terminated by AstraZeneca at will under Section 13.2 or by FibroGen China under Section 13.4 for AstraZeneca's material breach or by FibroGen China under Section 13.5 for patent challenge, for three (3) years after the effective date of termination, AstraZeneca will not develop, manufacture or commercialize (directly or indirectly), nor license or authorize a Third Party to commercialize, any HIF Compound in the Territory for use in the Field, or knowingly sell or supply HIF Compounds to a Third Party for such purpose.

(h) No Other Rights. For the avoidance of doubt, the rights granted to FibroGen China under this Section 13.6 are restricted to Collaboration Compounds and Products and AstraZeneca does not grant any rights whatsoever to any other compounds or products or to any Patents or other intellectual property rights other than as set forth in this Section 13.6. Moreover, AstraZeneca shall not be obligated to provide FibroGen China with any other intellectual property rights or other rights or services than that which is explicitly provided for under this Section 13.6.

13.7 Certain Additional Provisions for Termination for FibroGen China's Breach.

(a) If this Agreement is terminated by AstraZeneca under Section 13.4 for FibroGen China's material breach, FibroGen China shall, in addition to any other remedies available to AstraZeneca under this Agreement or applicable law as a consequence of such breach, compensate AstraZeneca for any costs or expenses incurred by AstraZeneca or its Affiliates in connection with performing any of the activities contemplated by the applicable provisions in Section 13.6.

(b) If FibroGen China's material breach is a material breach of Section 5.7 (Regulatory Compliance), in addition to the rights and remedies set forth in this Agreement, AstraZeneca may, at its option, elect to continue the Agreement, in which case the rights and obligations of the Parties shall continue in full force and effect as described herein, except that (i) at AstraZeneca's option, FibroGen China's co-promotion rights shall terminate; and (ii) AstraZeneca shall, as an exception to the decision making principles set forth in Section 2.2(e), have final say over any and all future decision and issues relating to regulatory compliance pursuant to Section 5.7.

13.8 Other Remedies. Termination or expiration of this Agreement for any reason shall not release either Party from any liability or obligation that already has accrued prior to the effective date of such expiration or termination, nor affect the survival of any provision hereof to the extent it is expressly stated to survive such termination. Termination or expiration of this Agreement for any reason shall not constitute a waiver or release of, or otherwise be deemed to prejudice or adversely affect, any rights, remedies or claims, whether for damages or otherwise, that a Party may have hereunder or that may arise out of or in connection with such termination or expiration.

13.9 Bankruptcy. In addition to the termination rights set forth in Sections 13.1 – 13.8 above, a Party shall have the right to terminate this Agreement in its entirety before the end of the Term upon the bankruptcy or insolvency of, or the filing of an action to commence insolvency proceedings against the other Party, or the making or seeking to make or arrange an assignment for the benefit of creditors of the other Party, or the initiation of proceedings in voluntary or involuntary bankruptcy, or the appointment of a receiver or trustee of such Party's property, in each case that is not discharged within sixty (60) days of the applicable filing, action or initiation of proceedings. In the case of AstraZeneca's rights under this Section 13.9, such rights shall extend to any of the aforementioned bankruptcy or insolvency events described above occurring in relation to any of the FibroGen Contracting Parties. In addition, if in the Territory an equivalent law to Section 365(n) of the U.S. Bankruptcy Code comes into effect, the Parties shall amend this Agreement as necessary to ensure that each Party as licensee of intellectual property is able to enjoy the full benefits of such law.

13.10 Survival. Termination or expiration of this Agreement shall not affect rights or obligations of the Parties under this Agreement that have accrued prior to the date of termination or expiration of this Agreement. Notwithstanding anything to the contrary, the following provisions shall survive and apply after expiration or termination of this Agreement: Sections 3.7(b), 3.8, 8.1, 8.7-8.13, 9.2, 10.6, 12.1, 12.2, 12.3, 13.6, 13.8 and 13.10 and Articles 11, 14 and 15. In addition, the other applicable provisions of Article 8 shall survive to the extent required to make final reimbursements, reconciliations or other payments with respect to Net Sales and costs and expenses incurred or accrued prior to the date of termination or expiration. For any

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surviving provisions requiring action or decision by a Committee or an Executive Officer, each Party will appoint representatives to act as its Committee members or Executive Officer, as applicable. All provisions not surviving in accordance with the foregoing shall terminate upon expiration or termination of this Agreement and be of no further force and effect.

ARTICLE 14

DISPUTE RESOLUTION AND GOVERNING LAW

14.1 Disputes. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. In the event of any disputes, controversies or differences which may arise between the Parties out of or in relation to or in connection with this Agreement (including disputes arising from the JSC that are not resolved pursuant to Section 2.2(e)), including, without limitation, any alleged failure to perform, or breach, of this Agreement, or any issue relating to the interpretation or application of this Agreement (each, a "**Dispute**"), then upon the request of either Party by written notice, the dispute will be referred to the Executive Officers of each Party, who shall meet and discuss in good faith a possible resolution thereof, which good faith efforts shall include at least one in-person meeting. If the matter is not resolved within thirty (30) days following the written request for discussions, either Party may then invoke the provisions of Section 14.2.

14.2 Arbitration. Any dispute, controversy, difference or claim which may arise between the Parties, out of or in relation to or in connection with this Agreement (including, without limitation, arising out of or relating to the validity, construction, interpretation, enforceability, breach, performance, application or termination of this Agreement) that is not resolved pursuant to Section 14.1, except for a dispute, claim or controversy under Section 14.7 or 14.8, shall be settled by binding arbitration administered by the American Arbitration Association (the "**AAA**") in accordance with its Commercial Arbitration Rules (or the AAA International Arbitration Rules, if recommended under the AAA guidelines), as such rules may be modified by this Section 14.2 or otherwise by subsequent written agreement of the Parties. The arbitration shall be governed by the U.S. Federal Arbitration Act, 9 U.S.C. §§ 1-16 (the "**Federal Arbitration Act**"), to the exclusion of any inconsistent state laws. The arbitration will be conducted in New York, New York. The number of arbitrators shall be three (3), of whom the Parties shall select one (1) each. The two arbitrators so selected will select the third and final arbitrator. If the arbitrators selected by the Parties are unable or fail to agree upon the third arbitrator, the AAA shall select the third arbitrator. The language to be used in the arbitral proceedings will be English. The Parties shall have the right to be represented by counsel. The arbitration proceeding shall be confidential. Except as required by applicable law, no Party shall make (or instruct the arbitrator to make) any public announcement with respect to the proceedings or decision of the arbitrator without the prior written consent of the other Party. The existence of any dispute submitted to arbitration, and the award, shall be kept in confidence by the Parties and the arbitrator, except as required in connection with the enforcement of such award or as otherwise required by applicable law. Any judgment or award rendered by the arbitrators shall be final and binding on the Parties. The Parties agree that such judgment or award may be enforced in any court of competent jurisdiction.

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14.3 Governing Law. Resolution of all Disputes and any remedies relating thereto shall be governed by and construed under the substantive laws of the State of California, excluding any conflicts or choice of law rule or principle that might otherwise refer construction or interpretation of this Agreement to the substantive law of another jurisdiction.

14.4 Decision. The arbitrators shall issue a reasoned opinion following a full comprehensive hearing, no later than twelve (12) months following the selection of the arbitrators.

14.5 Award. Any award shall be promptly paid in Dollars free of any tax, deduction or offset; and any costs, fees or taxes incident to enforcing the award shall, to the maximum extent permitted by law, be charged against the Party resisting enforcement. If as to any issue the arbitrators should determine under the applicable law that the position taken by a Party is frivolous or otherwise irresponsible or that any wrongdoing it finds is in callous disregard of law and equity or the rights of the other Party, the arbitrators shall also be entitled to award an appropriate allocation of the adversary's reasonable attorney fees, costs and expenses to be paid by the offending Party, the precise sums to be determined after a bill of attorney fees, expenses and costs consistent with such award has been presented following the award on the merits. Each Party agrees to abide by the award rendered in any arbitration conducted pursuant to this Article 14. The award shall include interest from the date of any damages incurred for breach of the Agreement, and from the date of the award until paid in full, at a rate fixed by the arbitrators. With respect to money damages, nothing contained herein shall be construed to permit the arbitrators or any court or any other forum to award punitive or exemplary damages. By entering into this agreement to arbitrate, the Parties expressly waive any claim for punitive or exemplary damages. The only damages recoverable under this Agreement are compensatory damages.

14.6 Injunctive Relief. Provided a Party has made a sufficient showing under the rules and standards set forth in the U.S. Federal Rules of Civil Procedure and applicable case law, the arbitrator shall have the freedom to invoke, and the Parties agree to abide by, injunctive measures after either Party submits in writing for arbitration claims requiring immediate relief. Nothing in this Article 14 will preclude either Party from seeking equitable relief or interim or provisional relief from a court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief, concerning a dispute either prior to or during any arbitration if necessary to protect the interests of such Party or to preserve the status quo pending the arbitration proceeding.

14.7 Patent and Trademark Disputes. Any dispute, controversy or claim relating to the scope, validity, enforceability or infringement of any patents or trademarks covering the manufacture, use, importation, offer for sale or sale of the Product shall be submitted to a court of competent jurisdiction in the country in which such patent or trademark rights were granted or arose.

14.8 Expedited Arbitration for Disputes Related to Technical Product Failure. Disputes with respect to a Technical Product Failure that are not resolved at the JSC or by the

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Executive Officers within twenty (20) Business Days after referral thereto, in the case of a Technical Product Failure as defined in Section 1.105(a), or resolved by the Parties, in the case of a Technical Product Failure as defined in Section 1.105(b), shall be finally determined as set forth in this Section 14.8. Within five (5) Business Days after the end of such twenty (20)-Business Day period, each Party shall propose a list of three (3) individuals, each of whom has at least ten (10) years of significant relevant technical experience in the pharmaceutical industry, and none of whom is or has been affiliated with either Party or with either Party's Affiliates, licensees, sublicensees or business partners, or otherwise has any interest in the resolution of the issue to be submitted by the Parties for resolution (the foregoing requirements, the "**Requirements**"). Within five (5) Business Days after the Parties exchange such lists, the Parties shall either agree upon one of such proposed individuals to resolve the disputed matter, or if the Parties do not so select one such individual within such period of time, each Party shall select one (1) such individual from the list proposed by the other Party, and the two (2) selected individuals shall select a third individual who otherwise meets the Requirements to resolve the disputed matter (the selected individual, the "**Industry Expert**"). Each Party shall submit written materials to the other Party and to the Industry Expert relating to the matters in issue within five (5) Business Days after the Industry Expert is selected. Each Party shall then have five (5) Business Days to submit a written rebuttal to the other Party's submission to the other Party and to the Industry Expert. The Industry Expert shall have the discretion to interview the Parties' officers and employees to obtain further information relating to the matters in issue and to hear oral argument. Each Party shall cooperate with the Industry Expert. The Industry Expert's determination shall be binding, and such determination shall be given retroactive effect. Until such determination is delivered to the Parties, the Parties shall continue to perform their obligations under this Agreement in good faith and make any applicable payments accordingly. If the Industry Expert decides in AstraZeneca's favor, then the Parties shall bear all expenses incurred pursuant to this Section 14.8 equally, and if the Industry Expert decides in FibroGen's favor, then AstraZeneca shall bear all expenses incurred pursuant to this Section 14.8, including reasonable reimbursement of FibroGen's expenses for internal personnel and external advisors.

ARTICLE 15

MISCELLANEOUS

15.1 Entire Agreement; Amendment. This Agreement, including the Exhibits hereto, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties hereto with respect to the subject matter hereof and supersedes, as of the Effective Date, all prior agreements and understandings between the Parties with respect to the subject matter hereof, including, without limitation, the Existing Confidentiality Agreement. The foregoing shall not be interpreted as a waiver of any remedies available to either Party as a result of any breach, prior to the Effective Date, by the other Party of its obligations pursuant to the Existing Confidentiality Agreement. In the event of any inconsistency between any plan hereunder (including the Development Plan and/or Commercialization Plan) and this Agreement or between the terms of this Agreement and the U.S. and RoW Agreement, the terms of this Agreement shall prevail (but solely with respect to the Territory). There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or

written, between the Parties other than as are set forth herein and therein. No subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

15.2 Force Majeure. Both Parties shall be excused from the performance of their obligations under this Agreement to the extent that such performance is prevented or delayed by force majeure and the nonperforming Party promptly provides notice of the prevention to the other Party. Such excuse shall be continued so long as the condition constituting force majeure continues and the nonperforming Party takes reasonable efforts to remove the condition. For purposes of this Agreement, force majeure shall mean conditions beyond the control of the Parties, including without limitation, an act of God, war, civil commotion, terrorist act, labor strike or lock-out, epidemic, failure or default of public utilities or common carriers, destruction of production facilities or materials by fire, earthquake, storm or like catastrophe, and failure of plant or machinery (provided that such failure could not have been prevented by the exercise of skill, diligence, and prudence that would be reasonably and ordinarily expected from a skilled and experienced person engaged in the same type of undertaking under the same or similar circumstances). The non-performing Party shall within thirty (30) days after a force majeure provide the other Party a good faith estimate of the anticipated duration and any action being taken to avoid or minimize its effect. The suspension of performance shall be of no greater scope and no longer duration than is reasonably necessary and the non-performing Party shall use Commercially Reasonable Efforts to remedy its inability to perform. Notwithstanding the foregoing, a Party shall not be excused from making payments owed hereunder because of a force majeure affecting such Party.

15.3 Notices. Any notice required or permitted to be given under this Agreement shall be in writing, shall specifically refer to this Agreement, and shall be addressed to the appropriate Party at the address specified below or such other address as may be specified by such Party in writing in accordance with this Section 15.3, and shall be deemed to have been given for all purposes (a) when received, if hand-delivered or sent by a reputable international expedited delivery service, or (b) five (5) Business Days after mailing, if mailed by first class certified or registered mail, postage prepaid, return receipt requested.

If to FibroGen China:	FibroGen China Anemia Holdings, Ltd. FibroGen Medical Technology Development Co., Ltd. FibroGen International (Hong Kong Limited) c/o FibroGen, Inc. 499 Illinois St. San Francisco, CA 94158 USA Attn: Chief Executive Officer
With a copy to:	FibroGen, Inc. 409 Illinois St. San Francisco, CA 94158 USA Attn: Michael Lowenstein, Vice President, Legal Affairs

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If to AstraZeneca:	AstraZeneca AB Pepparredsleden 1, 431 83 Mölndal Gothenburg Sweden Attention: Chief Financial Officer
With a copy to:	AstraZeneca UK Limited Alderley Park Macclesfield Cheshire SK10 4TF Attention: Liam McIlveen, Deputy General Counsel

15.4 No Strict Construction; Headings. Each of the Parties acknowledges and agrees that this Agreement has been diligently reviewed by and negotiated by and between them, that in such negotiations each of them has been represented by competent counsel and that the final agreement contained herein, including the language whereby it has been expressed, represents the joint efforts of the Parties hereto and their counsel. Accordingly, in the event an ambiguity or a question of intent or interpretation arises, this Agreement will be construed as if drafted jointly by the Parties and no presumption or burden of proof will arise favoring or disfavoring any Party by virtue of the authorship of any provisions of this Agreement. The headings of each Article and Section in this Agreement have been inserted for convenience of reference only and are not intended to limit or expand on the meaning of the language contained in the particular Article or Section.

