

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

**Amendment No. 1
To
FORM S-1
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933**

BIO-PATH HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

87-0652870
(I.R.S. Employer
Identification Number)

**4710 Bellaire Boulevard, Suite 210
Bellaire, Texas 77401
(832) 742-1357**
(Address, including zip code, and telephone
number, including area code, of registrant's
principal executive offices)

**Peter H. Nielsen
President and Chief Executive Officer
4710 Bellaire Boulevard, Suite 210
Bellaire, Texas 77401
(832) 742-1357**
(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies To:

**William R. Rohrlich, II
Winstead PC
600 Travis Street
Suite 5200
Houston, Texas 77002
Tel. (281) 681-5912
Fax (281) 681-5901**

**M. Ali Panjwani
Pryor Cashman LLP
7 Times Square
New York, NY 10036
Tel. (212) 421-4100**

Approximate date of commencement of proposed sale to the 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 a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer
Non-accelerated filer
Emerging growth company

Accelerated filer
Smaller reporting company

If an emerging growth company, 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 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 this registration statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 1 (this “Amendment”) to the Registration Statement on Form S-1 of Bio-Path Holdings, Inc. ([File No. 333-277802](#)), initially filed on March 8, 2024 (the “Registration Statement”), is an exhibit-only filing that is being filed solely for the purpose of filing Exhibit 5.1. Accordingly, this Amendment consists only of the facing page, this explanatory note, Part II of the Registration Statement, the signature pages to the Registration Statement, and Exhibit 5.1. This Amendment does not include the prospectus, which remains unchanged from the Registration Statement filed on March 8, 2024.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth an estimate of the fees and expenses payable by the registrant in connection with the issuance and distribution of the securities being registered, other than Placement Agent fees. All amounts are estimated, except the Securities and Exchange Commission (“SEC”) registration fee and the FINRA filing fee. All of the expenses below will be paid by us.

	<u>AMOUNT</u>
SEC registration fee	\$ 3,321(1)
FINRA Filing Fee	\$ 5,000
Printing and related expenses	\$ 2,500
Legal fees and expenses	\$ 80,000
Transfer agent and registrar fees and expenses	\$ 10,000
Accounting fees and expenses	\$ 10,000
Miscellaneous expenses	\$ 1,000
Total	<u>\$ 111,821</u>

(1) Previously paid.

Item 14. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law (the “DGCL”) permits a corporation to eliminate or limit the personal liability of its directors to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that to the fullest extent elimination or limitation of personal liability of directors is permitted by the DGCL, no director of the Company shall be liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director.

Section 145 of the DGCL permits a corporation to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is party or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnification for such expenses which the Court of Chancery or such other court shall deem proper.

Our first amended and restated bylaws, as amended, and our certificate of incorporation provide that each person (and the heirs, executors or administrators of such person) who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Company shall be indemnified and held harmless by the Company to the fullest extent permitted by applicable law. Our certificate of incorporation also states that we will pay or reimburse the reasonable expenses incurred in defending any such action, suit or proceeding in advance of its final disposition if we have received an undertaking by the person receiving such payment or reimbursement to repay all amounts advanced if it should be ultimately determined that he or she is not entitled to be indemnified.

We have entered into indemnification agreements with each of our directors. The contractual rights to indemnification provided by these indemnity agreements are subject to the limitations and conditions specified in such agreements.

The effect of the foregoing is to require us to indemnify our officers and directors for any claim arising against such persons in their official capacities if such person acted in good faith and in a manner that he or she reasonably believed to be in or not contrary to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the “Securities Act”) may be permitted to our directors and officers, we have 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.

We have directors and officers insurance which includes insurance for claims against these persons brought under securities laws.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding securities issued by the Company since January 1, 2021 that were not registered under the Securities Act. Also included is the consideration received by the Company for such securities and information relating to the section of the Securities Act or rule of the SEC under which exemption from registration was claimed.

