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

SCHEDULE 13D  
Under the Securities Exchange Act of 1934  
(Amendment No. 7)\*

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**XTANT MEDICAL HOLDINGS, INC.**

(Name of Issuer)

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**Common Stock**

(Title of Class of Securities)

**98420P308**

(CUSIP Number)

**OrbiMed Advisors LLC  
OrbiMed ROF II LLC**

**601 Lexington Avenue, 54th Floor  
New York, NY 10022**

**Telephone: (212) 739-6400**

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(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

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**February 24, 2021**

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of § 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7(b) for other parties to whom copies are to be sent.

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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**SCHEDULE 13D**

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|--|---|--|
| <b>CUSIP No. 98420P308</b>   |   |  |
| 1  | NAME OF REPORTING PERSONS<br>OrbiMed Advisors LLC   |  |
| 2  | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)<br>(a) <input type="radio"/><br>(b) <input type="radio"/> |  |
| 3  | SEC USE ONLY  |  |
| 4  | SOURCE OF FUNDS (See Instructions)<br>AF  |  |
| 5  | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>                 |  |
| 6  | CITIZENSHIP OR PLACE OF ORGANIZATION<br>Delaware  |  |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH: | 7   | SOLE VOTING POWER                      |
|  | 8   | SHARED VOTING POWER<br>72,803,072 (1)  |
|  | 9   | SOLE DISPOSITIVE POWER                 |
|  | 10  | SHARED DISPOSITIVE POWER<br>72,803,072 |
| 11   | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br>72,803,072  |  |
| 12   | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="radio"/>                |  |
| 13   | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)<br>93.6%*  |  |
| 14   | TYPE OF REPORTING PERSON (See Instructions)<br>IA   |  |

\* This percentage is calculated based upon 77,818,396 Shares outstanding of Xtant Medical Holdings, Inc., a Delaware corporation (the "Issuer"), as set forth in the Issuer's report on Annual Report on Form 10-K, filed with the Securities and Exchange Commission on February 24, 2021.

**SCHEDULE 13D**

|  |   |  |
|--|---|--|
| <b>CUSIP No. 98420P308</b>   |   |  |
| 1  | NAME OF REPORTING PERSONS<br>OrbiMed ROF II LLC   |  |
| 2  | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)<br>(a) <input type="radio"/><br>(b) <input type="radio"/> |  |
| 3  | SEC USE ONLY  |  |
| 4  | SOURCE OF FUNDS (See Instructions)<br>AF  |  |
| 5  | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>                 |  |
| 6  | CITIZENSHIP OR PLACE OF ORGANIZATION<br>Delaware  |  |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH: | 7   | SOLE VOTING POWER                          |
|  | 8   | SHARED VOTING POWER<br>17,036,720 (1)      |
|  | 9   | SOLE DISPOSITIVE POWER<br>0                |
|  | 10  | SHARED DISPOSITIVE POWER<br>17,036,720 (1) |
| 11   | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON<br>17,036,720 (1)  |  |
| 12   | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="radio"/>                |  |
| 13   | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)<br>21.9% (2)   |  |
| 14   | TYPE OF REPORTING PERSON (See Instructions)<br>IA   |  |

\* This percentage is calculated based upon 77,818,396 Shares outstanding of Xtant Medical Holdings, Inc., a Delaware corporation (the "Issuer"), as set forth in the Issuer's report on Annual Report on Form 10-K, filed with the Securities and Exchange Commission on February 24, 2021.

## Item 1. Security and Issuer

This Amendment No. 7 ("Amendment No. 7") to Schedule 13D supplements and amends the Statement on Schedule 13D of OrbiMed Advisors LLC originally filed with the Securities and Exchange Commission (the "SEC") on May 30, 2017 (the "Statement") with Samuel D. Isaly as an additional reporting person, and amended by Amendment No. 1 thereto filed with the SEC on January 17, 2018, Amendment No. 2 thereto filed with the SEC on February 15, 2018, Amendment No. 3 thereto filed with the SEC on September 19, 2018, Amendment No. 4 thereto filed with the SEC on April 4, 2019, Amendment No. 5 thereto filed with the SEC on May 20, 2020, and Amendment No. 6 thereto filed with the SEC on October 5, 2020 ("Amendment No. 6"). The Statement relates to the common stock, par value \$0.000001 per share (the "Shares"), of Xtant Medical Holdings, Inc. (formerly Bacterin International Holdings, Inc.), a Delaware corporation (the "Issuer"), with its principal offices located at 664 Cruiser Lane, Belgrade, Montana 59714. The Shares are listed on the NYSE American LLC (formerly the NYSE MKT) under the ticker symbol "XTNT".

This Amendment No. 7 is being filed to report that on February 24, 2021, the Issuer filed its Annual Report on Form 10-K with the SEC that reported its total number of outstanding Shares had increased to 77,818,396 (the "Outstanding Share Increase"). As a result of the Outstanding Share Increase, the percentage of outstanding Shares that the Reporting Persons may be deemed to beneficially own was reduced by more than 1% since the filing of Amendment No. 6.

## Item 2. Identity and Background

(a) This Statement is being filed by OrbiMed Advisors LLC ("Advisors") and OrbiMed ROF II LLC ("OrbiMed ROF") (collectively, the "Reporting Persons").

(b) – (c), (f) Advisors, a limited liability company organized under the laws of Delaware and a registered investment adviser under the Investment Advisers Act of 1940, as amended, is the managing member or investment manager of certain entities as more particularly described in Item 6 below. Advisors has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

OrbiMed ROF, a limited liability company organized under the laws of Delaware, is the general partner of OrbiMed Royalty Opportunities II, LP ("ORO II") as more particularly described in Item 6 below. OrbiMed ROF has its principal offices at 601 Lexington Avenue, 54th Floor, New York, New York 10022.

The directors and executive officers of Advisors and OrbiMed ROF are set forth on Schedules I and II, attached hereto. Schedules I and II set forth the following information with respect to each such person:

(i) name;

(ii) business address;

(iii) present principal occupation or employment and the name, principal business and address of any corporation or other organization in which such employment is conducted; and

(iv) citizenship.

(d) – (e) During the last five years, neither the Reporting Person nor any person named in Schedule I or Schedule II have been (i) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

## Item 3. Source and Amount of Funds or Other Consideration

Not Applicable.

#### **Item 4. Purpose of Transaction**

Advisors caused ROS Acquisition Offshore LP (“ROS Acquisition”), and Advisors and OrbiMed ROF caused ORO II, to acquire Shares and other securities of the Issuer for the purpose of making an investment in the Issuer and not with the intention of acquiring control of the Issuer’s business on behalf of ROS Acquisition and ORO II.

The Reporting Persons from time to time intend to review their investment in the Issuer on the basis of various factors, including the Issuer’s business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer’s Shares in particular, as well as other developments and other investment opportunities. Based upon such review, the Reporting Persons will take such actions in the future as the Reporting Persons may deem appropriate in light of the circumstances existing from time to time. If the Reporting Persons believe that further investment in the Issuer is attractive, whether because of the market price of Shares or otherwise, they may acquire Shares or other securities of the Issuer either in the open market or in privately negotiated transactions. Similarly, depending on market and other factors, the Reporting Persons may determine to dispose of some or all of the Shares currently owned by the Reporting Persons or otherwise acquired by the Reporting Persons either in the open market or in privately negotiated transactions.

Except as set forth in this Statement, the Reporting Persons have not formulated any plans or proposals which relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries; (c) a sale or transfer of a material amount of the assets of the Issuer or any of its subsidiaries; (d) any change in the present board of directors (the “Board”) or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the Board; (e) any material change in the Issuer’s capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer’s business or corporate structure; (g) any change in the Issuer’s charter or bylaws or other instrument corresponding thereto or other action which may impede the acquisition of control of the Issuer by any person; (h) causing a class of the Issuer’s securities to be deregistered or delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or (j) any action similar to any of those enumerated above.

#### **Item 5. Interest in Securities of the Issuer**

(a)-(b) As of the date of this filing, ROS Acquisition, a Cayman Islands exempted limited partnership, holds 55,766,352 Shares, constituting approximately 71.7% of the issued and outstanding Shares. Advisors, pursuant to its authority as the investment manager of ROS Acquisition, has the power to direct the vote and to direct the disposition of the Shares held by ROS Acquisition. As a result, Advisors may be deemed to indirectly beneficially own the Shares held by ROS Acquisition. Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the Shares held by ROS Acquisition.

In addition, Advisors, pursuant to its authority as investment manager of ROS Acquisition, caused ROS Acquisition to enter into the agreements referred to in Item 6 below.

As of the date of this filing, ORO II, a limited partnership organized under the laws of Delaware, holds 17,036,720 Shares, constituting approximately 21.8% of the issued and outstanding Shares. OrbiMed ROF is the general partner of ORO II, pursuant to the terms of the limited partnership agreement of ORO II, and Advisors is the managing member of OrbiMed ROF, pursuant to the terms of the limited liability company agreement of OrbiMed ROF. As a result, Advisors and OrbiMed ROF share power to direct the vote and disposition of the Shares held by ORO II and may be deemed directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the Shares held by ORO II. Advisors exercises this investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the Shares held by ORO II.

In addition, Advisors, pursuant to its authority under the limited liability company agreement of OrbiMed ROF, and OrbiMed ROF, pursuant to its authority under the limited partnership agreement of ORO II, caused ORO II to enter into the agreements referred to in Item 6 below.

- (c) The Reporting Persons have not effected any transactions in the Shares during the past sixty (60) days.
- (d) Not applicable.
- (e) Not applicable.

**Item 6. Contracts, Arrangements, Understandings or Relationship with Respect to Securities of the Issuer**

OrbiMed ROF is the general partner of ORO II, pursuant to the terms of the limited partnership agreement of ORO II. Pursuant to this agreement and relationship, OrbiMed ROF has discretionary investment management authority with respect to the assets of ORO II. Such authority includes the power to vote and otherwise dispose of securities held by ORO II. The number of outstanding Shares of the Issuer attributable to ORO II is 17,036,720. OrbiMed ROF, pursuant to its authority under the limited partnership agreement of ORO II, may be considered to hold indirectly 17,036,720 Shares.

Advisors is the managing member of OrbiMed ROF pursuant to the terms of the limited liability company agreement of OrbiMed ROF and is the investment manager of ROS Acquisition. Pursuant to these relationships, Advisors has discretionary investment management authority with respect to the assets of ROS Acquisition and, together with OrbiMed ROF, ORO II. Such authority includes the power of Advisors to vote and otherwise dispose of securities held by ROS Acquisition and ORO II. The aggregate number of fully diluted Shares held by ROS Acquisition is 55,766,352 and the aggregate number of fully diluted shares owned by ORO II is 17,036,720. Advisors may be considered to hold indirectly 72,803,072 Shares.

Matthew Rizzo (“Rizzo”) and Michael Eggenberg (“Eggenberg”), both of whom are employees of Advisors, are members of the Board, and, accordingly, the Reporting Persons may have the ability to affect and influence control of the Issuer. From time to time, Rizzo and/or Eggenberg may receive stock options or other awards of equity-based compensation pursuant to the Issuer’s compensation arrangements for non-employee directors. Rizzo and Eggenberg are obligated to transfer any securities issued under any such stock options or other awards, or the economic benefit thereof, to the Reporting Persons, which will in turn ensure that such securities or economic benefit are provided to ROS Acquisition and ORO II.

***Registration Rights Agreement***

On the Closing Date, the Issuer entered into a Registration Rights Agreement (the “Registration Rights Agreement”) with the Lenders. Upon demand by the Lenders, the Registration Rights Agreement requires the Issuer to, among other things, file with the SEC a shelf registration statement (which, initially, will be on Form S-1 and, as soon as the Issuer is eligible, will be on Form S-3) covering the resale, from time to time, of the Shares issued to the Lenders pursuant to the transactions described in the Restructuring Agreement and in respect of prepayment fees under the amendment to the Second A&R Credit Agreement within 90 days of such demand and to use its best efforts to cause the shelf registration statement to become effective under the Securities Act no later than the 180th day after such demand.

***Investor Rights Agreement***

The Issuer is party to an Investor Rights Agreement (the “Investor Rights Agreement”) with the ROS Acquisition and ORO II and certain other investors. Under the Investor Rights Agreement, ROS Acquisition and ORO II are permitted to nominate a majority of the directors and designate the chairperson of the Board at subsequent annual meetings, as long as they maintain an ownership threshold in the Issuer of at least 40% of the then outstanding Shares (the “Ownership Threshold”). If ROS Acquisition and ORO II are unable to maintain the Ownership Threshold, the Investor Rights Agreement contemplates a reduction of nomination rights commensurate with the Issuer ownership interests. At the request of the Reporting Person, the Issuer nominated Rizzo and Eggenberg, both of whom are employees of Advisors. The Issuer’s stockholders elected both Rizzo and Eggenberg to the Board.

For so long as the Ownership Threshold is met, the Issuer must obtain the approval of a majority of the Shares held by ROS Acquisition and ORO II to proceed with the following actions: (i) issue new securities; (ii) incur over \$250,000 of debt in a fiscal year; (iii) sell or transfer over \$250,000 of assets or businesses of the Issuer or its subsidiaries in a fiscal year; (iv) acquire over \$250,000 of assets or properties in a fiscal year; (v) make capital expenditures over \$125,000 individually, or \$1.5 million in the aggregate during a fiscal year; (vi) approve the Issuer's annual budget; (vii) hire or terminate the Issuer's chief executive officer; (viii) appoint or remove the chairperson of the Board; and (ix) make loans to, investments in, or purchase, or permit any subsidiary to purchase, any stock or other securities in another entity in excess of \$250,000 in a fiscal year. As long as the Ownership Threshold is met, the Issuer may not increase the size of the Board beyond seven directors without the approval of a majority of the directors nominated by ROS Acquisition and ORO II.

The Investor Rights Agreement grants ROS Acquisition and ORO II the right to purchase from the Issuer a pro rata amount of any new securities that the Issuer may propose to issue and sell. The Investor Rights Agreement may be terminated (a) upon the mutual written agreement of all the parties, (b) upon written notice of any party if ROS Acquisition and ORO II's ownership percentage of the Shares is less than 10%, or (c) upon written notice of ROS Acquisition and ORO II.

#### ***Credit Agreement Amendment***

On October 1, 2020, the Issuer entered into a Second Amendment to the Second A&R Credit Agreement with the Lenders, which amended the Second A&R Credit Agreement as follows: (i) extinguished loans in an aggregate principal amount equal to the Exchanging Loans outstanding thereunder on the Closing Date, immediately prior to the Closing, together with all accrued and unpaid interest thereon; (ii) added loans in an aggregate principal amount equal to a portion of the prepayment fee payable under the Second A&R Credit Agreement in respect of the Exchanging Loans and exchanged the remaining portion of the prepayment fee for an additional 0.9 million shares of Common Stock; (iii) removed the availability of the Additional Delayed Draw Loans and reduced the Additional Second Delayed Draw Commitment Amount (as such terms are defined in the Second A&R Credit Agreement) to \$5.0 million; (iv) provided that beginning on October 1, 2020 through the maturity date of the Second A&R Credit Agreement, interest payable in cash will accrue on the loans thereunder at a rate per annum equal to the sum of (i) 7.00% plus (ii) the higher of (x) the LIBO Rate (as such term is defined in the Second A&R Credit Agreement) and (y) 1.00%; and (v) eliminated the Revenue Base (as such term is defined in the Second A&R Credit Agreement) financial covenant.

#### ***Lock-Up Agreement***

Pursuant to a Lock-Up agreement (the "Lock-Up Agreement"), ROS Acquisition and ORO II agreed that they will not, during the period ending 90 days after February 24, 2021, which was the closing date of the transactions contemplated by that certain Securities Purchase Agreement, dated as of February 22, 2021, between the Issuer and the purchaser signatory thereto (the "Lock-Up Period"), directly or indirectly (1) sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, any Shares or securities convertible into or exercisable or exchangeable for Shares with respect to which ROS Acquisition and ORO II have or acquire the power of disposition or (2) enter into any swap or other agreement that transfers, in whole or in part, the economic risk of ownership of any such Shares.

After the Lock-Up Period expires, ROS Acquisition's and ORO II's Shares will be eligible for sale in the public market, subject to any applicable limitations under Rule 144 under the Securities Act, and other applicable U.S. securities laws.

The foregoing descriptions of the Registration Rights Agreement, the Investor Rights Agreement, the Second Amendment to the Second A&R Credit Agreement, and the Lock-Up Agreement do not purport to be complete and are qualified in their entirety by reference to such documents that are attached as exhibits hereto and are incorporated by reference herein. Other than as described in this Statement, to the best of the Reporting Persons' knowledge, there are no other contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any person with respect to any securities of the Issuer.

**Item 7. Materials to Be Filed as Exhibits**

| <b>Exhibit</b> | <b>Description</b>  |
|----------------|---|
| 1.             | Joint Filing Agreement among OrbiMed Advisors LLC and OrbiMed ROF II LLC.   |
| 2.             | Form of Investor Rights Agreement among Xtant Medical Holdings, Inc., ROS Acquisition Offshore LP, OrbiMed Royalty Opportunities II, LP, Park West Partners International and Limited, Park West Investors Master Fund, Limited (incorporated by reference to Exhibit D to Exhibit 10.1 to the Form 8-K filed with the SEC by Xtant Medical Holdings, Inc. on January 12, 2018).  |
| 3.             | Second Amended and Restated Credit Agreement, effective as of March 29, 2019, by and among Xtant Medical Holdings, Inc., Bacterin International, Inc., Xtant Medical, Inc., X-Spine Systems, Inc., OrbiMed Royalty Opportunities II, LP and ROS Acquisition Offshore LP (incorporated by reference to Exhibit 10.47 to the Form 10-K filed with the SEC by Xtant Medical Holdings, Inc. on April 1, 2019).                          |
| 4.             | First Amendment to the Second Amended and Restated Credit Agreement, effective as of April 1, 2020, by and among Xtant Medical Holdings, Inc., Bacterin International, Inc., Xtant Medical, Inc., X-Spine Systems, Inc., OrbiMed Royalty Opportunities II, LP and ROS Acquisition Offshore LP (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed with the SEC by Xtant Medical Holdings, Inc. on May 7, 2020).       |
| 5.             | Registration Rights Agreement (incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC by Xtant Medical Holdings, Inc. on October 1, 2020).  |
| 6.             | Second Amendment to the Second Amended and Restated Credit Agreement, effective as of October 1, 2020, by and among Xtant Medical Holdings, Inc., Bacterin International, Inc., Xtant Medical, Inc., X-Spine Systems, Inc., OrbiMed Royalty Opportunities II, LP and ROS Acquisition Offshore LP (incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC by Xtant Medical Holdings, Inc. on October 1, 2020). |
| 7.             | Form of Lock-Up Agreement   |



**SIGNATURE**

After reasonable inquiry and to the best of each of the undersigned's knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: February 25, 2021

OrbiMed Advisors LLC

By: /s/ Jonathan T. Silverstein

Name: Jonathan T. Silverstein

Title: Member

OrbiMed ROF II LLC

By: OrbiMed Advisors LLC  
its Managing Member

By: /s/ Jonathan T. Silverstein

Name: Jonathan T. Silverstein

Title: Member of OrbiMed Advisors LLC

**Schedule I**

The name and present principal occupation of each of the executive officers and directors of OrbiMed Advisors LLC are set forth below. Unless otherwise noted, each of these persons are United States citizens and have as their business address 601 Lexington Avenue, 54th Floor, New York, NY 10022.

| Name  | Position with Reporting Person | Principal Occupation                            |
|---|--------------------------------|---|
| Carl L. Gordon                              | Member                         | Member<br>OrbiMed Advisors LLC                  |
| Sven H. Borho<br>German and Swedish Citizen | Member                         | Member<br>OrbiMed Advisors LLC                  |
| Jonathan T. Silverstein                     | Member                         | Member<br>OrbiMed Advisors LLC                  |
| W. Carter Neild                             | Member                         | Member<br>OrbiMed Advisors LLC                  |
| Geoffrey C. Hsu                             | Member                         | Member<br>OrbiMed Advisors LLC                  |
| C. Scotland Stevens                         | Member                         | Member<br>OrbiMed Advisors LLC                  |
| David P. Bonita                             | Member                         | Member<br>OrbiMed Advisors LLC                  |
| Trey Block                                  | Chief Financial Officer        | Chief Financial Officer<br>OrbiMed Advisors LLC |

**Schedule II**

The business and operations of OrbiMed ROF II LLC are managed by the executive officers and directors of its managing member, OrbiMed Advisors LLC, set forth on Schedule I.

**EXHIBIT INDEX**

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| 7.             | Form of Lock-Up Agreement   |

## JOINT FILING AGREEMENT

The undersigned hereby agree that the Statement on this Schedule 13D, dated February 25, 2021 (the "Schedule 13D"), with respect to the Common Stock, of Xtant Medical Holdings, Inc. is filed, and all amendments thereto will be filed, on behalf of each of us pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, and that this Agreement shall be included as an Exhibit to this Schedule 13D. Each of the undersigned agrees to be responsible for the timely filing of the Schedule 13D, and for the completeness and accuracy of the information concerning itself contained therein. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the 25<sup>th</sup> day of February, 2021.

OrbiMed Advisors LLC

By: /s/ Jonathan T. Silverstein  
Name: Jonathan T. Silverstein  
Title: Member

OrbiMed ROF II LLC

By: OrbiMed Advisors LLC  
its Managing Member

By: /s/ Jonathan T. Silverstein  
Name: Jonathan T. Silverstein  
Title: Member of OrbiMed Advisors LLC

# Lock-Up Agreement

February 24, 2021

Xtant Medical Holdings, Inc.  
664 Cruiser Lane  
Belgrade, Montana 59714

Re: Securities Purchase Agreement, dated as of February 22, 2021 (the "Purchase Agreement"), between Xtant Medical Holdings, Inc. (the "Company") and the purchasers signatory thereto (each, a "Purchaser" and, collectively, the "Purchasers")

Ladies and Gentlemen:

Defined terms not otherwise defined in this letter agreement (the "Letter Agreement") shall have the meanings set forth in the Purchase Agreement. Pursuant to Section 2.2(a) of the Purchase Agreement and in satisfaction of a condition of the Company's obligations under the Purchase Agreement, the undersigned irrevocably agrees with the Company that, from the date hereof until 90 days following the Closing Date (such period, the "Restriction Period"), the undersigned will not offer, sell, contract to sell, hypothecate, pledge or otherwise dispose of (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the undersigned or any Affiliate of the undersigned or any person in privity with the undersigned or any Affiliate of the undersigned), directly or indirectly, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), with respect to, any shares of common stock of the Company, par value \$0.000001, per share (the "Common Stock"), or securities convertible, exchangeable or exercisable into, Common Stock of the Company beneficially owned, held or hereafter acquired by the undersigned (the "Securities"). Beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act. In order to enforce this covenant, the Company shall impose irrevocable stop-transfer instructions preventing the transfer agent of the Company from effecting any actions in violation of this Letter Agreement.

Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer the Securities provided that (1) the Company receives a signed lock-up letter agreement (in the form of this Letter Agreement) for the balance of the Restriction Period from each donee, trustee, distributee, or transferee, as the case may be, prior to such transfer (2) any such transfer shall not involve a disposition for value, (3) such transfer is not required to be reported with the Securities and Exchange Commission in accordance with the Exchange Act and no report of such transfer shall be made voluntarily, and (4) neither the undersigned nor any donee, trustee, distributee or transferee, as the case may be, otherwise voluntarily effects any public filing or report regarding such transfers, with respect to transfer:

- i) as a *bona fide* gift or gifts;
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- ii) to any immediate family member or to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned (for purposes of this Letter Agreement, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin);
- iii) to any corporation, partnership, limited liability company, or other business entity all of the equity holders of which consist of the undersigned and/or the immediate family of the undersigned;
- iv) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (a) to another corporation, partnership, limited liability company, trust or other business entity that is an Affiliate of the undersigned or (b) in the form of a distribution to limited partners, limited liability company members or stockholders of the undersigned;
- v) if the undersigned is a trust, to the beneficiary of such trust; or
- vi) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned.

In addition, notwithstanding the foregoing, this Letter Agreement shall not restrict the delivery of Common Stock to the undersigned upon (i) exercise any options granted under any employee benefit plan of the Company; provided that any Common Stock or Securities acquired in connection with any such exercise will be subject to the restrictions set forth in this Letter Agreement, or (ii) the exercise of warrants; provided that such Common Stock delivered to the undersigned in connection with such exercise are subject to the restrictions set forth in this Letter Agreement.

Furthermore, the undersigned may enter into any new plan established in compliance with Rule 10b5-1 of the Exchange Act; provided that (i) such plan may only be established if no public announcement or filing with the Securities and Exchange Commission, or other applicable regulatory authority, is made in connection with the establishment of such plan during the Restriction Period and (ii) no sale of Common Stock are made pursuant to such plan during the Restriction Period.

The undersigned acknowledges that the execution, delivery and performance of this Letter Agreement is a material inducement to each Purchaser to complete the transactions contemplated by the Purchase Agreement and the Company shall be entitled to specific performance of the undersigned’s obligations hereunder. The undersigned hereby represents that the undersigned has the power and authority to execute, deliver and perform this Letter Agreement, that the undersigned has received adequate consideration therefor and that the undersigned will indirectly benefit from the closing of the transactions contemplated by the Purchase Agreement.

This Letter Agreement may not be amended or otherwise modified in any respect without the written consent of each of the Company and the undersigned. This Letter Agreement shall be construed and enforced in accordance with the laws of the State of New York without regard to the principles of conflict of laws. The undersigned hereby irrevocably submits to the exclusive

jurisdiction of the United States District Court sitting in the Southern District of New York and the courts of the State of New York located in Manhattan, for the purposes of any suit, action or proceeding arising out of or relating to this Letter Agreement, and hereby waives, and agrees not to assert in any such suit, action or proceeding, any claim that (i) it is not personally subject to the jurisdiction of such court, (ii) the suit, action or proceeding is brought in an inconvenient forum, or (iii) the venue of the suit, action or proceeding is improper. The undersigned hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by receiving a copy thereof sent to the Company at the address in effect for notices to it under the Purchase Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. The undersigned hereby waives any right to a trial by jury. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. The undersigned agrees and understands that this Letter Agreement does not intend to create any relationship between the undersigned and any Purchaser and that no Purchaser is entitled to cast any votes on the matters herein contemplated and that no issuance or sale of the Securities is created or intended by virtue of this Letter Agreement.

This Letter Agreement shall be binding on successors and assigns of the undersigned with respect to the Securities and any such successor or assign shall enter into a similar agreement for the benefit of the Purchasers.

\*\*\* SIGNATURE PAGE FOLLOWS\*\*\*



This Letter Agreement may be executed in two or more counterparts, all of which when taken together may be considered one and the same agreement.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Position in Company, if any

Address for Notice:  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Number of Shares of Common Stock

\_\_\_\_\_  
Number of Shares of Common Stock underlying subject to warrants, options, debentures or other convertible securities

By signing below, the Company agrees to enforce the restrictions on transfer set forth in this Letter Agreement.

Xtant Medical Holdings, Inc.

By: \_\_\_\_\_

Name: Sean E. Browne

Title: President and Chief Executive Officer