15.5 Assignment. Neither Party may assign or transfer this Agreement (either in whole or part) or any rights or obligations hereunder without the prior written consent of the other, except that a Party may make such an assignment or transfer without the other Party's consent to Affiliates or to a successor to substantially all of the business of such Party, whether in a merger, sale of stock, sale of assets or other transaction. Any permitted successor or assignee of rights and/or obligations hereunder shall, in a writing to the other Party, expressly assume performance of such rights and/or obligations (and in any event, any Party assigning this Agreement to an Affiliate shall remain bound by the terms and conditions hereof). In the event that a Party is acquired by a Third Party (such Third Party, hereinafter referred to as an "Acquiror"), then the intellectual property of such Acquiror held or developed by such Acquiror (whether prior to or after such acquisition) shall be excluded from the FibroGen China Technology (in the case when the acquired Party is FibroGen China) and AstraZeneca Technology (in the case when the acquired Party is AstraZeneca), and such Acquiror (and Affiliates of such Acquiror which are not controlled by the acquired Party itself) shall be excluded from "Affiliate" solely for purposes of the applicable components of the foregoing intellectual property definitions, in all such cases if and only if: (a) the acquired Party remains a wholly-owned subsidiary of the Acquiror; (b) all intellectual property of the acquired Party and all research and development assets and operations of the acquired Party with respect to the Product remain with the acquired Party and are not transferred to the Acquiror or another Affiliate of the Acquiror; (c) the scientific and development activities with respect to Product of the acquired Party and the Acquiror (if any) are maintained separate and distinct, and (d) there is

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no exchange of confidential Information relating to Product between the acquired Party and the Acquiror. For clarity, in the event that a Party is acquired by an Acquiror and any of the criteria described in subsections (a) through (d) is not satisfied, then the intellectual property of such Acquiror shall be included within FibroGen China Technology (in the case when the acquired Party is FibroGen China) and AstraZeneca Technology (in the case when the acquired Party is AstraZeneca). Any permitted assignment of the rights and obligations of a Party under this Agreement shall be binding on the successors of the assigning Party. Any assignment or attempted assignment by either Party in violation of the terms of this Section 15.5 shall be null, void and of no legal effect.

15.6 Performance by Affiliates. Subject to the limitations of Section 7.3, each Party may discharge any obligations and exercise any right hereunder through any of its Affiliates. Each Party hereby guarantees the performance by its Affiliates of such Party's obligations under this Agreement, and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance. Any breach by a Party's Affiliate of any of such Party's obligations under this Agreement shall be deemed a breach by such Party, and the other Party may proceed directly against such Party without any obligation to first proceed against such Party's Affiliate.

15.7 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments, and to do all such other acts, as may be necessary or appropriate in order to carry out the purposes and intent of this Agreement.

15.8 Compliance with Applicable Law. Each Party shall comply with all applicable laws and regulations in the course of performing its obligations or exercising its rights pursuant to this Agreement.

15.9 Limitation of Liability. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR INDIRECT DAMAGES ARISING FROM OR RELATING TO ANY BREACH OF THIS AGREEMENT OR ANY TORT CLAIMS ARISING HEREUNDER, REGARDLESS OF ANY NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING THE FOREGOING, NOTHING IN THIS SECTION 15.9 IS INTENDED TO OR SHALL LIMIT OR RESTRICT THE INDEMNIFICATION RIGHTS OR OBLIGATIONS OF ANY PARTY UNDER SECTION 11.1, 11.2 OR 11.3, OR DAMAGES AVAILABLE FOR A PARTY'S BREACH OF ITS CONFIDENTIALITY OBLIGATIONS UNDER ARTICLE 12.

15.10 Severability. To the fullest extent permitted by applicable law, each Party hereby waives any provision of law that would render any provision hereof illegal, invalid or unenforceable in any respect. If any one or more of the provisions of this Agreement is held to be invalid or unenforceable by an arbitrator or by any court of competent jurisdiction from which no appeal can be or is taken (within the time period prescribed for appeal), the provision shall be considered severed from this Agreement and shall not serve to invalidate any remaining provisions hereof. The Parties shall make a good faith effort to replace any invalid or unenforceable provision with a valid and enforceable one that achieves, as nearly as possible, the objectives contemplated by the Parties when entering this Agreement.

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15.11 No Waiver. Any delay in enforcing a Party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of such Party's rights to the future enforcement of its rights under this Agreement, except with respect to an express written and signed waiver relating to a particular matter for a particular period of time.

15.12 Independent Contractors. It is expressly agreed that each of the FibroGen Contracting Parties, on the one hand, and AstraZeneca, on the other hand, shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency, except as provided in this Section 15.12. Notwithstanding the foregoing, the Parties acknowledge and agree that the Collaboration between them established by this Agreement (i) will be treated as a partnership for United States federal, state, and local income tax purposes and that the provisions set forth in **Exhibit B** shall be incorporated into this document, solely for United States federal income tax purposes and (ii) will not be treated as a partnership for Swedish tax purposes. Neither FibroGen China, on the one hand, nor AstraZeneca, on the other hand, shall have the authority to make any statements, representations or commitments of any kind, or to take any action that will be binding on the other, without the prior written consent of the other Party to do so. All persons employed by a Party shall be employees of such Party and not of the other Party and all costs and obligations incurred by reason of any such employment shall be for the account and expense of such first Party.

15.13 English Language. This Agreement shall be written and executed in and all other communications under or in connection with this Agreement shall be in, the English language. Any translation into any other language shall not be an official version thereof and in the event of any conflict in interpretation between the English version and such translation, the English version shall control.

15.14 Counterparts. This Agreement may be executed in one (1) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature Page Follows]

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IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate originals by their duly authorized officers as of the Execution Date.

FIBROGEN CHINA ANEMIA HOLDINGS, LTD.

By: /s/ Martin S. Zolnai
Name: Martin S. Zolnai
Title: General Manager

ASTRAZENECA AB

By: /s/ Elisabeth Bjork
Name: Elisabeth Bjork
Title: VP, GMed Head, CVMD

BEIJING FIBROGEN MEDICAL TECHNOLOGY DEVELOPMENT CO., LTD.

Chop: {Seal dated 20 Oct 2014}

FIBROGEN INTERNATIONAL (HONG KONG) LIMITED

By: /s/ Martin S. Zolnai
Name: Martin S. Zolnai
Title:

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EXHIBITS

Exhibit A – Structure of FG-4592

Exhibit B – United States Federal Income Tax Matters

Exhibit C – Certain Co-Promotion Agreement Terms

Exhibit D – Net Profit and Net Loss Calculations

Exhibit E – Initial Development Plan

Exhibit F – Distribution Agreement Key Terms

Exhibit G – Listed Patents

Exhibit H – AstraZeneca's Anti-Corruption Rules and Policies

Exhibit I – Invoicing Requirements

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Exhibit A
Structure of FG-4592

[*]

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Exhibit B

United States Federal Income Tax Matters

1. Purpose and Scope

(a) **Purpose**. The Parties hereby acknowledge and agree that the Collaboration between them established by this Agreement will be viewed as a partnership for United States federal, state, and local income tax purposes (the **"Partnership"**). Pursuant to the status of the Collaboration as a partnership for such purposes, this Exhibit B provides for the manner in which FibroGen Cayman will cause Capital Accounts to be maintained for each Party and the manner in which the Partnership's items of income, gain, loss, deduction or credit will be allocated among the Parties, in each case solely for United States federal, state, and local income tax purposes. This Exhibit B shall not alter or affect the Parties' obligations to make any payments or to receive any payments under the Agreement. Furthermore the Parties acknowledge and agree that this Exhibit B has no bearing on the Parties' treatment of the Collaboration for non-US tax purposes, and each Party will be free to take any position or any action with respect to taxes for non-US purposes, whether or not consistent with this Exhibit B.

(b) **Scope**. The Parties acknowledge and agree that this Exhibit B is intended to govern the allocations and reporting of FibroGen Cayman's items of income, gain, loss, deduction or credit for United States federal, state, and local income tax purposes only, and that consistent with such intention and the purpose stated in Section 1(a) of this Exhibit B, if the provisions of this Exhibit B conflict with any other provisions of the Agreement, the other provisions of the Agreement shall prevail.

2. Definitions

For purposes of this Exhibit B, the following words and expressions shall have the following meanings respectively given to them:

"Adjusted Capital Account Deficit" means, with respect to any Party, the deficit balance in such Party's Capital Account as of the end of the relevant taxable period, after giving effect to the following adjustments: (i) credit to such Capital Account any amounts which such Party is deemed to be obligated to restore pursuant to Treasury Regulations Section 1.704-1(b)(2)(c) and pursuant to the penultimate sentences in Treasury Regulations Sections 1.704-2(g)(1) and 1.704-2(i)(5); and (ii) debit from such Capital Account the items described in Treasury Regulations Sections 1.704-1(b)(2)(ii)(*d*)(4), (5) and (6). The foregoing definition of Adjusted Capital Account Deficit is intended to comply with the provisions of Treasury Regulations Section 1.704-1(b)(2)(ii)(*d*) and shall be interpreted consistently therewith.

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"Capital Account" means a capital account established and maintained on behalf of the Partnership for a Party and adjusted in accordance with the provisions of this Exhibit B.

"Code" means the United States Internal Revenue Code of 1986, as amended. Any reference to a section of the Code shall include a reference to any successor provision thereto.

"IRS" means the United States Internal Revenue Service.

"Treasury Regulations" means the United States federal income tax regulations promulgated under the Code, as such regulations may be amended from time to time (including corresponding provisions of succeeding regulations).

3. Partnership Accounting Matters

(a) Except as otherwise provided in this Section 3(a) of Exhibit B, (i) the amount of any cash payment made by a Party under this Agreement shall be treated as the contribution of an equivalent amount of cash by such Party to the Partnership, and (ii) the amount of any cash payment received by a Party under this Agreement shall be treated as the distribution of an equivalent amount of cash to such Party by the Partnership. Notwithstanding the foregoing clause (ii), the sales milestone payments made by AstraZeneca to FibroGen Cayman pursuant to Section 8.4(a) of this Agreement and the Co-Promotion Profit paid to AstraZeneca under the Co-Promotion Agreement shall be treated as guaranteed payments within the meaning of Code Section 707(c) that are made to FibroGen Cayman or AstraZeneca, respectively, not in their capacity as a partners of the Partnership. For the avoidance of doubt, sales milestones payments made by AstraZeneca to FibroGen Cayman pursuant to Section 8.4(a) of this Agreement and the Co-Promotion Profit paid to AstraZeneca under the Co-Promotion Agreement shall not reduce the Capital Accounts of FibroGen Cayman and AstraZeneca, respectively, and shall result in a corresponding item of Partnership deduction.

(b) FibroGen Cayman shall calculate the Partnership's items of income, gain, loss, deduction and credit for each taxable period of the Partnership, using the same methodologies used to calculate Net Profit and Net Loss and Development Costs.

4. Capital Accounts

(a) FibroGen Cayman will cause a separate Capital Account to be established for each Party. The Capital Account of each Party will be adjusted and maintained in accordance with Code Section 704 and Treasury Regulations
Section 1.704-1(b)(2)(iv).

(b) If the Capital Account of any Party has a deficit balance (after giving effect to all contributions, distributions, and allocations for all periods), such Party will not be obligated to make any payments as contributions to the capital of the Partnership with respect to such deficit, and such deficit will not be considered a debt owed to the Partnership or to any other person for any purpose whatsoever.

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5. Allocations

(a) **General**. In accordance with the Parties' intention to share Development Costs, Net Profits and Net Losses equally, after giving effect to the allocation set forth in Section 5(b) of this Exhibit B and subject to the application of Section 5(c) of this Exhibit B, all items of Partnership income, gain, loss, deduction and credit for any taxable period shall be allocated fifty percent (50%) to AstraZeneca and fifty percent (50%) to FibroGen Cayman.

(b) **Qualified Income Offset**. In the event any Party unexpectedly receives any adjustments, allocations or distributions described in Treasury Regulations Sections 1.704-1(b)(2)(ii)(d)(4), (5) or (6), items of Partnership income and gain shall be specially allocated to such Party in an amount and manner sufficient to eliminate, to the extent required by Treasury Regulations, the Adjusted Capital Account Deficit of the Party as quickly as possible; provided that an allocation pursuant to this Section 5(b) of Exhibit B shall be made only if and to the extent that such Party would have an Adjusted Capital Account Deficit after all other allocations provided for in this Section 5 of this Exhibit B have been tentatively made as if this Section 5(b) of Exhibit B were not in this Agreement.

(c) **Loss Limitation**. Any items of Partnership loss or deduction allocated pursuant to Section 5(a) of this Exhibit B shall not exceed the maximum amount of items of Partnership loss or deduction that can be allocated without causing any Party to have an Adjusted Capital Account Deficit at the end of any taxable period. In the event one but not both Parties would have an Adjusted Capital Account Deficit as a consequence of an allocation of any items of Partnership loss or deduction allocated pursuant to Section 5(a) of this Exhibit B, the limitation set forth in the immediately preceding sentence of this Section 5(c) of Exhibit B shall be applied and items of Partnership loss or deduction not allocable to a Party as a result of such limitation shall be allocated to the other Party to the extent such items of Partnership loss or deduction can be allocated without causing such other Party to have an Adjusted Capital Account Deficit.

(d) **Other Allocation Rules**.

(i) Items of Partnership income, gain, loss or deduction shall be allocated to the Parties pursuant to this Section 5 of Exhibit B as of the last day of each taxable period.

(ii) **Creditable Foreign Tax Expenditures**. The Partnership's "creditable foreign tax expenditures," within the meaning of Treasury Regulations Section 1.704-1(b)(4)(viii)(*b*), shall be allocated in proportion to the Parties' share of the corresponding item of Partnership income, gain, loss and deduction to which such creditable foreign tax expenditure relates.

(e) **Tax Allocations; Code Section 704(c)**. Each item of Partnership income, gain, loss, deduction and credit, as determined for United States federal income tax

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purposes, shall be allocated among the Parties in the same manner as such items are allocated for book purposes to the Parties' Capital Accounts. In accordance with Code Section 704(c) and the Treasury Regulations thereunder, income, gain, loss, and deduction with respect to any property deemed contributed to the Partnership shall, solely for United States federal income tax purposes, be allocated among the Parties so as to take account of any variation between the adjusted basis of such property to the Partnership for United States federal income tax purposes and its fair market value at the time of contribution, using any method that FibroGen Cayman, in its sole discretion, determines is necessary or appropriate to reflect the purpose and intentions of this Agreement. Allocations pursuant to this Section 5(e) of Exhibit B are solely for purposes of United States federal, state and local income taxes and shall not affect, or in any way be taken into account in computing, any Party's Capital Account.

6. Other Tax Matters

(a) **Tax Filings and Elections**. FibroGen Cayman will be responsible for timely causing the Partnership to make the following tax elections and filings:

(i) An Internal Revenue Service Form SS-4 (Application for Employer Identification Number) for the Partnership using any name for the Partnership as FibroGen Cayman deems appropriate;

(ii) An election under Code Section 6231(a)(1)(B)(ii) to have the TEFRA audit provisions of subchapter C of chapter 23 of the Code apply to the Partnership; and

(iii) Any other election for United States federal, state, and local tax purposes that FibroGen Cayman, in its sole discretion, deems necessary or appropriate.

In each case, where any filing identifies AstraZeneca or any Affiliate thereof as partner of the Partnership, FibroGen Cayman will provide a written notice of such filing and a copy of the relevant portion thereof to AstraZeneca at least ten (10) Business Days prior to the proposed submission date for AstraZeneca's review and approval, such approval not to be unreasonably withheld.

(b) **Tax Matters Partner**. FibroGen Cayman shall serve as the "tax matters partner" of the Partnership for purposes of Code Section 6231 (and any similar provisions under any state, or local tax law). FibroGen Cayman shall promptly notify AstraZeneca if any tax return of the Partnership is audited or if any adjustments to any such return are proposed in writing and shall promptly furnish AstraZeneca with all copies of material documents and notices received in connection with an administrative or judicial proceeding relating to United States income tax matters of the Partnership. FibroGen Cayman will provide a final draft of any tax document to AstraZeneca at least ten (10) Business Days before the date on which such document is to be submitted to the relevant tax authority and will ensure that

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reasonable comments made by AstraZeneca in relation to such final drafts are considered. FibroGen Cayman shall ensure that AstraZeneca is kept informed in reasonable detail of the progress of, and is consulted in relation to, all tax matters. FibroGen Cayman is authorized to take the following actions, but shall not take any such action without first obtaining the prior written consent of AstraZeneca, which consent shall not be unreasonably withheld.