On November 9, 2022, we completed the closing of the a registered direct offering (the “2022 Registered Direct Offering”) with certain institutional and accredited investors for the sale of an aggregate of 40,000 shares of our common stock for gross proceeds of approximately \$2.0 million. On November, 9, 2022, we also completed a concurrent (the “2022 Private Placement”), in which we issued to the investors in the 2022 Registered Direct Offering warrants to purchase up to 40,000 shares of our common stock, with an exercise price of \$57.00 per share, which was subsequently amended to \$15.19 per share, exercisable from May 9, 2023 until May 9, 2028. The Warrants were issued in reliance on the exemption from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder. Each investor represented that it was an accredited investor, as defined in Rule 501 of Regulation D promulgated under the Securities Act.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

Exhibit Number	Exhibit
<u>2.1</u>	<u>Agreement and Plan of Merger and Reorganization dated September 27, 2007, by and among the Company, Biopath Acquisition Corp., a Utah corporation and wholly owned subsidiary of the registrant, and Bio-Path, Inc., a Utah corporation (incorporated by reference to Exhibit 2.1 to the Company’s Current Report on Form 8-K filed on September 27, 2007).</u>
<u>3.1</u>	<u>Certificate of Incorporation (incorporated by reference to Exhibit 3.3 to the Company’s Current Report on Form 8-K filed on January 6, 2015).</u>
<u>3.2</u>	<u>Certificate of Amendment to the Certificate of Incorporation of Bio-Path Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on February 9, 2018).</u>
<u>3.3</u>	<u>Certificate of Amendment to the Certificate of Incorporation of Bio-Path Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on January 16, 2019).</u>
<u>3.4</u>	<u>First Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on June 7, 2017).</u>
<u>3.5</u>	<u>Amendment No. 1 to First Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on December 8, 2023).</u>
<u>4.1</u>	<u>Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company’s Annual Report on Form 10-K filed on March 16, 2015).</u>
<u>4.2</u>	<u>Form of Warrant issued to Maxim Group LLC, Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 4.1 to the Company’s Current Report on Form 8-K on January 21, 2014).</u>
<u>4.3</u>	<u>Form of Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company’s Current Report on Form 8-K filed on June 29, 2016).</u>
<u>4.4</u>	<u>Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.5 to the Company’s Quarterly Report on Form 10-Q filed on August 9, 2016).</u>

Exhibit Number	Exhibit
4.5	Form of New Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on May 22, 2017).
4.6	Form of Warrant Amendment (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 19, 2017).
4.7	Form of Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 6, 2017).
4.8	Form of Warrant issued to Roth Capital Partners, LLC (incorporated by reference to Exhibit 4.9 to the Company's Annual Report on Form 10-K filed on April 2, 2018).
4.9	Form of Series A Warrant issued to certain investors (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on September 21, 2018).
4.10	Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q filed on November 14, 2018).
4.11	Form of Underwriter Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 16, 2019).
4.12	Form of Series A Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 22, 2019).
4.13	Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.15 to the Company's Annual Report on Form 10-K filed on March 19, 2019).
4.14	Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on March 13, 2019).
4.15	Form of Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 22, 2019).
4.16	Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on November 22, 2019).
4.17	Description of Bio-Path Holdings, Inc.'s Securities Registered under Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.17 to the Company's Annual Report on Form 10-K filed on March 5, 2020).
4.18	Form of Common Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 9, 2022).
4.19	Form of Common Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on August 7, 2023).
4.20	Warrant Agency Agreement, dated as of August 7, 2023, by and between Bio-Path Holdings, Inc. and Equinity Trust Company, LLC (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on August 7, 2023).
4.21**	Form of Common Warrant.
4.22**	Form of Pre-Funded Warrant.
4.23**	Form of Warrant Agency Agreement.
5.1*	Opinion of Winstead PC.
10.1+	Employment Agreement — Peter H. Nielsen (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 19, 2008).
10.2+	Amended 2007 Stock Incentive Plan (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed on December 10, 2008).
10.3+	First Amendment to First Amended 2007 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 14, 2013).
10.4	Form of Securities Purchase Agreement by and between the Company, Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 21, 2014).

