As confidentially submitted to the Securities and Exchange Commission on September 19, 2018 as Amendment No. 2 to the draft registration statement.
This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.
Registration Statement No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form F-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Orchard Rx Limited[1]

(Exact name of registrant as specified in its charter)

England and Wales	**2836**	**Not applicable**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

108 Cannon Street
London EC4N 6EU
United Kingdom
Tel: +44 (0) 203 384 6700
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Cogency Global Inc.
10 East 40th Street 10th Floor
New York, New York 10016
+1 212 947 7200
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Mitchell S. Bloom **Michael H. Bison** **Goodwin Procter LLP** **100 Northern Avenue** **Boston, MA 02210** **(617) 570-1000**	**Andrew Harrow** **Goodwin Procter (UK) LLP** **100 Cheapside** **London EC2V 6DY** **United Kingdom** **+44 20 7447 4200**	**Deanna L. Kirkpatrick** **Marcel R. Fausten** **Davis Polk & Wardwell LLP** **450 Lexington Avenue** **New York, NY 10017** **(212) 450-4000**

Approximate date of commencement of proposed sale to public: As soon as practicable after this registration statement becomes effective.

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 an emerging growth company as defined in Rule 405 of the Securities Act.

Emerging growth company ☑

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

† The term "new or revised financial accounting standards" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	**Proposed maximum aggregate offering price(1)**	**Amount of registration fee(2)**
Ordinary shares, nominal value £ per share(3)	$	$

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the aggregate offering price of additional ordinary shares represented by American Depositary Shares, or ADSs, that the underwriters have the option to purchase.

(2) 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.

(3) These ordinary shares are represented by ADSs, each of which represents ordinary shares of the registrant. ADSs issuable upon deposit of the ordinary shares registered hereby are being registered pursuant to a separate registration statement on Form F-6 (File No. 333-).

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), shall determine.

1. We intend to alter the legal status of our company under English law from a private limited company by re-registering as a public limited company and changing our name from Orchard Rx Limited to Orchard Therapeutics plc prior to the completion of this offering. Prior to re-registration, Orchard Therapeutics Limited will change its name to Orchard Therapeutics (Europe) Limited.

EXPLANATORY NOTE

Orchard Rx Limited is filing this Amendment No. 2 (this “Amendment”) to its Registration Statement on Form F-1 (the “Registration Statement”) to file certain exhibits to the Registration Statement as indicated in the index to exhibits in Item 8 of Part II of the Registration Statement. Accordingly, this Amendment consists only of the facing page, this explanatory note, Part II of the Registration Statement, the signature page to the Registration Statement and the filed exhibits. Part I of the Registration Statement is unchanged and has therefore been omitted.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 6. Indemnification of Directors and Officers.

Subject to the Companies Act 2006, members of the registrant's board of directors and its officers (excluding auditors) have the benefit of the following indemnification provisions in the registrant's Articles of Association:

Current and former members of the registrant's board of directors or officers shall be reimbursed for:

(i) all costs, charges, losses, expenses and liabilities sustained or incurred in relation to his or her actual or purported execution of his or her duties in relation to the registrant, including any liability incurred in defending any criminal or civil proceedings; and

(ii) expenses incurred or to be incurred in defending any criminal or civil proceedings, in an investigation by a regulatory authority or against a proposed action to be taken by a regulatory authority, or in connection with any application for relief under the statutes of the United Kingdom and any other statutes that concern and affect the registrant as a company, or collectively the Statutes, arising in relation to the registrant or an associated company, by virtue of the actual or purposed execution of the duties of his or her office or the exercise of his or her powers.

In the case of current or former members of the registrant's board of directors, there shall be no entitlement to reimbursement as referred to above for (i) any liability incurred to the registrant or any associated company,(ii) the payment of a fine imposed in any criminal proceeding or a penalty imposed by a regulatory authority for non-compliance with any requirement of a regulatory nature, (iii) the defense of any criminal proceeding if the member of the registrant's board of directors is convicted, (iv) the defense of any civil proceeding brought by the registrant or an associated company in which judgment is given against the director, and (v) any application for relief under the statutes of the United Kingdom and any other statutes that concern and affect the registrant as a company in which the court refuses to grant relief to the director.

In addition, members of the registrant's board of directors and its officers who have received payment from the registrant under these indemnification provisions must repay the amount they received in accordance with the Statutes or in any other circumstances that the registrant may prescribe or where the registrant has reserved the right to require repayment.

The underwriting agreement the registrant will enter into in connection with the offering of ADSs being registered hereby provides that the underwriters will indemnify, under certain conditions, the registrant's board of directors and its officers against certain liabilities arising in connection with this offering.

Item 7. Recent Sales of Unregistered Securities.

In the three year preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act:

(a) Issuances of Share Capital

In September 2015, Orchard Therapeutics Limited issued one ordinary share of £1.00 nominal value to one investor for consideration of £1.00 which share, on December 17, 2015, was subdivided into 100,000 ordinary shares of £0.00001 nominal value.

In December 2015, Orchard Therapeutics Limited issued 2,500,000 ordinary shares to one investor for aggregate consideration of £25.00.

In December 2015, Orchard Therapeutics Limited issued 770,175 ordinary shares to two individuals for aggregate consideration of £7.70.

In February 2016, Orchard Therapeutics Limited issued 4,300,000 shares to one investor as consideration for entering into a license agreement.

In April 2016, Orchard Therapeutics Limited issued 1,000,000 ordinary shares to three investors and three individuals as consideration for entering into a license agreement.

In December 2016, Orchard Therapeutics Limited issued 735,000 ordinary shares to one investor as consideration for entering into a license agreement.

In February 2017, Orchard Therapeutics Limited issued 320,000 ordinary shares to one investor for aggregate consideration of £3.20.

In March 2017, Orchard Therapeutics Limited issued 825,000 ordinary shares to one investor as consideration for satisfying a milestone under a license agreement.

In December 2017, Orchard Therapeutics Limited issued 704,545 ordinary shares to one investor as consideration for satisfying a milestone under a license agreement.

In February 2018, Orchard Therapeutics Limited issued 437,049 ordinary shares to one investor as consideration for entering into a license agreement.

In June 2018, Orchard Therapeutics Limited issued 188,462 ordinary shares to one investor as consideration for satisfying a milestone under a license agreement.

In February 2016, with subsequent closings in May 2016, July 2016, August 2016, January 2017 and February 2017, Orchard Therapeutics Limited issued an aggregate of 21,000,000 Series A convertible preferred shares to two investors for aggregate consideration of approximately £21.0 million.

In March 2017, with subsequent closings in August 2017, October 2017, December 2017 and January 2018, Orchard Therapeutics Limited issued an aggregate of 21,198,154 Series B convertible preferred shares to 17 investors for aggregate consideration of approximately £85.2 million.

In April 2018, Orchard Therapeutics Limited issued an aggregate of 15,563,230 Series B-2 convertible preferred shares to GSK pursuant to the terms of an asset purchase and license agreement.

In August 2018, Orchard Therapeutics Limited issued an aggregate of 17,421,600 Series C convertible preferred shares to 60 investors for aggregate consideration of approximately $150.0 million.

No underwriters were involved in the foregoing sales of securities. The sales of securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated thereunder, as transactions by an issuer not involving a public offering. All of the purchasers in these transactions represented to us in connection with their purchase that they were acquiring the securities for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. Such purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

(b) Grants and Exercises of Options and Restricted Share Awards

We have granted share options to purchase an aggregate of 10,296,532 ordinary shares, with exercise prices ranging from £0.00001 to £5.68 per share, to employees and directors pursuant to the 2016 Plan. In May 2018, Orchard Therapeutics Limited issued 13,125 ordinary shares to one individual upon exercise of options for an aggregate purchase price of $25,593.75.

The issuances of the securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The ordinary shares issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

Item 8. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit number	Description of exhibit
1.1*	Form of Underwriting Agreement.
2.1† **	Asset Purchase and License Agreement, by and among the registrant, Glaxo Group Limited and GlaxoSmithKline Intellectual Property Development Ltd., dated April 11, 2018 (schedules, exhibits, and similar supporting attachments are omitted pursuant to Item 601(b)(2) of Regulation S-K. The registrant agrees to furnish a supplemental copy of any omitted schedule or similar attachment to the Securities and Exchange Commission upon request).
3.1*	Form of Articles of Association of Orchard Therapeutics plc (to be adopted prior to the effectiveness of this registration statement).
4.1*	Form of Deposit Agreement.
4.2*	Form of American Depositary Receipt (included in exhibit 4.1).
5.1*	Opinion of Goodwin Procter (UK) LLP.
10.1*	Investment and shareholders' agreement by and between the registrant and the shareholders named therein, dated August 2, 2018.
10.2**#	2016 Employee Share Option Plan with Non-Employee Sub-Plan and U.S. Sub-Plan, as amended.
10.3*#	2018 Equity Incentive Plan (to be adopted prior to the effectiveness of this registration statement).

Exhibit number	Description of exhibit
10.4† **	Deed of Novation, by and among the registrant, Glaxo Group Limited, GlaxoSmithKline Intellectual Property Development Limited, GlaxoSmithKline S.p.A., Fondazione Telethon and Ospedale San Raffaele (in its own capacity and as successor in interest to Fondazione Centro San Raffaele Del Monte Tabor), dated April 5, 2018.
10.5† **	Research and Development Collaboration and License Agreement, by and among Glaxo Group Limited, Fondazione Telethon and Fondazione Centro San Raffaele del Monte Tabor, dated October 15, 2010, as amended.
10.6*#	Form of Deed of Indemnity between the registrant and each of its executive officers.
10.7*#	Form of Deed of Indemnity between the registrant and each of its non-executive directors.
10.8**	Lease Agreement, dated as of January 19, 2018, by and between the Registrant and New Connect Investments Limited.
10.9†	License and Development Agreement, by and between the registrant and Oxford BioMedica (UK) Limited, dated November 28, 2016, as amended.
10.10†**	License Agreement between UCL Business Plc, The Regents of the University of California and the registrant, dated February 6, 2016, as amended.
21.1*	Subsidiaries of the registrant.
23.1*	Consent of independent registered public accounting firm.
23.2*	Consent of Goodwin Procter (UK) LLP (included in exhibit 5.1).
24.1*	Power of Attorney (included on signature page to this registration statement).

† Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from the registration statement and filed separately with the United States Securities and Exchange Commission.

* To be filed by amendment.

** Previously filed.

# Indicates a management contract or any compensatory plan, contract or arrangement.

(b) Financial Statement Schedules

None. All schedules have been omitted because the information required to be set forth therein is not applicable or has been included in the consolidated financial statements and notes thereto.

Item 9. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements, 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 provisions described in Item 6 hereof, or otherwise, the registrant has been advised that in the opinion of the SEC 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:

(i) 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.

(ii) 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, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of London, United Kingdom, on , 2018.

ORCHARD RX LIMITED

By: _____

Mark Rothera

President and Chief Executive Officer

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Mark Rothera and Frank E. Thomas, and each of them, his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this Registration Statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this Registration Statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his or her substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Mark Rothera	President, Chief Executive Officer and Director *(Principal Executive Officer)*	, 2018
_____ Frank E. Thomas	Chief Financial Officer and Chief Business Officer *(Principal Financial Officer and Principal Accounting Officer)*	, 2018
_____ James A. Geraghty	Chairman of the Board of Directors	, 2018
_____ Joanne T. Beck, Ph.D.	Director	, 2018
_____ Marc Dunoyer	Director	, 2018

Signature	Title	Date
Jon Ellis	Director	, 2018
Bobby Gaspar, M.D., Ph.D.	Director	, 2018
Alex Pasteur, Ph.D.	Director	, 2018
Charles A. Rowland, Jr.	Director	, 2018
Hong Fang Song	Director	, 2018

Cogency Global Inc.

By: _____ Authorized Representative in the United States , 2018
Name:
Title:

CERTAIN CONFIDENTIAL PORTIONS OF THIS EXHIBIT WERE OMITTED AND REPLACED WITH "[***]". A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECRETARY OF THE SECURITIES AND EXCHANGE COMMISSION PURSUANT TO AN APPLICATION REQUESTING CONFIDENTIAL TREATMENT PURSUANT TO RULE 406 PROMULGATED UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

OXFORD BIOMEDICA (UK) LIMITED

and

ORCHARD THERAPEUTICS LIMITED

LICENCE AND DEVELOPMENT AGREEMENT

Contents

BETWEEN:

(1) **OXFORD BIOMEDICA (UK) LIMITED**, a company incorporated in England and registered under number 03028927, whose registered office is at Windrush Court, Transport Way, Oxford, OX4 6LT ("**BioMedica**"); and

(2) **ORCHARD THERAPEUTICS LIMITED**, a company incorporated in England and registered under number 09759506, whose registered office is at Octagon Point, 5 Cheapside, London, EC2V 6AA ("**Orchard**").