(i) To enter into any settlement with the IRS with respect to any administrative or judicial proceedings for the adjustment of Partnership items (within the meaning of Code Section 6231) required to be taken into account by any Party for United States federal, state or local income tax purposes (such administrative proceedings being referred to as a "tax audit" and such judicial proceedings being referred to as "judicial review"); and in the settlement agreement FibroGen Cayman may expressly state that such agreement shall bind all Parties, except that such settlement agreement shall not bind any Party (A) who (within the time prescribed pursuant to the Code and Treasury Regulations) files a statement with the IRS providing that FibroGen Cayman shall not have the authority to enter into a settlement agreement on behalf of such Party or (B) who is a "notice partner" (as defined in Code Section 6231(a)(8)) or a member of a "notice group" (as defined in Code Section 6223(b)(2));

(ii) In the event that a notice of a final administrative adjustment at the Partnership level of any item required to be taken into account by a Party for United States federal income tax purposes (a "final adjustment") is mailed to FibroGen Cayman, to seek judicial review of such final adjustment, including the filing of a petition for readjustment with the United States Tax Court or the applicable District Court of the United States;

(iii) To file a request for an administrative adjustment with the IRS at any time and, if part of such request is not allowed by the IRS, to file an appropriate pleading (petition or complaint) for judicial review with respect to such request;

(iv) To enter into an agreement with the IRS to extend the period for assessing any United States federal income tax which is attributable to any item required to be taken into account by a Party for tax purposes, or an item affected by such item; and

(v) To take any other action on behalf of the Parties in connection with any tax audit or judicial review proceeding to the extent permitted by applicable law or regulations.

(c) **Tax Information**. If required by applicable law, FibroGen Cayman shall cause the necessary United States federal income tax information to be delivered to AstraZeneca as soon as practicable after the end of each taxable period of the Partnership, and in any event within fifteen (15) Business Days after any such information has been determined.

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(d) **Consistent Treatment**. The Parties are aware of the United States federal income tax consequences of the allocations made by this Exhibit B and hereby agree to be bound by the provisions of this Exhibit B in reporting their shares of Partnership income and loss for United States federal income tax purposes.

(e) **Treatment as Partnership**. It is the intent of the Parties that the Collaboration between them established by this Agreement be taxed as a partnership for United States federal income tax purposes. Accordingly, the Parties hereby agree not to take any position or any action or to make any election in a U.S. tax return inconsistent therewith. Notwithstanding the foregoing, the Parties acknowledge and agree that this Exhibit B has no bearing on the Parties' tax treatment or filing in relation to the Collaboration for non-U.S. tax purposes or any activities outside the scope of the Collaboration.

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Exhibit C

Certain Co-Promotion Terms

Commercialization	The Commercialization Plan will include (a) a multi-year marketing strategy, (b) a multi-year communications strategy, (c) a multi-year detailing strategy (including, without limitation, a call plan which shall consist of a high-level geographic distribution of details, a target range of the aggregate number of details to be performed and the position of such details (i.e., primary or secondary)), and (d) a high-level operating plan and budget for Commercialization of the Product. The numbers in contemplating the initial Commercialization Plan are as follows: 12-month period prior to launch —$[*] First 12-month period after launch —$[*] (such 12-month period and each successive 12-month period thereafter, a "launch year") 2nd launch year—$[*] 3rd launch year—$[*] 4th launch year—$[*]
Teams and responsibilities	1. AstraZeneca will hire, train, and manage the marketing team in accordance with budget and activities set forth in the Commercialization Plan. 2. AstraZeneca will hire, train, and manage the national sales team to cover all target hospitals, affiliated or independent dialysis centers, and physicians according to the Commercialization Plan. If AstraZeneca desires to utilize an external sales force to detail the Products, then it shall discuss such utilization with the China Committee. AstraZeneca shall not utilize any such external sales force without the approval of FibroGen China, and FibroGen China shall not utilize any external sales force without the approval of AstraZeneca, in either case, such approval not to be unreasonably withheld. Any such sales force will be required to agree in writing to meet all of the quality, ethical and compliance standards undertaken by AstraZeneca or FibroGen China (as the case may be, including, but not limited to, all of AstraZeneca's policies regarding engagement of health care professionals), and shall not have been found to have committed a material violation of any rule or regulation of the CFDA.

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3. FibroGen China will hire, train, and manage brand physicians and the Medical Science Liaison (MSL) team to conduct medical affairs activities according to the Development Plan and to provide scientific support for the Sales and Marketing teams in the Territory according to the Commercialization Plan.

4. AstraZeneca will provide commercial and key account services through its existing infrastructure and hire, train, and manage additional full-time equivalents according to the Commercialization Plan.

5. AstraZeneca's Government affairs and Market Access teams will work jointly with FibroGen China's team on key market access activities such as Provincial and National RDL according to the Commercialization Plan.

Launch Pricing. The Parties are committed to making first-in-class novel therapies available to Chinese patients on a cost-effective basis. FibroGen WFOE as the manufacturer will have responsibility for pricing. Pricing decisions will be subject to approval by the China Committee. AstraZeneca shall conduct Market research to help establish the optimal pricing level in accordance with the Commercialization Plan.

Pharmacy Channel. There may be opportunity for separate channels to serve patients in the stage 5 non-dialysis population who are currently not being treated due to logistical constraints at the hospitals, e.g., retail pharmacies outside of hospitals.

Co-Promotion Fee The Co-Promotion Agreement shall provide for the payment to AstraZeneca or AstraZeneca's designated Affiliate in the Territory of a service fee (the "**Co-Promotion Fee**") in RMB consisting of [*]. Notwithstanding the foregoing, no such [*] as set forth in this Agreement.

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Exhibit D

Net Profit and Net Loss Calculations (Product containing FG-4592)

[*]

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EXHIBIT D-1

FINANCE SUBCOMMITTEE

Formation and Purpose. FibroGen China and AstraZeneca (either itself or via its designated Affiliate) shall, as soon as practicable after the Effective Date, establish a Finance Subcommittee (the "FSC"), which shall consist of up to four (4) representatives from each Party (or such other number as may be mutually agreed by the Parties, *provided*, that each Party at all times has an equal number of representatives on the FSC). Each Party may replace its FSC representatives at any time upon written notice to the other Party. Each Party shall appoint a secretariat to the FSC who is not a member of the FSC.

The FSC shall report to the China Committee with respect to all tax, accounting and financial matters relating to the Products in the Territory, including the Net Profit and Net Loss calculations described in this Exhibit D.

Authority and Decision Making. The FSC shall act by consensus. The representatives from each Party will have, collectively, one (1) vote on behalf of that Party. If the FSC cannot reach consensus on an issue that comes before the FSC and over which the FSC has oversight, then the Parties shall refer such matter to the China Committee for resolution in accordance with Section 2.2(e).

The FSC shall have no power to amend, modify, or waive compliance with Exhibit D or this Agreement.

Meetings. The FSC shall meet at least once per Calendar Quarter during the Term unless the Parties mutually agree in writing to a different frequency for such meetings as reasonably necessary. The meeting shall be scheduled in advance of any meeting of the China Committee scheduled during the same Calendar Quarter. Not later than ten (10) Business Days, or such shorter period as may be necessary in the event of any meeting convened on an ad hoc basis, the secretariats of the FSC shall jointly prepare and circulate an agenda for such meeting. The FSC may meet in person, by videoconference or by teleconference. In person FSC meetings will be held at locations alternately selected and hosted by FibroGen China and by AstraZeneca. The host Party shall be responsible for the costs and expenses of the FSC meetings hosted, provided that each Party will bear the expense of its respective members' participation in FSC meetings, including travel costs. Meetings of the FSC shall be effective only if at least one (1) representative of each Party is present or participating in such meeting. The FSC secretariat of the host Party will be responsible for keeping reasonably detailed written minutes of all FSC meetings that reflect, without limitation, material decision made at such meetings. The FSC secretariat of the host Party shall send draft meeting minutes to the other Party's FSC secretariat, and each secretariat shall seek and obtain review and approval of such minutes from its respective Party's members of the FSC within ten (10) Business Days after each FSC meeting. Such minutes will be deemed approved unless one or more members of the FSC objects to the accuracy of such minutes within ten (10) Business Days of receipt.

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Specific Responsibilities. In addition to its general responsibilities, the FSC shall have the following responsibilities. For clarity, certain decisions of the China Committee are subject to approval by the JSC:

- review, discuss and agree the proposed calculation of Net Profit which for clarity shall be initially prepared by FibroGen China, including the calculation of any amounts to be paid by the Parties hereunder; the FSC shall prepare for the China Committee a mutually agreed calculation of Net Profit for final approval by the JSC.
- review the statement to be prepared by FibroGen China setting forth Product Revenues, COGS, Marketing and Sales Expenses, Royalty Payments, Royalty Withholding Tax, Taxes and Net Profit for the applicable Calendar Quarter as well as the anticipated cash balance (net of payables) projected for the end of the applicable Calendar Year.
- review and discuss the Minimum Cash Level for FibroGen WFOE for the applicable Calendar Quarter.
- review and discuss the payment of Co-Promotion Fees or Deferred Co-Promotion Fees, as applicable.
- review and discuss the prioritisation of payments as described in this Exhibit D.
- review and discuss the distribution of available cash as described in this Exhibit D.
- review and discuss an appropriate adjustment to the payment flow process described in this Exhibit D, if necessary in relation to the funding of Mandatory Post-Approval Safety Studies and maintaining of a reasonable level of working capital for the ongoing and planned operations of FibroGen WFOE, as further described in this Exhibit D. Any adjustments mutually agreed by the FSC shall be prepared for the China Committee for approval, for final approval by the JSC; no such adjustments shall be implemented unless and until finally approved by the JSC.
- recommend any amendments to Exhibit D, for review by the China Committee and final approval, if any, by the JSC. Such proposed amendments may comprise amendments to the payment methodology described in this Exhibit D, taking into account a Party's then current transfer pricing policies, manufacturing plant locations, and inter-Affiliate licensing practices and policies. Any amendments mutually agreed by the FSC shall be prepared for the China Committee for approval, for final approval by the JSC; no such amendments shall be implemented unless and until finally approved by the JSC. For clarity, no Party shall be required to make any material changes to its internal accounting and reporting systems and standards to implement any such amendments.
- review significant cost and expense reconciliation questions raised between the Parties.
- review the reconciliation of payment flows at the FibroGen Cayman level.
- establish the process for financial detail discussions between the Parties regarding the costs and expenses charged to the profit and loss calculations for FG-4592.

In addition, the FSC will perform such other functions as are appropriate to further the purposes of this Agreement, as directed by the China Committee or the JSC.

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Exhibit E

Initial Development Plan

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Exhibit F

Distribution Agreement Key Terms

FibroGen China to deliver all Products to AstraZeneca or its designated Affiliate according to a rolling demand forecast mechanism.

AstraZeneca or its designated Affiliate will take transfer of title and assume full and unconditional credit risk on acceptance of delivery EXW (Incoterms 2010) FibroGen China's or its CMO's manufacturing warehouse, and pay FibroGen China within ninety (90) days.

AstraZeneca or its designated Affiliate shall sell to its sub-distributors [*].

AstraZeneca or its designated Affiliate will pay a transfer price to FibroGen China equal to [*] for the national distribution service in the Territory. The Parties agree such price may be revised by AstraZeneca or its designated Affiliate following any change in applicable law, regulations and prevailing practice required by the tax authority.

AstraZeneca and FibroGen China will jointly select the next level distributors for AstraZeneca or its designated Affiliate under the China Committee.

AstraZeneca or its designated Affiliate will allow FibroGen China full access to all distribution data including all hospital sales data related to the Product to the extent that AstraZeneca or its designated Affiliate has access to such data.

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Exhibit G

Listed Patents

DOCKET NO.	COUNTRY	STATUS	APPLICATION NO.	FILING DATE	PATENT NO.	GRANT DATE
[*]	[*]	[*]	[*]	[*]	[*]	[*]

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Exhibit H

AstraZeneca's Anti-Corruption Rules and Policies

ASTRAZENECA GLOBAL POLICY
ETHICAL INTERACTIONS
ANTI-BRIBERY & ANTI-CORRUPTION
EXTERNAL INTERACTIONS

This Global Policy describes what is required to meet our commitment to operate ethically and with integrity in our business and personal interactions and activities.

This Policy applies to all Employees.

The Company is committed to acting responsibly and in compliance with the requirements of the UK Bribery Act, Foreign Corrupt Practices Act and other relevant laws, regulations and adopted industry codes

CONTENTS

1. SCOPE, APPLICATION & INTERPRETATION

1.1 This Policy applies to all Employees and represents the minimum requirements that the Company has set for Interactions.

An alphabetised Glossary containing definitions for all capitalised terms used in this Policy is included at the end of this Policy.

For certain Interactions, You must refer to more than one Section of this Policy. The relevant Sections are cross-referenced as appropriate.

Other Global Policies may also apply to Interactions. For example, the *Global Data Privacy Policy* applies to Interactions where there is a need to protect the confidentiality of Patient information.

Global Standards may also apply to Interactions. The Global Standards give additional information about what is required to ensure compliance for particular Interactions. The requirements of this Policy and of the supporting Global Standards must be considered as a whole to evaluate and support compliant Interactions. Global Standards are cross-referenced in each relevant section of this Policy.

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1.2 This Policy expands on the Company's *Code of Conduct,* and aligns with (and in some cases exceeds) the requirements of applicable law and adopted industry codes.

You must follow the spirit of this Policy and not just its letter. The absence of a specific requirement relating to a particular Interaction does not mean that the Interaction is necessarily permitted; You must avoid any Interaction that breaches the Company's *Code of Conduct* or supporting Global Policies, Global Standards or Relevant Procedures.

1.3 Employees must not attempt to avoid the requirements of this Policy by requesting, allowing or enabling Third Parties (including relatives, friends or other associates) to be involved in the Interactions prohibited by this Policy on the Employee's (or the Company's) behalf.

In some cases, local law, adopted industry codes particular to a jurisdiction, or rules particular to a Business Unit (e.g., Senior Executive Team ("SET") function), may apply to Interactions, and may be more restrictive than this Policy. Where that is the case, You must follow the more restrictive rules set out in Relevant Procedures. For example, local marketing organisations must establish Relevant Procedures with respect to Interactions with Public Officials, where local law is more restrictive than this Policy.

To the extent appropriate, Business Units must establish Relevant Procedures to assure compliance with the requirements of this Policy and supporting Global Standards, including requirements for sufficient monitoring and/or audit. Employees must use reasonable judgement to create business records sufficient to demonstrate compliance with the requirements of this Policy, supporting Global Standards and these Relevant Procedures (e.g., business records of required approvals and required rationales for approvals).

For purposes of this Policy, required approvals must be obtained in advance of any Interaction.

Where the scope or interpretation of a particular provision of this Policy, supporting Global Standards or Relevant Procedures is unclear, You should seek guidance from Your line manager or Your relevant Legal and/or Compliance partner.

2. ANTI-BRIBERY & ANTI-CORRUPTION

2.1 AstraZeneca has zero tolerance for Bribery or corruption (i.e., improper influence).

The Company will support Employees and Third Parties who refuse requests to Give or Receive Bribes on the Company's behalf. Employees and Third Parties will not be subject to retaliation or other adverse consequences for such refusal, even if the Company loses business as a result.

See Section 7 for prohibitions and other requirements regarding Facilitation Payments, including payments Given under duress.

2.2 You may Give or Receive something of value in compliance with the requirements and limits of this Policy, supporting Global Standards and Relevant Procedures.