Exhibit Number	Exhibit
<u>10.5</u>	<u>Form of Waiver, Consent and Amendment to that certain Securities Purchase Agreement by and between Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K on January 21, 2014).</u>
<u>10.6+</u>	<u>First Amendment to Employment Agreement, dated March 26, 2014 — Peter H. Nielsen (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 26, 2014).</u>
<u>10.7</u>	<u>Lease Agreement dated April 16, 2014 by and between the Company and Pin Oak North Parcel TT, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 18, 2014).</u>
<u>10.8</u>	<u>Form of Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 16, 2015).</u>
<u>10.9</u>	<u>Controlled Equity OfferingSM Sales Agreement, dated June 24, 2015, by and between the Company and Cantor Fitzgerald & Co. (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on June 25, 2015).</u>
<u>10.10</u>	<u>Form of Securities Purchase Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 29, 2016).</u>
<u>10.11</u>	<u>Form of Warrant Exercise Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 22, 2017).</u>
<u>10.12</u>	<u>Form of Securities Purchase Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 6, 2017).</u>
<u>10.13</u>	<u>Form of Leak-Out Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on November 6, 2017).</u>
<u>10.14+</u>	<u>Bio-Path Holdings, Inc. 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.15</u>	<u>Form of Incentive Stock Option Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.16</u>	<u>Form of Non-Qualified Stock Option Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.17</u>	<u>Form of Restricted Share Unit Award Agreement (Time-Vested) under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.18</u>	<u>Form of Restricted Share Unit Award Agreement (Performance-Based) under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.19</u>	<u>Form of Restricted Share Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.20</u>	<u>Form of Stock Appreciation Right Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on December 27, 2017).</u>
<u>10.21</u>	<u>Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 21, 2018).</u>
<u>10.22</u>	<u>Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 22, 2019).</u>
<u>10.23</u>	<u>Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 13, 2019).</u>
<u>10.24</u>	<u>First Amendment to Lease Agreement dated April 16, 2014 by and between the Company and Pin Oak North Parcel TT, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 4, 2019).</u>

Exhibit Number	Exhibit
<u>10.25</u>	<u>Form of Securities Purchase Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 22, 2019).</u>
<u>10.26+</u>	<u>First Amendment to Bio-Path Holdings, Inc. 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 23, 2019).</u>
<u>10.27+</u>	<u>Second Amendment to Bio-Path Holdings, Inc. 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 16, 2022).</u>
<u>10.28</u>	<u>Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 9, 2022).</u>
<u>10.29+</u>	<u>Bio-Path Holdings, Inc. 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.30</u>	<u>Form of Incentive Stock Option Award Agreement under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.31</u>	<u>Form of Non-Qualified Stock Option Award Agreement under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.32</u>	<u>Form of Restricted Share Unit Award Agreement (Time-Vested) under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.33</u>	<u>Form of Restricted Share Unit Award Agreement (Performance-Based) under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.34</u>	<u>Form of Restricted Share Award Agreement under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.35</u>	<u>Form of Stock Appreciation Right Award Agreement under 2022 Stock Incentive Plan (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on December 20, 2022).</u>
<u>10.36</u>	<u>Placement Agency Agreement, dated as of August 3, 2023, by and between Bio-Path Holdings, Inc. and Roth Capital Partners, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 7, 2023).</u>
<u>10.37</u>	<u>Form of Securities Purchase Agreement, dated as of August 3, 2023, by and between Bio-Path Holdings, Inc. and certain purchasers (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on August 7, 2023).</u>
<u>10.38</u>	<u>Form of Warrant Amendment Agreement, dated as of August 3, 2023, by and between Bio-Path Holdings, Inc. and certain warrant holders (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on August 7, 2023).</u>
<u>10.39**</u>	<u>Form of Placement Agency Agreement.</u>
<u>10.40**</u>	<u>Form of Securities Purchase Agreement.</u>
<u>21.1</u>	<u>Subsidiaries of Bio-Path Holdings, Inc. (incorporated by reference to Exhibit 21.1 to the Company's Annual Report on Form 10-K filed on March 5, 2020).</u>
<u>23.1**</u>	<u>Consent of Ernst & Young LLP.</u>
<u>23.2*</u>	<u>Consent of Winstead PC (included in Exhibit 5.1).</u>
<u>107**</u>	<u>Filing Fee Table.</u>

* Filed herewith.

** Previously filed.

+ Management contract or compensatory plan.

(b) Financial statement schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (ii), and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement;

(2) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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;

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(4) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;

(5) that, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser;

(6) that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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;

(7) insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the 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; and

(8) 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; and

(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.



March 13, 2024

Bio-Path Holdings, Inc.
4710 Bellaire Boulevard, Suite 210
Bellaire, Texas 77401

Dear Ladies and Gentlemen:

We have acted as legal counsel to Bio-Path Holdings, Inc., a Delaware corporation (the "Company"), in connection with the filing of a registration statement on Form S-1 (File No. 333-277802) (the "Registration Statement") initially filed with the Securities and Exchange Commission (the "Commission") on March 8, 2024, including the prospectus (the "Prospectus") which forms a part of the Registration Statement, under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement, including the Prospectus contained therein, relates to the proposed offer and sale by the Company of up to: (i) 1,152,073 shares (the "Shares") of the Company's common stock, par value \$0.001 per share ("Common Stock"); (ii) pre-funded warrants to purchase up to 1,152,073 shares of Common Stock (the "Pre-Funded Warrants"); (iii) the shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants (the "Pre-Funded Warrant Shares"); (iv) warrants to purchase up to 2,304,146 shares of Common Stock (the "Common Warrants") and together with the Pre-Funded Warrants, the "Warrants"); and (v) the shares of Common Stock issuable upon the exercise of the Common Warrants (the "Common Warrant Shares" and together with the Pre-Funded Warrant Shares, the "Warrant Shares"). The Shares, Warrants and Warrant Shares are collectively referred to herein as the "Securities." This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K in connection with the Registration Statement.

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of (i) the Registration Statement, including the Prospectus; (ii) a specimen certificate representing the Common Stock; (iii) the form of placement agency agreement between the Company and Roth Capital Partners, LLC filed with the Registration Statement; (iv) the form of securities purchase agreement between the Company and each purchaser to be identified on the signature pages thereto, filed with the Registration Statement (the "Purchase Agreement"); (v) the form of Pre-Funded Warrant filed with the Registration Statement; (vi) the form of Common Warrant filed with the Registration Statement; (vii) the warrant agency agreement between the Company and Equiniti Trust Company, LLC filed with the Registration Statement (the "Warrant Agreement"); (viii) the Certificate of Incorporation of the Company, as currently in effect; (ix) the First Amended and Restated Bylaws of the Company, as amended, as currently in effect; and (x) certain resolutions adopted by the Board of Directors of the Company and committees thereof with respect to the Purchase Agreements and the issuance of the Shares, the Warrants and the Warrant Shares. We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates of public officials, certificates of officers or other representatives of the Company and others, and such other documents, certificates and records, as we have deemed necessary or appropriate as a basis for the opinion set forth herein.

