

PROSPECTUS



42,703,475 Shares of Common Stock

This prospectus covers the offer and resale by the selling stockholders identified in this prospectus or their donees, pledgees, assignees, transferees, distributees or other successors-in-interest (the “selling stockholders”) of up to an aggregate of 42,703,475 shares of our common stock, par value \$0.0001 per share, which consists of (i) up to 34,304,688 shares of common stock issued by us in a private placement on December 13, 2023 consisting of (a) 10,860,655 shares of our common stock (the “PIPE Shares”), (b) 547,241 shares of our common stock issuable upon the exercise of outstanding pre-funded warrants to purchase shares of our common stock held by certain selling stockholders (the “Pre-Funded Warrant Shares”), (c) 11,434,896 shares of our common stock issuable upon the exercise of outstanding common warrants to purchase shares of our common stock held by the selling stockholders (the “Series A Warrant Shares”) and (d) 11,434,896 shares of our common stock issuable upon the exercise of outstanding common warrants to purchase shares of our common stock held by the selling stockholders (the “Series B Warrant Shares” and, together with the Pre-Funded Warrant Shares and the Series A Warrant Shares, the “Warrant Shares”), and (ii) up to 8,398,787 shares of common stock pursuant to that certain Investors’ Rights Agreement, dated May 7, 2018 (the “IRA”), between us and the selling securityholders granting such holders registration rights with respect to such shares.

We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale by the selling stockholders of such shares. We will, however, receive the net proceeds of any warrants exercised for cash.

Sales of the shares by the selling stockholders may occur at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. The selling stockholders may sell shares to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders, the purchasers of the shares, or both.

We are paying the cost of registering the shares of common stock covered by this prospectus as well as various related expenses. The selling stockholders are responsible for all broker or similar commissions related to the offer and sale of their shares.

Our common stock is listed on the Nasdaq Global Market under the trading symbol “INAB.” On January 17, 2024, the last reported sale price of our common stock was \$1.52 per share.

We are an “emerging growth company” and a “smaller reporting company” as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and the documents incorporated by reference herein and may elect to comply with reduced public company reporting requirements in future filings.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the section titled “[Risk Factors](#)” on page 7 of this prospectus and any similar section contained in any amendment or supplement to this prospectus or in any filing with the Securities and Exchange Commission that is incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is January 18, 2024.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (“SEC”) using a “shelf” registration process under the Securities Act of 1933, as amended (“Securities Act”). Under this registration statement, the selling stockholders may sell from time to time in one or more offerings the common stock described in this prospectus.

We have not authorized anyone to provide you with information other than the information that we have provided or incorporated by reference in this prospectus and your reliance on any unauthorized information or representation is at your own risk. This prospectus may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that the information appearing in this prospectus is accurate only as of the date of this prospectus and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, or any sale of our common stock. Our business, financial condition and results of operations may have changed since those dates.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus or incorporated by reference in this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the sections titled “Risk Factors” contained in this prospectus, the applicable prospectus supplement and any related free writing prospectus, and under similar sections in the other documents that are incorporated by reference into this prospectus. You should also carefully read the other information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Overview

We are a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of gamma-delta T cell product candidates for solid and liquid tumors. Gamma-delta T cells are a specialized population of T cells that possess unique properties. They are naturally occurring immune cells that can intrinsically differentiate between healthy and diseased tissue. These cells serve as a functional bridge between innate and adaptive immunity to contribute to direct tumor killing, as well as immune cell recruitment and activation to drive deeper and more comprehensive immune responses. The pivotal role of gamma-delta T cells in immune function and activation against diseases such as cancer underscores their therapeutic potential across a wide range of solid and hematologic malignancies. We develop ex vivo-expanded and activated gamma-delta T cell candidates based upon our deep expertise in gamma-delta T cell biology, proprietary genetic engineering, and cell-type specific manufacturing capabilities, which we refer to collectively as our DeltEx platform. Our platform employs allogeneic, autologous, induced pluripotent stem cell, and genetically modified cell therapy approaches that are designed to effectively identify and eradicate tumor cells. We are the most clinically advanced gamma-delta T cell focused cellular therapy company and are utilizing our suite of DeltEx platform technologies as we aspire to eliminate cancer cells to achieve our mission of what we refer to as Cancer Zero — the elimination of all cancer cells in every patient battling the disease. We believe this lofty aspiration will one day be achievable and that it is our responsibility to directly contribute to related global health efforts by pursuing scientific research that will advance cancer treatment.