For purposes of this Policy, supporting Global Standards and Relevant Procedures, "something of value" means any financial or non-financial benefit of any kind, including, but not limited to:

a) the Giving and Receiving of Items of Value and Hospitality (See Section 3 and the *Global Standard on Items of Value and Hospitality*);

b) prices, discounts and rebates for Company Products Given to Third Parties (See Section 4);

c) Contributions Given to Third Parties (See Section 5 and the *Global Standard on Contributions*);

d) Political Support Given to Public Officials or Political Organisations and participation in Political Activities (See Section 6);

e) payments Given to Public Officials and Public Sector Organisations (See Section 7);

f) appointments, paid and volunteer work outside of the Company or other interests associated with actual, apparent or potential Conflicts of Interest (See Section 8);

g) the venue, conduct or other arrangements made for Meetings, as well as the selection and/or support of External Stakeholders to attend Meetings or independent congresses, including professional education credits and capability-building sessions (See Section 9 and the *Global Standard on Meetings*);

h) the engagement of Third Parties to provide Services, including compensation and expense reimbursement (See Section 10 and the *Global Standard on Engaging Third Parties*); and

i) support for External Stakeholders for Non-Interventional Studies and Investigator Sponsored Studies (See Sections 13 and 14).

2.3 You must not Give or Receive something of value that is intended or could be seen as improper influence.

If you are in doubt about any Interaction, you must consult with your line manager or your relevant Legal and/or Compliance partner for appropriate guidance.

2.4 All monetary payments by the Company to Third Parties that are permitted by this Policy must be made via an approved Company financial payment system by bank transfer, cheque or company credit card, must not take the form of cash or cash equivalent (e.g., debit cards, gift cards, gift certificates), and must be accurately and appropriately recorded in the Company's books and records.

All such payments may also be made via a specifically authorised Third Party (unless otherwise noted in this Policy or supporting Global Standards), when genuine business needs require, and Relevant Procedures (with adequate controls) support such an arrangement. In such cases, the Third Party must be contractually obligated to accurately document, track and report to the Company the amounts paid on its behalf, as required by the Relevant Procedures.

This Section 2.4 prohibits cash and cash equivalent payments by Employees (or Third Parties acting on the Company's behalf), except as specifically permitted by Relevant Procedures established or approved by the Global Finance function. Also, see paragraph 1.18 of the *Global Standard on Items of Value and Hospitality* for requirements regarding exceptional Cultural Courtesy Gifts in the form of cash or cash equivalent.

2.5 You must not Give a Bribe.

Give means to directly or indirectly offer, promise or give, or to authorise such actions.

You must not Give something of value to any Third Party or any fellow Employee that is intended or could be seen to:

a) influence or reward an official action or decision (e.g., by a Public Official);

b) enable or induce a Third Party or fellow Employee to perform their function improperly, or make any decision or take any action favourable to the interests of the Company (or You) on an improper basis, or reward them for doing so;

c) provide incentive or reward to a Third Party for past, present or future willingness to prescribe, administer, recommend, purchase, pay for, reimburse, authorise, approve, supply or use any Company Product or service; or

d) obtain or retain improper business, or secure any improper professional or personal advantage.

2.6 You must not Receive a Bribe.

Receive means to directly or indirectly solicit, agree to receive or accept, or to authorise such actions. You must not Receive something of value from any Third Party or any fellow Employee that is intended or could be seen to:

a) compromise Your independence or judgement;

b) enable or induce You to perform Your function improperly, or make any decision or take any action favourable to the interests of the Third Party (or fellow Employee) on an improper basis, or reward You for doing so; or

c) obtain or retain improper business, or secure any improper professional or personal advantage.

3. ITEMS OF VALUE & HOSPITALITY

3.1 You must not Give or Receive Items of Value or Hospitality that are intended or could be seen as improper influence.

To the extent appropriate, Business Units must establish Relevant Procedures on actual or perceived value and frequency when Giving and Receiving Items of Value and Hospitality. These Relevant Procedures must include specific limits on value (modest) and frequency (occasional) and definitions for “modest” and “occasional,” to guide Employees on appropriate value and frequency levels that would not create actual or perceived improper influence, taking into account local custom and practice (See paragraph 2.1 of the *Global Standard on Meetings*).

To the extent appropriate, Business Units must establish Relevant Procedures to enable the Company to satisfy transparency obligations, with respect to the Giving of Items of Value and Hospitality to External Stakeholders.

Items of Value and Hospitality that exceed Company limits, either separately or in total, to or from the same individual or organisation, are prohibited.

Any Giving or Receiving of Items of Value or Hospitality that is based upon a genuine personal relationship independent of the Company and that is personally funded by the individuals involved (without Company reimbursement) is permissible and is not restricted by this Policy**,** if it is not intended and could not be seen as improper influence.

3.2 See Section 2 of this Policy and the *Global Standard on Items of Value and Hospitality* for further requirements on Items of Value and Hospitality.

4. PRICING, DISCOUNTS & REBATES

4.1 To the extent appropriate, Business Units must have an approved pricing model in place, based on objective criteria, to govern the pricing, rebates and discounts (and other commercial advantages or favourable terms) that can be Given to Third Parties.

The pricing model must be reviewed on a regular basis by the head of the relevant Business Unit or designee to ensure appropriateness and transparency.

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These Business Units must document the purpose of any prices, rebates or discounts (or other commercial advantages or favourable terms) Given to Third Parties that fall outside the approved pricing model, and this documented purpose must be approved by the head of the relevant Business Unit or designee to ensure appropriateness and transparency.

4.2 See Section 2 of this Policy for further requirements on prices, discounts and rebates.

5. CONTRIBUTIONS (DONATIONS, SPONSORSHIPS & PARTNERSHIPS)

5.1 The Company is committed to making a positive impact on Our local communities and supporting the work of others in the healthcare and scientific arenas.

Contributions may be classified as Donations, Sponsorships or Partnerships, and may take the form of financial or non-financial support (e.g., funds or in-kind assistance, such as resources, facilities or employee time).

Contributions may generally only be Given for legitimate scientific, educational and/or charitable purposes to support the following: health or healthcare, medical or scientific education, advances in medical or scientific research and disaster relief. Contributions may also be Given for other purposes on an exceptional basis, only with senior management approval, as set out in Relevant Procedures.

For the avoidance of doubt, this Section does not prohibit individual Employees from supporting charities and other organisations in a purely personal capacity and without any involvement of the Company, if the support meets the requirements of Section 8 of this Policy. This Section 5 also does not prohibit Employees from organising charitable efforts on the Company premises (such as a local food drive or book drive), with line manager approval, where Employees use only their personal funds and resources to participate, if the support meets the requirements of Section 8 of this Policy.

Generally, Contributions to support a Meeting or other event must only be Given where the venue and location of the supported event are appropriate and conducive to the intended purpose, and where any Meals or other Hospitality provided by the Company or by the recipient of the Contribution are modest and incidental to the purpose of the event. See the *Global Standard on Contributions*, the *Global Standard on Items of Value and Hospitality* and the *Global Standard on Meetings* for specific requirements and exceptions.

Certain charitable Donations, Sponsorships and Partnerships that meet the relevant criteria described in the *Global Standard on Contributions* and the *Global Procedure and Guidance Community Investment* specifically qualify as Community Investment Contributions.

5.2 Contributions may only be given to reputable, recognised and independent institutions or other legitimate, established organisations, and only for legitimate purposes.

The relevant Business Unit managing the Contribution must conduct appropriate due diligence on the proposed recipient of any Contribution to establish that the proposed recipient satisfies the requirements of this Section 5.2 and to establish that Contribution will be well used. In addition, the relevant Business Unit may agree upfront with the recipient organisation to conduct appropriate post-funding review (e.g., review of a summary of the completed projects or other results of the

In addition to the requirements of Section 2, a Contribution must not be Given for any other improper purpose or use, including, but not limited to, the following:

a) to help offset an External Stakeholder’s cost of purchasing or reimbursing Company Products or to influence any other decisions about listing, purchasing or reimbursing of Company Products;

b) to organisations or activities that are known to discriminate on any unlawful basis;

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c) to support programming or editorial content containing gratuitous violence or sexually explicit material or any activity that does not reflect the values and/or mission of the Company, or could cause embarrassment to the Company; or d) to support any activities prohibited by Relevant Procedures.

Contributions that might be considered as excessive or inappropriate in scale and/or affiliation are not permitted.

Contributions must not be Given to avoid the restrictions on Giving Items of Value and Hospitality to Third Parties (See Section 3 and the *Global Standard on Items of Value and Hospitality*).

5.3 Contributions must not be Given to any organisation for the personal benefit of any individual or Healthcare Professional ("HCP") practice (i.e., a group of HCPs sharing premises or other resources) selected by the Company, or to disguise or conceal any such personal benefit (except as permitted in paragraph 4.5 of the *Global Standard on Contributions* regarding Fellowships and Preceptorships for scientists to support research activities).

Contributions must not be Given by the Company directly to an individual or HCP practice.

For the avoidance of doubt, direct Company support for individual External Stakeholders to attend Meetings or independent congresses is not considered to be a Contribution for purposes of this Policy and is permissible only in limited circumstances (See section 3 of the *Global Standard on Meetings*).

For the avoidance of doubt, awards to individuals are not considered Contributions. See the *Global Standard on Items of Value and Hospitality* for requirements regarding awards and awards ceremonies.

An individual who formally represents an organisation may request a Contribution from the Company on behalf of the organisation, and such request must be considered and processed as required by Relevant Procedures. Contributions must not be Given to an organisation at the request of any other individual (e.g., to a Public Official's preferred charity), except for Sympathy Gifts Given to a designated non-profit organisation as a memorial in the event of a death, or Contributions Given at the request of an Employee as part of a Company matching fund programme.

Contributions must not be Given to financially benefit HCPs or HCP practices by replacing any assets or funding any activities that they would be expected or required to provide themselves to fulfil obligations they have under local law, contract or customary business practice. For example, Contributions must not be Given to improve business efficiencies or administrative processes of an HCP or HCP practice, such as support for billing or taxes. For the avoidance of doubt, Contributions to support HCP education are permissible, in the interest of improving Patient care and/or Patient health.

5.4 See Section 2 of this Policy and the *Global Standard on Contributions* for further requirements on Contributions.

Contributions must not be Given by Third Parties on behalf of the Company, except for Company Product Donations (See the *Global Procedure and Guidance Community Investment* and the *Global Guidance for Product Donations*).

For the avoidance of doubt, Contributions do not include Political Support or participation in Political

6. POLITICAL SUPPORT & POLITICAL ACTIVITIES

6.1 Employees must not Give Political Support on behalf of the Company unless specifically authorised to do so by the Government Affairs function or the Reviewer.

Third Parties must not Give Political Support on behalf of the Company under any circumstance. The Company will not reimburse in any way or form any Third Party or non-authorised Employee for Giving Political Support.

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Political Support may only be Given where it is expressly permitted by local law and where acceptable as part of local custom and practice.

All Political Support must be Given directly to the recipient organisation or individual. The name of the organisation or individual, purpose, nature and value of the Political Support and the date of the Political Support must be properly documented and recorded in the Company's books and records, to enable public disclosure.

The Government Affairs function will establish or approve Applicable Internal Review Procedures for the Giving of Political Support.

6.2 Employees and Third Parties must not participate in Political Activities on behalf of the Company unless specifically authorised to do so by the Government Affairs function or the Reviewer.

The Government Affairs function will establish or approve Applicable Internal Review Procedures for participation in Political Activities.

6.3 The Company recognises the rights of Employees to use their own funds, time and other personal resources to Give Political Support or to participate in Political Activities.

You must ensure that you do not act or appear to act as a representative of the Company when participating in Political Activities or Giving Political Support in a personal capacity. You must make it clear that your views and actions are Your own, and that any Political Support You provide is Given on a personal basis, using Your own funds, time or other personal resources.

6.4 See Section 2 of this Policy for further requirements on Political Support and Political Activities.

7. PAYMENTS TO PUBLIC OFFICIALS & PUBLIC SECTOR ORGANISATIONS

7.1 The Company does not permit Employees or Third Parties providing Services to Give Facilitation Payments, either directly or indirectly, to Public Officials (including HCPs and other individuals employed by Public Sector Organisations), regardless of whether such payments are nominal in amount.

Employees and Third Parties must not attempt to conceal or disguise Facilitation Payments to avoid the requirements of this Section.

The nature of the Company's business involves legitimate Interactions with a range of Public Officials. Examples include Public Officials responsible for issuing Company Product licences, making Company Product listing decisions, determining Company Product pricing and payment, providing permits and regulatory Authorisations and conducting facility inspections.

You may Give payments to individual Public Officials where they are engaged to provide legitimate Services (See Section 10). You must not Give any other payments to individual Public Officials unless such payments are required or otherwise expressly permitted by local law and not otherwise prohibited by this Policy.

You may Give legitimate and lawful payments to Public Sector Organisations with respect to taxes, permits, licences, inspections and other fees required or otherwise expressly permitted by local law and not otherwise prohibited by this Policy. Official government receipts must be obtained to support all such payments.

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7.2 The Company recognises that, in exceptional circumstances, payments may be demanded under duress from Employees or Third Parties providing Services. It is permissible for Employees and Third Parties to Give payments demanded under duress, where there is reasonable fear for personal safety.

Duress describes situations of actual or threatened violence or imprisonment to force a person to act against their will. The Company is committed to ensuring the safety of its Employees and Third Parties and does not expect them to compromise their safety in such situations.

Employees and Third Parties must promptly report in writing to their line manager all incidents where:

a) Facilitation Payments are requested but not paid; or

b) payments are demanded under duress, whether paid or not.

The line manager must then promptly inform the relevant Legal partner of such incidents in writing and ensure that any payments actually made are properly documented and recorded in the Company's books and records. The line manager must also consult with the relevant Legal partner regarding the reporting of such incidents to the relevant authorities and the steps to be taken to prevent recurrence.

7.3 See Section 2 of this Policy for further requirements on payments to Public Officials and Public Sector Organisations.

8. AVOIDING CONFLICTS OF INTEREST

8.1 You must ensure that Your interests, activities and associations outside of the Company do not result in actual, apparent or potential Conflicts of Interest with Your professional duties and decisions as an Employee, by directly or indirectly compromising Your independence or professional judgement, or creating an appearance of doing so.

You must not allow, or appear to allow, a personal relationship to influence Your decision-making or judgement. You must ensure that the Company's interests are paramount when business opportunities are assessed and commercial decisions are taken.

You may make personal financial investments, pursue other business interests and maintain social relationships with people You meet through Your Employment, if all of the relevant requirements of this Section of the Policy are met. You must ensure that these Interactions do not result in actual, apparent or potential Conflicts of Interest with the Company's business activities.

You must not use Company resources or your position as an Employee for Your own personal benefit or for the benefit of Your relatives, friends or other associates.

8.2 You must inform Your line manager in writing of any actual, apparent or potential Conflicts of Interest at the time they become known. Engagement Owners must also inform their line managers in writing of any actual, apparent or potential Conflicts of Interest of a Third Party providing Services, at the time they become known.

Line managers must provide written direction on how to resolve or avoid the Conflict of Interest after obtaining any necessary advice from the relevant Legal and/or Compliance partner.

If You, a relative or close friend has a financial or management interest in a Third Party (other than a nominal shareholding interest through a publicly-available investment), You must disclose the situation as a potential Conflict of Interest to Your line manager. You must not participate in any purchasing or other Company decisions related to that Third Party.

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8.3 You must not do any volunteer or paid work outside of the Company related to Your Company work responsibilities or work product (e.g., speaking engagement, authoring or publishing) unless You obtain written approval from Your line manager, on the basis that such work is unlikely to create an actual, apparent or potential Conflict of Interest and on the basis that any payment is not intended and could not be seen as improper influence.

For all such work, You may Receive necessary and modest travel, accommodation, Meals and other directly related, incidental expenses, with written line manager approval, on the basis that such expenses are not intended and could not be seen as improper influence.

8.4 You must not accept any appointment to the Board of Directors of an external organisation in the healthcare or scientific arena, unless You obtain written approval from Your line manager.

Approval should not normally be provided for directorships of Third Parties who are conducting, or may conduct, business directly within Your scope of responsibility or where You will gain a financial benefit that could be open to question or misinterpretation if publicly disclosed.

8.5 You must not use non-public Company information for personal gain.

You must not pass such information to anyone else (either inside or outside the Company), who does not have a legitimate need for the information.