BACKGROUND:

(A) BioMedica has special expertise and longstanding experience in the field of lentiviral vector gene therapy products including manufacture, testing and product release.

(B) BioMedica has developed and controls certain intellectual property rights useful for the production and use of lentiviral vectors in human cells.

(C) Orchard wishes to develop and commercialise certain gene therapy products transduced using lentiviral vectors for the treatment of adenosine deaminase severe combined immunodeficiency and other diseases.

(D) Orchard wishes to appoint BioMedica to perform development activities and to manufacture and supply certain of Orchard's requirements of lentiviral vectors. Orchard also wishes to take a licence under certain intellectual property of BioMedica on the terms of this Agreement.

OPERATIVE PROVISIONS

1. Definitions and Interpretation

1.1 **Definitions**. In this Agreement, the following words and expressions shall have the following meanings:

(a) "**Accounting Standards**" means internationally recognised accounting principles (e.g. IFRS, US GAAP, etc.) in each case, as generally and consistently applied throughout Orchard's organisation;

(b) "**ADA-SCID**" means adenosine deaminase severe combined immunodeficiency;

(c) "**Affiliate**" means with respect to a Party, any other Person that directly or indirectly, controls, is controlled by or is under common control with such Party; in this context, "control", and with correlative meanings, "controlled by" and "under common control with", shall mean ownership of fifty per cent (50%) or more of the shares of stock entitled to vote for the election of directors, in the case of a corporation, or fifty per cent (50%) or more of the equity interest in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby the Person controls or has the right to control the board of directors or equivalent governing body of a corporation or other entity, or the ability to cause the direction of the management or policies of a corporation or other entity. In the case of entities

organised under the laws of certain countries, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty per cent (50%), and in such case such lower percentage shall be substituted in the preceding sentence, provided that such foreign investor has the power to direct the management and policies of such entity;

(d) "**Applicable Laws**" means any law (including common law or other binding law), statute, regulation, code, directive or any requirement of a Competent Authority;

(e) "**BioMedica Arising IPR**" means all Intellectual Property Rights and materials prepared, developed, generated or derived by or on behalf of either Party in the course of the performance of its obligations under the Collaboration Plan, the Letter of Intent, or the Supply Agreement;

(f) "**BioMedica Background IPR**" means the patents and patent applications listed in Schedule 1;

(g) "**Business Day**" means Monday to Friday (inclusive) except bank or public holidays in London, UK;

(h) "**Charge**" has the meaning set forth in clause 12.7(a)(ii);

(i) "**Claim**" means losses, liabilities, damages, reasonable legal costs and other reasonable expenses of any nature whatsoever suffered or incurred in connection with any Third Party demands, claims, actions, or proceedings (whether criminal or civil, in contract, tort or otherwise);

(j) "**Collaboration Costs**" means the following costs for activities set out in the Collaboration Plan (as may be amended pursuant to this Agreement):

(i) the FTE Costs;

(ii) Materials Costs; and

(iii) Out-of-Pocket Costs;

(k) "**Collaboration Materials**" means the materials provided by one Party to the other Party as -required for the performance of the Collaboration Plan;

(l) "**Collaboration Particles**" means [***] particles for the delivery of specific sequences into target cells, manufactured by BioMedica and supplied to Orchard by BioMedica, for use in treating any Initial Indication or Subsequent Indication;

(m) "**Collaboration Plan**" means the collaboration plan set out in Schedule 5 as amended from time to time by the Steering Committee;

(n) "**Collaboration Product**" means any [***] using Collaboration Particles by or on behalf of Orchard or any of its Affiliates or sublicensees, in each case for use in treating any Initial Indication or Subsequent Indication;

(o) "**Collaboration Term**" has the meaning set forth in clause 10.1;

(p) "**Commercialise**" means any and all activities directed toward marketing, promoting, detailing, distributing, importing, exporting, selling or offering to sell a therapeutic product or therapy, but excluding all Manufacturing activities in support of the foregoing, and "**Commercialisation**" and "**Commercialising**" shall have a corresponding meaning;

(q) "**Commercially Reasonable Efforts**" means the expenditure of those efforts and resources normally used by a reasonable Third Party company in the biopharmaceutical industry in pursuing development (including manufacturing and process development) of similar pharmaceutical products with similar market and economic potential, and at a similar stage in development or product life;

(r) "**Competent Authority**" any local or national agency, authority, department, inspectorate, minister, ministry official, or public or statutory Person (whether autonomous or not) of any government of any country having jurisdiction over this Agreement or any of the Parties or over the development, Manufacture, sale, or use of medicinal products, including, where applicable, the European Commission and the European Court of Justice;

(s) "**Confidential Information**" means all information of a confidential or proprietary nature which is obtained directly or indirectly by one Party (the "**Receiving Party**") or its Affiliates, from the other Party (the "**Disclosing Party**") or its Affiliates at any time before, on, or after the Effective Date, without regard to the form or manner in which such information is disclosed or obtained (including information disclosed orally or in documentary or electronic form or by way of model, or obtained by observation), and in addition shall include:

(i) the existence and terms of this Agreement and the Supply Agreement for which both Parties shall be deemed to be the Receiving Party; and

(ii) information disclosed [***] and with effect from the Effective Date, such information shall be deemed to be Confidential Information of the relevant Party under this Agreement and subject to the terms of this Agreement; and

(iii) the Manufacturing Know-How and BioMedica Arising IPR for which BioMedica shall be deemed to be the Disclosing Party; and

(iv) the Orchard Arising IPR for which both Parties shall be deemed to be the Disclosing Party;

(t) "**Control**" and with correlative meaning, "**Controlled by**", means with respect to any Intellectual Property Right or material, the possession (whether by ownership or licence, other than pursuant to this Agreement) by a Party of the legal authority or right to grant to the other Party access and/or a licence as provided herein under such Intellectual Property Right or in respect of such material without violating the terms of any agreement or other arrangements with any Third Party, or misappropriating the proprietary or trade secret information of a Third Party;

(u) "**Equity**" means the fully diluted share capital of Orchard as at the Effective Date;

(v) "**Field**" means [***];

(w) "**FTE**" means a full time equivalent person year (consisting of 224 days at 7 hours per day);

(x) "**FTE Costs**" for a given period means the FTE Rate multiplied by the total FTEs (proportionately, on a per-FTE basis) directly engaged, in the particular period, in the performance of activities pursuant to the Collaboration Plan;

(y) "**FTE Rate**" means [***] (which may be prorated on a daily or hourly basis as necessary). The FTE Rate is a preferential "fully burdened" rate and covers employee salaries, benefits, and ordinary laboratory consumables;

(z) "**Fundamental Breach**" means a material breach by BioMedica of any material obligation contained in clauses [***];

(aa) "**GBP**" and "**£**" mean the lawful currency of the United Kingdom;

(bb) "**GMP**" has the meaning set out in the Supply Agreement;

(cc) "[***] **Licence**" means the licence agreement between BioMedica and [***] dated [***];

(dd) "**Initial Indications**" means ADA-SCID and MPS-IIIA;

(ee) "**Insolvency Event**" means, in relation to either Party, any of the following:

(i) a meeting of creditors of that Party being held or an arrangement or composition with or for the benefit of its creditors (including a voluntary arrangement as defined in the Insolvency Act 1986) being proposed by or in relation to that Party;

(ii) a chargeholder, administrator, receiver, administrative receiver or other similar person taking possession of or being appointed over or any distress, execution or other process being levied or enforced (and not being discharged within seven days) on that Party or the whole or a material part of the assets of that Party;

(iii) that Party ceasing to carry on business or being deemed to be unable to pay its debts within the meaning of section 123 Insolvency Act 1986 ([***]) or ceasing to pay its debts as they fall due;

(iv) that Party or its directors or the holder of a qualifying floating charge or any of its creditors giving notice of their intention to appoint, appointing or making an application to the court for the appointment of, an administrator;

(v) a petition being presented or advertised or a resolution being passed or an order being made for the purposes of or in relation to the administration or the winding-up, bankruptcy, liquidation or dissolution of that Party; or

(vi) the happening in relation to that Party of an event analogous to any of the above in any jurisdiction in which it is incorporated or resident or in which it carries on business or has assets;

(ff) "**Intellectual Property Rights**" means all rights in patents, rights to inventions, copyright and related rights, rights in trade marks, trade names and domain names, rights in designs, rights in computer software, database rights, rights in confidential information (including know-how) and any other intellectual property rights, in each case whether registered or unregistered and including all applications (or rights to apply) for, and renewals or extensions (for their full term) of, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world;

(gg) "**Letter of Intent**" means that letter of intent executed by the Parties on [***];

(hh) "**Loan Agreement**" has the meaning set forth in clause 12.7(a)(i);

(ii) "**Manufacturing**" means any and all operations, including without limitation processing, filling, testing, releasing and packaging for shipment, carried out by or on behalf of BioMedica in the preparation of the Particles under this Agreement, the Supply Agreement and the Quality Agreement; and "**Manufacture**" and "**Manufactured**" have corresponding meanings;

(jj) "**Manufacturing Know-How**" means know-how which is Controlled by BioMedica at the Effective Date and which is used by BioMedica in the course of performance of the activities assigned to it under the Supply Agreement;

(kk) "**Materials Costs**" shall mean the direct cost of materials used by BioMedica in the performance of the Collaboration Plan;

(ll) "**Milestone**" means the milestones set out in Schedule 3;

(mm) "**MPS-IIIA**" means mucopolysaccharidosis III (or Sanfilippo syndrome type A);

(nn) "**Net Sales**" means the net sales recorded by Orchard or any of its Affiliates or any sublicensees (including through multiple tiers), for any Product sold or otherwise supplied to a Third Party, as determined in accordance with the Accounting Standards as consistently applied, of the applicable selling entity. The deductions booked on an accrual basis by Orchard or any of its Affiliates or sublicensees under the applicable entity's Accounting Standards to calculate the recorded net sales from gross sales shall be limited to the following:

(i) [***];

(ii) [***];

(iii) [***];

(iv) [***];

(v) [***];

(vi) [***];

(vii) [***];

(viii) [***]; and

(ix) [***].

[***];

(oo) "**Orchard Arising IPR**" means all Intellectual Property Rights and materials prepared, developed, generated or derived by or on behalf of either Party in the course of the performance of its obligations under the Collaboration Plan, the Letter of Intent or the Supply Agreement solely to the extent that such Intellectual Property Rights and materials are (i) an improvement to the Orchard Technology and (ii) cannot be exploited without also infringing Orchard Background Patents;

(pp) "**Orchard Background Patents**" means the patents referred to in Schedule 7 to the extent that such patents claim the Orchard Technology, and any patents issuing therefrom or claiming priority thereto, worldwide, together with any extensions (including patent term extensions and supplementary protection certificates) and renewals thereof, reissues, reexaminations, substitutions, confirmation patents, registration patents, invention certificates, patents of addition, renewals, divisionals, continuations and continuations in part of any of the foregoing, in each case to the extent that the same claim the Orchard Technology;

(qq) "**Orchard Technology**" means (i) vectors [***], cells containing the same, and use of the cells to treat a subject; (ii) vectors for treating ADA-SCID, [***], cells containing the same, and use of the cells to treat ADA-SCID; and (iii) vectors [***];

(rr) "**Other Particles**" means [***], manufactured by or on behalf of Orchard or its Affiliates or sublicensees, for use in treating any indication other than an Initial Indication or Subsequent Indications;

(ss) "**Other Product**" means [***] or any of its Affiliates or sublicensees, in each case for use in treating any indication other than an Initial Indication or Subsequent Indication;

(tt) "**Out-of-Pocket Costs**" shall mean all out-of-pocket costs and expenses paid by or on behalf of BioMedica to Third Parties in connection with the performance of activities pursuant to the Collaboration Plan;

(uu) "**Particle**" means any Collaboration Particle and/or Other Particle;

(vv) **"Parties**" means BioMedica and Orchard and "**Party**" shall mean either of them;

(ww) "**Person**" means any individual, partnership, limited liability company, firm, corporation, association, trust, unincorporated organisation or other legal entity;

(xx) "**Product**" means any Collaboration Product, and/or Other Product;

(yy) **"Quality Agreement**" has the meaning set out in the Supply Agreement;

(zz) "**Quarter**" means a calendar quarter ending on 31 March, 30 June, 30 September, and 31 December;

(aaa) "**Representatives**" means, in relation to a Party, such Party's Affiliates, and its and their directors, officers, employees, consultants, advisors, and permitted subcontractors and in the case of Orchard, its licensees and sublicensees;

(bbb) "**Share Subscription Letter**" means the letter dated on or about the date of this Agreement relating to the issue to BioMedica of Equity in accordance with clause 6.1;

(ccc) "**Senior Officers**" means, for Orchard, the Chief Executive Officer or a Board Member, and for BioMedica, the Chief Executive Officer of BioMedica;

(ddd) "**Steering Committee**" means the steering committee to be established, and operating, in accordance with the provisions of clause 2;

(eee) "**Subsequent Indications**" means an indication added to the scope of this Agreement in accordance with clauses 4.3 (a) or (b);

(fff) "**Supply Agreement**" means the supply agreement between the Parties relating to the supply by BioMedica of [***] to Orchard dated on our about the date of this Agreement;

(ggg) "**Term**" means the term of this Agreement;

(hhh) "**Third Party**" means any Person other than a Party or its Affiliates;

(iii) "**Valid Claim**" means a claim of:

(i) an unexpired and issued patent; or

(ii) a pending patent application;

that has not been disclaimed, revoked, or held invalid, unpatentable or unenforceable by an administrative agency, court or other government agency of competent jurisdiction in a final and non-appealable decision (or a decision unappealed within the time limit allowed for appeal), and which has not been admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise; and

(jjj) "**Year**" means a period of twelve (12) consecutive calendar months ending on 31 December.

1.2 **Interpretation**. In this Agreement:

(a) unless otherwise specified, references to clauses and schedules are to the clauses and schedules of this Agreement;

(b) the words "include", "including" and "in particular" are to be construed as being by way of illustration or emphasis only and are not to be construed so as to limit the generality of any words preceding them;

(c) the words "other" and "otherwise" are not to be construed as being limited by any words preceding them;

(d) headings are used for convenience only and do not affect its interpretation; and

(e) a reference to the singular includes a reference to the plural and vice versa and a reference to any gender includes a reference to all other genders.

2. Management of the Collaboration

2.1 **Steering Committee**. Within [***] days after the Effective Date, the Parties shall establish a steering committee ("**Steering Committee**") by each Party designating its initial members to serve on the Steering Committee and notifying the other Party of its dates of availability for the Steering Committee's first meeting. The Steering Committee will remain in place until the termination or expiration of the Collaboration Term and, unless otherwise agreed in writing between the Parties, will be disbanded at the end of such period.

2.2 **Role of Steering Committee**. The Steering Committee shall lead and oversee the collaboration between the Parties and, subject to clause 2.7, shall be responsible for and have authority over the following:

(a) providing a forum for, and facilitating, communications between the Parties with respect to the collaboration between the Parties;

(b) subject to clause 4.2, reviewing and approving any revised Collaboration Plans (which may be conducted by explicit email exchange);

(c) considering expansion of the collaboration between the Parties to indications other than the Initial Indications as contemplated in clause 4.3;

(d) overseeing and monitoring the implementation of the Collaboration Plan by the Parties and coordinating the activities of the Parties under the Collaboration Plan;

(e) determining achievement of the Milestones; and

(f) making such other determinations as are expressly delegated to it under the terms of this Agreement.

2.3 **Membership**. The Steering Committee shall consist of [***] senior personnel of BioMedica and [***] senior personnel of Orchard, in each case with authority to make decisions for the appointing Party on issues within the mandate of the Steering Committee. Each member shall have the appropriate background and expertise to contribute to the Steering Committee. Each Party may change its members on the Steering Committee from time to time. Either Party may, from time to time, invite additional representatives or consultants, who are not Steering Committee members but who have knowledge and/or experience in relation to the performance of the collaboration between the Parties to attend Steering Committee meetings, subject to the written consent of the other Party (such consent not to be unreasonably withheld or delayed) and such representatives and consultants being bound by the confidentiality obligations set out in clause 8.

2.4 **Co-Chairpersons**. Each Party shall appoint [***] of its members to co-chair Steering Committee meetings (each, a "**Co-Chairperson**"). The Co-Chairpersons shall attend meetings, ensure the orderly conduct of meetings, and ensure that written minutes of each meeting are taken and issued to each of the Parties.

2.5 **Meetings**. The Steering Committee shall meet at least [***] times per Year or more or less often as otherwise agreed by the Steering Committee, but in no event [***]. Such meetings may be conducted by telephone, videoconference or in person as determined by the Co-Chairpersons. Each Party may also call for special meetings of the Steering Committee with reasonable prior notice (it being agreed that at least [***] Business Days shall constitute reasonable notice), to resolve particular matters within the decision-making responsibility of the Steering Committee. Meetings of the Steering Committee shall be effective only if at least [***] of each Party is present and participating as a Co-Chairperson.

2.6 **Decision-Making**. The Steering Committee will endeavour to make decisions by consensus of the Co-Chairpersons with each Party having [***] vote. If a dispute or failure to agree arises which cannot be resolved within the Steering Committee the Steering Committee shall cause such dispute or failure to agree to be referred to the Senior Officers (or their respective delegates) for resolution. The Senior Officers (or their respective delegates) shall attempt in good faith to resolve such dispute or failure to agree. In the event of a dispute as to whether a Milestone has been achieved or if the Parties are unable to agree on the extension of any Milestone deadline in accordance with clause 4.9, either Party may refer the matter to an expert for determination in accordance with Schedule 6.

2.7 **Limits**. The Steering Committee shall only have the powers assigned expressly to it in this Agreement. Notwithstanding any provision to the contrary, the Steering Committee shall not have any power to amend or modify the provisions of this Agreement, or to waive compliance with this Agreement and each Party shall retain the rights, powers and discretion granted to it under this Agreement and no such rights, powers or discretion shall be delegated to or vested in the Steering Committee.

2.8 **Project Leaders**. Each Party shall appoint, and notify the other Party of the identity of, a project leader who will be the primary point of contact for communicating all instructions and information to the other Party ("**Project Leader**"). The Parties shall procure that the Project Leaders will communicate with each other during the Collaboration Term, by telephone, email and letter or face-to-face, as often as is reasonably necessary for each Party to update the other on the progress of the activities under the Collaboration Plan. Each Party may change its Project Leader at any time by giving written notice to the other Party, provided that there shall always be a designated Project Leader for each Party for the duration of the Collaboration Term and, unless otherwise agreed in writing between the Parties, the Project Leaders will be discharged from such role at the end of the Collaboration Term.

2.9 **Project Team**. On or promptly after the Effective Date, the Parties will also establish a project team ("**Project Team**") which shall consist of the Project Leaders and such other employees, representatives or consultants invited by a Project Leader and approved by the other Party to participate in Project Team meetings. Prior to attendance of any Project Team meeting all such representatives and consultants must be bound by the confidentiality obligations set out in clause 8. The Project Team shall have operational responsibility for co-ordinating the performance of the Collaboration Plan. Subject to clause 4.2, the Project Team may also amend the Collaboration Plan and estimated Collaboration Costs, provided such cost changes have been approved by the appropriately authorized representative of the party paying

for such cost change. A copy of the updated Collaboration Plan and details of any changes to the Collaboration Costs shall be submitted to the members of the Steering Committee prior to the next meeting of the Steering Committee following such agreement of such amendments by the Project Team. The Project Team shall hold meetings on a [***] basis during the performance of the Collaboration Plan, or more or less frequently as determined by the Project Leaders to be required for co-ordinating and monitoring activities under the Collaboration Plan. Project Team meetings can be held face to face, or by tele- or video-conference, at such times and places as are agreed to by the Parties. All decisions of the Project Team will be made by consensus of the Project Leaders, and any failure to agree will be referred to the Steering Committee for resolution.

2.10 **Costs of Governance**. The Parties agree that the costs incurred by each Party in connection with its participation in the Steering Committee shall be borne solely by such Party.

3. Grant of Rights

3.1 **Licence Grant**. BioMedica hereby grants to Orchard, subject to the terms of this Agreement:

(a) with respect to Collaboration Particles and Collaboration Products a licence under the BioMedica Background IPR and the BioMedica Arising IPR, which licence shall be:

(i) exclusive and worldwide, except that, where such Collaboration Particles and/or Collaboration Products are for use in treating any Subsequent Indication and such Subsequent Indication is the subject of the [***] Licence:

(A) such licence granted by BioMedica to Orchard shall be non-exclusive; and

(B) save in respect of the rights granted to [***] under the [***] Licence [***], BioMedica shall not grant to any Third Party any rights under the BioMedica Background IPR with respect to such Subsequent Indication;

(ii) solely for the purposes of research, development, and Commercialisation (in each case excluding Manufacture of Collaboration Particles (except as provided in paragraph (iii) below)) of Collaboration Products in the Field;

(iii) in the event of a Prolonged Failure to Supply (as defined in the Supply Agreement):

(A) the licence granted pursuant to this clause 3.1(a) shall be extended to include the Manufacture of Collaboration Particles and clause 3.1(a)(ii) shall be deemed to be amended accordingly;

(B) BioMedica hereby grants to Orchard, subject to the terms of this Agreement with respect to Collaboration Particles and Collaboration Products a non-transferable, non-exclusive, worldwide, fully paid-up licence under the Manufacturing Know-How solely for the purposes of Manufacture of Collaboration Particles in the Field, provided that Orchard may grant sub-licences only in accordance with the following:

(1) Orchard may not disclose the Manufacturing Know-How to any third party nor grant any sub-licence to use the Manufacturing Know-How, including to any Orchard Affiliate, without the prior written consent of BioMedica, [***];

(2) Orchard may not disclose the Manufacturing Know-How to any third party, or Affiliate, or proposed sub-licensee, unless such third party, or Affiliate, or proposed sub-licensee has entered into a legally binding confidentiality agreement with BioMedica and enforceable by BioMedica, on terms [***] to BioMedica; and

(3) in the event that Orchard discloses any Manufacturing Know-How to any third party, including to any Orchard Affiliate, Orchard shall remain fully liable to BioMedica in respect of any acts or omissions of such third party that would, if effected by Orchard, constitute a breach of this Agreement.

("**Collaboration Product Licence**")

(b) with respect to Other Particles and Other Products a licence under the BioMedica Background IPR, which licence shall be:

(i) non-exclusive and worldwide; and

(ii) solely for the purposes of research, development, Commercialisation, and Manufacture of Other Particles and Other Products in the Field;

("**Other Product Licence**")

(c) under the Orchard Arising IPR only:

(i) after the expiry of the royalty obligations under this Agreement, an exclusive, worldwide, royalty free, perpetual, irrevocable, sublicensable licence, solely for the purposes of research, development, Commercialisation and Manufacture of Collaboration Particles and Collaboration Products in the Field; and

(ii) a non-exclusive, worldwide, royalty free, perpetual, irrevocable sublicensable licence, for all purposes outside the Field.

3.2 **Particle Restrictions**. Orchard and its Affiliates and sublicensees shall, with respect to all Collaboration Particles and Other Particles:

(a) use the Collaboration Particles and Other Particles only for the generation of Collaboration Products or Other Products respectively; and/or

(b) supply the Collaboration Particles and Other Particles only to Orchard or its Affiliates or Third Parties who hold a sublicence in compliance with this Agreement, under the BioMedica Background IP, for the purposes of research, development and/or Commercialisation of the applicable Collaboration Products and/or Other Products in the Field.

3.3 **Sublicensing Rights**.

(a) Subject to clauses 3.3(c) and 3.3(d), Orchard may sublicense its rights under the Collaboration Product Licence (including through multiple tiers) solely for the purposes set out in clause 3.1(a)(ii) subject to clause 3.1(a)(iii).

(b) Subject to clauses 3.3(c) and 3.3(d), Orchard may sublicense its rights under the Other Product Licence (including through multiple tiers) solely for the purposes of research, development, Commercialisation, and Manufacture of Other Particles and Other Products in the Field.

(c) Orchard shall only disclose Confidential Information of BioMedica to a sublicensee under the Collaboration Product Licence or Other Product Licence if such sublicensee has undertaken directly to BioMedica to comply with terms of confidentiality and non-use of such Confidential Information on terms at least as stringent as those in this Agreement.

(d) All sublicences (including through multiple tiers) under the BioMedica Background IPR and/or Arising IPR must:

(i) include legally binding provisions at least as stringent as those contained in clauses 3.2, 3.3(b), 3.3(c) and 3.3(d) and 8; and

(ii) such sublicences shall automatically terminate upon termination of this Agreement.

(e) Orchard shall remain fully liable to BioMedica in respect of any acts or omissions of any Affiliate, sublicensee (through multiple tiers) or subcontractor of Orchard, its Affiliates or sublicensees (through multiple tiers), that would, if effected by Orchard, constitute a breach of this Agreement.

3.4 **Registration**. If requested by Orchard, BioMedica shall (at Orchard's expense, [***]) execute such formal licences as may be necessary or appropriate for registration with patent offices and other relevant authorities. In the event of any conflict in meaning between any such licence and the provisions of this Agreement, the provisions of this Agreement shall prevail.

3.5 **Regulatory**. As soon as reasonably practicable after the Effective Date, but not later than [***], the Parties shall enter into a Pharmacovigilance Agreement, setting forth the worldwide pharmacovigilance procedures for the Parties with respect to Collaboration Particles and Collaboration Products and which will include those terms set out in Schedule 8.

4. Collaboration

4.1 **Collaboration**. For the Collaboration Term:

(a) BioMedica shall use Commercially Reasonable Efforts to perform the activities set out in the Collaboration Plan:

(i) in accordance with the provisions of this Agreement and, if applicable, the Quality Agreement between the Parties relating to such activities;

(ii) in a professional manner, in conformance with that level of care and skill ordinarily exercised by other professionals in the biopharmaceutical industry in similar circumstances; and

(iii) in accordance with the time-lines in the Collaboration Plan [***];

(b) Orchard shall use Commercially Reasonable Efforts to:

(i) provide all documentation and materials (including Collaboration Materials) reasonably requested by BioMedica as necessary for BioMedica to conduct its obligations under the Collaboration Plan; and

(ii) perform all activities set out in the Collaboration Plan as being the responsibility of Orchard, in all cases, in accordance with the time-lines in the Collaboration Plan.

4.2 **Amendments to Collaboration Plan**. Upon request by either Party, the Parties will negotiate in good faith and seek to agree, through the Project Team and/or Steering Committee, amendments to the Collaboration Plan. In the event that any amendment to the Collaboration Plan would have the effect that any programme of work relevant to the achievement of any Milestone is amended or deleted such that a Milestone can no longer reasonably be achieved pursuant to the amended Collaboration Plan, such amendments to the Collaboration Plan may only be made:

(a) [***]; and

(b) [***].

4.3 **Subsequent Indications**. Orchard may, at any time, request that an additional indication ([***]) be included in this Agreement and the following provisions shall apply:

(a) Orchard may by written notice to BioMedica received on or before [***], nominate [***] and upon [***], such indication shall become a Subsequent Indication; and/or

(b) Orchard may, at any time after [***], request [***] and, if [***], such additional indication shall become a Subsequent Indication.

4.4 **Collaboration Materials**. Each Party shall provide to the other Party the Collaboration Materials. [***]. The receiving Party with respect to the such Collaboration Materials shall use the Collaboration Materials:

(a) only for the purpose of performing the activities assigned to it under the Collaboration Plan, and not for any other purpose;

(b) in compliance with this Agreement and the Quality Agreement, all Applicable Laws and all reasonable instructions of the providing Party; and

(c) only in the facilities of such Party, collaborators or its approved subcontractors and under suitable containment conditions;

Upon the later to occur of completion of the activities assigned to it under the Collaboration Plan or, if earlier, termination of the collaboration or this Agreement, BioMedica shall either (i) destroy any Collaboration Materials received from Orchard in connection with the Collaboration Plan; or (ii) transfer such Collaboration Materials to Orchard. Title in all such Collaboration Materials provided by Orchard shall remain with Orchard and Title to any Collaboration Materials transferred by BioMedica to Orchard shall pass to Orchard on delivery to Orchard.

The Parties agree that the materials transferred between the Parties prior to the Effective Date pursuant to the Material Transfer Agreement dated 1 March 2016 shall be deemed to be Collaboration Materials subject to the terms of this Agreement and the provisions of the Material Transfer Agreement shall no longer apply to such materials.

4.5 **Subcontracting**.

(a) Orchard shall be entitled to subcontract its obligations under this Agreement subject to the provisions of this clause 4.5 and the consent of BioMedica, [***] (provided that the other conditions of clause 4.5(c) are met).

(b) Other than as set forth in this clause, BioMedica shall not be entitled to subcontract its obligations under the Collaboration Plan, in whole or in part, without the prior written consent of Orchard [***].

(c) The relevant Party shall ensure that all subcontractors are bound by confidentiality obligations and by provisions in relation to intellectual property which enable such Party to grant the rights set out in this Agreement. [***].

(d) Notwithstanding the foregoing, BioMedica may subcontract its obligations under the Collaboration Plan to the subcontractors or subcontactors listed in Schedule 2 or in the Collaboration Plan or in the Quality Agreement.

4.6 **Reports**. BioMedica shall provide to Orchard, in advance of each regularly scheduled Steering Committee meeting, a report detailing its activities under the Collaboration Plan, the results of such activities, and all Collaboration Costs incurred by it.

4.7 **Unforeseen Events**. Each Party shall promptly inform the other about any unforeseen results, problems, difficulties, delays, or the like with regard to the activities under the Collaboration Plan. [***]. The Steering Committee shall review any applicable timelines set forth in the Collaboration Plan and agree on commercially reasonable revised timelines.

4.8 **Collaboration Costs**.

(a) Orchard shall be liable for the Collaboration Costs for the activities as set out in the Collaboration Plan.

(b) Within [***] days after the end of each Quarter, BioMedica shall provide Orchard with a statement of the activities performed under the Collaboration Plan and the Collaboration Costs incurred by it in such Quarter (each, a "**Collaboration Costs Report**") together with an invoice for such Collaboration Costs. Orchard shall pay such invoice within [***] days after receipt of such invoice.

(c) If Orchard in good faith reasonably disputes an amount provided in such Collaboration Costs Report then such disputed amount shall be reviewed by the Steering Committee, and upon resolution, any payment owed with respect to the then-undisputed amounts shall be paid in the next payment cycle as set forth above.

(d) If requested by Orchard, BioMedica shall promptly provide to Orchard any invoices or other supporting documentation for any payments to a Third Party included in any Collaboration Costs.

4.9 **Milestone Deadlines.** Notwithstanding the qualified nature of Orchard's obligations under clause 4.1(b), the Parties acknowledge that any delay by Orchard in the provision of documentation and/or materials or performance of its activities set out in the Collaboration Plan (together the "**Orchard Performance Obligations**") could prevent BioMedica from achieving the Milestones on or before the dates for such achievement as set out in Schedule 3. In the event that there is a delay in the performance of any Orchard Performance Obligations caused by Orchard and such delay directly or indirectly prevents BioMedica from achieving a Milestone on or before the dates for such achievement as set out in Schedule 3, the dates for achieving the affected Milestone and any linked subsequent Milestones which are affected by such delay shall be extended by the length of such delay. In the event that the Parties are unable to agree on (i) whether the delay in the performance of any Orchard Performance Obligations caused the delay or directly or indirectly prevented BioMedica from achieving a Milestone by the due date; or (ii) the applicable extension to such dates, the matter shall be referred to the Steering Committee for determination in accordance with clause 2.6.

5. Collaboration Intellectual Property

5.1 **Background IPR**. Nothing in this Agreement will affect either Party's ownership of any BioMedica Background IPR or Orchard Background Patents. No licence to use any such rights is granted or implied except as expressly set out in this Agreement.

5.2 **Licence Grant for Collaboration Activities**. Orchard hereby grants to BioMedica a non-exclusive non-transferable licence under the Orchard Background Patents and Orchard Arising IPR, solely for the purpose of and to the extent necessary to enable BioMedica to perform the activities assigned to it under the Collaboration Plan and any Supply Agreement. BioMedica shall only be entitled to [***].

5.3 **BioMedica Arising IPR**. BioMedica shall solely own all BioMedica Arising IPR. Orchard hereby assigns, by way of present and future assignment with full title guarantee, and shall procure that its Representatives assign, by way of present and future assignment with full title guarantee to BioMedica all right, title and interest in the BioMedica Arising IPR. To the extent that any such BioMedica Arising IPR cannot be assigned by way of future assignment, Orchard agrees to assign with full title guarantee, and shall procure that its Representatives agree to assign with full title guarantee, to BioMedica all right, title and interest in the BioMedica Arising IPR. At BioMedica's written request and at [***], Orchard shall, and shall ensure that its Representatives shall, execute all documents and do all things requested by BioMedica to vest and confirm in BioMedica all right, title, and interest in and to all BioMedica Arising IPR. BioMedica shall be responsible, at its discretion, in its sole name and at its sole cost for obtaining, prosecuting, and maintaining patents and patent applications within or claiming any BioMedica Arising IPR. Orchard will fully cooperate with BioMedica, at BioMedica's cost, in connection with the filing, prosecution and maintenance of any patents claiming any BioMedica Arising IPR, including by providing access to relevant persons and executing all documentation reasonably requested by BioMedica.

6. Equity and Royalties

6.1 **Upfront Equity**. In partial consideration of the rights and licences granted to Orchard hereunder, Orchard shall, with effect from the Effective Date issue to BioMedica 735,000 ordinary shares of Orchard (representing 1.95% of the Equity), subject to signature by BioMedica of the Share Subscription Letter.

6.2 **Milestone Based Equity**. In further consideration of the rights and licences granted to Orchard hereunder Orchard shall issue to BioMedica the equity described in Schedule 3 upon achievement of the Milestones described in Schedule 3, subject to the provisions of clause 6.1(d) of the Supply Agreement.

6.3 **Collaboration Product Royalties**. In further consideration of the rights and licences granted to Orchard hereunder, in respect of all Collaboration Products generated using Collaboration Particles:

(a) where such Collaboration Product is sold or otherwise supplied on or before [***], a royalty on Net Sales of such Collaboration Product of [***]%;

(b) where such Collaboration Product is sold or otherwise supplied after [***] and on or before [***], a royalty on Net Sales of such Collaboration Product of [***]%; and

(c) where such Collaboration Product is sold or otherwise supplied after [***] and before 31 January 2039, a royalty on Net Sales of such Collaboration Product of [***]%,

except in each case as set out in clause 6.5.

6.4 **Other Product Royalties**. In further consideration of the rights and licences granted to Orchard hereunder, in respect of all Other Products generated using Other Particles, where:

(a) the manufacture of such Other Particle, had it been manufactured in [***], would have been covered by, would but for a licence to Orchard have infringed, one or more Valid Claims of a Platform Patent; and

(b) such Other Product is sold or otherwise supplied on or before [***];

a royalty on Net Sales equal to [***]% except as set out in clause 6.5.

6.5 **Royalties Payable for Products for Compassionate Use**. In respect of any Collaboration Product or Other Product which is provided on a compassionate use basis in any country at any time prior to obtaining marketing authorisation for such Collaboration Product or Other Product in such country, the royalties payable in respect of such Products shall be [***] 6.3 and 6.4 until the first commercial sale post marketing authorisation for such Product is made in such country.

6.6 **Duration of Royalty Obligations**. The Parties acknowledge and agree that Orchard's obligations to pay royalties on Net Sales of Products as set forth in this clause 6 have been agreed via arm's length negotiations between sophisticated commercial entities to be a fair and reasonable consideration, payable in instalments over a mutually-agreed period of time, in recognition of the rights granted to Orchard hereunder.

6.7 **Royalty Statements**. Within [***], Orchard shall send to BioMedica a royalty statement ("**Royalty Statement**") setting out in respect of each of Orchard, its Affiliates and sublicensees:

(a) in respect of each country in which Products are sold:

[***]

(b) the resulting amount payable by Orchard, in GBP.

6.8 **Royalty Invoices**. Following receipt of the Royalty Statement, BioMedica shall issue an invoice to Orchard for the royalty payable for the reported [***]. Orchard shall pay such invoice within [***] after receipt of such invoice.

6.9 **Sums Due to BioMedica**. All sums due to BioMedica under this Agreement:

(a) subject to BioMedica issuing a valid VAT invoice, are exclusive of Value Added Tax, which where applicable will be paid by Orchard in addition;

(b) shall be paid in:

(i) GBP in cash by transferring an amount in aggregate to the following account:

Account name:	[***]
Account number:	[***]
Sort code:	[***]
IBAN:	[***]
SWIFT:	[***]

(c) when conversion of payments from any foreign currency is required Orchard shall convert such amounts into an amount in GBP using its customary conversion procedures as used in in preparing its audited financial statements;

(d) shall be made subject to any applicable withholding taxes, in respect of which Orchard shall be entitled to deduct from payments made to BioMedica under this Agreement the amount of any withholding taxes required to be withheld, to the extent paid to the appropriate governmental authority on behalf of BioMedica (and not refunded or reimbursed). Orchard shall deliver to BioMedica, upon request, proof of payment of all such withholding taxes. Orchard shall provide reasonable assistance to BioMedica in seeking any benefits available to BioMedica with respect to government tax withholdings by any relevant law, regulation or double tax treaty.

(e) shall be made by the due date; provided that any payment which falls due on a date which is not a Business Day in the location from which the payment will be made may be made on the next Business Day in such location; and

(f) if any undisputed payment is not made within [***] days after the due date, BioMedica may charge interest on any outstanding amount of such payment on a daily basis at a rate equivalent to [***] above the base rate of the Bank of England then in force in London.

7. Records and Audit

7.1 **Records**. Orchard shall, and shall procure that its Affiliates and sublicensees shall, keep at its or their normal place of business detailed and up-to-date records and accounts in accordance with their respective Accounting Standards as consistently applied of Net Sales and any amounts due under this Agreement (as applicable), in each case for [***]. Such records shall be in sufficient detail to enable BioMedica to verify the matters to which they pertain.