Corporate Information

Incysus, Ltd. was incorporated in Bermuda on February 8, 2016. On May 7, 2018, Incysus, Ltd. reincorporated in the United States in a domestication transaction in which Incysus, Ltd. converted into a newly formed Delaware corporation, Incysus Therapeutics, Inc. Upon the domestication, each Class A share of Incysus, Ltd. was automatically converted into one share of common stock of Incysus Therapeutics, Inc. and each Class B share of Incysus, Ltd. was automatically cancelled and did not convert into any shares of any class of capital stock of Incysus Therapeutics, Inc. In August 2020, we amended our certificate of incorporation, as amended, to change our name to IN8bio, Inc. Our principal executive offices are located at 350 5th Avenue, Suite 5330, New York, New York 10118, and our telephone number is (646) 600-6438. Our corporate website address is www.in8bio.com. Information contained on, or accessible through, our website is not a part of this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

“IN8BIO,” “INEIGHTBIO,” the IN8BIO logo, DeltEx and other trademarks, trade names or service marks of IN8bio, Inc. appearing in this prospectus are the property of IN8bio, Inc.

Emerging Growth Company and Smaller Reporting Company Status

We qualify as an Emerging Growth Company (“EGC”), as defined in the Jumpstart Our Business Startups (“JOBS”) Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that

are otherwise applicable generally to public companies, including reduced disclosure about our executive compensation arrangements, exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments and exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until December 31, 2026 or such earlier time that we are no longer an emerging growth company. We would cease to be an EGC earlier if we have more than \$1.235 billion in annual revenue, we have more than \$700.0 million in market value of our stock held by non-affiliates (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K) or we issue more than \$1.0 billion of non-convertible debt securities over a three-year period. For so long as we remain an EGC, we are permitted, and intend, to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not EGCs. We may choose to take advantage of some, but not all, of the available exemptions.

In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an EGC to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to “opt out” of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our financial statements may not be directly comparable to those of other public companies.

We are also a “smaller reporting company,” meaning that the market value of our stock held by non-affiliates was less than \$700 million at the closing of the initial public offering (“IPO”) and our annual revenue for 2021 was less than \$100 million. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue is less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million.

If we are a smaller reporting company at the time we cease to be an EGC, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report and, similar to EGCs, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Private Placement

On December 11, 2023, we entered into a Securities Purchase Agreement (the “Purchase Agreement”), pursuant to which we agreed to issue and sell the following securities to the selling stockholders in a private placement transaction (the “Private Placement”): (i) 10,860,655 PIPE Shares; (ii) with respect to certain selling stockholders, pre-funded warrants to purchase an aggregate of 547,241 Pre-Funded Warrant Shares (the “Pre-Funded Warrants”); (iii) common warrants to purchase 11,434,896 Series A Warrant Shares (the “Series A Warrants”); (iv) common warrants to purchase 11,434,896 Series B Warrant Shares (the “Series B Warrants” and, together with the Series A Warrants, the “Common Stock Warrants” and the Common Stock Warrants together with the Pre-Funded Warrants, the “Warrants”). In addition, certain of our directors and officers purchased 388,933 shares of our common stock, Series A common stock warrants to purchase 388,933 shares of our common stock and Series B common stock warrants to purchase 388,933 shares of our common stock in the Private Placement, none of which are included in this registration statement. The purchase price per share of common stock and accompanying common warrants was \$1.22, and the purchase price per pre-funded warrant was \$1.2199.

Our total gross proceeds from the sale of securities in the Private Placement, before deducting commissions to the placement agent and estimated offering expenses, was approximately \$14.4 million, which does not include any proceeds that may be received upon exercise of any warrants issued in the Private Placement. The closing of the Private Placement occurred on December 13, 2023.