8.6 See Section 2 of this Policy for further requirements on Conflicts of Interest.

9. MEETINGS

9.1 Organising or supporting Meetings with External Stakeholders is part of Our business. Where doing so, You must follow the requirements listed in the Global Standard on Meetings.

The location, venue, conduct and other arrangements made for Meetings must be modest, conducive and appropriate to the purpose of the Meeting.

9.2 Meetings must always have a scientific, medical education and/or other legitimate business purpose, which must be clearly stated.

The Company may Give a Contribution (See Section 5) to a Meeting organiser to support the conduct of a Meeting (e.g., a Sponsorship). Any such Contribution must meet the relevant requirements of both the *Global Standard on Contributions* and the *Global Standard on Meetings*, with respect to the substance of the Meeting as well as the conduct and arrangements made for the Meeting.

9.3 See Section 2 of the Policy and the *Global Standard on Meetings* for further requirements on Meetings.

The *Global Standard on Meetings* also includes specific requirements on Company support for External Stakeholders to attend independent congresses.

10. ENGAGING THIRD PARTIES & ENSURING COMPLIANCE

10.1 The Company is committed to engaging only those Third Parties who embrace standards of ethical behavior that are consistent with Our own.

Engagement Owners are accountable for ensuring that the Third Party’s reputation and conduct are consistent with the Company’s ethical standards (See Section 10.5).

For the avoidance of doubt, engagements do not include informal, routine business Interactions between Employees and Third Parties, where no Services are provided and no payment is Given (e.g., informal discussions at professional Meetings or independent congresses for scientific exchange, or routine phone calls in the normal course of business).

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10.2 Engagement Owners must engage a Third Party only where there is a genuine business need for Third Party Services and must only engage the necessary and appropriate Third Parties to provide those Services.

Engagement Owners must ensure that the selected Third Party has the relevant qualifications, expertise, reputation, knowledge, experience and ability to fulfill the genuine business need, and is the most appropriate choice to provide the Services.

External Stakeholders may be engaged by the Company (either directly or through a specifically authorised Third Party on the Company's behalf) to provide Services. Such Services include, but are not limited to: providing input and information as an Advisor or consultant, speaking at Meetings (e.g., a Promotional Speaker), acting as a clinical investigator or a study site, or educating or otherwise presenting to Representatives at Representative training or business cycle sessions. Patients and Other Third Parties may also be engaged by the Company to provide Services.

Each engagement with an External Stakeholder or Patient for Services must be documented in a signed contract. If the External Stakeholder or Patient is not accepting compensation, or payment or reimbursement of expenses, the requirement for a signed contract may be waived with documented line manager approval.

Each engagement with Other Third Parties for Services must be documented in the format required for the particular Services to be provided, such as a contract, Terms & Conditions, a Purchase Order or other required documentation of offer and acceptance of Services.

Third Parties must not provide any Service on behalf of the Company, in connection with the execution of an engagement or otherwise, unless the Service has been specifically authorised in the signed contract (or other required documentation of the engagement) between the Company and the Third Party, or has otherwise received appropriate documented approval.

You must not Give any Payments for Voluntary or Incidental Activities to any Third Party.

10.3 Our Interactions and engagements with External Stakeholders and Patients must at all times be professional exchanges, designed to enhance the practice of medicine, to benefit Patients, or to fulfill a genuine business need.

In no circumstances may the engagement of an External Stakeholder or Patient be used as a means to gain access or to disguise Promotional Activities, or create an appearance of doing so.

10.4 To the extent appropriate, Business Units must establish adequate Relevant Procedures to mitigate the risk of actual or apparent improper influence over individual External Stakeholders engaged to provide Services, and for monitoring compliance.

To the extent appropriate, Business Units must establish Relevant Procedures that include Fair Market Value guidelines, as well as limits on aggregate compensation provided to individual External Stakeholders and limits on frequency of engagement of individual External Stakeholders. The scope of such guidelines and limits ultimately established will vary, based upon locality and/or function. In developing Fair Market Value guidelines, these Business Units must consider local established compensation levels, varying levels of expertise and/or prominence of Third Parties, varying types and durations of Services to be provided, and the spirit and principles of this Policy.

Third Parties must be paid compensation consistent with and no greater than Fair Market Value, taking into account individual qualifications, experience, ability and reputation, and only for the Services actually provided, consistent with the terms of the engagement.

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To the extent appropriate, Business Units must establish Relevant Procedures to enable the Company to satisfy transparency obligations, with respect to payments made to External Stakeholders.

10.5 Prior to the selection and engagement of a Third Party, Engagement Owners must conduct appropriate and proportionate risk assessments, as well as associated, due diligence procedures (if necessary), according to Relevant Procedures. Engagement Owners must take these steps to ensure that the Third Party's reputation and conduct relating to the execution of the engagement are consistent with the Company's ethical standards, with respect to all relevant areas of risk.

To the extent appropriate, Business Units must establish Relevant Procedures to guide Engagement Owners on how to assess, develop, communicate, implement and enforce required compliance expectations for Third Parties. Required compliance expectations will vary, based upon the nature of the Third Party, the Services to be provided and the nature of the associated risks. Based upon the risk assessment and outcomes for a particular Third Party, Engagement Owners may be required to implement one or more of the following actions with respect to that Third Party:

a) improvement plans or action plans;

b) monitoring or auditing requirements;

c) contractual obligations, including written assurances or commitments by the Third Party;

d) provision of Global Policies, Global Standards, Relevant Procedures or other reference materials, and/or associated training;

e) prior review of the engagement or aspects of the engagement or Services from the relevant Legal and/or Compliance partner; and/or

f) other actions to mitigate identified areas of risk, such as contractual risk mitigation clauses.

At a minimum, Engagement Owners must not engage a Third Party where it is known, or where there is a reason to believe, that the Third Party has Given or Received Bribes, unless the Engagement Owner has documented his/her satisfaction with all of the following, in consultation with the relevant Legal and/or Compliance partner:

a) the actions and improvements undertaken by the Third Party to remediate the concerns and/or behaviour;

b) the current level of compliance by the Third Party; and

c) evidence of the Third Party's ability to provide strong governance and monitoring and to prevent future occurrences of such concerns and/or behaviour.

Engagement Owners, in consultation with an appropriately senior level of management, must periodically reassess existing Third Party relationships, following the required timeframes outlined in the Relevant Procedures, and taking into account any unanticipated changes in the conduct, reputation or risks related to the particular Third Party.

10.6 See Section 2 of this Policy for further requirements on Engaging Third Parties. Engagement Owners must also refer to the *Global Standard on Engaging Third Parties* for further requirements, prior to entering into any engagement with a Third Party.

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11. PROMOTIONAL & NON-PROMOTIONAL ACTIVITIES & MATERIALS

11.1 A key part of Our business is to provide information about Company Products and, where and when appropriate, to Promote their use. Promotional and Non-Promotional Activities and Materials must always be accurate, fair and balanced and not misleading in their content.

The Company has a duty to support the safe and effective use of Company Products. While the Company cannot provide medical advice to External Stakeholders or Patients, the Company may engage in Promotional and Non-Promotional Activities where this is appropriate and permitted by local law. For example, Promotional and Non-Promotional Activities directed to Patients (i.e., “direct to consumer” activities) may only be undertaken where this is permitted by local law.

Our activities must never undermine the relationship between HCPs and their Patients. All Promotional and Non-Promotional Activities and Materials directed to HCPs or Patients must therefore support HCPPatient Interactions and must allow the therapeutic value of Company Products to be assessed by HCPs in the interest of Patient care.

Promotional and Non-Promotional Materials about Company Products directed to Patients must be understandable, taking into account varying levels of education between and within populations. These Materials must be educational, scientific and balanced, and should encourage the Patient to seek further information from the appropriate HCP.

The Company may display Promotional or Non-Promotional exhibits, either in conjunction with a Meeting or as a stand-alone activity, according to the requirements included in Relevant Procedures. See the *Global Standard on Meetings* for further requirements on exhibits (with or without a Meeting).

11.2 The Company must only Promote Company Products once the time is right to do so (which will never be before the Company Product or Use has received the necessary Authorisation), and only consistent with the approved labeling.

Promotional Activities and Promotional Materials must meet all of the following requirements:

a) They must provide a fair balance between a Company Product’s benefits and its risks or limitations. They must not exaggerate the benefits or downplay the risks or limitations;

b) They must not mislead by distortion, exaggeration, undue emphasis, omission or in any other way, and must not involve false or unapproved statements about other companies’ products. Company Products must only be Promoted on their own proven merits; and

c) They must be capable of substantiation by reference to the approved labeling or scientific evidence consistent with the approved labeling, and must not involve discussions of Unauthorised Company Products or Uses.

Representatives and other Employees in customer-facing roles (e.g., public relations, telemarketing, Marketing, Medical) must be trained as appropriate to their role and must do all of the following in an accurate, responsible manner:

a) They must possess sufficient Company Product and disease area knowledge to present information to External Stakeholders or Patients, as appropriate to their role; and

b) They must be able to recognise inquiries regarding Unauthorised Company Products or Uses and refer these inquiries to Scientifically Trained Personnel.

All training and educational materials must be approved through the Applicable Internal Review Procedures.

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Representatives and other Employees in customer-facing roles must have available a copy of the current, approved labeling for each Company Product or Use discussion they initiate with External Stakeholders.

Any revisions to the approved labeling must be communicated to Representatives and other relevant customer-facing Employees as soon as reasonably possible.

Promotional Activities that are directed to External Stakeholders must be confined to those individuals who are recognised practitioners in the area of medicine concerning Authorised Company Products or Uses.

Promotional Activities and Promotional Materials must not be directed to External Stakeholders who have requested that they not be sent such information.

11.3 Non-Promotional Activities and Materials (including those regarding disease awareness programs) must not be used to Promote Company Products. Non-Promotional Activities and Materials must be presented in an objective, balanced manner, and must be scientific in tone, language, appearance and intent.

Where local law allows the Company to respond to Company Product-related questions from Patients, any such response may only be made by Scientifically Trained Personnel or other specifically authorised Employee or Third Party, according to Relevant Procedures. Patients communicating with the Company must not be given medical advice, but must instead be referred to their HCP.

Specifically authorised Employees are permitted to proactively issue press releases or other Non-Promotional Materials, such as those relating to financial or investor information.

Scientifically Trained Personnel are permitted to proactively present scientific data or findings regarding Authorised or Unauthorised Company Products or Uses with a view to generating further scientific insight, supporting the medical community in learning about scientific/medical progress or sharing information on current medical practice, such as at scientific congresses or similar events.

All inquiries concerning Unauthorised Company Products or Uses (whether from External Stakeholders or Patients) must be referred to Scientifically Trained Personnel. All responses to such inquiries, either oral or written, must then come directly and only from such Scientifically Trained Personnel, and must meet all of the following requirements:

a) Information must only be provided in response to unsolicited inquiries;

b) Information must be accompanied by the approved labeling, as applicable;

c) All responses must be limited to the scope of the inquiry and must provide data which are appropriate to the source of the inquiry; and

d) All responses must contain (as relevant) a statement that the information requested involves an Unauthorised Company Product or Use and that the Company does not recommend Unauthorised Uses of the Company Product.

11.4 Promotional Materials and Non-Promotional Materials must be approved through the Applicable Internal Review Procedures. Any modification to approved Promotional or Non-Promotional Materials must also be approved through the Applicable Internal Review Procedures.

You must not create, use or provide “home-made” or other unapproved Promotional or Non-Promotional Materials on any topic. You must not alter any approved Promotional or Non-Promotional Materials in any way, unless such creation or alteration is for the express purpose of submitting these Materials for review and approval.

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Promotional and Non-Promotional Materials must be assigned an expiration date upon approval, must be monitored for expiration date and must not be used after the expiration date specified in the original approval, unless they are formally re-approved through the Applicable Internal Review Procedures.

Promotional and Non-Promotional Materials must be accompanied by the approved labeling where applicable, as required by Relevant Procedures.

12. PRE-AUTHORISATION ACTIVITIES & MATERIALS

12.1 It is permissible to engage in Pre-Authorisation Activities (i.e., Profiling, Market Access and Pre-Authorisation Training activities), and to use materials supporting such activities, to prepare for a successful commercial launch of a Company Product or Use. Pre-Authorisation Activities must not be used to disguise Pre-Authorisation Company Product Promotion, or create an appearance of doing so.

Materials used for Pre-Authorisation Activities must be approved through the Applicable Internal Review Procedures.

12.2 Relevant Employees (e.g., Employees in the Marketing, Medical or Sales functions) and specifically authorised Third Parties may Profile customers prior to Authorisation of a new Company Product or Use, to assist in segmentation and targeting activities.

Profiling Activities may only be conducted if all of the following requirements are met:

a) Employees engaging in Profiling must use materials (e.g., scripts) that have been approved through the Applicable Internal Review Procedures;

b) These materials must be structured to allow for a brief conversation to collect broad information about an External Stakeholder's involvement in a disease area, such as treatments and classes used (e.g., "What classes do you use to treat this disease state?"), as well as their needs and the needs of their Patients;

c) These materials must contain clear instructions on proper execution. These materials must contain a clear, prominent prohibition against engaging in Promotional Activities about the new Company Product or Use during a Profiling conversation;

d) These materials must not contain targeted questions that are specific or unique to a Company Product or Use;

e) If asked by the External Stakeholder about the purpose of the Employee's questions, Employees may objectively state that the Company has submitted a Company Product or Use for regulatory Authorisation. Employees must not proactively discuss the Company Product or Use in any further detail; and

f) In the event that the External Stakeholder asks for more details about the Company Product or Use during a Profiling discussion, Employees (other than those in the Medical function) may provide appropriate contact information for the External Stakeholder to submit his/her own request for such information (i.e., a "professional information request"), but such Employees must not directly respond to the request or submit the request on behalf of the External Stakeholder. Employees in the Medical function may directly respond to the request and may submit a professional information request on behalf of the External Stakeholder.

During, and in support of, internal Company segmentation and targeting activities, relevant Employees may share existing knowledge and review and share prescribing data and other Company-purchased or publicly available information.

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For the avoidance of doubt, Profiling activities are also permitted after Authorisation of a new Company Product or Use.

12.3 Relevant Employees other than Representatives or their first line managers (e.g., Employees in the Market Access or Medical functions) and specifically authorised Third Parties may perform Market Access activities prior to Authorisation of a new Company Product or Use, by providing Company Product or relevant disease area information to Healthcare Organisations ("HCOs") (i.e., payers) or Public Officials to support regulatory Authorisation, pricing or reimbursement discussions.

For the avoidance of doubt, Market Access activities are also permitted after Authorisation of a new Company Product or Use.

12.4 Pre-Authorisation Training on Unauthorised Company Products or Uses may be initiated as necessary to allow for sufficient time to study and understand the new information presented regarding the Company Product or Use, disease area, disease management, External Stakeholder and Patient needs and/or the current market, including the current state of medical practice, competitors and existing therapies, and treatment protocols and Guidelines.

In making the determination of the timing and sequencing of Pre-Authorisation Training for a particular new Company Product or Use (as a guideline, no longer than 60 days before the expected Authorisation date), the Reviewer must seek input from Employees in the Medical, Training, Commercial, Compliance and/or Legal functions ("contributing functions"), as applicable, and must take into account all of the following considerations:

a) whether the training will involve a new or familiar disease area;

b) whether the training will involve an Unauthorised Company Product or an Unauthorised Use of an Authorised Company Product;

c) the likelihood of receiving significant changes and comments to the proposed labeling submitted to the regulatory agency responsible for Authorisation;

d) the risks of pre-Authorisation Promotion arising from providing training on Unauthorised Company Products or Uses and/or Promotional messages; and

e) other factors deemed relevant to the particular proposed training by the Reviewer and/or contributing functions, who are evaluating the training need and the associated risks.