7.2 **Audit Rights**.

(a) BioMedica may, upon written notice to Orchard, appoint an internationally-recognised independent accounting firm (which is reasonably acceptable to Orchard (the "**Auditor**") for the purpose of verifying the accuracy of any statement or report given to BioMedica under this Agreement. Before beginning its audit, the Auditor shall execute an undertaking acceptable to Orchard by which the Auditor shall keep confidential all information reviewed during such audit. [***].

(b) Orchard and its Affiliates and sublicensees shall make their records available for inspection by such Auditor during regular business hours at such place or places where such records are customarily kept, upon receipt of reasonable advance notice from BioMedica. The records shall be reviewed solely to verify the accuracy of any statement or report given to BioMedica under this Agreement. [***]. In addition, BioMedica shall only be entitled to audit the relevant books and records of Orchard, its Affiliates and sublicensees for a period of [***] after receipt of the applicable report or statement. BioMedica agrees to hold in strict confidence all information received and all information learned in the course of any audit or inspection, except to the extent necessary to enforce its rights under this Agreement or if disclosure is required by law, regulation or judicial order.

(c) The Auditor shall provide its audit report and basis for any determination to Orchard at the time such report is provided to BioMedica, before it is considered final. Orchard shall have the right to request a further determination by such Auditor as to matters which Orchard disputes within [***] following

receipt of such report. Orchard will provide BioMedica and the Auditor with a reasonably detailed statement of the grounds upon which it disputes any findings in the audit report and the Auditor shall undertake to complete such further determination within [***] after the dispute notice is provided, which determination shall be limited to the disputed matters. The Parties agree that they shall use reasonable efforts, through the participation of finance representatives of both companies, to resolve any remaining dispute arising in relation to the Audit by good faith discussion.

(d) In the event that the final result of the inspection reveals an undisputed underpayment or overpayment by either Party, the underpaid or overpaid amount shall be settled promptly [***].

(e) BioMedica shall be responsible for the Auditor's charges unless the Auditor certifies that there is an overcharge, or under-reporting and underpayment, of more than [***] in aggregate amounts payable for any Year, in which case Orchard shall pay the Auditor's charges in respect of that inspection.

8. Confidential Information

8.1 **Duty of Confidence**. Each Receiving Party shall:

(a) keep the Confidential Information of the Disclosing Party secret and confidential at all times;

(b) not disclose or permit the disclosure of any Confidential Information of the Disclosing Party, in whole, in part, or in summary, to any Person, except as expressly permitted by this Agreement and/or the Supply Agreement;

(c) not use the Confidential Information of the Disclosing Party or permit it to be used, in whole or in part, for any purpose other than performance of the obligations and enjoyment of the rights granted under this Agreement and/or the Supply Agreement; and

(d) inform the Disclosing Party immediately if it becomes aware of the possession, use or knowledge of any of the Confidential Information of the Disclosing Party by an unauthorised person, and to provide any assistance in relation to such unauthorised possession, use or knowledge that the Disclosing Party may require.

8.2 **Representatives**. The Receiving Party shall permit access to the Confidential Information of the Disclosing Party only to those of its Representatives who:

(a) reasonably require such access for the performance of the obligations and/or enjoyment of the rights granted under this Agreement and/or the Supply Agreement;

(b) have been informed of the confidential nature of such Confidential Information, the Disclosing Party's interest in such Confidential Information, and the provisions of this Agreement; and

(c) have entered into legally binding confidentiality obligations to the Receiving Party on terms that are no less onerous than those set out in this Agreement, and which extend to such Confidential Information.

The Receiving Party shall ensure that all those Representatives who have access to the Confidential Information of the Disclosing Party comply with the provisions of this Agreement. Notwithstanding any other provision of this Agreement, the Receiving Party shall be liable to the Disclosing Party for any acts or omissions of any such Representative, that would, if effected by the Receiving Party, constitute a breach of this Agreement.

8.3 **Exceptions**. The Receiving Party's obligations under clause 8.1 shall not apply to any Confidential Information of the Disclosing Party that the Receiving Party can prove by means of reasonable written evidence:

(a) was known to the Receiving Party prior to disclosure by the Disclosing Party;

(b) is or becomes publicly known other than as a result of breach of this Agreement by the Receiving Party or by anyone to whom the Receiving Party disclosed the Confidential Information of the Disclosing Party;

(c) is received by the Receiving Party from a Third Party lawfully entitled to make the disclosure without restrictions on such Third Party's rights to disclose or use; or

(d) is developed by or on behalf of the Receiving Party without any direct or indirect access to, or use or knowledge of, the Confidential Information of the Disclosing Party (except that this exception does not extend to the Arising IPR);

except that the above exceptions do not extend to circumstances where the Confidential Information is specific, does not fall within the above exceptions, and is embraced by more general information which does fall within the above exceptions.

8.4 **Required Disclosures**. The Receiving Party will not be in breach of its obligations under this Agreement to the extent that it is required to disclose Confidential Information of the Disclosing Party by law (provided, in the case of a disclosure under any freedom of information legislation, that the exemptions under that legislation do not apply) or order of a court or other public body or regulatory authority or Competent Authority that has jurisdiction over it or pursuant to the rules of any recognized stock exchange, provided that, before making such a disclosure, the Receiving Party shall, to the extent it is legally permitted to do so:

(a) inform the Disclosing Party of the proposed disclosure as soon as possible, and if possible before the court or other public body orders the disclosure;

(b) take into account reasonable requests of the Disclosing Party in relation to such disclosure;

(c) ask the court or other public body to treat such Confidential Information as confidential; and

(d) permit and assist the Disclosing Party to make representations to the court or other public body in respect of the disclosure and/or confidential treatment of such Confidential Information.

8.5 **Additional Disclosures**. In addition to disclosures allowed under clause 8.4:

(a) Orchard may disclose Confidential Information of BioMedica to the extent such disclosure is necessary in connection with exercising or sublicensing (or potential sublicensing) the rights granted under this Agreement, provided that:

(i) the provisions of clauses 3.1(a)(iii)(B), 3.3(c) and 4.5(c) are have been complied with where applicable; and

(ii) in all other events, such disclosure is made only under obligations of confidence and non-use at least as stringent as set out in this Agreement.

(b) BioMedica may disclose Orchard Arising IP to the extent such disclosure is necessary in connection with:

(i) obtaining patent protection with respect to such Orchard Arising IPR;

(ii) [***];

(c) BioMedica may disclose, to any licensor or assignor of Intellectual Property Rights to BioMedica, financial Confidential Information of Orchard provided to BioMedica under this Agreement to the extent required and for the specific purpose of enabling BioMedica to comply with its contractual royalty reporting obligations to any such licensor or assignor of Intellectual Property Rights to BioMedica; provided that any such disclosure is made only under obligations of confidence and non-use at least as stringent as set out in this Agreement.

(d) Each Party and its Affiliates may disclose the existence of this Agreement to financial or institutional potential and actual investors or potential purchasers of the business of such Party or its Affiliates in connection with:

(i) the raising of finance;

(ii) the sale of any equity interest in such Party or its Affiliates: or

(iii) the sale of the business or relevant part of the business of the Party or its Affiliates.

8.6 **Return and Destruction of Confidential Information**. At the Disclosing Party's written request and on expiration or termination of this Agreement, the Receiving Party shall:

(a) promptly destroy or erase all Confidential Information of the Disclosing Party that the Receiving Party has received under this Agreement including any copies made and delete all electronic copies of any such Confidential Information from the Receiving Party's computer systems, but excluding documents related to the GMP manufacture, release, distribution, etc. which must be retained for regulatory purposes; and

(b) make no further use of any such Confidential Information.

The Receiving Party may, however, keep one copy of the Confidential Information of the Disclosing Party in its legal advisor's files solely for the purpose of enabling it to comply with the provisions of this Agreement and as required to comply with the requirements of relevant regulatory authorities, and the Receiving Party shall not be required to remove such Confidential Information of the Disclosing Party from its back-up or archive electronic records.

8.7 **Press Releases and Publicity.** Neither Party shall make, nor permit any Person to make, any public announcement, whether oral or written, concerning this Agreement or the Supply Agreement or make any use of the name, symbol, trade mark, trade name or logo of the other Party or its Affiliates without the prior written consent of the other Party (such consent not to be unreasonably withheld or delayed); provided, however, that notwithstanding any other provision of this Agreement each Party shall be permitted to make an announcement in the agreed form appended to this Agreement as Schedule 4 and otherwise repeat the information contained therein as required by law or any other governmental regulation and such activities shall not constitute a breach of this Agreement.

9. Warranties and Liability

9.1 **Mutual Representations and Warranties. Each Party warrants to the other as of the Effective Date that:**

(a) it is a corporation duly organised, validly existing, and in good standing under the laws of its jurisdiction of formation;

(b) it has full corporate power and authority to execute, deliver, and perform this Agreement, and has taken all corporate action required by law and its organisational documents to authorise the execution and delivery of this Agreement and the consummation of the transactions contemplated by this Agreement;

(c) this Agreement constitutes a valid and binding agreement enforceable against it in accordance with its terms;

(d) all consents, approvals and authorisations from all governmental authorities or other Third Parties required to be obtained by such Party in connection with this Agreement have been obtained; and

(e) the execution and delivery of this Agreement and all other instruments and documents required to be executed pursuant to this Agreement do not and shall not (i) conflict with or result in a breach of any provision of its organisational documents, (ii) result in a breach of any agreement to which it is a party; or (iii) violate any law; and

9.2 BioMedica Warranties. BioMedica represents and warrants that:

(a) so far as it is aware as of the Effective Date there are no claims, challenges, oppositions, nullity actions, interferences, inter-partes reexaminations, inter-partes reviews, post-grant reviews, derivation proceedings, or other proceedings pending in respect of the BioMedica Patents (other than matters raised in the ordinary course of patent prosecution);

(b) so far as it is aware as of the Effective Date and without having made any particular enquiry [***];

(c) so far as it is aware BioMedica has filed and prosecuted patent applications within the BioMedica Patents in good faith and complied with all duties of disclosure with respect thereto;

(d) so far as it is aware BioMedica has not committed any act, or omitted to commit any act, that may cause the BioMedica Patents to expire prematurely or be declared invalid or unenforceable;

(e) all application, registration, maintenance and renewal fees in respect of the BioMedica Patents as of the Effective Date have been paid and all necessary documents and certificates have been filed with the relevant agencies for the purpose of maintaining the BioMedica Patents; and

(f) as at the Effective Date, so far as BioMedica is aware, BioMedica is not in breach of the [***];

(g) BioMedica has not granted any Third Party rights that would otherwise interfere or be inconsistent with Orchard's rights hereunder.

9.3 **Orchard Warranties**. Orchard represents and warrants that:

(a) Orchard has the right to grant to BioMedica the right to use the sequences, information and/or Collaboration Materials which are provided by or on behalf of Orchard to BioMedica in connection with this Agreement; and

(b) so far as Orchard is aware as of the Effective Date and without having made any particular enquiry, the use by Orchard and BioMedica of the sequences, information and/or Collaboration Materials which are provided by or on behalf of Orchard to BioMedica in connection with this Agreement will not give rise to any infringement nor misappropriation of the Intellectual Property Rights of any Third Party.

9.4 **No Other Warranties**. Each of the Parties acknowledges that, in entering into this Agreement, it does not do so in reliance on any representation, warranty, or other provision except as expressly provided in this Agreement, and any conditions, warranties or other terms implied by statute or common law are excluded from this Agreement to the fullest extent permitted by law.

10. Duration and Termination

10.1 **Term**. This Agreement shall commence on the Effective Date and, shall expire when no further payments are due to BioMedica under this Agreement unless earlier terminated by the Parties by agreement in writing. On expiry of this Agreement upon expiry of all payment obligations, all of the licences granted by BioMedica in this Agreement shall become fully paid up, royalty free, perpetual and irrevocable.

10.2 **Termination of Collaboration**.

(a) Orchard may terminate the performance of the Collaboration Plan by giving to BioMedica written notice at [***] in advance of such termination;

(b) If either Party is in material breach of any material obligation hereunder (including failure by Orchard to make an undisputed payment due under this Agreement) with respect to the performance of the Collaboration Plan, the non-breaching Party may give written notice to the breaching Party specifying the claimed particulars of such breach, and in the event such material breach is not cured within [***] after such notice [***], the non-breaching Party shall have the right thereafter to terminate the performance of the Collaboration Plan immediately by giving written notice to the breaching Party to such effect; provided, however, that if such breach is capable of being cured but cannot be cured within such cure period and the breaching Party initiates actions to cure such breach within such period and thereafter diligently pursues such actions, the breaching Party shall have such additional period as is reasonable in the circumstances to cure such breach;

(c) In the event of termination of the performance of the Collaboration Plan:

(i) by Orchard pursuant to Clause 10.2(a) or by BioMedica pursuant to Clause 10.2(b):

(A) Orchard shall, within [***] after the effective date of termination, pay to BioMedica:

(1) all expenses actually incurred by BioMedica in connection with the performance of the Collaboration Plan prior to such effective date of termination; and

(2) all costs and expenses which BioMedica is committed to incur in connection with the performance of the Collaboration Plan as at the effective date of termination and which could not be cancelled by BioMedica prior to expiry of such [***] period and which are actually incurred by BioMedica; and

(B) if the termination is by BioMedica pursuant to clause 10.2(b), [***]; and

(C) if the termination is by Orchard pursuant to clause 10.2(a) Orchard shall, within [***] after the effective date of termination, [***].

(ii) by Orchard pursuant to clause 10.2(b), Orchard shall within [***] after the effective date of termination, pay to BioMedica:

(A) all expenses actually incurred by BioMedica in connection with the proper performance of the Collaboration Plan in accordance with this Agreement prior to such effective date of termination; and

(B) all costs and expenses which BioMedica is committed to incur in connection with the performance of the Collaboration Plan as at the effective date of termination and which could not be cancelled by BioMedica prior to expiry of such [***] period or which [***].

10.3 Termination of Agreement for Breach or Insolvency.

(a) If either Party is in material breach of any material obligation hereunder (including failure by Orchard to make an undisputed payment due under this Agreement), the non-breaching Party may give written notice to the breaching Party specifying the claimed particulars of such breach, and in the event such material breach is not cured within [***] after such notice [***], the non-breaching Party shall have the right thereafter to terminate this Agreement immediately by giving written notice to the breaching Party to such effect; provided, however, that if such breach is capable of being cured but cannot be cured within such cure period and the breaching Party initiates actions to cure such breach within such period and thereafter diligently pursues such actions, the breaching Party shall have such additional period as is reasonable in the circumstances to cure such breach.

(b) Either Party may terminate this Agreement without notice if an Insolvency Event occurs in relation to the other Party. In any event when a Party first becomes aware of the likely occurrence of any Insolvency Event in regard to that Party, it shall promptly so notify the other Party in sufficient time to give the other Party sufficient notice to protect its interests under this Agreement.

10.4 **Termination Not Sole Remedy**. A Party's right of termination under this Agreement, and the exercise of any such right, shall be without prejudice to any other right or remedy (including any right to claim damages) that such Party may have in the event of a breach of contract or other default by the other Party.

10.5 **Effects of Termination by BioMedica**. Upon termination of this Agreement by BioMedica pursuant to clause 10.3:

(a) such termination shall be deemed to be a termination of the performance of the Collaboration Plan by BioMedica pursuant to clause 10.2(b) and the provisions of clause 10.2(c)(i) shall apply;

(b) [***];

(c) [***];

(d) subject to paragraph 10.5(c), Orchard shall no longer be licensed to use or otherwise exploit in any way under this Agreement, either directly or indirectly, the BioMedica Background IPR or BioMedica Arising IPR;

(e) Orchard shall consent to the cancellation of any formal licence granted to it, or of any registration of it in any register, in relation to any patents rights; and

(f) the Supply Agreement shall automatically terminate, subject to the survival and other consequences of termination in such Supply Agreement**.**

10.6 **Effects of Termination by Orchard**. Upon termination of this Agreement by Orchard pursuant to clause 10.3:

(a) such termination shall be deemed to be a termination of the performance of the Collaboration Plan by Orchard pursuant to clause 10.2(b) and the provisions of clause 10.2(c)(ii) shall apply;

(b) BioMedica shall have no further obligations under clauses 2 or 4 of this Agreement and Orchard shall not be obliged to [***];

(c) any Collaboration Particles or other materials that the Collaboration Plan contemplates [***];

(d) the licence granted to Orchard under clause 3.1(c) and any licence described in this Agreement as being irrevocable [***];

(e) only in the event of a Fundamental Breach by BioMedica, the licences granted by BioMedica to Orchard under this Agreement shall continue subject to all terms of this Agreement provided that:

(i) Orchard shall pay the royalties to BioMedica referred to in clauses 6.3 and 6.4 at [***] of the rates set out in clauses 6.3 and 6.4; and

(ii) BioMedica shall otherwise retain all rights granted to it under this Agreement including the right to terminate the rights which Orchard continues to hold under this Agreement in accordance with clause 10.3 as if this Agreement were still in effect; and

(f) Orchard shall consent to the cancellation of any formal licence granted to it, or of any registration of it in any register, in relation to any patents rights to the extent that such licences no longer remain in effect.

(g) [***].

10.7 **Survival**. Clauses 1, 3.1(c), 3.2, 4.4, 5, 6.9, 7, 9, 10.4, 10.5, 10.6 (along with any clauses stated therein as surviving termination where applicable), 10.7, 11, and 12 will continue in force indefinitely. Clause 8 will survive and continue in force for a period of [***] following expiry or termination of this Agreement.

11. Liability and Indemnities

11.1 **No Exclusion**. Nothing in this Agreement shall exclude or limit, or purport to exclude or limit, a Party's liability in the case of:

(a) breach of clause 8;

(b) fraud or fraudulent misrepresentation;

(c) death or personal injury resulting from its negligence; or

(d) any other matter in respect of which it would be unlawful to exclude or restrict liability.

11.2 **Limitation of Damages**. Subject to clause 11.1 above:

(a) neither Party nor any of its Affiliates shall be liable in contract, tort, negligence, breach of statutory duty or otherwise to the other Party for any consequential or indirect loss or damage (including lost profits, business or goodwill) arising out of this Agreement, except to the extent any such losses or damages (including lost profits, business or goodwill) are required to be paid as part of a claim for which a Party provides indemnification under this clause 11;

11.3 **Orchard Indemnification**. Orchard shall indemnify BioMedica and its Affiliates, and their respective officers, directors, employees, contractors and agents (the "**BioMedica Indemnitees**"), from and against any and all Claims against a BioMedica Indemnitee arising out of:

(a) the research, development, use, Manufacture, or Commercialisation of any Collaboration Product or Other Product by Orchard or its Affiliates or its or their sublicensees or subcontractors, including, but not limited to, any actual or alleged injury or death, claimed to result directly or indirectly from the possession, use or consumption of, or treatment with, any such Product; or

(b) use by the BioMedica Indemnitees of Collaboration Materials or information provided to BioMedica by or on behalf of Orchard, including, without limitation, infringement by the BioMedica Indemnitees of Third Party Intellectual Property Rights relating to the [***] by or on behalf of Orchard; or

(c) alleged infringement of any Third Party Intellectual Property Right relating specifically to Collaboration Product or Other Product provided that (i) subject to paragraph (ii) below, this indemnity shall not apply in relation to any alleged infringement of any Third Party Intellectual Property Right which relates specifically to the process of manufacture of any Collaboration Particle or Other Particle; and (ii) this indemnity shall apply in relation to alleged infringement of any Third Party Intellectual Property Right which relates to any of the sequences to be delivered to target cells by any Collaboration Particle or Other Particle;

in each case, except to the extent that such Claim is attributable to the negligence of, wilful misconduct of, or breach of this Agreement or the Supply Agreement by the BioMedica Indemnitees.

11.4 **BioMedica Indemnification**. BioMedica shall indemnify Orchard and its Affiliates, and their respective officers, directors, employees, contractors and agents (the "**Orchard Indemnitees**"), from and against any and all Claims against an Orchard Indemnitee arising out of the negligence or wilful misconduct of BioMedica or any of its Affiliates or subcontractors except to the extent that such Claim is attributable to the negligence, wilful misconduct, or breach of this Agreement by the Orchard Indemnitees or sublicensees of Orchard.

11.5 **Indemnification Procedure**. Where a Party (the "**Indemnified Party**") seeks indemnification from the other Party (the "**Indemnifying Party**") under clause 11:

(a) the Indemnified Party shall provide prompt written notice to the Indemnifying Party of the assertion or commencement of any Third Party claim, demand, action or suit;

(b) the Indemnifying Party shall have the right to assume (with its own counsel and at its own costs) the defence and/or settlement of the same and shall not be liable for any settlement made by the Indemnified Party without the Indemnifying Party's consent;

(c) the Indemnified Party shall:

(i) promptly provide all assistance and information reasonably required by the Indemnifying Party;

(ii) not make any admission of liability, conclude any agreement or make any compromise with any person in relation to such claim, demand, action or suit without the prior written consent of the Indemnifying Party (which consent shall not be withheld unreasonably); and

(iii) have the right to participate in (but not control) the defence of the claim, demand, action or suit and to retain its own counsel in connection with such claim, demand, action or suit at its own expense.

11.6 **Mitigation of Loss.** Each Indemnified Party will take and will ensure that its Affiliates take all such reasonable steps and action as are necessary or as the Indemnifying Party may reasonably require in order to mitigate any Claims (or potential losses or damages) under this clause 11. Nothing in this Agreement shall or shall be deemed to relieve any Party of any common law or other duty to mitigate any losses incurred by it.

12. General

12.1 **Force Majeure**. Neither Party shall have any liability or be deemed to be in breach of this Agreement for any delays or failures in performance of this Agreement that result from circumstances beyond the reasonable control of that Party and which circumstances are not reasonably foreseeable. The Party affected by such circumstances shall promptly notify the other Party in writing when such circumstances cause a delay or failure in performance and use its reasonable endeavours to avoid or remove the causes of non-performance and shall continue performance as expeditiously as possible as soon as such causes have been removed. If any circumstances described in this clause 12.1 prevent a Party from performing its material obligations under this Agreement for [***], the other Party may terminate this Agreement by giving [***] written notice to the affected Party.

12.2 **Compliance with Law.** Each Party shall perform its obligations under this Agreement in accordance with all Applicable Laws are being performed. No Party shall, or shall be required to, undertake any activity under or in connection with this Agreement which violates, or which it reasonably believes, in good faith, may violate, any Applicable Law.

12.3 **Further Action**. Each Party agrees, without the necessity of any further consideration, to execute, acknowledge, and deliver such further instruments, and do all further similar acts, as may be necessary or appropriate to carry out the purposes and intent of this Agreement.

12.4 **Notices and Other Communications**. Any notice to be given under this Agreement must be in writing, and be delivered to the other Party by courier or other recorded delivery post and will be deemed to be received on the date of delivery. Until changed by notice given in accordance with this clause 12.4, all notices should be addressed as follows:

For BioMedica:

For the attention of: Company Secretary

Address: Oxford BioMedica (UK) Limited

Windrush Court, Transport Way, Oxford, OX4 6LT, United Kingdom

With a copy to: [***]

For Orchard:

For the attention of: [***]

Address: Cheapside 5, EC2V 6AA

London (UK)

12.5 **Amendment**. This Agreement may only be amended in writing signed by duly authorised representatives of the Parties.

12.6 **Assignment**. Subject to the performance of the obligations and exercise of the rights described directly or indirectly in clause 12.7, neither Party may assign, mortgage, charge or otherwise transfer any of its rights nor obligations under this Agreement without the other Party's prior written consent (which consent shall not be unreasonably withheld, delayed or conditioned), except that either Party may assign its rights and obligations under this Agreement, without the consent of the other to any Person acquiring all or substantially all of the assigning Party's assets or business to which this Agreement relates, provided that, in all cases:

(a) the assigning Party shall provide the other Party with prompt written notice of any such assignment; and

(b) the permitted assignee shall assume the obligations of the assigning Party hereunder in writing.

12.7 **Term Loan Agreement**.

(a) The Parties agree and acknowledge:

(i) [***];

(ii) [***]; and

(iii) [***].

(b) [***]:

(i) [***];

(ii) [***]; and

(iii) [***].

12.8 **Third Party Rights**. The provisions of this Agreement are for the sole benefit of the Parties and their successors and permitted assigns, and they shall not be construed as conferring any rights to any Third Party except as otherwise expressly provided in clause 11 above. Except as expressly provided in clause 11 above, no person who is not a Party to this Agreement, nor any employee, officer, agent, representative or subcontractor of either Party, nor any Affiliate of Orchard, shall have the right to enforce any term of this Agreement which expressly or by implication confers a benefit on that person without the express prior agreement in writing of the Parties.

12.9 **Entire Agreement**. This Agreement, together with the Share Subscription Letter, the Supply Agreement, the Quality Agreement and all other agreements referred to in such documents constitute the entire agreement between the Parties relating to their subject matter and in relation to such subject matter supersedes all earlier understandings and agreements between the Parties. In the event of any conflict between the terms of this Agreement and the Share Subscription Letter or the Supply Agreement, this Agreement shall prevail solely to the extent necessary to resolve such conflict.

12.10 **Relationship**. Nothing in this Agreement creates, implies or evidences any contract of employment or any partnership or joint venture between the Parties, or authorises either Party to act as agent for the other. Moreover, each Party agrees not to construe this Agreement, or any of the transactions contemplated hereby, as a partnership for any tax purposes. Each Party shall act solely as an independent contractor, and nothing in this Agreement shall be construed to give any Party the power or authority to act for, bind, or commit the other.

12.11 **Waiver of Rights**. No failure or delay by a Party to exercise any right or remedy provided under this Agreement or by law or to insist upon compliance with any term or condition of this Agreement will constitute a waiver of that (or any other) right or remedy or excuse a similar subsequent failure to perform any such term or condition by the other Party. No waiver shall be effective unless it has been given in writing and signed by the Party giving such waiver. No single or partial exercise of such right or remedy will preclude or restrict the further exercise of that (or any other) right or remedy.

12.12 **Unenforceable Provisions**. If the whole or any part of any provision of this Agreement is unenforceable in any jurisdiction, then this Agreement shall be construed as if such provision were not contained herein and the remainder of this Agreement shall continue in full force and effect. The Parties will use their commercially reasonable efforts to substitute for the invalid or unenforceable provision a valid and enforceable provision which conforms as nearly as possible to the original intent of the Parties. The validity and enforceability of that provision in any other jurisdiction will not be affected.

12.13 **Counterparts**. This Agreement may be executed in any number of counterparts, each of which is an original but all of which together will constitute one document.

12.14 **Governing Law**. This Agreement and any dispute arising out of or relating to this Agreement is governed by and construed in accordance with English Law.

12.15 **Dispute Resolution; Jurisdiction and Venue**. Any dispute arising out of or relating to this Agreement shall be subject to the exclusive jurisdiction of the courts located in London, England and the Parties hereby consent to the personal jurisdiction of the courts of England. Nothing in this Agreement shall prevent either Party from seeking interim relief in any court of competent jurisdiction.

12.16 **Cumulative Remedies.** No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

12.17 **Expenses.** Except as otherwise expressly provided in this Agreement, each Party shall pay the fees and expenses of its respective lawyers and other experts and all other expenses and costs incurred by such Party incidental to the negotiation, preparation, execution and delivery of this Agreement.

AGREED by the Parties to this Agreement through their authorised signatories:

[SIGNATURES FOLLOW ON NEXT PAGE]

For and on behalf of

OXFORD BIOMEDICA (UK) LIMITED:

Signature
/s/ Timothy Watts

Print name
Timothy Watts

Job title
CFO

Date
28 November 2016

For and on behalf of

ORCHARD THERAPEUTICS LIMITED:

Signature
/s/ Nicolas Koebel

Print name
Nicolas Koebel

Job title
SVP Business Operatoins

Date
28.11.2016

Confidential Treatment Requested

SCHEDULE 1: BIOMEDICA BACKGROUND IPR

9Nov2016 (KH)

Country	Patent Application No.	Patent Number	Expiry
[***]			
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
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[***]	[***]	[***]	[***]
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Confidential Treatment Requested

[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
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[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]
[***]	[***]	[***]	[***]

KNOW-HOW

Extensive know-how including, without limitation:

[***]

SCHEDULE 2: APPROVED SUBCONTRACTORS

Name	Service
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

Confidential Treatment Requested

SCHEDULE 3: MILESTONES

Milestone 1

Orchard shall issue to BioMedica 188,462 ordinary shares in Orchard (representing [***]% of the Equity) upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, of both:

1. [***]; and
2. [***].

Milestone 2

Orchard shall issue to BioMedica [***] ordinary shares in Orchard (representing [***]% of the Equity) upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, [***].

Milestone 3

Orchard shall issue to BioMedica 169,615 ordinary shares in Orchard (representing [***]%% of the Equity) upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, [***].

[***].

Milestone 4

Orchard shall issue to BioMedica [***] ordinary shares in Orchard (representing [***]% of the Equity) upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, [***].

SCHEDULE 4: AGREED FORM PRESS RELEASE

Oxford BioMedica Announces a Strategic Alliance with Orchard Therapeutics

Oxford, UK & London, UK– 29 November 2016: Oxford BioMedica plc ("Oxford BioMedica" or "the Group") (LSE: OXB), a leading gene and cell therapy group, today announces it has entered into a strategic alliance with Orchard Therapeutics ("Orchard"), a biotechnology company dedicated to bringing transformative *ex-vivo* stem cell based gene therapies to patients with serious and life-threatening orphan diseases.

As part of the agreement the Group will develop and supply lentiviral vectors used by Orchard for the manufacture of *ex-vivo* gene therapy products in primary immune deficiency disorders and inherited metabolic disorders, including adenosine deaminase severe combined immunodeficiency (ADA-SCID), Mucopolysaccharidosis-IIIA (MPS-IIIA or Sanfilippo Syndrome type A) and undisclosed follow-on indications. Orchard will lead the global clinical development and commercialisation of collaboration programs in Europe, the United States and in other regions.

Under the terms of the collaboration and licence agreement, Oxford BioMedica will receive a 1.95% equity stake in Orchard and will be entitled to royalties on future sales of products covered by the collaboration. The Group will provide process development services and manufacture clinical and commercial GMP-grade lentiviral vectors for Orchard. The process development arrangements include performance-related incentives through which Oxford BioMedica could receive a further 1.95% equity stake in Orchard. The Group has also granted an exclusive intellectual property licence to Orchard for collaboration programmes.

John Dawson, Chief Executive Officer of Oxford BioMedica, commented: *"We are delighted to initiate a Strategic Alliance with Orchard Therapeutics and look forward to working with them to develop and launch much needed treatments for patients in desperate need of better treatment options. The alliance combines Oxford BioMedica's world-leading capabilities in lentiviral vector process development and bioprocessing expertise with Orchard's expertise in the development and commercialisation of gene therapies for orphan diseases. This further demonstrates Oxford BioMedica's position as a "go to" partner for companies and academic institutions working with lentiviral vector based products."*

Stewart Craig, Chief Manufacturing Officer of Orchard Therapeutics Ltd., commented: *"Orchard is a leader in bringing transformative gene therapies to patients with serious and life threatening orphan diseases. This alliance with Oxford BioMedica represents a key element of the supply chain for manufacture of our ex vivo gene-modified stem cell products. We expect that Oxford BioMedica's expertise in the development and manufacture of lentiviral vectors, along with their proven experience of working with global pharma companies will accelerate our ability to potentially address a series of devastating genetic diseases. We are excited about the potential for this alliance to deliver real patient benefits."*

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-Ends-

For further information, please contact:

Oxford BioMedica plc: Tel: +44 (0)1865 783 000

John Dawson, Chief Executive Officer

Tim Watts, Chief Financial Officer

Financial and corporate communications enquiries: Tel: +44 (0)20 3709 5700

Consilium Strategic Communications

Mary-Jane Elliott/Matthew Neal/Chris Welsh/Laura Thornton

Orchard Therapeutics Limited:
Sylvie Blanchier Tel: +44 (0)20 3823 2149

Notes to editors

About Oxford BioMedica®

Oxford BioMedica (LSE:OXB) is a leading gene and cell therapy company focused on developing life changing treatments for serious diseases. Oxford BioMedica and its subsidiaries (the “Group”) have built a sector leading lentiviral vector delivery platform (LentiVector®) through which the Group develops *in vivo* and *ex-vivo* products both in-house and with partners. The Group has created a valuable proprietary portfolio of gene and cell therapy product candidates in the areas of oncology, ophthalmology and CNS disorders. The

Group has also entered into a number of partnerships, including with Novartis, Sanofi, GSK, and Immune Design, through which it has long-term economic interests in other potential gene and cell therapy products. Oxford BioMedica is based across several locations in Oxfordshire, UK and employs more than 250 people. Further information is available at www.oxfordbiomedica.co.uk.

About Orchard Therapeutics Ltd.

Orchard Therapeutics is a clinical-stage biotechnology company dedicated to bringing transformative *ex-vivo* gene therapies to patients with serious and life-threatening orphan diseases. The company was recently named a Fierce 15 Company for 2016 by Fierce Biotech. For more information, visit www.orchard-tx.com

About Adenosine Deaminase Deficiency Severe Combined Immunodeficiency ("ADA-SCID")

ADA-SCID is a rare inherited disorder of the immune system. The incidence of ADA-SCID is estimated between 1 in every 375,000 - 660,000 live births, according to literature sources. ADA-SCID is caused by mutations in the gene encoding for the enzyme adenosine deaminase, which result in a severe deficiency in white blood cells and life-threatening infections. In the absence of treatment, ADA-SCID is fatal within the first months of life. Despite currently available treatment options, there remains significant need for therapies that reduce the mortality, morbidity and burden of disease on patients and families.

About Mucopolysaccharidosis type-A (Sanfilippo Syndrome type A)

Mucopolysaccharidosis type-A is a rare neurodegenerative lysosomal storage disease caused by mutations in the sulfoglycosamine sulfohydrolase (SGSH) gene. There are no effective treatments for MPS-IIIA to date. The disease affects children in early life, with a progressive decline in cognitive and behavioural function and a subsequent decline in motor function and results in severe dementia and early death, usually in the teens or early twenties.

SCHEDULE 5: COLLABORATION PLAN

Collaboration Plan 24 November 2016

Summary of work that either has been completed, is ongoing or is planned

ADA-SCID

a. WORK COMPLETED
[***]

b. WORK ONGOING
[***]

c. FUTURE WORK
[***]

MPSIIIA

a. WORK ONGOING
[***]

b. FUTURE WORK
[***]

SCHEDULE 6: EXPERT DETERMINATION PROCEDURE

Either Party may serve notice on the other (a "**Referral Notice**") that it wishes to refer the disputed matter (the "**Matter**") to an expert (the "**Expert**") for resolution in accordance with this Schedule 6. The Expert's determination shall be binding on the Parties.

1. The Parties shall agree the identity of a single independent, impartial, appropriately qualified expert to determine the Matter. In the absence of such agreement within [***] of the Referral Notice, upon request by either Party, the Expert shall be appointed by the ICC International Centre for ADR in accordance with the Rules for the Appointment of Experts and Neutrals of the International Chamber of Commerce.

2. Within [***], both Parties shall exchange simultaneously statements of case, and each Party shall simultaneously send a copy of its statement of case to the Expert.

3. Each Party may, [***] pursuant to paragraph 2 above, serve a reply to the other Party's statement of case. A copy of any such reply shall be simultaneously sent to the Expert.

4. The Expert shall make their decision on the Matter on the basis of the written statements and supporting documentation provided by the Parties only and there shall be no oral hearing. The Expert shall issue their decision in writing within [***] pursuant to paragraph 3 above or, in the absence of receipt of any replies, within [***] pursuant to paragraph 2 above.

5. The Expert's charges shall be borne as determined by the Expert.

SCHEDULE 7: ORCHARD BACKGROUND PATENTS

[***]

[***]

SCHEDULE 8: KEY TERMS OF PHARMACOVIGILANCE AGREEMENT

Each Party shall:

(a) ensure that it or its subcontractors shall have a Quality Management System for its Pharmacovigilance System that complies with applicable regulations and guidelines and that deficiencies with regards to applicable regulations and guidelines are identified and mitigation plans are put in place and implemented in a reasonable timeframe. This should include at a minimum appropriate metrics and measures of performance to provide evidence of the effectiveness of the Pharmacovigilance System. Must ensure that its own staff and any subcontractor staff are trained in the appropriate pharmacovigilance procedures according to its SOPs.

(b) transmit to the other Party copies of [***] and [***] sent to Regulatory agencies relating to Relevant Products for cases where [***], within specified expedited timelines.

(c) transmit to the other Party typically on a [***] basis (for discussion, pending recruitment rates etc.), to the other Party a cumulative line-listing of all initial and follow-up of all [***]). Agreement to be made on the relevance of exchange of [***].

(d) notify to the other Party any safety issue (urgent safety measure/restriction, product recall, signal detection, amendments to Reference Safety Information etc.) promptly, for cases where [***].

(e) collaborate on Platform Products [***] and duly provide to the other Party required information, as relevant (e.g. patient exposure in clinical trials).

(f) promptly notify each other of any new findings (clinical or non-clinical), which may imact the safety of the subjects of any clinical trials of the Relevant Products being conducted, for cases where OXB lentiviral vectors could be involved.

(g) promptly, transmit to the other Party any relevant safety question or request from a Health Authority relating to the Relevant Products for cases [***]. In addition, each party to notify each other of any communication from the IRBs or ethics committees, DMC or any other external body regarding any safety concern relating to the Relevant Products for cases where OXB lentiviral vectors could be involved

(h) agree to collaborate on a Risk Management Plan (RMP) for the Platform Products; such a RMP shall be set up as required under the terms of any regulatory marketing approval.

(i) collaboration/meetings: The Parties agree to collaborate in good faith on all aspects and meet if relevant to address safety aspects linked to the Platform Products. Frequency of meetings to be detailed.

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Amendment Letter

To:	Orchard Therapeutics Limited ("**Orchard**")
Address:	Birchin Court 20, Birchin Lane London EC3V 9DU
With a copy to:	[***]
	and
	[***]
	and
	[***]
	and
	Ari B. Blaut, Esq. Sullivan & Cromwell LLP 125 Broad Street New York NY 10004 Facsimile: (212)291 9219 E-mail: blauta@sullcrom.com

Confidential Treatment Requested

Date: 29 June 2017

Dear Sirs,

1. We refer to the License and Development Agreement (the "**LDA**") and the Supply Agreement (the "**SA**", together with the LDA, the "**Agreements**") both dated 28 November 2016 and made between Oxford BioMedica (UK) Limited (the "**Company**") and, Orchard (the Company and Orchard together the "**parties**"). In particular (without limitation) we refer to clauses 12.7 of the LDA and 13.8 of the SA, which both include consents and provisions in relation to [***].
2. We are informing you that [***].
3. We request your consent to amend the Agreements such that:
    a. reference to [***] is replaced with reference to [***];
    b. reference to [***] is replaced with reference to [***]; and
    c. reference to the [***] is replaced with reference to the [***].
4. All of the foregoing points a to c inclusive are herein collectively the "Amendments".
5. All other terms and conditions of the Agreements shall remain unchanged and in full force and effect mutatis mutandis.
6. By your countersignature below, you acknowledge and agree:
    a. to the Amendments;
    b. [***];
    c. [***];
    d. you will pay all moneys hereafter becoming due to the Company in respect of the Agreements as directed in this Letter and accept and will comply with the terms of this Letter and the provisions of the Agreements (as modified by this Letter);
    e. you will send to [***] copies of any notices which you may give to the Company under the Agreements at the same time as you send them to the Company; and
    f. [***].
7. The Company confirms that:
    a. [***];
    b. [***]; and

c. any written notice or instructions given to you by [***] in accordance with this Letter shall be conclusive (except for the avoidance of doubt, in relation to the Amendments).

8. This Letter shall be governed by English Law. The English Courts shall have exclusive jurisdiction to deal with any disputes which have arisen or may arise out of or in connection with this Letter.

9. This Letter may be executed in any number of counterparts and has the same effect as if the signatures on the counterparts were on a single copy of this Letter.

10. Kindly sign the enclosed counterpart and return by post to Oxford BioMedica (UK) Ltd, Windrush Court, Transport Way, Oxford 0X4 6LT for the attention of [***], with a copy to: [***].

Yours faithfully,

/s/ Timothy Watts
for and on behalf of

Oxford BioMedica (UK) Limited

Acknowledged and agreed,

/s/ Nicolas Koebel
Orchard Therapeutics Limited

Date: 03 July 2017

SECOND AMENDMENT OF THE LICENCE AND DEVELOPMENT AGREEMENT BETWEEN

Oxford BioMedica (UK) Limited
&
Orchard Therapeutics Limited

This second amendment of the licence and development agreement (the "**Second Amendment**") is made this 31st day of May 2018 (the "**Second Amendment Effective Date**")

BETWEEN

Oxford BioMedica (UK) Ltd, a company incorporated in England and Wales whose registered office address is at Windrush Court, Transport Way, Oxford, OX4 6LT, United Kingdom, and other affiliated members of the Oxford BioMedica pic group of companies, (hereinafter "**BioMedica**").

AND

Orchard Therapeutics Limited, a company incorporated in England whose registered office is at 108 Cannon Street, London, EC4N 6EU, United Kingdom (hereinafter "**Orchard**")

WHEREAS BioMedica and Orchard entered into a licence and development agreement dated 28 November 2016 which was amended on 3 July 2017 (together "**the Agreement**") and wish to amend the Agreement as shown below.

NOW IT IS AGREED as follows:

1. Clause 1.1 of the Agreement shall be amended by adding the following to the end of clause 1.1(j):

   (iv) Technology Access Fee for cell line development.

2. Clause 1.1 of the Agreement shall be further amended by adding the following definition to clause 1.1:

   "**Technology Access Fee**" means a fee for utilising BioMedica's [***], which fee shall be [***] (or other such amount agreed between the Parties in writing or outlined in a statement of work signed by the Parties).

3. A new Clause 4.7A shall be added after Clause 4.7 as follows:

   4.7A **Technology Access Fee**

   (a) It is agreed by the Parties that the Technology Access Fee shall only be charged to Orchard by BioMedica when the [***] has actually been used by BioMedica in the performance of activities set out in the Collaboration Plan.

   (b) If BioMedica commences the use of the [***] but any of the following:

      i. a system failure (including, without limitation, mechanical failure, software error or tissue culture contamination); or

      ii. any act or omission of BioMedica; or

      iii. force majeure (Clause 12.1);

   results in the inability of BioMedica to use the [***] in such [***] to complete the proposed stage of work that was scheduled to be undertaken, then BioMedica will waive the

Technology Access Fee for such [***] and will (subject to the provisions of sub-paragraph (c) below) reschedule such work on an expedited basis to minimize delay in completion of such work and the impact on the Collaboration Plan. For the avoidance of doubt, the Technology Access Fee will be charged for the rescheduled [***] work provided it has not been previously paid.

(c) In the event that access to the [***] needs to be rescheduled pursuant to sub-paragraph (b) above, BioMedica shall promptly consult with Orchard to agree upon the timing of any rescheduled work. In the event that the Parties are not able to agree upon an appropriate time slot for the rescheduled work on the [***], Orchard shall have the right to cancel such work as well as any other scheduled work contemplated by the Collaboration Plan involving use of the [***] and the Parties shall be required to promptly agree a revision to the Collaboration Plan to take account of such cancellation.

4. Clause 4.8(b) shall be amended by the addition of the language underlined below as follows:

Within [***] after [***], BioMedica shall provide Orchard with a statement of the activities performed under the Collaboration Plan and the Collaboration Costs incurred by it in such [***] (each, a **"Collaboration Costs Report")** together with an invoice for such Collaboration Costs. Notwithstanding the previous sentence but subject to the provisions of Clause 4.7A above, the Technology Access Fee will be invoiced by BioMedica within [***] after the end of each [***] that the Technology Access Fee is applied. Orchard shall pay such invoices within [***] after receipt of such invoice.

5. Clause 12.4 (Notices and Other Communications) shall be amended by deleting the current notice provisions for Orchard and replacing them with the following:

For Orchard

For the attention of: [***]

Address: Orchard Therapeutics Limited, 108 Cannon Street, London EC4N 6EU, UK

With a copy to: General Counsel, Orchard Therapeutics Limited, 108 Cannon Street, London EC4N 6EU, UK

6. Schedule 5 (the Collaboration Plan) of the Agreement shall be deleted in its entirety and replaced with the updated Schedule 5 (Collaboration Plan) attached as Exhibit A to this Second Amendment.

5. Miscellaneous

5.1 This Second Amendment shall become effective on the Second Amendment Effective Date.

5.2 Except as specifically amended by this Second Amendment, the terms and conditions of the Agreement shall remain in full force and effect. All capitalized terms used but not otherwise defined In this Second Amendment shall have the meanings given to such terms in the Agreement.

5.3 This Second Amendment shall be governed by the laws of England as set forth in clause 12.14 of the Agreement.

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Signed for and on behalf of the Orchard Therapeutics Limited

/s/ Stewart Craig Date: 31ST MAY 2018

Print name: Stewart Craig

Position: Chief Manufacturing Officer

Signed for and on behalf of Oxford BioMedica (UK) Ltd

/s/ James Miskin Date: 01 JUN 2018

Print name: James Miskin

Position: CTO

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EXHIBIT A

SCHEDULE 5: COLLABORATION PLAN

Collaboration Plan updated 31st May 2018

Below is a summary of work that either has been completed, is ongoing or is planned under Schedule 5 Collaboration Plan of Licence and Development Agreement between Oxford BioMedica (UK) Ltd and Orchard Therapeutics Ltd dated 28th November 2016 (as amended from time to time).

ADA-SCID

a. WORK COMPLETED

[***]

b. WORK ONGOING

[***]

c. FUTURE WORK

[***]

MPSIIIA

a. WORK COMPLETED

[***]

b. WORK ONGOING

[***]

c. FUTURE WORK:

[***]

[***]

THIRD AMENDMENT OF THE LICENCE AND DEVELOPMENT AGREEMENT BETWEEN

Oxford BioMedica (UK) Limited
&
Orchard Therapeutics Limited

This third amendment of the licence and development agreement (the "**Third Amendment**") is made this 9th day of July 2018 (the "**Third Amendment Effective Date**")

BETWEEN

Oxford BioMedica (UK) Ltd, a company incorporated in England and Wales whose registered office address is at Windrush Court, Transport Way, Oxford, 0X4 6LT, United Kingdom, and other affiliated members of the Oxford BioMedica pic group of companies, (hereinafter "**BioMedica**").

AND

Orchard Therapeutics Limited, a company incorporated in England whose registered office is at 108 Cannon Street, London, EC4N 6EU, United Kingdom (hereinafter "**Orchard**")

WHEREAS BioMedica and Orchard entered into a licence and development agreement dated 28 November 2016 which was amended on 3 July 2017 (together "**the Agreement**") and wish to amend the Agreement as shown below.

NOW IT IS AGREED as follows:

1. Schedule 2 of the agreement shall be replaced in its entirety with the version attached hereto at Exhibit A. The purpose of the amendment is to include two new approved subcontractors, [***] and [***].

2. Miscellaneous

2.1 This Third Amendment shall become effective on the Third Amendment Effective Date.

2.2 Except as specifically amended by this Third Amendment, the terms and conditions of the Agreement shall remain in full force and effect. All capitalized terms used but not otherwise defined in this Third Amendment shall have the meanings given to such terms in the Agreement.

2.3 This Third Amendment shall be governed by the laws of England as set forth in clause 12.14 of the Agreement.

Signatures follow on next page

Signed for and on behalf of the Orchard Therapeutics Limited

/s/ Stewart Craig Date: 12 Jul 2018

Print name: Stewart Craig

Position: CMO

Signed for and on behalf of Oxford BioMedica (UK) Ltd

/s/ Kyriacos Mytrphanous Date: 13 JUL 2018

Print name: K. Mitrophanous

Position: CSO

Confidential Treatment Requested

EXHIBIT A

SCHEDULE 2: APPROVED SUBCONTRACTORS

Name	Service
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]
[***]	[***]

OXFORD BIOMEDICA(UK) LIMITED

and

ORCHARD THERAPEUTICS LIMITED

LICENCE AND DEVELOPMENT AGREEMENT

Amendment #4

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BETWEEN:

(1) **OXFORD BIOMEDICA (UK) LIMITED,** a company incorporated in England and registered under number 03028927, whose registered office is at Windrush Court, Transport Way, Oxford, 0X4 6LT ("**BioMedica**"); and

(2) **ORCHARD THERAPEUTICS LIMITED,** a company incorporated in England and registered under number 09759506, whose registered office is at 108b Cannon Street, EC4N 6EU London ("**Orchard**").

BACKGROUND:

(A) Orchard has appointed BioMedica to perform development activities and to manufacture and supply lentiviral vectors taken a licence under certain intellectual property of BioMedica on the terms of this Agreement under a License and Development Agreement executed on the 28th of November 2017 ("**Agreement**").

(B) The Agreement contains provisions regarding the issue of equity to BioMedica upon achievement of Milestones described in Schedule 3 of the Agreement.

(C) At the Joint Steering Committee dated 15 June 2018 both parties verbally agreed to a revision of certain of the milestones in the Agreement, and the parties now wish to formally amend the provisions relating to the aforementioned milestones in accordance with the terms of this fourth amendment to the Agreement ("**Fourth Amendment**").

OPERATIVE PROVISIONS

1.1 Milestone 2 and Milestone 4 in Schedule 3 of the Agreement are amended as follows:

Milestone 2

Orchard shall issue to BioMedica 94,231 ordinary shares in Orchard upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, of [***].

Milestone 4

Orchard shall issue to BioMedica 94,231 ordinary shares in Orchard upon the achievement, as determined by the Steering Committee pursuant to clause 2.6, of [***].

1.2 Notwithstanding the date of execution of this amendment, the parties agree that this amendment shall be deemed effective as of 15 June 2018.

1.3 Except as specifically amended by this Fourth Amendment, the terms and conditions of the Agreement shall remain in full force and effect. All capitalized terms used but not otherwise defined in this Fourth Amendment shall have the meanings given to such terms in the Agreement.

1.4 This Fourth Amendment shall be governed by the laws of England as set forth in clause 12.14 of the Agreement.

For and on behalf of

OXFORD BIOMEDICA (UK) LIMITED:

Signature

/s/ Stuart Paynter

Print name
Stuart Paynter

Job title
CFO

Date

For and on behalf of

ORCHARD THERAPEUTICS LIMITED:

Signature

/s/ Nicolas Koebel

Print name
Nicolas Koebel

Job title
Chief of Staff and Head of Program Management

Date
11 September 2018