Warrants

The Pre-Funded Warrants have an exercise price of \$0.0001 per share, are exercisable immediately and are exercisable until the Pre-Funded Warrant is exercised in full. In lieu of making the cash payment upon exercise of a Pre-Funded Warrant, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Pre-Funded Warrants.

The Series A Warrants are exercisable immediately and will expire on June 13, 2025. We have the option to cause the Series A Warrants to be exercised at a strike price of \$1.25 per share upon our public announcement of INB-100 clinical data for the 10 currently enrolled patients, should they remain alive and evaluable, covering a period of at least 11 months, along with certain stock price and trading volume requirements.

The Series B Warrants are exercisable immediately and will expire on December 13, 2028. The Series B Warrants allow us to redeem such warrants at a price of \$0.01 per share upon our public announcement of INB-100 data for all enrolled patients covering a period of at least 22 months, along with certain stock price and trading volume requirements. Holders of Class B Warrants may choose to exercise such warrants at a purchase price of \$1.50 per share prior to such redemption.

Under the terms of the Warrants, we may not give effect to the exercise of any such Warrant, and a holder will not be entitled to exercise any portion of any such Warrant, if, upon giving effect to such exercise, the aggregate number of shares of common stock beneficially owned by the holder (together with its affiliates, any other persons acting as a group together with the holder or any of the holder's affiliates, and any other persons whose beneficial ownership of common stock would or could be aggregated with the holder's for purposes of Section 13(d) or Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) would exceed 4.99% of the number of shares of common stock outstanding immediately after giving effect to such exercise, which percentage may be increased or decreased at the holder's election upon notice to us, up to 19.99%.

Registration Rights Agreement

In connection with the Private Placement, we entered into a registration rights agreement (the "2023 RRA") with the selling stockholders, pursuant to which we agreed to register for resale the PIPE Shares and the Warrant Shares (together, the "Registrable Securities"). Under the 2023 RRA, we agreed to file a registration statement covering the resale by the selling stockholders of their Registrable Securities no later than 30 days following the closing of the Private Placement, and to use commercially reasonable efforts to cause such registration statement to become effective as soon as reasonably practicable after filing and in any case not more than 30 days following the filing.

For more information regarding the Private Placement, see our Current Report on [Form 8-K](#) filed with the SEC on December 11, 2023 and incorporated herein by reference. The registration statement of which this prospectus forms a part is being filed in part to satisfy the requirements of the Registration Rights Agreement.

The Offering

Shares of common stock offered by the selling stockholders	<p>We are registering the resale by the selling stockholders an aggregate of 42,703,475 shares of common stock, consisting of:</p> <ul style="list-style-type: none">• up to 10,860,655 PIPE Shares;• up to 547,241 Pre-Funded Warrant Shares;• up to 11,434,896 Series A Warrant Shares;• up to 11,434,896 Series B Warrant Shares; and• up to 8,398,787 shares of common stock pursuant to the IRA.
Terms of the offering	<p>Each selling stockholder will determine when and how it will sell the common stock offered in this prospectus, as described in “Plan of Distribution.”</p>
Use of proceeds	<p>We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus. We will, however, receive the exercise price of (i) \$0.0001 per share of any of the Pre-Funded Warrants, (ii) \$1.25 per share of any of the Series A Warrants and (iii) \$1.50 per share of any of the Series B Warrants (if not otherwise redeemed by us pursuant to terms set forth in the Purchase Agreement), in each case exercised for cash.</p>
Risk Factors	<p>See “Risk Factors” on page 4 for a discussion of factors you should carefully consider before deciding to invest in our common stock.</p>
Nasdaq ticker symbol	<p>“INAB”</p>

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the SEC that are incorporated by reference contain “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our ability to mitigate the substantial doubt to continue as a going concern;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our plans to develop and commercialize our product candidates;
- the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and our research and development programs;
- our ability to take advantage of abbreviated regulatory pathways for any of our product candidates;
- our ability to successfully acquire or in-license additional product candidates on reasonable terms;
- our ability to maintain and establish collaborations or obtain additional funding;
- our ability to obtain regulatory approval of our current and future product candidates;
- our expectations regarding the potential market size and the rate and degree of market acceptance of such product candidates;
- our continued reliance on third parties to conduct clinical trials of our product candidates, and for the manufacture of our product candidates for preclinical studies and clinical trials;
- the implementation of our business model and strategic plans for our business and product candidates;
- our intellectual property position and the duration of our patent rights;
- developments or disputes concerning our intellectual property or other proprietary rights;
- our expectations regarding government and third-party payor coverage and reimbursement;
- our ability to compete in the markets we serve;
- the impact of government laws and regulations and liabilities thereunder;
- our need to hire additional personnel and our ability to attract and retain such personnel;
- developments relating to our competitors and our industry;
- our expectations regarding the impact of recent bank closures, public health crises and geopolitical tensions, such as the Russia-Ukraine war, on our business, our industry and the economy;
- our ability to contribute to eliminate cancer and achieve cancer-free status in any or all patients;
- other factors that may impact our financial results; and
- our use of the proceeds from any offering of securities.

The foregoing list of risks is not exhaustive. Other sections of this prospectus may include additional factors that could harm our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to

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predict all risk factors nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements.

All statements other than statements of historical facts contained in this prospectus, including statements regarding our future financial condition, business strategy and plans, and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by words such as “anticipate,” “believe,” “continue,” “could,” “design,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially,” “predict,” “should,” “will” or the negative of these terms or other similar expressions. These statements reflect our current views with respect to future events and are based on assumptions and are subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss in greater detail many of these risks under the section titled “Risk Factors” contained in the applicable prospectus supplement, in any free writing prospectuses we may authorize for use in connection with a specific offering, and in our most recent Annual Report on Form 10-K and in our most recent Quarterly Report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read this prospectus, any applicable prospectus supplement, together with the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we may authorize for use in connection with a specific offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described in the sections entitled “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q, as filed with the SEC, which are incorporated herein by reference in their entirety, as well any amendment or updates to our risk factors reflected in subsequent filings with the SEC, including any applicable prospectus supplement. Our business, financial condition, results of operations or prospects could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus. For more information, see the below section “Where You Can Find Additional Information.” Please also read carefully the above section “Special Note Regarding Forward-Looking Statements.”

Risks Related to the Ownership of Our Common Stock

A substantial number of shares of our common stock may be sold in the market following the effective date of the registration statement of which this prospectus form a part, which may depress the market price for our common stock.

Sales of a substantial number of shares of our common stock in the public market following the effective date of the registration statement of which this prospectus forms a part could cause the market price of our common stock to decline. A substantial majority of our outstanding common stock is, and the common stock offered hereby will be, freely tradable without restriction or further registration under the Securities Act.

We have broad discretion over the use of the net proceeds from the exercise of any Pre-Funded Warrants or Warrants for cash and may use them in ways with which you do not agree and in ways that may not enhance our operating results or the price of our common stock.

Our board of directors and management will have broad discretion over the application of the net proceeds that we receive from any exercise of Pre-Funded Warrants or Warrants for cash. We may spend or invest these proceeds in ways with which our stockholders disagree or that do not yield a favorable return, if at all. We intend to use the net proceeds from any exercise of Pre-Funded Warrants or Warrants for cash, together with our existing cash resources as described in “Use of Proceeds.” However, our use of these proceeds may differ substantially from our current plans. Failure by our management to apply these funds effectively could harm our business, results of operations, cash flows, financial condition and/or prospects. Pending use, we may invest the net proceeds from the offering in a manner that does not produce income or that loses value.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale or other disposition of shares of our common stock beneficially owned by the selling stockholders pursuant to this prospectus. Upon any exercise of the Warrants for cash, the applicable selling stockholder would pay us the exercise price set forth in the applicable Warrant.

Each Pre-Funded Warrant has an exercise price equal to \$0.0001 per share, and if all 547,241 Pre-Funded Warrants are exercised on a cash basis, we will receive proceeds of approximately \$55. Each Series A Warrant has an exercise price equal to \$1.25 per share, and if all 11,434,896 Series A Warrants are exercised on a cash basis, we will receive proceeds of approximately \$14.3 million. Each Series B Warrant has an exercise price equal to \$1.50 per share, and if all 11,434,896 Series B Warrants are exercised on a cash basis, we will receive proceeds of approximately \$17.2 million. We expect to use any such proceeds primarily to fund the clinical development of our product candidates and for general corporate purposes. The Pre-Funded Warrants are exercisable at any time after their original issuance on December 13, 2023 and will not expire until exercised in full. The Series A Warrants are exercisable at any time after their original issuance on December 13, 2023 and expire on June 13, 2025. The Series B Warrants are exercisable at any time after their original issuance on December 13, 2023 and expire on December 13, 2028.

The Pre-Funded Warrants are exercisable on a net exercise cashless basis. The Series A Warrants and the Series B Warrants are only exercisable on a net exercise cashless basis if there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of, the shares issuable upon exercise of such warrants. If any of the Warrants are exercised on a cashless basis, we would not receive any cash payment from the applicable selling stockholder upon any such exercise.

We will bear the out-of-pocket costs, expenses and fees incurred in connection with the registration of shares of our common stock to be sold by the selling stockholders pursuant to this prospectus. Other than registration expenses, the selling stockholders will bear their own broker or similar commissions payable with respect to sales of shares of our common stock.

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders include (i) shares of common stock issued by us in the Private Placement consisting of (a) the PIPE Shares, (b) the Pre-Funded Warrant Shares, (c) the Series A Warrant Shares and (d) the Series B Warrant Shares, and (ii) shares of common stock required to be registered pursuant to the IRA. For additional information regarding the issuance of the PIPE Shares and Warrants in connection with the Private Placement, see the section “Prospectus Summary—Private Placement” above. We are registering the resale of shares of common stock issued to the selling stockholders and issuable upon exercise of the Warrants in order to permit such selling stockholders to offer the shares for resale from time to time.

As used in this prospectus, the term “selling securityholders” includes the selling securityholders listed in the table below, together with any additional selling securityholders listed in a subsequent amendment to this prospectus, and their donees, pledgees, assignees, transferees, distributees or other successors-in-interest that receive shares in any non-sale transfer after the date of this prospectus. None of the selling stockholders or any persons having control over such selling stockholders has held any position or office with us or our affiliates within the last three years or has had a material relationship with us or any of our predecessors or affiliates within the past three years, other than as a result of the ownership of our shares or other securities, except that prior to our IPO on July 29, 2021, our director, Travis Whitfill, a former partner at Bios Equity Partners, LP, was a board of director designee selected by the Bios Entities. Upon completion of the IPO, this board designation right terminated.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to our common stock. Generally, a person “beneficially owns” shares of our common stock if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock by each of the selling stockholders. This information has been obtained from the selling stockholders or in Schedules 13G or 13D and other public documents filed with the SEC. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of shares of common stock, PIPE Shares and Warrants, as of January 1, 2024, assuming exercise of the Warrants held by the selling stockholders on that date, without regard to any limitations on exercises. The percentage of shares owned prior to and after the offering in the third and sixth columns are based on 43,287,325 shares of common stock outstanding as of January 1, 2024. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

In accordance with the terms of the 2023 RRA, this prospectus covers the resale of the sum of (i) the PIPE Shares (ii) the maximum number of shares of common stock issuable upon exercise of the Warrants issued in the Private Placement. This maximum amount is determined as if the outstanding warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, subject to adjustment as provided in the 2023 RRA and without regard to any limitations on the exercise of the Warrants. Under the terms of the Warrants, a selling stockholder may not exercise the Warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 4.99% or 19.99%, as applicable to each holder, of the number of shares of our common stock outstanding following such exercise (for purposes of the denominator, immediately after giving effect to the issuance of shares of common stock to be issued upon the applicable exercise of such warrant). The number of shares in the second and fifth columns do not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See the section “Plan of Distribution.”

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Unless otherwise indicated, the address for each of the stockholders in the table below is c/o IN8bio, Inc., 350 5th Avenue, Suite 5330, New York, New York 10118.

Name and Address	Before Offering		Maximum Number of Shares Offered	After Offering	
	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned		Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Bios Equity Entities ⁽¹⁾	10,121,510	22.5%	10,121,510	—	—
AIGH Investment Partners, LP ⁽²⁾	9,238,488	18.7%	9,238,488	—	—
WVP Emerging Manager Onshore Fund, LLC – AIGH Series ⁽³⁾	2,401,356	5.3%	2,401,356	—	—
WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series ⁽⁴⁾	655,239	1.5%	655,239	—	—
The Grant Ryan Fairbairn Revocable Trust ⁽⁵⁾	3,688,524	8.1%	3,688,524	—	—
The Nina Claire Fairbairn Revocable Trust ⁽⁶⁾	3,688,524	8.1%	3,688,524	—	—
Puffin Partners, LP ⁽⁷⁾	4,180,326	9.1%	4,180,326	—	—
Montrose Investments Fund I, LP ⁽⁸⁾	1,967,214	4.4%	1,967,214	—	—
The Hewlett Fund LP ⁽⁹⁾	2,459,016	5.5%	2,459,016	—	—
Alyeska Master Fund, L.P. ⁽¹⁰⁾	2,459,016	5.1%	2,459,016	—	—
683 Capital Partners, LP ⁽¹¹⁾	1,844,262	4.1%	1,844,262	—	—

- (1) Includes (i) (a) 574,432 shares of common stock directly held by Bios Fund II, LP (“Bios Fund II”), (b) 1,876,624 shares of common stock directly held by Bios Fund II QP, LP (“Bios Fund II QP”), (c) 251,211 shares of common stock directly held by Bios Fund II NT, LP (“Bios Fund II NT”), (d) 997,433 shares of common stock directly held by BIOS Incysus Co-Invest I, LP (“BIOS Incysus”), (e) 547,288 shares of common stock directly held by Bios Fund III, LP (“Bios Fund III”), (f) 3,574,534 shares of common stock directly held by Bios Fund III QP, LP (“Bios Fund III QP”), (g) 577,265 shares of common stock directly held by Bios Fund III NT, LP (“Bios Fund III NT”) and (ii) (a) 574,241 Pre-Funded Warrant Shares, (b) 574,241 Series A Warrant Shares and (c) 574,241 Series B Warrant Shares in each case purchased in the Private Placement by Bios Clinical Opportunity Fund, LP (“Bios COF Fund” and together with Bios Fund II, Bios Fund II QP, Bios Fund II NT, BIOS Incysus, Bios Fund III, Bios Fund III QP and Bios Fund III NT the “Bios Equity Entities”). Bios Equity Partners II, LP is the general partner of Bios Fund II, Bios Fund II QP and Bios Fund II NT (collectively, “Bios Equity II Entities”). Bios Equity Partners III, LP is the general partner of Bios Fund III, Bios Fund III QP and Bios Fund III NT (collectively, “Bios Equity III Entities”). Bios Equity COF, LP (“Bios Equity COF”) is the general partner of Bios COF Fund. Cavu Management, LP (“Cavu Management”) and Bios Capital Management, LP (“Bios Management”) are the general partners of Bios Equity I, Bios Equity II and Bios Equity III and Bios Management is the general partner of Bios Equity COF. Cavu Advisors, LLC (“Cavu Advisors”) an entity controlled by Leslie Wayne Kreis, Jr. is the general partner of Cavu Management. Bios Advisors GP, LLC, an entity controlled by Aaron Glenn Louis Fletcher, Ph.D., is the general partner of Bios Management. Due to the foregoing relationships, Bios Equity I, Bios Equity II, Bios Equity III, Bios Equity COF, Cavu Management, Bios Management, Cavu Advisors, Bios Advisors, Mr. Kreis and Dr. Fletcher may be deemed to have shared voting and/or dispositive power with respect to Shares directly or indirectly held by the Bios Equity II Entities, the Bios Equity III and Bios COF Fund. The address of each of the Bios Equity Entities is 1751 River Run, Suite 400, Fort Worth, Texas 76107.
- (2) Includes (i) 3,079,496 PIPE Shares, (ii) 3,079,496 Series A Warrant Shares (iii) 3,079,496 Series B Warrant Shares, in each case purchased in the Private Placement. The warrants held by AIGH Investment Partners, LP prohibit the exercise thereof if, after giving

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effect to such exercise, the beneficial ownership of AIGH Investment Partners, LP and its affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 9.99%. Mr. Orin Hirschman is the managing member of AIGH Capital Management, LLC, a Maryland limited liability company (“AIGH CM”), who is an advisor with respect to the securities held by AIGH Investment Partners, L.P. (“AIGH LP”). Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM, directly held by AIGH IP and directly held by Mr. Hirschman and his family. The address for AIGH CM, AIGH LP and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.

- (3) Includes (i) 800,452 PIPE Shares, (ii) 800,452 Series A Warrant Shares and (iii) 800,452 Series B Warrant Shares, in each case purchased in the Private Placement. The warrants held by WVP Emerging Manager Onshore Fund, LLC – AIGH Series prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of WVP Emerging Manager Onshore Fund, LLC – AIGH Series and its affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 9.99%. Mr. Orin Hirschman is the managing member of AIGH CM, who is a sub-advisor with respect to the securities held by WVP Emerging Manager Onshore Fund, LLC—AIGH Series. Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly held by Mr. Hirschman and his family directly. The address for AIGH CM and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.
- (4) Includes (i) 218,413 PIPE Shares, (ii) 218,413 Series A Warrant Shares and (iii) 218,413 Series B Warrant Shares, in each case purchased in the Private Placement. The warrants held by WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series and its affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 9.99%. Mr. Orin Hirschman is the managing member of AIGH CM, who is a sub-advisor with respect to the securities held by WVP Emerging Manager Onshore Fund, LLC—Optimized Equity Series. Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly held by Mr. Hirschman and his family directly. The address for AIGH CM and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.
- (5) Includes (i) 1,229,508 PIPE Shares, (ii) 1,229,508 Series A Warrant Shares and (iii) 1,229,508 Series B Warrant Shares, in each case purchased in the Private Placement. The address of The Grant Ryan Fairbairn Revocable Trust is 3826 Happy Valley Rd., Lafayette, CA 94549.
- (6) Includes (i) 1,229,508 PIPE Shares, (ii) 1,229,508 Series A Warrant Shares and (iii) 1,229,508 Series B Warrant Shares, in each case purchased in the Private Placement. The address of The Nina Claire Fairbairn Revocable Trust is 3826 Happy Valley Rd., Lafayette, CA 94549.
- (7) Includes (i) 1,393,442 PIPE Shares, (ii) 1,393,442 Series A Warrant Shares and (iii) 1,393,442 Series B Warrant Shares, in each case purchased in the Private Placement. The warrants held by Puffin Partners, LP prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of Puffin Partners, LP and its affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 4.99%. Charles E. Gale and William E. Rose are the co-managers of Puffin Partners, LP and have shared voting and dispositive power with respect to the PIPE Shares and Warrants held by Puffin Partners, LP. The address of Puffin Partners, LP is 4215 W Lovers Lane, Suite 200, Dallas, TX 75209.
- (8) Includes (i) 655,738 PIPE Shares, (ii) 655,738 Series A Warrant Shares and (iii) 655,738 Series B Warrant Shares, in each case purchased in the Private Placement. The warrants held by Montrose Investments Fund I, LP prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of Montrose Investments Fund I, LP and its affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 4.99%. William E. Rose is the sole manager of Montrose Investments Fund I, LP and has voting and dispositive power with respect to the shares of common stock and Warrants held by Montrose Investments Fund I, LP. The address of Montrose Investments Fund I, LP is 4215 W Lovers Lane, Suite 200, Dallas, TX 75209.
- (9) Includes (i) 819,672 PIPE Shares, (ii) 819,672 Series A Warrant Shares and (iii) 819,672 Series B Warrant Shares, in each case purchased in the Private Placement. Martin Chopp has voting and investment control over the securities held by The Hewlett Fund LP. The address of The Hewlett Fund LP is 100 Merrick Road, Suite 400W, Rockville Centre, NY 11570.

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- (10) Includes (i) 819,672 PIPE Shares, (ii) 819,672 Series A Warrant Shares and (iii) 819,672 Series B Warrant Shares, in each case purchased in the Private Placement. Alyeska Investment Group, L.P., the investment manager of Alyeska Master Fund, L.P. (“Alyeska”), has voting and investment control of the shares held by Alyeska. Anand Parekh is the Chief Executive Officer of Alyeska Investment Group, L.P. and may be deemed to be the beneficial owner of such shares. Mr. Parekh, however, disclaims any beneficial ownership of the shares held Alyeska. The registered address of Alyeska Master Fund, L.P. is at c/o Maples Corporate Services Limited, P.O. Box 309, Uglan House, South Church Street George Town, Grand Cayman, KY1-1104, Cayman Islands. Alyeska Investment Group, L.P. is located at 77 W. Wacker, Suite 700, Chicago IL 60601.
- (11) Includes (i) 614,754 PIPE Shares, (ii) 614,754 Series A Warrant Shares and (iii) 614,754 Series B Warrant Shares, in each case purchased in the Private Placement. The shares and warrants held by 683 Capital Partners, LP are indirectly held by 683 Capital Management, LLC and Ari Zweiman, the managing member of 683 Capital Management, LLC. 683 Capital Management, LLC, 683 Capital Partners, LP and Mr. Zweiman share voting and dispositive power with respect to the shares and warrants held by 683 Capital Partners, LP. The address of 683 Capital Partners, LP is 1700 Broadway, Suite 4200, New York, NY 10019.

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. The selling stockholders may use one or more of the following methods when disposing of the shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers or dealers that may act solely as agents;
- to or through underwriters;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 or Rule 904 under the Securities Act, if available, or Section 4(a)(1) under the Securities Act, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which

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such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledgee intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of the shares of common stock or interests in shares of common stock, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any profits realized by such selling stockholders or compensation received by such broker-dealers or agents may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum commission or discount to be received by any member of the Financial Industry Regulatory Authority (FINRA) or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold.

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Exchange Act during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act or otherwise.

We have agreed with the selling stockholders who purchased securities in the Private Placement to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (a) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement and (b) such time as none of the shares covered by this prospectus constitute “registrable securities,” as such term is defined in the registration rights agreement.

LEGAL MATTERS

Cooley LLP, New York, New York, will pass upon the validity of the securities offered by this prospectus and any supplement thereto. As of the date of this prospectus, partners of Cooley LLP and GC&H Investments and GC&H Investments, LLC, each an entity that is comprised of partners and associates of Cooley LLP, beneficially own an aggregate of 173,937 shares of our common stock. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we name in the applicable prospectus supplement.

EXPERTS

The financial statements of IN8bio, Inc. for the years ended December 31, 2021 and 2022 have been audited by CohnReznick LLP, independent registered public accounting firm, as forth in their report thereon appearing in IN8bio Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022, and incorporated by reference herein. Such financial statements are incorporated by reference herein in reliance upon such report, which includes an explanatory paragraph on IN8bio, Inc.'s ability to continue as a going concern, given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth or incorporated by reference in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge on the Investor Relations section of our website. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our website address is www.in8bio.com. Information contained on or accessible through our website is not a part of this prospectus and is not incorporated by reference herein, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (Commission File No. 001-39692):

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022, filed with the SEC on March 30, 2023;
- our definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on May 1, 2023 (excluding those portions that are not incorporated by reference into our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023, June 30, 2023 and September 30, 2023, filed with the SEC on [May 12, 2023](#), [August 10, 2023](#) and [November 9, 2023](#), respectively;
- our Current Reports on Form 8-K filed with the SEC on [January 5, 2023](#), [February 23, 2023](#), [April 17, 2023](#), [April 24, 2023](#), [May 1, 2023](#), [May 17, 2023](#), [June 5, 2023](#), [June 16, 2023](#), [October 12, 2023](#), [November 20, 2023](#), [December 7, 2023](#), [December 11, 2023](#) and [December 11, 2023](#); and
- the description of our common stock contained in our registration statement on [Form 8-A](#) filed with the SEC on November 10, 2020, including any amendments or reports filed for the purposes of updating this description.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have “furnished” to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You should direct any requests for documents to IN8bio, Inc., Attn: Patrick McCall, Corporate Secretary, 350 5th Avenue, Suite 5330, New York, New York 10118; telephone: (646) 600-6438.



42,703,475 Shares of Common Stock

PROSPECTUS

January 18, 2024