All Pre-Authorisation Training materials must be marked with a clear, prominent, appropriate disclaimer stating that the material is strictly for internal purposes only (e.g., "For Internal Use Only"). These materials may include information on Unauthorised Company Products or Uses or relevant disease areas, and may include relevant reprints. These materials, or the information they contain, must not be shown, discussed, or distributed outside the Company, except where an appropriate Third Party must also be trained (e.g., a contract sales force or sales force of a co-promotional partner).

After the relevant Authorisation has been obtained, information included in Pre-Authorisation Training materials that is appropriate for discussion with External Stakeholders or Patients may be included in Promotional and/or Non-Promotional Materials specifically designed and approved for those purposes.

13. NON-INTERVENTIONAL STUDIES

13.1 Non-Interventional Studies ("NISs") must address a scientifically and medically valid question to which the Company needs the answer.

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These may include: the effectiveness and/or safety of a Company Product, medical practice and drug utilisation characterisation, disease epidemiology and clinical epidemiology, burden of disease (e.g., costs and quality of life) or other Patient-reported outcomes, and compliance/adherence to a therapeutic regimen.

13.2 The Company must not be involved in the decision to place a particular Patient on a specific Company Product. That decision is made solely by the Patient's HCP.

An NIS must not be used to induce the use or prescription of a Company Product or to train HCPs on the use of a particular therapy.

Patients must not be given a Company Product or switched to a Company Product for the purpose of taking part in the study.

13.3 NISs must be observational in nature and the collected data must undergo a formal analysis by the Company or by a Third Party on the Company's behalf.

Additional diagnostic or monitoring procedures must not be applied to the Patients, and epidemiological methods must be used for the analysis of collected data.

13.4 See Section 2 of this Policy for further requirements on NISs. Employees must also refer to the Relevant Procedures (i.e., International Procedures) for further requirements.

All NISs must be registered and their results posted according to the requirements of the Relevant Procedures.

The decision to conduct an NIS and the selection, engagement and payment of NIS investigators must meet all of the relevant requirements of Section 10 of this Policy and the *Global Standard on Engaging Third Parties.*

Support for NISs may be Given by specifically authorised Third Parties on behalf of the Company according to the Relevant Procedures.

14. INVESTIGATOR SPONSORED STUDIES

14.1 The Company recognises the importance of Investigator Sponsored Studies ("ISSs") in expanding scientific knowledge related to potential Uses of Company Products.

An ISS may be conducted with Authorised or Unauthorised Company Products or Uses.

All ISSs supported by the Company must be consistent with the research strategy for the relevant Company Product.

14.2 The Company may provide support for an ISS, but must not be considered to be the sponsor or to have any partial sponsorship role in the study in accordance with local law.

The decision to provide support for an ISS must be based on whether the study expands scientific knowledge related to potential Uses of Company Products and/or associated disease area(s) through a properly conducted independent clinical study that will result in the publication of meaningful new data.

14.3 See Section 2 of this Policy for further requirements on ISSs. Employees must also refer to the Relevant Procedures (i.e., International Procedures) for further requirements.

A contract approved through the Applicable Internal Review Procedures must be negotiated and signed by authorised representatives of the Company and the sponsor and, as applicable, the investigator, prior to study initiation.

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The level of financial support that may be provided will vary among countries. It must always be consistent with Fair Market Value for the activities to be conducted as part of the clinical trial, and payments must be milestone-driven.

The Company must not provide Company Product Samples for use in ISSs.

Support for ISSs may be Given by specifically authorised Third Parties on behalf of the Company according to the Relevant Procedures.

GLOSSARY

Advisory Boards refers to internal Meetings organised by the Company where the Company engages External Stakeholders (i.e., "**Advisors**") to provide the Company with independent advice and input within their area of expertise.

Advisors refers to the definition provided within the definition of Advisory Boards.

Applicable Internal Review Procedures refers to the review and approval requirements for Interactions and supporting materials, as set out in Relevant Procedures. These requirements include, but are not limited to, review and approval by Nominated Signatories, Scientifically Trained Personnel, the Legal Department, other specialist functions (e.g., Procurement) or line managers, as appropriate (i.e., "**Reviewers**"). Reviewers must take into account the substance, as well as the intended purpose and audience, when approving Interactions or supporting materials, and approval must be obtained in advance of any Interaction or use of supporting materials.

Authorisation or **Authorised** refers to approval of a Company Product or Use by the relevant local regulatory agency, to permit entry into the local market or to permit inclusion into the local approved labeling.

Bribe or **Bribery** refers to Giving or Receiving of something of value that is intended or could be seen as an inducement or reward for improper behaviour (i.e., behaviour that is dishonest or illegal or a breach of duty of impartiality, trust or good faith), to influence any official act or decision, or to obtain or retain business, favourable treatment or other advantage or benefit. Giving or Receiving of Bribes is a wellrecognised form of corruption (collectively referred to as "improper influence" through this Policy).

Business Unit refers to a distinct section of the Company, such as a consolidated legal entity, a local marketing organisation, a Senior Executive Team ("SET") function, a department or operating entity within a SET function, or, in some cases, a cross-functional unit comprising Employees with common responsibilities.

Community Investment Contributions refers to certain charitable Donations, Sponsorships or Partnerships Given by the Company to non-profit organisations that meet the relevant criteria described in the *Global Standard on Contributions* and the *Global Procedure and Guidance Community Investment*.

Company or **Our** refers to AstraZeneca PLC and its consolidated legal entities worldwide, including MedImmune.

Company Product refers to any pharmaceutical or biological product or medical device that is developed and/or marketed by the Company, including investigational products/devices and co-promoted products/devices. For purposes of this Policy, references to Company Products include both Authorised and Unauthorised Company Products, unless specifically noted.

Conflicts of Interest refers to situations where personal, financial or other interests, activities or associations outside of the Company may influence or compromise, or could be seen to influence or compromise, the professional duties and decisions of an Employee or Third Party providing Services.

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Contributions refers to financial or non-financial support (e.g., funds or in-kind assistance, such as resources, facilities or Employee time) Given by the Company to a Third Party. Contributions may be classified as either Donations, Sponsorships or Partnerships.

Cultural Courtesy Gift refers to a personal Gift traditionally given to acknowledge a significant national, cultural or religious holiday or event.

Donations refers to the type of Contributions Given by the Company to a non-profit or Public Sector Organisation, that may or may not be for a designated pre-defined initiative.

Employee or **You(r)** refers to all Company full-time and part-time directors, officers, employees and temporary staff worldwide.

Engagement Owners refers to Employees responsible for engaging with and managing the Services provided by a Third Party.

External Stakeholders refers to the category of Third Parties who are external customers and other relevant stakeholders, including Healthcare Professionals ("HCPs") and Healthcare Organisations ("HCOs"), Scientifically Trained Personnel engaged by the Company to provide Services, Public Officials, Patient Groups and other relevant public and private organisations and groups.

A **Facilitation Payment** (or "grease" payment) is an unofficial payment or anything else of value Given to Public Officials (including HCPs and other individuals employed by Public Sector Organisations) to secure or speed up routine actions that the recipient has a duty to perform. Examples include additional payments required to issue permits or licences, speed passage through immigration controls and release goods held at port or in customs.

Fair Market Value refers to the amount that a service or item would be worth to a typical buyer who is under no duty to purchase and who receives no special advantage. Fair Market Value is determined by the home country of the relevant service provider (who receives payment for the service) or relevant buyer of the item.

Fellowships and **Preceptorships** refer to programmes conducted at host institutions and designed to provide basic training (i.e., training necessary to obtain a degree or licence) or advanced education to HCPs or scientists in a particular specialty, therapeutic area or field of research.

Gift refers to an Item of Value that is provided as a mark of appreciation, commemoration or friendship.

Give, Giving or **Given** means to directly or indirectly offer, promise or give, or to authorise such actions.

Global Policies refers to the mandatory documents that support the Company's *Code of Conduct* by setting out the compliance commitments of the Company and the key principles to be followed to meet those commitments.

Global Standards refers to the mandatory documents that support the Global Policies by describing the compliance rules to be followed to deliver the intent stated in the Global Policies or in the Company's *Code of Conduct*.

Guidelines refers to any of the following materials and may or may not relate to a specific disease state: practice guidelines, treatment guidelines, medication algorithms, disease definitions or Research & Development quality standards. Guidelines are not intended to refer to treatment guidelines or protocols developed by HCOs, where such development is essential to the business of the HCO (such as a formulary or benefit administrator), or those developed by HCP practices.

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Healthcare Professionals ("HCPs") and **Healthcare Organisations ("HCOs")** refer to individuals or organisations, respectively, who may or do prescribe, administer, recommend, purchase, pay for, reimburse, authorise, approve or supply any Company Product or service, including any members of the medical, dental, pharmacy or nursing professions, and relevant associated administrative staff; and/or hospitals and other care organisations, health plans, health insurers, managed care organisations, pharmacies, formulary or benefit administrators and clinical research organisations, and relevant staff at such entities.

Hospitality refers to Meals, travel/accommodation, and other directly related, incidental expenses, as well as invitations or tickets to social or entertainment events. Entertainment events include sporting, theatre, music or recreational events.

Interactions refers to the business and personal interactions and activities described in this Policy.

Interacts refers to the conduct of an Interaction.

Investigator Sponsored Study (ISS) refers to a clinical study that is independently initiated, designed and conducted by an external investigator (who assumes both the sponsor and principal investigator role) or medical institution, collaborative research group or academic research organisation (which assumes the sponsor role and appoints principal investigator(s) for the study). For purposes of this Policy, sponsor/investigator is used as a generic term for both situations described above.

Item of Medical Utility refers to an Item of Value primarily designed to educate External Stakeholders or Patients or help External Stakeholders educate Patients about disease management in disease state areas relevant to Authorised Company Products or Uses.

Items of Value refers to Gifts, Items of Medical Utility, items used to assist in screening or diagnosis of Patients, items linked to the safe and effective administration of Company Products, logistical items, Samples (including Samples vouchers or coupons), awards and Patient Programmes.

Market Access refers to discussions with HCOs (i.e., payers) or Public Officials about regulatory Authorisation, pricing or reimbursement decisions.

Market Research refers to the systematic gathering and interpretation of quantitative or qualitative data on the market environment from External Stakeholders or Patients using statistical and analytical methods to gain insight and support decision-making. It does not include the gathering and interpretation of "real world evidence" or Company-purchased HCP-level data.

Meals refers to food and/or beverages.

Meeting refers to a planned gathering of External Stakeholders, which the Company organises or supports, either financially or non-financially. Non-financial support includes in-kind assistance, such as resources, facilities or Employee time. Meetings may be for an internal Employee audience, or for an external audience of External Stakeholders and may be held in-person or virtually.

Non-Interventional Study (NIS) refers, in general terms, to a study where the assignment of the Patient to a particular therapeutic strategy is not decided in advance by a study protocol but falls within the HCP's current practice, and the prescription of the Company Product is clearly separated from the decision to include the Patient in the study.

Non-Promotional Activity refers to any activity that is not a Promotional Activity that is intended to provide scientific or educational information about Company Products, relevant disease areas or health and medicines generally. Non-Promotional Activities may be oral or written and may be conducted through any medium, including the Internet. Non-Promotional Activities may take a number of forms, including, but not limited to, leaflets provided with Company Products, point of sale information, information regarding disease awareness programmes, responses to queries from External Stakeholders or Patients, information provided to inform the development of Guidelines or other information contributing to scientific exchange.

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Non-Promotional Materials refers to materials intended to be used during Non-Promotional Activities or to support Non-Promotional Activities.

Our or **Company** refers to AstraZeneca PLC and its consolidated legal entities worldwide, including MedImmune.

Other Third Parties refers to the category of Third Parties who are not External Stakeholders or Patients, including, but not limited to, the media, suppliers, distributors, agents and joint venture, co-promotion, research and licensing partners.

Partnerships refers to the type of Contributions Given by the Company in collaboration with a non-profit, for-profit or Public Sector Organisation for a pre-defined initiative, involving substantive, active Company participation and resulting in the delivery of specific, measurable outcomes. For purposes of this Policy, Partnerships do not include research or commercial collaborations aimed at the development or marketing of Company Products or services for the Company's benefit.

Patient Groups refers to non-profit organisations formally representing the needs of Patients, theirfamilies and other caregivers.

Patient Programmes refers to Items of Value, specifically vouchers, rebates, coupons, co-pay assistance cards, motivational information and other programmes and materials designed to increase access and affordability of Company Products or to enhance therapy compliance.

Patients refers to the category of Third Parties who are members of the general public and who use or may use Company Products.

Payments for Voluntary or Incidental Activities refers to any compensation or expense reimbursement Given to an individual or organisation as a "thank you" for voluntary activities or for activities that are not necessary to address a genuine business need. They do not include payments made to Third Parties for contracted Services that address a genuine business need.

Policy refers to this *AstraZeneca Global Policy on Ethical Interactions*.

Political Activities refers to attendance or participation in public policy or other political activities, including participation in political conventions or fundraising events for Political Organisations or individual Public Officials and their causes.

Political Organisations refers to political parties and their employees, Political Action Committees ("PACs") and other political organisations. Political Support is distinct from Company Contributions to Public Sector Organisations (See Section 5), as well as payments to Public Officials or Public Sector Organisations (See Sections 7 and 10).

Political Support refers to financial or non-financial support (e.g., funds or in-kind assistance, such as resources, facilities or Employee time) Given to Political Organisations or individual Public Officials and their causes.

Pre-Authorisation Activities refers to Profiling, Market Access and Pre-Authorisation Training activities undertaken by Employees in preparation for Authorisation of a new Company Product or Use.

Pre-Authorisation Training refers to Company-provided education to Representatives and/or their first line managers in preparation for Authorisation of a new Company Product or Use.

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Preceptorships and **Fellowships** refer to programmes conducted at host institutions and designed to provide basic training (i.e., training necessary to obtain a degree or licence) or advanced education to HCPs or scientists in a particular specialty, therapeutic area or field of research.

Presentation refers to each segment of a Meeting, where a distinct speaker is used and/or distinct topic is discussed.

Presentation Materials refers to all materials intended to be shown and/or distributed to the speaker or audience before, during or after a Presentation, including but not limited to speaker briefing documents, written summaries of Presentation objectives, slides and reference documents.

Profiling (also known as “disease insight visits”) refers to discussions with External Stakeholders to gain an understanding of their involvement in a disease area, including therapeutic options, medical gaps, External Stakeholder needs or the needs of Patients. For the avoidance of doubt, Profiling is not considered Market Research.

Promote, **Promotion** or **Promotional** refers to the conduct of Promotional Activities.

Promotional Activity refers to any activity that is intended or could be seen to Promote the prescription, administration, recommendation, purchase, payment, reimbursement, authorisation, approval, supply or use of Company Products or services. Promotional Activities may be oral or written and may be conducted through any medium, including the Internet.

Promotional Materials refers to materials intended to be used during Promotional Activities or to support Promotional Activities.

Promotional Speaker Programmes refers to Promotional Meetings organised by the Company to Promote Authorised Company Products or Uses, where the Company engages External Stakeholders

(i.e., “**Promotional Speakers**”) to speak to other External Stakeholders on behalf of the Company about such topics.

Promotional Speakers refers to the definition provided within the definition of Promotional Speaker Programmes.

Public Official refers to an individual who:

- Holds a legislative, administrative or judicial position of any kind, whether appointed or elected, or is a candidate for such a position, or
- Exercises a public function for a country or territory of a country, or for any Public Sector Organisation of a country or territory, at the national, regional or local level,
- Acts as an official or agent of an international Public Sector Organisation, or
- Is any other employee (including HCPs) of a Public Sector Organisation.

Public Sector Organisation refers to an agency, enterprise, or other entity of a government that sets or administers public policy or exercises executive, political and/or sovereign power through customs, institutions and laws within a country or territory of a country, at the national, regional or local level. It also includes state-owned and state-controlled entities, such as a state-owned or state-controlled hospital, university, energy company, telecommunications company or other similar state-owned or statecontrolled enterprises.

Receive, Receiving or **Received** means to directly or indirectly solicit, agree to receive or accept, or to authorise such actions.