In our examination, we have assumed and have not verified (i) the legal capacity of all natural persons; (ii) the genuineness of all signatures (other than persons signing on behalf of the Company); (iii) the authenticity of all documents, certificates and instruments submitted to us as originals; (iv) the conformity with the originals of all documents supplied to us as copies; (v) the accuracy and completeness of all corporate records and documents made available to us by the Company; (vi) that the foregoing documents, in the form submitted to us for our review, have not been altered or amended in any respect material to our opinion stated herein; and (v) that at or prior to the time of the issuance and delivery of any of the Securities, the Registration Statement will have been declared effective under the Securities Act and such effectiveness shall not have been terminated or rescinded. We have relied as to factual matters upon certificates from officers of the Company and certificates and other documents from public officials and government agencies and departments and we have assumed the accuracy and authenticity of such certificates and documents. We have also assumed that, at or prior to the time of the issuance and delivery of any Warrant Shares, that there will not have occurred any change in law, change in the Warrants or the Company's Certificate of Incorporation or further action by the Company's board of directors, in each case affecting the validity of the issuance of the Warrant Shares.

Based on the foregoing, and subject to the assumptions, qualifications and limitations set forth herein, as of the date hereof, we are of the opinion that:

(1) the Shares have been duly authorized for issuance, and when issued and delivered by the Company and paid for pursuant to the terms of the Purchase Agreement and the Registration Statement, the Shares will be validly issued, fully paid and non-assessable;

(2) when the Warrants have been duly executed by the Company and the Warrants have been issued and sold pursuant to the terms of the Purchase Agreement and the Registration Statement, the Warrants will constitute valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms; and

(3) the Warrant Shares have been duly authorized and, when issued by the Company upon the valid exercise in accordance with the terms of the Warrants and the Warrant Agreement and payment of the consideration required in connection therewith, the Warrant Shares will be validly issued, fully paid and non-assessable.

With respect to our opinion in paragraph (2) above, the enforceability of the Warrants may be limited by bankruptcy, insolvency, reorganization, fraudulent transfer, fraudulent conveyance, moratorium or other laws now or hereafter in effect relating to or affecting enforcement of creditors' rights generally and by general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing), regardless of whether such enforcement is considered in a proceeding in equity or at law. Further, we express no opinion with respect to the validity or enforceability of the following provisions: (i) provisions purporting to release, exculpate, hold harmless or exempt any person or entity from, or to require indemnification or contribution of or by any person or entity for, liability for any matter; (ii) provisions purporting to waive, subordinate or not give effect to rights to notice, demands, legal defenses or other rights or benefits that cannot be waived, subordinated or rendered ineffective under Applicable Law; (iii) provisions relating to severability; (iv) provisions restricting access to courts or purporting to affect the jurisdiction or venue of courts; (v) provisions purporting to exclude all conflicts of law rules; or (vi) provisions providing that decisions by a party are conclusive or may be made in its sole discretion.

With your consent, we have assumed (i) that the Warrants and the Warrant Agreement have been duly authorized, executed and delivered by the parties thereto other than the Company, (ii) that the Warrants and the Warrant Agreement constitute or will constitute legally valid and binding obligations of the parties thereto other than the Company, enforceable against each of them in accordance with their respective terms and (iii) that the status of the Warrants as legally valid and binding obligations of the parties will not be affected by any (a) breaches of, or defaults under, agreements or instruments, (b) violations of statutes, rules, regulations or court or governmental orders or (c) failures to obtain required consents, approvals or authorizations from, or to make required registrations, declarations or filings with, governmental authorities.

We express no opinion as to the laws of any jurisdiction other than as set forth in the following definition of "Applicable Laws." For the purpose of this opinion letter, "Applicable Laws" means (i) for the limited purpose of our opinions in paragraphs 1 and 3 above, the General Corporation Law of the State of Delaware (including, to the extent applicable, Delaware statutory and constitutional provisions and reported judicial decisions interpreting the foregoing), and (ii) for the limited purpose of our opinion in paragraph 2 above, the laws of the State of New York. The opinion expressed herein is given as of this date, and we do not undertake to supplement this opinion with respect to any events or changes occurring subsequent to the date of this letter.

We hereby consent to the reference to our firm under the heading "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not admit that we are "experts" within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Winstead PC

Winstead PC

WINSTEAD PC | ATTORNEYS