Relevant Procedures refers to the written local and/or functional policies, standards, procedures and guidelines that contain details, processes and controls for compliance with this Policy and the supporting Global Standards.

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Representatives refers to Employees who are members of any Commercial channel who Promote Company Products directly to External Stakeholders. Representatives may be referred to as sales representatives, service team associates, inside sales agents, medical representatives or other titles, depending upon the relevant local marketing organisation. Representatives include any Third Parties fulfilling such responsibilities on the Company's behalf (i.e., a contract sales force). Representatives do not include other Employees, such as those performing marketing or market access activities.

Reviewers refers to the definition provided within the definition of Applicable Internal Review Procedures.

Sample refers to an Item of Value, specifically a unit of pharmaceutical Company Product that is not to be sold but is provided free of charge to an HCP to allow the HCP and appropriate Patients to determine tolerability and effectiveness of the Company Product.

Scientifically Trained Personnel refers to individuals employed or engaged by the Company who are highly-trained experts, who have relevant, specialised scientific and/or medical knowledge and whose responsibilities include the provision of scientific and/or medical information. This excludes anyone in the Sales, Marketing or other non-Medical Commercial functions, even if they have scientific or medical training or backgrounds.

Section refers to Sections 1 through 14 of this Policy, listed in the Table of Contents. Each Section covers a category of Interactions.

Services refers to the activities performed by a Third Party engaged by the Company. Services include activities performed on behalf of the Company, goods, services or information provided to the Company, or the activities performed in collaboration with the Company.

Sponsorships refers to the type of Contributions Given by the Company to a non-profit, for-profit or Public Sector Organisation for a pre-defined initiative, where the Company's name is associated with the initiative and/or the Company receives other substantial recognition for the Sponsorship.

Sympathy Gift refers to a personal Gift to express sympathy for bereavement or serious illness of the recipient or immediate family member.

Third Party(ies) refers to any person or organisation who is not the Company or an Employee, with whom Employees Interact. The various types of Third Parties are categorised as either External Stakeholders, Patients, or Other Third Parties. Where a Third Party fits into more than one category, the more restrictive rules apply.

Uses refers to the indications, dosing, populations and other uses of Company Products. For purposes of this Policy, references to Uses include both Authorised and Unauthorised Uses of Company Products, unless specifically noted.

Unauthorised refers to a Company Product or Use that has not yet received Authorisation from the relevant local regulatory agency. An Unauthorised Company Product may also be referred to as "investigational." An Unauthorised Use (i.e., an "off-label use") is inconsistent with the local approved labeling for a Company Product.

Voluntary or Incidental Activities refers to any voluntary activities or activities that are not necessary to address a genuine business need.

You(r) or **Employee** refers to all Company full-time and part-time directors, officers, employees and temporary staff worldwide.

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REFERENCES

Global Standard on Items of Value and Hospitality

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/effective/Global%20Standard/LDMS_001_00145832.pdf

Global Standard on Contributions

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/effective/Global%20Standard/LDMS_001_00145831.pdf

Global Procedure and Guidance Community Investment

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/effective/Procedure/LDMS_001_00146359.pdf

Global Guidance for Product Donations

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/Active/Guidance%20Materials/LDMS_001_00146361.pdf

Global Standard on Meetings

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/effective/Global%20Standard/LDMS_001_00145768.pdf

Global Standard on Engaging Third Parties

http://portalapps.is.astrazeneca.net/azgard-components/ldms-documents/Global_Compliance/effective/Global%20Standard/LDMS_001_00145830.pdf

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Exhibit I
Invoicing Requirements

Subject to any separate instructions to be agreed between the Parties regarding payments to health care professionals or health care organizations in the Territory, as required by applicable laws and regulations, invoices should be sent to:

AstraZeneca AB
AstraZeneca R&D Mölndal
Att. Christina Wågestrand
CVGI iMed Strategy
431 83 Mölndal
Sweden

Invoices shall contain the following information:

a. AstraZeneca's Agreement ID: Elisabeth Björk, Global Product Vice President, Global Medicines Development, ECHO Project ID 10007956
b. the number and date of invoice
c. the latest date of payment according to Agreement
d. description of services
e. name and address of FibroGen
f. FibroGen VAT registration number or EIN/TaxID,
g. AstraZeneca's VAT registration number SE556011748201 (in EC),
h. VAT rate (%), if any,
i. taxable amount per VAT rate, if any,
j. VAT amount, if any
k. legal reference or explanation when VAT is excluded,
l. invoice amount and currency,
m. bank details, preferably IBAN code, otherwise account number and bank code, and SWIFT-address.

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INDEMNITY AGREEMENT

THIS INDEMNITY AGREEMENT (this "**Agreement**") dated as of _____, 20____, is made by and between **FIBROGEN, INC.**, a Delaware corporation (the "**Company**"), and _____ ("**Indemnitee**").

RECITALS

A. The Company desires to attract and retain the services of highly qualified individuals as directors, officers, employees and agents.

B. The Amended and Restated Bylaws of the Company (the "**Bylaws**") require that the Company indemnify its directors and officers, and empowers the Company to indemnify its employees and agents, as authorized by the General Corporation Law of the State of Delaware, as amended (the "**Code**"), under which the Company is organized and such Bylaws expressly provide that the indemnification provided therein is not exclusive and contemplates that the Company may enter into separate agreements with its directors, officers and other persons to set forth specific indemnification provisions.

C. Indemnitee does not regard the protection currently provided by applicable law, the Bylaws, the Company's other governing documents and available insurance as adequate under the present circumstances, and the Company has determined that Indemnitee and other directors, officers, employees and agents of the Company may not be willing to serve or continue to serve in such capacities without additional protection.

D. The Company desires and has requested Indemnitee to serve or continue to serve as a director, officer, employee or agent of the Company, as the case may be, and has proffered this Agreement to Indemnitee as an additional inducement to serve in such capacity.

E. Indemnitee is willing to serve, or to continue to serve, as a director, officer, employee or agent of the Company, as the case may be, if Indemnitee is furnished the indemnity provided for herein by the Company.

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants and agreements set forth herein, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions.

(a) Agent. For purposes of this Agreement, the term "Agent" of the Company means any person who: (i) is or was a director, officer, employee, agent or other fiduciary of the Company or a subsidiary of the Company; or (ii) is or was serving at the request or for the convenience of, or representing the interests of, the Company or a subsidiary of the Company, as a director, officer, employee, agent or other fiduciary of a foreign or domestic

corporation, partnership, joint venture, trust or other enterprise, including as a deemed fiduciary thereto.

(b) Change in Control. For purposes of this Agreement, the term "Change in Control" shall be deemed to have occurred if:

(i) any person, as that term is used in Section 13(d) and Section 14(d)(2) of the Securities Exchange Act of 1934, as amended ("**Exchange Act**"), becomes, is discovered to be, or files a report on Schedule 13D or 14D-1 (or any successor schedule, form or report) disclosing that such person is a beneficial owner (as defined in Rule 13d-3 under the Exchange Act or any successor rule or regulation), directly or indirectly, of securities of the Company representing 20% or more of the total voting power of the Company's then outstanding voting securities (unless such person becomes such a beneficial owner in connection with the initial public offering of the Company);

(ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof;

(iii) the Company is merged, consolidated or reorganized into or with another corporation or other legal person (an "**Acquiring Person**") or securities of the Company are exchanged for securities of an Acquiring Person, and immediately after such merger, consolidation, reorganization or exchange less than a majority of the combined voting power of the then outstanding securities of the Acquiring Person immediately after such transaction are held, directly or indirectly, in the aggregate by the holders of voting securities immediately prior to such transaction;

(iv) the Company, in any transaction or series of related transactions, sells or otherwise transfers all or substantially all of its assets to an Acquiring Person, and less than a majority of the combined voting power of the then outstanding securities of the Acquiring Person immediately after such sale or transfer is held, directly or indirectly, in the aggregate by the holders of voting securities immediately prior to such sale or transfer;

(v) the Company files a report or proxy statement with the Securities and Exchange Commission pursuant to the Exchange Act disclosing that a change in control of the Company has or may have occurred or will or may occur in the future pursuant to any then existing contract or transaction; or

(vi) any other transaction or series of related transactions occur that have substantially the effect of the transactions specified in any of the preceding clauses in this paragraph (b).

Notwithstanding the provisions of Section 1(b)(1) or 1(b)(4), unless otherwise determined in a specific case by majority vote of the Board of Directors of the Company, a Change of Control shall not be deemed to have occurred for purposes of this Agreement solely

because (i) the Company, (ii) an entity in which the Company directly or indirectly beneficially owns 50% or more of the voting securities or (iii) any Company sponsored employee stock ownership plan, or any other employee benefit plan of the Company, either files or becomes obligated to file a report or a proxy statement under or in response to Schedule 13D, Schedule 14D-1, Form 8-K or Schedule 14A (or any successor schedule, form or report or item therein) under the Exchange Act, disclosing beneficial ownership by it of shares of stock of the Company, or because the Company reports that a Change in Control of the Company has or may have occurred or will or may occur in the future by reason of such beneficial ownership.

(c) Expenses. For purposes of this Agreement, the term "Expenses" shall be broadly construed and shall include, without limitation, all direct and indirect costs of any type or nature whatsoever (including, without limitation, all attorneys', witness, or other professional fees and related disbursements, and other out-of-pocket costs of whatever nature, any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement, ERISA excise taxes, and premium, security for, and other costs relating to any cost bond, supersedeas bond or appeal bond), actually and reasonably incurred by Indemnitee in connection with the investigation, defense or appeal of a proceeding or establishing or enforcing a right to indemnification under this Agreement, the Code or otherwise, but shall not include any judgments, fines or penalties actually levied against Indemnitee for such individual's violations of law or amounts paid in settlement by or on behalf of Indemnitee. The term "Expenses" shall also include reasonable compensation for time spent by Indemnitee for which he is not compensated by the Company or any subsidiary or third party (i) for any period during which Indemnitee is not an Agent, in the employment of, or providing services for compensation to, the Company or any subsidiary; and (ii) if the rate of compensation and estimated time involved is approved by the directors of the Company who are not parties to any action with respect to which Expenses are incurred, for Indemnitee while an Agent of, employed by, or providing services for compensation to, the Company or any subsidiary.

(d) Proceedings. For purposes of this Agreement, the term "proceeding" shall be broadly construed and shall include, without limitation, any threatened, pending, or completed action, suit, claim, counterclaim, cross claim, arbitration, mediation, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought in the right of the Company or otherwise and whether of a civil, criminal, administrative or investigative nature, and whether formal or informal in any case, in which Indemnitee was, is or will be involved as a party, potential party, non-party witness or otherwise by reason of: (i) the fact that Indemnitee is or was a director or officer of the Company; (ii) the fact that any action taken by Indemnitee (or a failure to take action by Indemnitee) or of any action (or failure to act) on Indemnitee's part while acting as an Agent; or (iii) the fact that Indemnitee is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise (including as a deemed fiduciary thereto), and in any such case described above, whether or not serving in any such capacity at the time any liability or Expense is incurred for which indemnification, reimbursement, or advancement of Expenses may be provided under this Agreement. If the Indemnitee believes in good faith that a given situation may lead to or culminate in the institution of a proceeding, this shall be considered a proceeding under this paragraph.

(e) Subsidiary. For purposes of this Agreement, the term "subsidiary" means any corporation, limited liability company or other entity of which more than 50% of the outstanding voting securities or equity interests are owned, directly or indirectly, by the Company and one or more of its subsidiaries, and any other corporation, limited liability company, partnership, joint venture, trust, employee benefit plan or other enterprise of which Indemnitee is or was serving as an Agent.

(f) Independent Counsel. For purposes of this Agreement, the term "independent counsel" means a law firm, or a partner (or, if applicable, member) of such a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five (5) years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party, or (ii) any other party to the proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "independent counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees and expenses of the Independent Counsel referred to above and to fully indemnify such counsel against any and all expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

2. Agreement to Serve. Indemnitee will serve, or continue to serve, as an Agent, as the case may be, faithfully and to the best of his or her ability, at the will of such entity (or under separate agreement, if such agreement exists), in the capacity Indemnitee currently serves such entity , so long as Indemnitee is duly appointed or elected and qualified in accordance with the applicable provisions of governance documents of such entity, or until such time as Indemnitee tenders his or her resignation in writing; provided, however, that nothing contained in this Agreement is intended as an employment agreement between Indemnitee and the Company or any of its subsidiaries or to create any right to continued employment of Indemnitee with the Company or any of its subsidiaries in any capacity.

The Company acknowledges that it has entered into this Agreement and assumes the obligations imposed on it hereby, in addition to and separate from its obligations to Indemnitee under the Bylaws, to induce Indemnitee to serve, or continue to serve, as an Agent, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an Agent.

3. Indemnification.

(a) Indemnification in Third Party Proceedings. Subject to Section 10 below, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, to the fullest extent permitted by applicable law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding, other than an proceeding by or in the right of the Company to procure a judgment in its favor, for any and all Expenses, judgments, fines and amounts paid in settlement (including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses, judgments, fines and amounts paid in settlement), actually and reasonably incurred by Indemnitee in

connection with the investigation, defense, settlement or appeal of such proceeding, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company and, in the case of a criminal proceeding had no reasonable cause to believe that Indemnitee's conduct was unlawful. The parties hereto intend that this Agreement shall provide to the fullest extent permitted by law for indemnification in excess of that expressly permitted by statute, including, without limitation, any indemnification provided by the certificate of incorporation of the Company, the Bylaws, vote of its stockholders or disinterested directors or applicable law.

(b) Indemnification in Derivative Actions and Direct Actions by the Company. Subject to Section 10 below, the Company shall indemnify Indemnitee to the fullest extent permitted by the Code, as the same may be amended from time to time (but, to the fullest extent permitted by applicable law, only to the extent that such amendment permits Indemnitee to broader indemnification rights than the Code permitted prior to adoption of such amendment), if Indemnitee is a party to or threatened to be made a party to or otherwise involved in any proceeding by or in the right of the Company to procure a judgment in its favor, against any and all Expenses actually and reasonably incurred by Indemnitee in connection with the investigation, defense, settlement, or appeal of such proceedings, if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in or not opposed to the best interests of the Company. No indemnification for Expenses shall be made under this Section 3(b) in respect of any claim, issue or matter as to which Indemnitee shall have been finally adjudged by a court competent jurisdiction to be liable to the Company, unless and only to the extent that the Chancery Court of the State of Delaware or any court in which the proceeding was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, Indemnitee is fairly and reasonably entitled to indemnification.

4. Indemnification of Expenses of Successful Party. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by law and to the extent that Indemnitee is a party to (or a participant in) any proceeding and has been successful on the merits or otherwise in defense of any proceeding or in defense of any claim, issue or matter therein, in whole or part, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred in connection with the investigation, defense or appeal of such proceeding. If Indemnitee is not wholly successful in such proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection with or related to each successfully resolved claim, issue or matter to the fullest extent permitted by law. For these purposes, Indemnitee will be deemed to have been "successful on the merits" upon termination of any proceeding or of any claim, issue or matter therein, by the winning of a motion to dismiss (with or without prejudice), motion for summary judgment, settlement (with or without court approval), or upon a plea of nolo contendere or its equivalent.

5. Partial Indemnification; Witness Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any expenses actually and reasonably incurred by Indemnitee in the investigation, defense,

settlement or appeal of a proceeding, but is precluded by applicable law or the specific terms of this Agreement to indemnification for the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled. Notwithstanding any other provision of this Agreement, to the fullest extent permitted by applicable law and to the extent that Indemnitee is, by reason of Indemnitee's acting as an Agent, a witness or otherwise asked to participate in any proceeding to which Indemnitee is not a party, Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by Indemnitee or on Indemnitee's behalf in connection therewith.

6. Advancement of Expenses. The Company shall advance the Expenses incurred by Indemnitee in connection with any proceeding, and such advancement shall be made within twenty (20) days after the receipt by the Company of a statement or statements requesting such advances (which shall include invoices received by Indemnitee in connection with such Expenses but, in the case of invoices in connection with legal services, any references to legal work performed or to expenditures made that would cause Indemnitee to waive any privilege accorded by applicable law shall not be included with the invoice). Advances shall be unsecured, interest free and made without regard to Indemnitee's ability to repay the expenses. Indemnitee's right to such advancement is not subject to the satisfaction of any standard of conduct. Advances shall be made without regard to Indemnitee's ultimate entitlement to be indemnified, held harmless or exonerated under the other provisions of this Agreement. Such advances are intended to be an obligation of the Company to Indemnitee hereunder and shall in no event be deemed to be a personal loan. Advances shall include any and all Expenses actually and reasonably incurred by Indemnitee pursuing an action to enforce Indemnitee's right to indemnification under this Agreement, or otherwise and this right of advancement, including expenses incurred preparing and forwarding statements to the Company to support the advances claimed. Indemnitee acknowledges that the execution and delivery of this Agreement shall constitute an undertaking providing that Indemnitee shall, to the fullest extent required by law, repay the advance (without interest) if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to appeal, that Indemnitee is not entitled to be indemnified by the Company. No other undertaking shall be required. The right to advances under this Section shall continue until final disposition of any proceeding, including any appeal therein. This Section 6 shall not apply to any claim made by Indemnitee for which indemnity is excluded pursuant to Section 10(b). Without limiting the generality or effect of the foregoing, within thirty days after any request by Indemnitee, the Company shall, in accordance with such request (but without duplication), (a) pay such Expenses on behalf of Indemnitee, (b) advance to Indemnitee funds in an amount sufficient to pay such Expenses, or (c) reimburse Indemnitee for such Expenses.

7. Notice and Other Indemnification Procedures.

(a) Notification of Proceeding. Unless the Company is a co-defendant or has otherwise received written notification in the proceeding, Indemnitee will notify the Company in writing promptly upon being served with any summons, citation, subpoena, complaint, indictment, information or other document relating to any proceeding or matter which may be subject to indemnification or advancement of Expenses covered hereunder. The written notification to the Company shall include a description of the nature of the proceeding and the facts underlying the proceeding. To obtain indemnification under this Agreement, Indemnitee

shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification following the final disposition of such proceeding. The failure of Indemnitee to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise and any delay in so notifying the Company shall not constitute a waiver by Indemnitee of any rights under this Agreement.

(b) Request for Indemnification and Indemnification Payments. Indemnitee shall notify the Company promptly in writing upon receiving notice of any demand, judgment or other requirement for payment that Indemnitee reasonably believes to be subject to indemnification under the terms of this Agreement, and shall request payment thereof by the Company. Indemnification payments requested by Indemnitee under Section 3 hereof shall be made by the Company no later than sixty (60) days after receipt of the written request of Indemnitee. Claims for advancement of Expenses shall be made under the provisions of Section 6 herein.

(c) Application for Enforcement. In the event the Company fails to make timely payments as set forth in Sections 6 or 7(b) above, Indemnitee shall have the right to apply to any court of competent jurisdiction for the purpose of enforcing Indemnitee's right to indemnification or advancement of Expenses pursuant to this Agreement. In such an enforcement hearing or proceeding, the burden of proof shall be on the Company to prove that indemnification or advancement of Expenses to Indemnitee is not required under this Agreement or permitted by applicable law. Any determination by the Company (including its Board of Directors, a committee thereof, stockholders or independent counsel) that Indemnitee is not entitled to indemnification hereunder, shall not be a defense by the Company to the action nor create any presumption that Indemnitee is not entitled to indemnification or advancement of expenses hereunder.

(d) Indemnification of Certain Expenses. The Company shall indemnify Indemnitee against all Expenses incurred in connection with any hearing or proceeding under this Section 7 unless the Company prevails in such hearing or proceeding on the merits in all material respects.

8. Assumption of Defense. In the event the Company shall be requested by Indemnitee to pay the Expenses of any proceeding, the Company, if appropriate, shall be entitled to assume the defense of such proceeding, or to participate to the extent permissible in such proceeding, with counsel reasonably acceptable to Indemnitee. Upon assumption of the defense by the Company and the retention of such counsel by the Company, the Company shall not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same proceeding, provided that Indemnitee shall have the right to employ separate counsel in such proceeding at Indemnitee's sole cost and expense. Notwithstanding the foregoing, if Indemnitee's counsel delivers a written notice to the Company stating that such counsel has reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense or the Company shall not, in fact, have employed counsel or otherwise actively pursued the defense of such proceeding within a reasonable time, then in any such event the fees and expenses of Indemnitee's counsel

to defend such proceeding shall be subject to the indemnification and advancement of Expenses provisions of this Agreement.

9. Insurance. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has an insurance policy or policies providing liability insurance for Agents in effect or otherwise potentially available, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies. In the event of a Change in Control or the Company's becoming insolvent (including being placed into receivership or entering the federal bankruptcy process and the like), the Company shall maintain in force any and all insurance policies then maintained by the Company in providing insurance (including directors' and officers' liability, fiduciary, employment practices or otherwise) in respect of Indemnitee, for a fixed period of six years thereafter (a "**Tail Policy**"). Such coverage shall be placed by the incumbent insurance brokers with the incumbent insurance carriers using the policies that were in place at the time of the Change in Control or insolvency, as applicable (unless the incumbent carriers will not offer such policies, in which case the Tail Policy placed by the incumbent insurance broker shall be substantially comparable in scope and amount as the expiring policies, and the insurance carriers for the Tail Policy shall have an AM Best rating that is the same or better than the AM Best ratings of the expiring policies).

10. Exceptions.

(a) Certain Matters. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee on account of any proceeding with respect to (i) remuneration paid to Indemnitee if it is determined by a final adjudication not subject to further appeal that such remuneration was in violation of law; or (ii) a final adjudication not subject to further appeal rendered against Indemnitee for an accounting, disgorgement or repayment of profits made from the purchase or sale by Indemnitee of securities of the Company against Indemnitee or in connection with a settlement by or on behalf of Indemnitee to the extent it is acknowledged by Indemnitee and the Company that such amount paid in settlement resulted from Indemnitee's conduct from which Indemnitee received monetary personal profit, pursuant to the provisions of Section 16(b) of the Securities Exchange Act of 1934, as amended, or other provisions of any federal, state or local statute or rules and regulations thereunder.

(b) Claims Initiated by Indemnitee. Any provision herein to the contrary notwithstanding, the Company shall not be obligated to indemnify or advance Expenses to Indemnitee with respect to proceedings or claims initiated or brought by Indemnitee against the Company or its directors, officers, employees or other agents and not by way of defense, except (i) with respect to proceedings brought to establish or enforce a right to indemnification or advancement under this Agreement or under any other agreement, provision in the Bylaws or the Amended and Restated Certificate of Incorporation of the Company (the "**Certificate**") or applicable law, or (ii) with respect to any other proceeding initiated by Indemnitee that is either approved by the Board of Directors or Indemnitee's participation is required by applicable law.

However, indemnification or advancement of Expenses may be provided by the Company in specific cases if the Board of Directors determines it to be appropriate.

(c) Settlements. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee under this Agreement for any amounts paid in settlement of a proceeding effected without the Company's written consent, which shall not be unreasonably withheld. Neither the Company nor Indemnitee shall unreasonably withhold consent to any proposed settlement; provided, however, that the Company may in any event decline to consent to (or to otherwise admit or agree to any liability for indemnification hereunder in respect of) any proposed settlement if the Company is also a party in such proceeding and determines in good faith that such settlement is not in the best interests of the Company and its stockholders. The Company shall have the right to settle any proceeding (or any part thereof) with respect to persons other than Indemnitee (including the Company) without the consent of Indemnitee (so long as doing so would not impose a penalty or limitation on the Indemnitee without Indemnitee's written consent); provided, however, that the Company shall not, on its own behalf, settle any part of any proceeding to which Indemnitee is party with respect to other parties (including the Company) without the written consent of Indemnitee if any portion of such settlement is to be funded from insurance proceeds unless approved by (a) the written consent of Indemnitee or (b) a majority of the independent members of the Company's Board of Directors; provided, further, that the right to constrain the Company's use of corporate insurance as described in this section shall terminate at the time the Company concludes (per the terms of this Agreement) that (i) Indemnitee is not entitled to indemnification pursuant to this agreement, or (ii) such indemnification obligation to Indemnitee has been fully discharged by the Company.

(d) Securities Act Liabilities. Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee or otherwise act in violation of any undertaking appearing in and required by the rules and regulations promulgated under the Securities Act of 1933, as amended (the "**Act**"), or in any registration statement filed with the SEC under the Act. Indemnitee acknowledges that paragraph (h) of Item 512 of Regulation S-K currently generally requires the Company to undertake in connection with any registration statement filed under the Act to submit the issue of the enforceability of Indemnitee's rights under this Agreement in connection with any liability under the Act on public policy grounds to a court of appropriate jurisdiction and to be governed by any final adjudication of such issue. Indemnitee specifically agrees that any such undertaking shall supersede the provisions of this Agreement and to be bound by any such undertaking.

(e) Prior Payments Any provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement to indemnify or advance Expenses to Indemnitee under this Agreement for which payment has actually been made to or on behalf of Indemnitee under any insurance policy procured by the Company or other indemnity provision, expect with respect to any excess beyond the amount paid under any insurance policy or indemnity policy.

11. Nonexclusivity and Survival of Rights. The provisions for indemnification and advancement of expenses set forth in this Agreement shall not be deemed exclusive of any other

rights which Indemnitee may at any time be entitled under any provision of applicable law, the Certificate, the Bylaws or other agreements, both as to action in Indemnitee's official capacity and Indemnitee's action as an Agent, in any court in which a proceeding is brought, and Indemnitee's rights hereunder shall continue after Indemnitee has ceased acting as an Agent and shall inure to the benefit of the heirs, executors, administrators and assigns of Indemnitee. The obligations and duties of the Company to Indemnitee under this Agreement shall be binding on the Company and its successors and assigns until terminated in accordance with its terms. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company, by written agreement, expressly to assume and agree to perform this Agreement as well as indemnify Indemnitee to the fullest extent permitted by law.

No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his or her corporate status prior to such amendment, alteration or repeal. To the extent that a change in the Code, whether by statute or judicial decision, permits greater indemnification or advancement of Expenses than would be afforded currently under the Certificate, the Bylaws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, by Indemnitee shall not prevent the concurrent assertion or employment of any other right or remedy by Indemnitee.

12. Term. This Agreement shall continue until and terminate upon the later of: (a) ten (10) years after the date that Indemnitee shall have ceased to serve as Agent; or (b) one (1) year after the final termination of any proceeding, including any appeal then pending, in respect to which Indemnitee was granted rights of indemnification or advancement of Expenses hereunder.

To the fullest extent permitted by applicable law, no legal action shall be brought and no cause of action shall be asserted by or in the right of the Company against an Indemnitee or an Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of five (5) years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such five-year period; provided, however, that if any shorter period of limitations is otherwise applicable to such cause of action, such shorter period shall govern.

13. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who, at the request and expense of the Company, shall execute all papers required and shall do everything that may be reasonably necessary to secure such rights, including the execution of such documents necessary to enable the Company effectively to bring suit to enforce such rights.

14. Interpretation of Agreement. It is understood that the parties hereto intend this Agreement to be interpreted and enforced so as to provide indemnification and advancement of Expenses to Indemnitee to the fullest extent now or hereafter permitted by law.

15. Severability. If any provision of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever, (a) the validity, legality and enforceability of the remaining provisions of the Agreement (including without limitation, all portions of any paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Agreement (including, without limitation, all portions of any paragraph of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable and to give effect to Section 14 hereof.

16. Amendment and Waiver. No supplement, modification, amendment, or cancellation of this Agreement shall be binding unless executed in writing by the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

17. Notice. Except as otherwise provided herein, any notice or demand which, by the provisions hereof, is required or which may be given to or served upon the parties hereto shall be in writing and, if by electronic transmission, shall be deemed to have been validly served, given or delivered when sent, if by overnight delivery, courier or personal delivery, shall be deemed to have been validly served, given or delivered upon actual delivery and, if mailed, shall be deemed to have been validly served, given or delivered three (3) business days after deposit in the United States mail, as registered or certified mail, with proper postage prepaid and addressed to the party or parties to be notified at the addresses set forth on the signature page of this Agreement (or such other address(es) as a party may designate for itself by like notice). If to the Company, notices and demands shall be delivered to the attention of the Secretary of the Company.

18. Governing Law. This Agreement shall be governed exclusively by and construed according to the laws of the State of Delaware, as applied to contracts between Delaware residents entered into and to be performed entirely within Delaware.

19. Consent to Jurisdiction. The Company and Indemnitee hereby irrevocably and unconditionally (a) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "**Delaware Court**"), and not in any other state or federal court in the United States of America or any court in any other country, (b) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (c) agree to appoint, to the extent such party is not otherwise subject to service of process in the State of Delaware, an agent in the State of Delaware as such party's agent for acceptance of legal process in connection with any such action or proceeding against such party with the same legal force and validity as if served upon such party personally within the State of Delaware, (d) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and

(e) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

20. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute but one and the same Agreement. Only one such counterpart need be produced to evidence the existence of this Agreement.

21. Headings. The headings of the sections of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction hereof.

22. Equitable Remedies. The Company and Indemnitee agree that a monetary remedy for breach of this Agreement may be inadequate, impracticable and difficult of proof, and further agree that such breach may cause Indemnitee irreparable harm. Accordingly, the parties hereto agree that Indemnitee may enforce this Agreement by seeking injunctive relief and/or specific performance hereof, without any necessity of showing actual damage or irreparable harm (having agreed that actual and irreparable harm will result in not forcing the Company to specifically perform its obligations pursuant to this Agreement) and that by seeking injunctive relief and/or specific performance, Indemnitee shall not be precluded from seeking or obtaining any other relief to which he may be entitled. The Company and Indemnitee further agree that Indemnitee shall be entitled to such specific performance and injunctive relief, including temporary restraining orders, preliminary injunctions and permanent injunctions, without the necessity of posting bonds or other undertaking in connection therewith. The Company acknowledges that in the absence of a waiver, a bond or undertaking may be required of Indemnitee by the Court, and the Company hereby waives any such requirement of a bond or undertaking.

23. Contribution. To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such proceeding in order to reflect (a) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such proceeding; and/or (b) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transaction(s).

24. Offset. The Company's obligation to indemnify, hold harmless, exonerate or advance Expenses hereunder to Indemnitee who is or was serving at the request of the Company as a director, officer, trustee, partner, managing member, fiduciary, employee or agent of any other enterprise shall be reduced by any amount Indemnitee has actually received as indemnification, hold harmless or exoneration payments or advancement of expenses from such enterprise. Notwithstanding any other provision of this Agreement to the contrary, (a) Indemnitee shall have no obligation to reduce, offset, allocate, pursue or apportion any indemnification, hold harmless, exoneration, advancement, contribution or insurance coverage

among multiple parties possessing such duties to Indemnitee prior to the Company's satisfaction and performance of all its obligations under this Agreement, and (b) the Company shall perform fully its obligations under this Agreement without regard to whether Indemnitee holds, may pursue or has pursued any indemnification, advancement, hold harmless, exoneration, contribution or insurance coverage rights against any person or entity other than the Company.

25. Entire Agreement. Subject to Section 11 hereof, this Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements, understandings and negotiations, written and oral, between the parties with respect to the subject matter of this Agreement; provided, however, that this Agreement is a supplement to and in furtherance of the Certificate, the Bylaws, the Code and any other applicable law, and shall not be deemed a substitute therefor, and does not diminish or abrogate any rights of Indemnitee thereunder.

[REMAINDER OF THIS PAGE LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have entered into this Agreement effective as of the date first above written.

COMPANY

FIBROGEN, INC.

By: _____
Name: _____
Title: _____

Address:

INDEMNITEE

_____
Signature of Indemnitee

_____
Print or Type Name of Indemnitee

Address: