

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

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

VivoSim Labs, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2836
(Primary Standard Industrial
Classification Code Number)

27-1488943
(I.R.S. Employer
Identification Number)

**VivoSim Labs, Inc.
11555 Sorrento Valley Road, Suite 100
San Diego, CA 92121
(858) 224-1000**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Keith Murphy
Executive Chairman
VivoSim Labs, Inc.
11555 Sorrento Valley Road, Suite 100
San Diego, CA 92121
(858) 224-1000**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Jeffrey T. Hartlin, Esq.
Samantha H. Eldredge, Esq.
Paul Hastings LLP
1117 S. California Avenue
Palo Alto, California 94304
(650) 320-1800**

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, 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, please 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, 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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth 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 the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated July 31, 2026

Prospectus



Up to 4,705,883 Shares of Common Stock Underlying the Pre-Funded Warrants
Up to 4,705,883 Shares of Common Stock Underlying the Common Warrants

This prospectus relates to the resale by the investor listed in the section of this prospectus entitled “Selling Stockholder” (the “Selling Stockholder”) of up to 9,411,766 shares of our common stock, par value \$0.001 per share (the “Common Stock”), which consist of: (i) 4,705,883 shares of Common Stock (the “Pre-Funded Warrant Shares”) issuable upon the exercise of those certain pre-funded warrants (the “Pre-Funded Warrants”) to purchase Common Stock issued on July 17, 2026 to the Selling Stockholder pursuant to that certain Securities Purchase Agreement, dated as of July 16, 2026, by and between us and the Selling Stockholder (the “Securities Purchase Agreement”), and (ii) 4,705,883 shares of Common Stock (the “Common Warrant Shares”) and, together with the Pre-Funded Warrant Shares, the “Warrant Shares”) issuable upon the exercise of those certain warrants to purchase Common Stock issued to the Selling Stockholder on July 17, 2026 pursuant to the Securities Purchase Agreement (the “Common Warrants” and, together with the Pre-Funded Warrants, the “Warrants”). We are registering the resale of the Warrant Shares as required by the Securities Purchase Agreement.

Our registration of the Warrant Shares covered by this prospectus does not mean that the Selling Stockholder will offer or sell any of the Warrant Shares. The Selling Stockholder may sell the Warrant Shares covered by this prospectus in a number of different ways and at varying prices. For additional information on the possible methods of sale that may be used by the Selling Stockholder, you should refer to the section of this prospectus entitled “Plan of Distribution” beginning on page 11 of this prospectus. We will not receive any of the proceeds from the Warrant Shares sold by the Selling Stockholder, other than any proceeds from any cash exercise of the Warrants.

No underwriter or other person has been engaged to facilitate the sale of the Warrant Shares in this offering. The Selling Stockholder may, individually but not severally, be deemed to be an “underwriter” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), of the Warrant Shares that they are offering pursuant to this prospectus. We will bear all costs, expenses and fees in connection with the registration of the Warrant Shares. The Selling Stockholder will bear all commissions and discounts, if any, attributable to their respective sales of the Warrant Shares.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “VIVS”. On July 30, 2026, the last reported sales price per share of our Common Stock was \$0.386.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read this prospectus, together with additional information described under the headings “Incorporation of Certain Information by Reference” and “Where You Can Find Additional Information”, and any amendments or supplements carefully before you invest in any of our securities.

Investing in our Common Stock involves substantial risk. You should review carefully the risks and uncertainties described under the heading “[Risk Factors](#)” beginning on page 6 of this prospectus.

Neither the Securities and Exchange Commission (the “SEC”) nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2026.

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ABOUT THIS PROSPECTUS

You should rely only on the information we have provided in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the Warrant Shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document, regardless of the time of delivery of this prospectus or any sale of a security.

The Selling Stockholder is offering the Warrant Shares only in jurisdictions where such issuances are permitted. The distribution of this prospectus and the issuance of the Warrant Shares in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the issuance of the Warrant Shares and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, the Warrant Shares offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

This prospectus is part of a registration statement that we filed with the SEC, under which the Selling Stockholder may offer from time to time up to an aggregate of 9,411,766 shares of our Common Stock in one or more offerings. If required, each time a Selling Stockholder offers shares of our Common Stock, in addition to this prospectus, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to that offering. We may also use a prospectus supplement and any related free writing prospectus to add, update or change any of the information contained in this prospectus. This prospectus, together with any applicable prospectus supplements and any related free writing prospectuses, includes all material information relating to this offering. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in a prospectus supplement. Please carefully read both this prospectus and any prospectus supplement.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference in this prospectus may contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), about VivoSim Labs, Inc. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not statements of historical fact, and can be identified by the use of forward-looking terminology such as “believes”, “expects”, “may”, “will”, “could”, “should”, “projects”, “plans”, “goal”, “targets”, “potential”, “estimates”, “pro forma”, “seeks”, “intends” or “anticipates” or the negative thereof or comparable terminology. Forward-looking statements include discussions of strategy, financial projections, guidance and estimates (including their underlying assumptions), statements regarding plans, objectives, expectations or consequences of various transactions, and statements about the future performance, operations, products and services of VivoSim Labs, Inc. We caution our stockholders and other readers not to place undue reliance on such statements.

You should read this prospectus, any accompanying prospectus supplement and the documents incorporated by reference completely and with the understanding that our actual future results may be materially different from what we currently expect. Our business and operations are and will be subject to a variety of risks, uncertainties and other factors. Consequently, actual results and experience may materially differ from those contained in any forward-looking statements. Such risks, uncertainties and other factors that could cause actual results and experience to differ from those projected include, but are not limited to, the risk factors described in the “Risk Factors” section beginning on page 6 of this prospectus.

You should assume that the information appearing in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor 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 any forward-looking statements. All written or oral forward-looking statements attributable to us or any person acting on our behalf made after the date of this prospectus are expressly qualified in their entirety by the risk factors and cautionary statements contained in and incorporated by reference into this prospectus. Unless legally required, we do not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events.

INDUSTRY AND MARKET DATA

This prospectus and the information incorporated by reference herein contain statistical data, estimates and forecasts that are based on various sources, including independent industry publications or other publicly available information, as well as other information based on our internal sources. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to these estimates. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled “Risk Factors,” that could cause results to differ materially from those expressed in these publications and reports.

Certain information in this prospectus and the information incorporated by reference herein is derived from independent industry publications and publicly available reports. We believe the data contained in these reports to be reliable as of the date of this prospectus, but there can be no assurance as to the accuracy or completeness of such information. We have not independently verified the market and industry data obtained from these third-party sources. Our internal data and estimates are based upon information obtained from trade and business organizations, other contacts in the markets in which we operate and our management’s understanding of industry conditions. Though we believe this information to be true and accurate, such information has not been verified by any independent sources.

TRADEMARKS, SERVICE MARKS AND TRADE NAMES

We own the trademarks, service marks and trade names that we use in connection with the operation of our business, including our corporate names, logos and website names. This prospectus and the information incorporated by reference herein may also contain trademarks, service marks, trade names and copyrights of other companies, which are the property of their respective owners. Solely for convenience, the trademarks, service marks, trade names and copyrights referred to in this prospectus are listed without the TM, SM, © and ® symbols, but we will assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensors, if any, to these trademarks, service marks, trade names and copyrights.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus. This summary does not contain all of the information you should consider before investing in our securities. You should read this entire prospectus carefully, including the sections of this prospectus titled “Risk Factors,” and “Disclosure Regarding Forward-Looking Statements” and under similar captions in the documents incorporated by reference into this prospectus, before making an investment decision. Unless otherwise indicated, all references in this prospectus to “VivoSim,” the “company,” “we,” “our,” “us” or similar terms refer to VivoSim Labs, Inc. and its wholly owned subsidiaries, including VivoSim, Inc. and Organovo, Inc.

Overview

We are a pharmaceutical and biotechnology services company that is focused on providing testing of drugs and drug candidates in three-dimensional (“3D”) human tissue models of liver and intestine. We offer partners liver and intestinal toxicology insights using our new approach methodologies (“NAM”) models. We anticipate accelerated adoption of human tissue models following the U.S. Food and Drug Administration (“FDA”) announcement on April 10, 2025 to refine animal testing requirements in favor of these non-animal NAM methods. We also expect to offer bespoke services in the areas of investigational toxicology, mechanism of drug action elucidation, and other applications of these complex human tissue models.

Prior to March 2025, we were a clinical stage biotechnology company that was focused on developing FXR314 in inflammatory bowel disease (“IBD”), including ulcerative colitis (“UC”), based on demonstration of clinical promise in 3D human tissues as well as strong preclinical data. Our clinical focus was in advancing FXR314 in IBD, including UC and Crohn’s disease (“CD”). We planned to start a Phase 2a clinical trial in UC in the calendar year 2025 and were also exploring the potential for combination therapies using FXR314 and approved mechanisms in preclinical animal studies and our IBD disease models.

In March 2025, we sold our FXR program for \$10.0 million, with \$9.0 million paid at closing and \$1.0 million held in escrow for a period of 15 months, with future milestones of up to \$50.0 million in the aggregate to be paid if the lead asset, FXR314, hits key development, regulatory and commercial milestones. In July 2026, we received a milestone payment in the amount of \$5.0 million upon the achievement of a certain development milestone related to FXR314.

Effective April 24, 2025, we changed our corporate name to VivoSim Labs, Inc. by filing a Certificate of Amendment to our Certificate of Incorporation (as amended, the “Certificate of Incorporation”) with the Secretary of State of the State of Delaware. We changed our name to reflect our new business model, which includes the use of other longstanding assets of the Company, intestinal and liver tox models and expertise, and our IP portfolio for 3D bioprinting.

We are now offering liver toxicology predictive screening and research services as well as working on predicting and studying the intestinal side effect profiles of drugs that are therapeutic candidates of pharmaceutical and biotech companies at all stages of drug development. Our services offer the potential benefit of reducing the significant risk and cost of bringing therapeutics to market through the regulatory process. It is estimated that less than 10% of drug candidates entering clinical trials are approved, with a portion of the failures due to unexpected liver toxicity or intestinal intolerability. In addition, even approved drugs are occasionally withdrawn after liver toxicity is determined to be caused by the drug in a phenomenon called drug induced liver injury. We presented findings at the May 2025 Digestive Disease Week scientific conference showing that our liver toxicology platform had a best-in-class predictive power. Our liver predictive power was shown to be 87.5% for a set of challenging liver toxicity cases – inclusive of classic cases of “liver tox misses” drugs with unforeseen liver

toxicity found in clinical trials or drugs that were withdrawn from the market after liver toxicity issues emerged later. The platform identified correctly that 87.5% of the known liver-toxic drugs could be seen as liver toxic using NAMkind™ liver. This is known as the sensitivity of the platform, which we believe at 87.5% is a world's best. Importantly, the specificity was 100%, meaning that none of the compounds tested that are not liver toxic were incorrectly identified as having liver toxicity issues by the platform.

We use our proprietary technologies to build functional 3D human tissues that mimic key aspects of native human tissue composition, architecture, function, and disease. We believe these attributes can enable critical complex, multicellular disease models that can be used to study and develop clinically effective drugs across multiple therapeutic areas.

We have also used these human disease models to identify new molecular targets responsible for driving IBD and to explore the mechanism of action of known drugs including JAK inhibitors and related molecules. A portion of our internal research continues to focus on early stage internal drug discovery programs, validating targets, and testing potentially licensable or transactable external drug compounds to identify drug candidates for partnering and/or internal clinical development.

Corporate Information

We were incorporated in Delaware under the name Organovo Holdings, Inc. in January 2012 and in April 2025, changed our name to VivoSim Labs, Inc. We are operating the business of our subsidiaries, including Organovo, Inc., our wholly-owned subsidiary, which we acquired in February 2012, and VivoSim, Inc., our wholly-owned subsidiary. Organovo, Inc. was incorporated in Delaware in April 2007. VivoSim, Inc. was incorporated in Delaware in April 2025. Our Common Stock has traded on the Nasdaq Capital Market under the symbol "VIVS" since April 24, 2025. Prior to that time, it had traded on the Nasdaq Capital Market under the symbol "ONVO" since December 27, 2019, prior to that it had traded on the Nasdaq Global Market under the symbol "ONVO" since August 8, 2016 and prior to that it traded on the NYSE MKT under the symbol "ONVO".

Our principal executive offices are located at 11555 Sorrento Valley Road, Suite 100, San Diego, CA 92121, and our telephone number is (858) 224-1000. Our website address is www.vivosim.ai. Any information contained on, or that can be accessed through, our website is not incorporated by reference into, nor is it in any way part of this prospectus and should not be relied upon in connection with making any decision with respect to an investment in our securities. We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may obtain any of the documents filed by us with the SEC at no cost from the SEC's website at <http://www.sec.gov>.

We are a "smaller reporting company" as defined in Rule 12b-2 of the Exchange Act, and have elected to take advantage of certain of the scaled disclosure available for smaller reporting companies in this prospectus as well as our filings under the Exchange Act.

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 below or under “Risk Factors” in our most recent Annual Report on Form 10-K, together with all of the other information appearing in or incorporated by reference into this prospectus, before deciding whether to purchase any of the Common Stock being offered in this prospectus. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

USE OF PROCEEDS

We will receive no proceeds from the sale of the Warrant Shares by the Selling Stockholder. We may, however, receive cash proceeds equal to the total exercise price of the Warrants to the extent any of such Warrants are exercised for cash. The exercise price of the Common Warrants is \$0.85 per share of Common Stock. The exercise price and the number of shares of Common Stock issuable upon exercise of the Warrants may be adjusted in certain circumstances, including stock splits, dividends or distributions, or other similar transactions. The Warrants contain a “cashless exercise” feature that allows the holders to exercise any of such Warrants without making a cash payment to us (and, in the case of Common Warrants, if there is not an effective registration statement registering or the prospectus contained therein is not available for the issuance of the Common Warrant Shares to the holders). There can be no assurance that any of the Warrants will be exercised by the Selling Stockholder at all. To the extent we receive proceeds from the cash exercise of the Common Warrants, we intend to use such proceeds for working capital and general corporate purposes. Our management will retain broad discretion in the allocation of the net proceeds from any exercise of the Common Warrants for cash.

The Selling Stockholder will pay any underwriting discounts, selling commissions or transfer taxes incurred in disposing of the Warrant Shares and the expenses of any attorney or other advisor they decide to employ. We will bear all other costs, fees and expenses incurred in effecting the registration of the Warrant Shares covered by this prospectus. These may include, without limitation, all registration, filing, stock exchange fees, printing expenses, all fees and expenses of complying with applicable securities laws and the fees and disbursements of our counsel and of our independent accountants and reasonable fees.

SELLING STOCKHOLDER

Unless the context otherwise requires, as used in this prospectus, “Selling Stockholder” includes the selling stockholder listed below and donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from the selling stockholder as a gift, pledge or other non-sale related transfer.

Pursuant to the terms of the Securities Purchase Agreement, we issued (i) Pre-Funded Warrants to purchase up to an aggregate of 4,705,883 shares of Common Stock and (ii) accompanying Common Warrants to purchase up to an aggregate of 4,705,883 shares of Common Stock. We have prepared this prospectus to allow the Selling Stockholder or their successors, assignees or other permitted transferees to sell or otherwise dispose of, from time to time, the Warrant Shares issuable upon the exercise of the Warrants.

The Pre-Funded Warrants are exercisable immediately upon issuance, will survive until they are exercised in full and have an exercise price of \$0.001 per share of Common Stock, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions.

The Pre-Funded Warrants are exercisable on a cash or cashless exercise basis.

The Common Warrants will become exercisable at any time on or after the date the Company obtains stockholder approval with respect to the issuance of the Common Warrant Shares upon exercise of the Common Warrants, for a period of five years thereafter, and have an exercise price of \$0.85 per share of Common Stock, subject to adjustment for stock splits, reverse stock splits, stock dividends and similar transactions. The Common Warrants are exercisable on a cash basis unless, at the time of such exercise, there is no effective registration statement registering or the prospectus contained therein is not available for the issuance of the Common Warrant Shares to the holder, in which case such Common Warrants will also be exercisable on a cashless exercise basis.

Under the terms of the Common Warrants, the Selling Stockholder may not exercise such Common Warrants to the extent such exercise would cause such Selling Stockholder, together with its affiliates, to beneficially own a number of shares of Common Stock which would exceed 4.99% of our then outstanding Common Stock following such exercise, excluding for purposes of such determination Common Stock issuable upon exercise of such Common Warrants which have not been exercised. Under the terms of the Pre-Funded Warrants, the Selling Stockholder may not exercise such Pre-Funded Warrants to the extent such exercise would cause the Selling Stockholder, together with its affiliates, to beneficially own a number of shares of Common Stock which would exceed 9.99% (together with the limitation applicable to the Common Warrants, the “Beneficial Ownership Limitation”) of our then outstanding Common Stock following such exercise, excluding for purposes of such determination Common Stock issuable upon exercise of such Pre-Funded Warrants which have not been exercised.

For each of the Pre-Funded Warrants and the Common Warrants, the Beneficial Ownership Limitation may be increased at the holder’s election upon 61 days’ notice to the Company, subject to the terms of such Warrants, provided that such percentage may in no event exceed 9.99%. The Beneficial Ownership Limitation may be decreased at any time, effective immediately upon notice to the Company.

The Warrant Shares were issued or will be issuable to the Selling Stockholder in reliance on the exemption from securities registration in Section 4(a) (2) under the Securities Act and/or Regulation D promulgated thereunder, to the extent applicable, and in reliance on similar exemptions under applicable state laws.

The shares of Common Stock to be offered by the Selling Stockholder are “restricted” securities under applicable federal and state securities laws and are being registered under the Securities Act to give the Selling Stockholder the opportunity to sell these shares publicly. The registration of these shares does not require that any of the shares be offered or sold by the Selling Stockholder. Subject to these resale restrictions, the Selling Stockholder may from time to time offer and sell all or a portion of their shares indicated below in privately negotiated transactions or on the Nasdaq Capital Market or any other market on which our Common Stock may subsequently be listed.

The registered shares may be sold directly or through brokers or dealers, or in a distribution by one or more underwriters on a firm commitment or best effort basis. To the extent required, the names of any agent or broker-dealer and applicable commissions or discounts and any other required information with respect to any particular offering will be set forth in a prospectus supplement. See the section of this prospectus entitled “Plan of Distribution”. The Selling Stockholder and any agents or broker-dealers that participate with the Selling Stockholder in the distribution of registered shares may be deemed to be “underwriters” within the meaning of the Securities Act, and any commissions received by them and any profit on the resale of the registered shares may be deemed to be underwriting commissions or discounts under the Securities Act.

No estimate can be given as to the amount or percentage of Common Stock that will be held by the Selling Stockholder after any sales made pursuant to this prospectus because the Selling Stockholder is not required to sell any of the Warrant Shares being registered under this prospectus. The following table assumes that the Selling Stockholder will sell all of the Warrant Shares listed in this prospectus.

Unless otherwise indicated in the footnotes below, the Selling Stockholder has not had any material relationship with us or any of our affiliates within the past three years other than as a security holder.

We have prepared this table based on written representations and information furnished to us by or on behalf of the Selling Stockholder. Since the date on which the Selling Stockholder provided this information, the Selling Stockholder may have sold, transferred or otherwise disposed of all or a portion of the shares of Common Stock in a transaction exempt from the registration requirements of the Securities Act. Unless otherwise indicated in the footnotes below, we believe that: (1) the Selling Stockholder is not a broker-dealer or affiliate of a broker-dealer, (2) the Selling Stockholder has no direct or indirect agreements or understandings with any person to distribute their Warrant Shares, and (3) the Selling Stockholder has sole voting and investment power with respect to all Warrant Shares beneficially owned, subject to applicable community property laws. To the extent the Selling Stockholder identified below is, or is affiliated with, a broker-dealer, it could be deemed, individually but not severally, to be an “underwriter” within the meaning of the Securities Act. Information about the Selling Stockholder may change over time. Any changed information will be set forth in supplements to this prospectus, if required.

The following table sets forth information with respect to the beneficial ownership of our Common Stock held, as of July 28, 2026, by the Selling Stockholder and the number of Warrant Shares being registered hereby and information with respect to shares to be beneficially owned by the Selling Stockholder after completion of the offering of the shares for resale. We have determined beneficial ownership in accordance with the rules of the SEC. The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the persons named below. The percentages in the following table reflect the shares beneficially owned by the Selling Stockholder as a percentage of the total number of shares of Common Stock outstanding as of July 28, 2026. As of such date, 16,763,672 shares of Common Stock were outstanding.

Selling Stockholder Name	Shares Beneficially Owned Before this Offering (1)	%	Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus	Shares Beneficially Owned After this Offering (1)(2)	%
	Number		Number	Number	
Armistice Capital Master Fund Ltd. (3)	5,226,716(4)	31.18%	9,411,766	—	—
TOTAL	5,226,716	—	9,411,766	—	—

- (1) Beneficial ownership is determined in accordance with Rule 13d-3 under the Exchange Act. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of Common Stock subject to the warrants, options and other convertible securities held by that person that are currently exercisable or exercisable within 60 days (of July 28, 2026) are deemed outstanding. Shares

subject to warrants, options and other convertible securities, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

- (2) We do not know when or in what amounts a Selling Stockholder may offer shares for sale. The Selling Stockholder may choose not to sell any or all of the shares offered by this prospectus. Because the Selling Stockholder may offer all or some of the Warrant Shares pursuant to this offering, we cannot estimate the number of the Warrant Shares that will be held by the Selling Stockholder after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, all of the Warrant Shares covered by this prospectus will be sold by the Selling Stockholder and that the Selling Stockholder does not acquire beneficial ownership of any additional shares.
- (3) The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the "Master Fund"), and may be deemed to be indirectly beneficially owned by: (i) Armistice Capital, LLC ("Armistice Capital"), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. Armistice Capital and Steven Boyd disclaim beneficial ownership of the reported securities except to the extent of their respective pecuniary interest therein. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.
- (4) Consists of (i) 520,834 shares of Common Stock issuable upon the exercise of warrants to purchase Common Stock, issued on May 13, 2024, and (ii) 4,705,883 shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants, without giving effect to the blocker provision described above, which are currently exercisable.

PLAN OF DISTRIBUTION

We are registering the shares of Common Stock issuable upon exercise of the Warrants previously issued to the Selling Stockholder to permit the resale of these shares of Common Stock by the holders of the Warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the Selling Stockholder of the shares of Common Stock. We will bear all fees and expenses incident to our obligation to register the shares of Common Stock.

The Selling Stockholder may sell all or a portion of the shares of Common Stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of Common Stock are sold through underwriters or broker-dealers, the Selling Stockholder will be responsible for underwriting fees, discounts or commissions or agent's commissions. The shares of Common Stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. The Selling Stockholder will act independently of us in making decisions with respect to the timing, manner and size of each sale. These sales may be effected in transactions, which may involve cross or block transactions:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- in ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- in 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 purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- in an exchange distribution in accordance with the rules of the applicable exchange;
- in privately negotiated transactions;
- in short sales;
- through the distribution of the Common Stock by the Selling Stockholder to its partners, members or stockholders;
- through one or more underwritten offerings on a firm commitment or best efforts basis;
- in sales pursuant to Rule 144;
- whereby broker-dealers may agree with the Selling Stockholder to sell a specified number of such shares at a stipulated price per share;
- in a combination of any such methods of sale; and
- in any other method permitted pursuant to applicable law.

If the Selling Stockholder effects such transactions by selling shares of Common Stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the Selling Stockholder or commissions from purchasers of the shares of Common Stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of Common Stock or otherwise, the Selling Stockholder may enter into hedging transactions with broker-dealers, which may in turn

engage in short sales of the shares of Common Stock in the course of hedging in positions they assume. The Selling Stockholder may also sell shares of Common Stock short and deliver shares of Common Stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The Selling Stockholder may also loan or pledge shares of Common Stock to broker-dealers that in turn may sell such shares. The Selling Stockholder may pledge or grant a security interest in some or all of the shares of Common Stock or Warrants owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of Common Stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholder under this prospectus. The Selling Stockholder also may transfer and donate the shares of Common Stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Stockholder, individually and not severally, and any broker-dealer participating in the distribution of the shares of Common Stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of Common Stock is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of shares of Common Stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the Selling Stockholder and any discounts, commissions or concessions allowed or reallocated or paid to broker-dealers. The Selling Stockholder may indemnify any broker-dealer that participates in transactions involving the sale of the shares of Common Stock against certain liabilities, including liabilities arising under the Securities Act.

Under the securities laws of some states, the shares of Common Stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of Common Stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

The aggregate proceeds to the Selling Stockholder from the sale of the Common Stock offered will be the purchase price of the Common Stock less discounts or commissions, if any. The Selling Stockholder 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. There can be no assurance that the Selling Stockholder will sell any or all of the shares of Common Stock registered pursuant to the registration statement of which this prospectus forms a part.

The Selling Stockholder and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of Common Stock by the Selling Stockholder and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of Common Stock to engage in market-making activities with respect to the shares of Common Stock. All of the foregoing may affect the marketability of the shares of Common Stock and the ability of any person or entity to engage in market-making activities with respect to the shares of Common Stock.

We will incur costs, fees and expenses in effecting the registration of the Warrant Shares covered by this prospectus, including, without limitation, all registration, filing, stock exchange fees, printing expenses, all fees and expenses of complying with applicable securities laws and the fees and disbursements of our counsel and of our independent registered public accounting firm and reasonable fees; provided, however, that a Selling Stockholder will pay all underwriting discounts, selling commissions or transfer taxes, if any. We will indemnify the Selling Stockholder against certain liabilities, including certain liabilities arising under the Securities Act or

the Exchange Act. We may be indemnified by the Selling Stockholder against certain liabilities, including certain liabilities arising under the Securities Act or the Exchange Act, that may arise from any written information furnished to us by the Selling Stockholder specifically for use in this prospectus.

Once sold under the registration statement, of which this prospectus forms a part, the shares of Common Stock will be freely tradable in the hands of persons other than our affiliates.

DESCRIPTION OF CAPITAL STOCK

The following description of the Common Stock, which is the only security of the Company registered under the Exchange Act, summarizes certain information regarding the Common Stock in our Certificate of Incorporation, our Amended and Restated Bylaws (the “Bylaws”), and applicable provisions of General Corporation Law of the State of Delaware (the “DGCL”), and is qualified by reference to our Certificate of Incorporation, our Certificate of Amendment of Certificate of Incorporation, our Certificate of Second Amendment of Certificate of Incorporation, our Certificate of Third Amendment of Certificate of Incorporation, our Certificate of Fourth Amendment of Certificate of Incorporation and our Bylaws, which are incorporated by reference as Exhibits 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6, respectively, to the Annual Report on Form 10-K for the fiscal year ended March 31, 2026.

Our authorized capital stock consists of 200,000,000 shares of Common Stock, par value \$0.001 per share and 25,000,000 shares of preferred stock, par value \$0.001 per share.

General

As of July 31, 2026, our Certificate of Incorporation authorizes us to issue up to (i) 200,000,000 shares of Common Stock, par value \$0.001 per share, and (ii) 25,000,000 shares of preferred stock, par value \$0.001 per share.

On August 18, 2020, we effected a 1-for-20 reverse stock split of our outstanding Common Stock. As a result of the reverse stock split, every twenty (20) shares of our pre-reverse split Common Stock were combined and reclassified into one (1) share of Common Stock. The reverse stock split had no effect on the number of authorized shares of common or preferred stock, or on the stated par value per share of our Common Stock.

On March 21, 2025, we effected a 1-for-12 reverse stock split of our outstanding Common Stock. As a result of the reverse stock split, every twelve (12) shares of our pre-reverse split Common Stock were combined and reclassified into one (1) share of Common Stock. The reverse stock split had no effect on the number of authorized shares of common or preferred stock, or on the stated par value per share of our Common Stock.

The following is a summary of the material provisions of the Common Stock and preferred stock provided for in our Certificate of Incorporation and Bylaws. For additional detail about our capital stock, please refer to our Certificate of Incorporation and Bylaws.

Common Stock

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “VIVS”.

Voting. Holders of our Common Stock are entitled to one vote for each share on all matters submitted to a stockholder vote, except matters that relate only to a series of our preferred stock.

The holders of Common Stock are entitled to one vote per share on all matters submitted to a vote of the stockholders, including the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of Common Stock that are present in person or represented by proxy. Except as otherwise provided by law, amendments to the Certificate of Incorporation generally must be approved by a majority of the votes entitled to be cast by all outstanding shares of Common Stock. The Certificate of Incorporation does not provide for cumulative voting in the election of directors. The Common Stock holders will be entitled to such cash dividends as may be declared from time to time by our board of directors from funds available. Upon our liquidation, dissolution or winding up, the Common Stock holders will be entitled to receive pro rata all assets available for distribution to such holders.

Dividends. Subject to limitations under Delaware law and preferences that may apply to any then-outstanding shares of preferred stock, holders of Common Stock are entitled to share ratably in dividends, if any, as may be declared from time to time by our board of directors in its discretion from funds legally available therefor.

Dividends, if any, will be contingent upon our revenues and earnings, if any, and capital requirements and financial conditions. The payment of dividends, if any, will be within the discretion of our board of directors. We presently intend to retain all earnings, if any, and accordingly our board of directors does not anticipate declaring any dividends prior to a business combination.

Liquidation. In the event of a liquidation, dissolution or winding up, the holders of Common Stock are entitled to share pro rata all assets remaining after payment in full of all liabilities and after providing for each class of stock, if any, having preference over the Common Stock, subject to the liquidation preference of any then outstanding shares of preferred stock.

Miscellaneous. Holders of our Common Stock have no pre-emptive rights, no conversion rights and there are no redemption provisions applicable to our Common Stock. The rights, preferences and privileges of the holders of our Common Stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our Certificate of Incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock. There are no restrictions presently on the repurchase or redemption of any shares of our preferred stock.

The issuance of preferred stock will affect, and may adversely affect, the rights of holders of Common Stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of Common Stock until the board of directors determines the specific rights attached to that preferred stock. The effects of issuing preferred stock could include one or more of the following:

- restricting dividends on the Common Stock;
- diluting the voting power of the Common Stock;
- impairing the liquidation rights of the Common Stock; or
- delaying or preventing changes in control or management of our company.

We have no present plans to issue any shares of preferred stock nor are any shares of our preferred stock presently outstanding.

Warrants

As of July 31, 2026, the Company had outstanding warrants to purchase an aggregate of 10,658,947 shares of Common Stock as follows:

- (i) warrants to purchase an aggregate of 18,227 shares of Common Stock (the “Unamended 2024 Common Warrants”) with an exercise price of \$9.60 per share, all of which are currently exercisable (subject to certain beneficial ownership requirements) and expire on May 13, 2029, and (ii) warrants to purchase an aggregate of 520,834 shares of Common Stock, as amended by that certain amendment thereto, dated July 16, 2026 (the “Amended 2024 Common Warrants”, and collectively with the Unamended 2024 Common Warrants, the “2024 Common Warrants”), with an original exercise price

of \$9.60 per share and, upon approval by the Company stockholders, a reduced exercise price of \$0.85 per share, all of which are currently exercisable (subject to certain beneficial ownership requirements) and expire on the date that is five years following the anniversary of the date the Company obtains stockholder approval with respect to the issuance of the Common Warrant Shares upon exercise of the Common Warrants;

- 576,542 common warrants (“March 2026 Common Warrants”) to purchase up to 576,542 shares of Common Stock with an exercise price of \$1.71 per share, all of which are currently exercisable (subject to certain beneficial ownership requirements) and expire on April 1, 2029;
- 131,579 warrants (“March 2026 Placement Agent Warrants”) to purchase 131,579 shares of Common Stock with an exercise price of \$1.425 per share, which will be exercisable on or after October 1, 2026 (subject to certain beneficial ownership requirements) and expire on April 1, 2029;
- 4,705,883 Pre-Funded Warrants to purchase 4,705,883 shares of Common Stock with an exercise price of \$0.001 per share, all of which are currently exercisable (subject to certain beneficial ownership requirements) and expire when exercised in full; and
- 4,705,883 Common Warrants to purchase up to 4,705,883 shares of Common Stock with an exercise price of \$0.85 per share, which will become exercisable on or after the date the Company obtains stockholder approval with respect to the issuance of the Common Warrant Shares upon exercise of the Common Warrants (subject to certain beneficial ownership requirements) for a period of five years thereafter.

All of the outstanding warrants contain provisions for the adjustment of the exercise price in the event of stock dividends, stock splits or similar transactions. In addition, the warrants contain a “cashless exercise” feature that allows the holders thereof to exercise the warrants without a cash payment to the Company under certain circumstances. The 2024 Common Warrants, March 2026 Common Warrants, March 2026 Placement Agent Warrants and Common Warrants also contain provisions that provide certain rights to warrant holders in the event of a fundamental transaction, including a merger or consolidation with or into another entity, such as:

- the right to receive, upon exercise of such warrants, the same amount and kind of consideration paid to the holders of Common Stock in the fundamental transaction;

and, in the case of the Unamended 2024 Common Warrants and the March 2026 Common Warrants only:

- the right to require the Company or a successor entity to purchase the unexercised portion of certain warrants at the warrant’s respective fair value using the Black-Scholes option pricing formula; or
- the right to require the Company or a successor entity to redeem the unexercised portion of certain warrants for the same consideration paid to holders of Common Stock in the fundamental transaction at the warrant’s respective fair value using the Black-Scholes option pricing formula.

The March 2026 Common Warrants have price protection against subsequent dilutive issuances of shares of Common Stock, options, warrants and convertible securities, subject to a \$0.01 per share of Common Stock floor, as further described in the March 2026 Common Warrants. The holders of the March 2026 Common Warrants may exchange the March 2026 Common Warrants on a cashless basis for a number of shares of Common Stock determined by multiplying the total number of shares of Common Stock with respect to which the March 2026 Common Warrant is then being exercised by the Black Scholes Value (as defined in the March 2026 Common Warrant) divided by the lower of the two closing bid prices of the Common Stock in the two days prior to the time of such exercise, but in any event not less than \$0.01.

Effect of Certain Provisions of our Certificate of Incorporation and Bylaws

Provisions of our Certificate of Incorporation and our Bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, may

have the effect of discouraging takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Classified Board. Our Certificate of Incorporation and our Bylaws provide that our board of directors is divided into three classes, consisting of two Class I directors, two Class II directors and two Class III directors. The directors designated as Class I directors have a term expiring at our annual meeting of stockholders in 2027. The directors designated as Class II directors have a term expiring at our annual meeting of stockholders in 2028, and the directors designated as a Class III directors have a term expiring at our annual meeting of stockholders in 2026. Directors for each class will be elected at the annual meeting of stockholders held in the year in which the term for that class expires and thereafter will serve for a term of three years. At any meeting of stockholders for the election of directors at which a quorum is present, the election will be determined by a plurality of the votes cast by the stockholders entitled to vote at the election. Under the classified board provisions, it will take at least two elections of directors for any individual or group to gain control of our board. Accordingly, these provisions could discourage a third party from initiating a proxy contest, making a tender offer or otherwise attempting to gain control of us.

Undesignated preferred stock. The authority of our board of directors to issue preferred stock could potentially be used to discourage attempts by third parties to obtain control of our company through a merger, tender offer, proxy contest, or otherwise by making it more difficult or more costly to obtain control of our company. Our board of directors may issue preferred stock with voting rights or conversion rights that, if exercised, could adversely affect the voting power of the holders of Common Stock.

Advanced Notice Requirement. Stockholder nominations of individuals for election to our board of directors and stockholder proposals of other matters to be brought before an annual meeting of our stockholders must comply with the advance notice procedures set forth in our Bylaws. Generally, to be timely, such notice must be received at our principal executive offices no later than the date specified in our proxy statement released to stockholders in connection with the preceding year's annual meeting of stockholders, which date shall be not earlier than the 75th day, nor later than the close of business on the 45th day, prior to the one-year anniversary of the date on which we first mailed our proxy materials or a notice of availability of proxy materials (whichever is earlier) for the preceding year's annual meeting and the stockholder must have complied in all respects with the requirements of Section 14 of the Exchange Act, including, without limitation, the requirements of Rule 14a-19 under the Exchange Act.

Special Meeting Requirements. Our Bylaws provide that special meetings of our stockholders may only be called at the request of a majority of the authorized number of members of the board of directors, chairperson of the board of directors, chief executive officer, president or secretary. Only such business shall be considered at a special meeting as shall have been stated in the notice for such meeting.

No Stockholder Action by Written Consent Except with Prior Board Approval. Our Certificate of Incorporation and Bylaws provide that no action shall be taken by our stockholders except at an annual or special meeting of the stockholders called in accordance with the Bylaws, and no action shall be taken by our stockholders by written consent, except if the action to be effected by written consent and the taking of such action by written consent is approved in advance by resolution of the board of directors.

No Cumulative Voting. Our Certificate of Incorporation does not include a provision for cumulative voting for directors.

Removal of Directors. Our Certificate of Incorporation and Bylaws provide that the holders of our voting stock may only remove our directors for cause.

Authorized but Unissued Shares. Our authorized but unissued shares of Common Stock and preferred stock will be available for future issuance without stockholder approval. We may use additional shares for a variety of purposes, including future public offerings to raise additional capital, to fund acquisitions and as employee compensation. The existence of authorized but unissued shares of Common Stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Size of Board and Vacancies. Our Bylaws provide that the number of directors on our board of directors is fixed exclusively by our board of directors. Vacancies and newly created directorships resulting from any increase in our authorized number of directors will be filled by a majority of our board of directors then in office, although less than a quorum, or by a sole remaining director.

Indemnification. Our Certificate of Incorporation and our Bylaws provide that we will indemnify our officers and directors against losses as they incur in investigations and legal proceedings resulting from their services to us, which may include service in connection with takeover defense measures.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 generally prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date on which the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, transfer, pledge or other disposition of 10% or more of either the assets or outstanding stock of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines interested stockholder as an entity or person who, together with affiliates and associates, beneficially owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

The provisions of the DGCL, our Certificate of Incorporation and our Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our Common Stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The Transfer Agent and Registrar for our Common Stock is Continental Stock Transfer & Trust Company, One State Street, 30th Floor, New York, NY 10004.

Listing

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “VIVS”. There is no established public trading market for the Pre-Funded Warrants or the Common Warrants to be sold in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Pre-Funded Warrants or the Common Warrants on any national securities exchange.

LEGAL MATTERS

The validity of the shares of our Common Stock being offered by this prospectus will be passed upon for us by Paul Hastings LLP, Palo Alto, California.

EXPERTS

The financial statements, and the related financial statement schedule, incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended March 31, 2026, have been audited by Rosenberg Rich Baker Berman, P.A., an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements and financial statement schedule have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities being offered under this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities being offered under this prospectus, we refer you to the registration statement of which this prospectus is a part and the exhibits filed as a part of the registration statement. Statements contained in this prospectus as to the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit.

The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including VivoSim Labs, Inc. The SEC's Internet site can be found at <http://www.sec.gov>. You may also request a copy of these filings, at no cost, by writing us at 11555 Sorrento Valley Road, Suite 100, San Diego, CA 92121 or telephoning us at (858) 224-1000.

We are subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available at the website of the SEC referred to above. We also maintain a website at www.vivosim.ai. You may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or connected to our website is not a part of, and is not incorporated into, this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and persons controlling us pursuant to the provisions described in Item 14 of the registration statement of which this prospectus is a part or otherwise, 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. In the event that a claim for indemnification against such liabilities (other than our payment of expenses incurred or paid by our directors, officers, or controlling persons in the successful defense of any action, suit, or proceeding) is asserted by our directors, officers, or controlling persons in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of the issue.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this prospectus:

- our Annual Report on [Form 10-K](#) for the year ended March 31, 2026, filed with the SEC on July 14, 2026;
- our Current Reports on Form 8-K, filed with the SEC on [April 3, 2026](#), [July 17, 2026](#) and [July 24, 2026](#);
- the description of our Common Stock set forth in our Registration Statement on [Form 8-A](#) (File No. 001-35996), filed with the SEC on July 26, 2016, including any amendments or reports filed for the purpose of updating such description, including the description of our Common Stock included as [Exhibit 4.5](#) to our Annual Report on [Form 10-K](#) for the fiscal year ended March 31, 2026, filed with the SEC on July 14, 2026.

We also incorporate by reference any future filings (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 unless such Form 8-K expressly provides to the contrary) made 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 such future filings and will become a part of this prospectus from the respective dates that such documents are filed with the SEC. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof or of the related prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may obtain any of the documents incorporated by reference in this prospectus from the SEC through the SEC’s website at the address provided above. Documents incorporated by reference are also available from us, without charge. You may obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone at the following address or phone number:

VivoSim Labs, Inc.
11555 Sorrento Valley Road, Suite 100
San Diego, CA 92121
Attn: Corporate Secretary
Phone: (858) 224-1000



VivoSim Labs, Inc.

**Up to 4,705,883 Shares of Common Stock Underlying the Pre-Funded Warrants
Up to 4,705,883 Shares of Common Stock Underlying the Common Warrants**

PROSPECTUS

, 2026

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all expenses to be paid by VivoSim Labs, Inc. (the “Registrant”) in connection with the sale of the Registrant’s common stock, par value \$0.001 per share (“Common Stock”), being registered. The security holders will not bear any portion of such expenses. All amounts shown are estimates except for the registration fee.

SEC registration fee	\$ 452
Legal fees and expenses	60,000
Accounting fees and expenses	10,000
Printing, transfer agent fees and miscellaneous expenses	10,000
Total	<u>\$ 80,452</u>

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 102 of the General Corporation Law of the State of Delaware (the “DGCL”) permits a corporation to eliminate or limit the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty to the corporation or its stockholders, 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 or redemption in violation of the DGCL or derived an improper personal benefit. The Registrant’s certificate of incorporation, as amended (the “Certificate of Incorporation”), provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding 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 judgments, fines and amounts paid in settlement in connection with such action, suit or proceeding or 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 indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

The Registrant’s amended and restated bylaws (the “Bylaws”) provide that the Registrant will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of the Registrant) by reason of the fact that he or she is or was a director or officer of the Registrant, or is or was serving, at the Registrant’s request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an “Indemnitee”), against expenses (including, attorneys’ fees), judgments, fines, and

amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the Registrant's best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. The Bylaws also provide that the Registrant will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of the Registrant to procure a judgment in the Registrant's favor by reason of the fact that the Indemnitee is or was, a director or officer, or is or was serving, or has agreed to serve, at the Registrant's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including, attorneys' fees) actually and reasonably incurred by such Indemnitee in connection with the defense or settlement of such action or suit, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the Registrant's best interests, except that 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 Registrant, unless, and only to the extent, that the Court of Chancery or the court in which such action or suit was brought determines, despite the adjudication of liability but in view of all the circumstances, he or she is entitled to indemnification of such expenses which the Court of Chancery or such other court shall deem proper. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified against expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

The Registrant has entered into indemnification agreements with each of its directors and executive officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements require the Registrant, among other things, to indemnify its directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require the Registrant to advance all expenses incurred by the directors and executive officers in investigating or defending any such action, suit or proceeding, subject to certain exceptions.

The Bylaws provide that the Registrant may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Registrant or is or was serving at the request of the Registrant as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or her in any such capacity, or arising out of his or her status as such, whether or not the Registrant would have the power to indemnify such person against such liability under the DGCL. The Registrant has obtained insurance under which, subject to the limitations of the insurance policies, coverage is provided to the Registrant's directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to the Registrant with respect to payments that may be made by the Registrant to these directors and executive officers pursuant to the Registrant's indemnification obligations or otherwise as a matter of law.

See also the undertakings set out in response to Item 17 herein.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

Since August 1, 2023, the Registrant has issued the following securities that were not registered under the Securities Act of 1933, as amended (the "Securities Act"):

(1) On December 6, 2023, the Registrant issued 5,482 unregistered shares of Common Stock to a marketing firm as consideration for services pursuant to a marketing agreement.

(2) On July 16, 2026, pursuant to that certain Securities Purchase Agreement, by and between the Registrant and the investor listed in the section of this prospectus entitled "Selling Stockholder" (the "Selling Stockholder"), the Registrant issued and sold to the Selling Stockholder, in a private placement transaction, unregistered (i) pre-funded warrants (the "Pre-Funded Warrants") to purchase up to an aggregate of 4,705,883 shares of Common Stock and (ii) accompanying warrants to purchase up to an aggregate of 4,705,883 shares of Common Stock (the "Common Warrants", and collectively with the Pre-Funded Warrants, the "Warrants").

The issuance of the shares of Common Stock and the Warrants was not registered under the Securities Act in reliance upon the exemption from registration provided by Section 4(a)(2) of the Securities Act and/or Regulation D promulgated thereunder, to the extent applicable, and in reliance upon similar exemptions under applicable state laws. The marketing firm and the Selling Stockholder represented that they were accredited investors and were acquiring the shares of Common Stock and the Warrants, respectively, for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investments and could hold the securities for an indefinite period of time.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) Exhibits.

Exhibit No.	Description
2.1#	Asset Purchase Agreement, dated February 23, 2025, by and between the Company, Eli Lilly and Company and for certain sections therein, Organovo, Inc. (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by the Company with the SEC on February 25, 2025).
3.1	Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 3, 2012).
3.2	Certificate of Amendment of Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Current Report on Form 8-K, as filed with the SEC on July 27, 2018).
3.3	Certificate of Second Amendment of Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Current Report on Form 8-K as filed with the SEC on August 17, 2020).
3.4	Certificate of Third Amendment of Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Current Report on Form 8-K as filed with the SEC on March 21, 2025).
3.5	Certificate of Fourth Amendment of Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Company's Current Report on Form 8-K as filed with the SEC on April 24, 2025).
3.6	Amended and Restated Bylaws (incorporated by reference from Exhibit 3.2 to the Company's Current Report on Form 8-K as filed with the SEC on April 24, 2025).
4.1	Form of Common Warrant (incorporated by reference from Exhibit 4.1 to the Company's Current Report on Form 8-K, as filed with the SEC on May 13, 2024).
4.2	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-1 (File No. 333-294716) filed with the Securities and Exchange Commission on March 27, 2026).
4.3	Form of Common Warrant (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-1 (File No. 333-294716) filed with the Securities and Exchange Commission on March 27, 2026).
4.4	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.5 to the Company's Registration Statement on Form S-1 (File No. 333-294716) filed with the Securities and Exchange Commission on March 27, 2026).
4.5	Description of Securities (incorporated by reference to Exhibit 4.5 to the Annual Report on Form 10-K for the fiscal year ended March 31, 2026, filed with the SEC on July 14, 2026).
4.6	Form of Pre-Funded Warrant to Purchase Shares of Common Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, as filed with the SEC on July 17, 2026).

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Exhibit No.	Description
4.7	<u>Form of Common Stock Purchase Warrant to Purchase Shares of Common Stock (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K, as filed with the SEC on July 17, 2026).</u>
4.8	<u>Amendment to Common Stock Purchase Warrants, dated July 16, 2026, between the Company and Armistice Capital Master Fund Ltd. (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K, as filed with the SEC on July 17, 2026).</u>
5.1*	<u>Opinion of Paul Hastings LLP.</u>
10.1+	<u>VivoSim Labs, Inc. Amended and Restated 2012 Equity Incentive Plan (incorporated by reference from Exhibit 10.1 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.2+	<u>Form of Stock Option Award Agreement under the 2012 Equity Incentive Plan (incorporated by reference from Exhibit 10.16 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012).</u>
10.3+	<u>Form of Non-Employee Director Stock Option Award Agreement under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 9, 2015).</u>
10.4+	<u>Form of Executive Stock Option Award Agreement under the 2012 Equity Incentive Plan (incorporated by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 9, 2015).</u>
10.5+	<u>Form of Indemnification Agreement (incorporated by reference from Exhibit 10.17 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012).</u>
10.6#	<u>License Agreement, dated March 24, 2009, by and between Organovo, Inc. and the Curators of the University of Missouri (incorporated by reference from Exhibit 10.6 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.7#	<u>License Agreement, dated March 12, 2010, by and between Organovo, Inc. and the Curators of the University of Missouri (incorporated by reference from Exhibit 10.7 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.8+	<u>Severance and Change in Control Plan (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on November 9, 2015).</u>
10.9+	<u>Amendment No. 1 to Severance and Change in Control Plan, dated May 19, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on May 20, 2020).</u>
10.10+	<u>Form of Severance and Change in Control Plan Participation Agreement (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on November 9, 2015).</u>
10.11+	<u>Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement (Retention Form) under the 2012 Equity Incentive Plan (incorporated by reference from Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on August 4, 2016).</u>
10.12+	<u>Form of Employee Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under the 2012 Equity Incentive Plan (incorporated by reference from Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on August 4, 2016).</u>
10.13+	<u>Form of Non-Employee Director Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under the 2012 Equity Incentive Plan (incorporated by reference from Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on August 4, 2016).</u>

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Exhibit No.	Description
10.14+	<u>Consulting Agreement, dated September 15, 2020, by and between Organovo, Inc. and Multi Dimensional Bio Insight LLC (incorporated by reference from Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on November 5, 2020).</u>
10.15+	<u>Consulting Agreement, dated August 25, 2020, by and between Organovo, Inc. and Danforth Advisors (incorporated by reference from Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, as filed with the SEC on November 5, 2020).</u>
10.16+	<u>Amendment No. 5, dated October 4, 2021, to Consulting Agreement, dated August 25, 2020, by and between Organovo, Inc. and Danforth Advisors LLC (incorporated by reference from Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the SEC on October 6, 2021).</u>
10.17+	<u>Amendment No. 6, dated December 30, 2024, to Consulting Agreement, dated August 25, 2020, by and between Organovo, Inc. and Danforth Advisors, LLC (incorporated by reference from Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on December 31, 2024).</u>
10.18	<u>Lease Agreement, dated November 23, 2020, between VivoSim Labs, Inc. and San Diego Inspire 2, LLC (Permanent Lease Agreement 176640186.8) (incorporated by reference from Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on November 25, 2020).</u>
10.19	<u>Amended and Restated Lease Agreement, dated November 23, 2020, between Organovo, Inc., as Tenant, and San Diego Inspire 2, LLC, as Landlord, as amended by First Amendment to Amended & Restated Lease, dated November 17, 2021, between Organovo, Inc., as Tenant and San Diego Inspire 2, LLC, as Landlord (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on November 19, 2021).</u>
10.20	<u>Intercompany Agreement, dated December 28, 2020, by and among VivoSim Labs, Inc., Organovo, Inc. and Viscient Biosciences, Inc. (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on December 31, 2020).</u>
10.21	<u>Sales Agreement, dated March 16, 2018, by and between VivoSim Labs, Inc. and Jones Trading Institutional Services LLC (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2018).</u>
10.22+	<u>VivoSim Labs, Inc. Amended and Restated 2021 Inducement Equity Incentive Plan (incorporated by reference from Exhibit 10.22 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.23+	<u>Form of Stock Option Agreement under the VivoSim Labs, Inc. 2021 Inducement Equity Incentive Plan (incorporated by reference from Exhibit 10.23 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.24+	<u>Form of Restricted Stock Unit Agreement under the VivoSim Labs, Inc. 2021 Inducement Equity Incentive Plan (incorporated by reference from Exhibit 10.24 to the Company's Annual Report on Form 10-K, as filed with the SEC on July 29, 2025).</u>
10.25	<u>Settlement and Patent License Agreement, dated February 22, 2022, by and between Organovo, Inc. and BICO Group AB (incorporated by reference to Exhibit 10.34 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 10, 2022).</u>
10.26+	<u>VivoSim Labs, Inc. Amended and Restated 2022 Equity Incentive Plan (incorporated by reference from Exhibit 10.26 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>
10.27+	<u>Form of Global Stock Option Award Agreement under the VivoSim Labs, Inc. Amended and Restated 2022 Equity Incentive Plan (incorporated by reference from Exhibit 10.27 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).</u>

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Exhibit No.	Description
10.28+	Form of Global Restricted Stock Unit Award Agreement under the VivoSim Labs, Inc. Amended and Restated 2022 Equity Incentive Plan (incorporated by reference from Exhibit 10.28 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).
10.29+	VivoSim Labs, Inc. Amended and Restated 2023 Employee Stock Purchase Plan (incorporated by reference from Exhibit 10.29 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).
10.30+	Offer Letter, dated July 25, 2025, between the Company and Tony Lialin (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on August 14, 2025).
10.31	Placement Agency Agreement, dated March 31, 2026, between the Company and Joseph Gunnar & Co., LLC (incorporated by reference to Exhibit 1.1 to the Company's Registration Statement on Form S-1 (File No. 333-294716) filed with the Securities and Exchange Commission on March 27, 2026).
10.32	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.30 to the Company's Registration Statement on Form S-1 (File No. 333-294716) filed with the Securities and Exchange Commission on March 27, 2026).
10.33+	Offer Letter, dated November 17, 2025, between the Company and Amar Sethi (incorporated by reference from Exhibit 10.33 to the Company's Annual Report on Form 10-K, as filed with the SEC on July 14, 2026).
10.34	Securities Purchase Agreement, dated July 16, 2026, between the Company and the purchaser identified on the signature page thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on July 17, 2026).
10.35	Placement Agency Agreement, dated July 16, 2026, between the Company and A.G.P./Alliance Global Partners (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on July 17, 2026).
19.1	VivoSim Labs, Inc. Insider Trading Policy (incorporated by reference from Exhibit 10.19 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).
21.1	Subsidiaries of VivoSim Labs, Inc. (incorporated by reference from Exhibit 21.1 to the Company's Annual Report on Form 10-K, as filed with the SEC on June 5, 2025).
23.1*	Consent of Independent Registered Public Accounting Firm.
24.1*	Power of Attorney (included on signature page hereto).
97	VivoSim Labs, Inc. Clawback Policy (incorporated by reference from Exhibit 97 to the Company's Annual Report on Form 10-K, as filed with the SEC on May 31, 2024).
107*	Filing Fee Table.

Portions of this exhibit (indicated by [* * *]) have been omitted pursuant to Item 601(b)(10) because the Company has determined that the information is both (i) not material and (ii) of the type that the Company treats as private and confidential. In addition, schedules have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. The Company hereby undertakes to furnish supplemental copies of the unredacted exhibit upon request by the SEC.

* Filed herewith.

+ Designates management contracts and compensation plans.

(b) Financial Statement Schedules.

All schedules are omitted because the information is not required, is not applicable, or is otherwise set forth 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;
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of this 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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" exhibit to the effective registration statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

Provided, however, that:

Paragraphs (1)(i), (1)(ii) and (1)(iii) of this section 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 SEC by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, 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 of the Registrant under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness.

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 first use, 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 date of first use.

(5) 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on July 31, 2026.

VivoSim Labs, Inc.

By: /s/ Keith Murphy
Keith Murphy
Executive Chairman

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Keith Murphy and Norman Staskey, and each or any one of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments and any related registration statements filed pursuant to Rule 462 and otherwise) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
<u>/s/ Keith Murphy</u> Keith Murphy	Executive Chairman (Principal Executive Officer)	July 31, 2026
<u>/s/ Norman Staskey</u> Norman Staskey	Chief Financial Officer (Principal Financial and Principal Accounting Officer)	July 31, 2026
<u>/s/ Adam Stern</u> Adam Stern	Director	July 31, 2026
<u>/s/ Douglas Cohen</u> Douglas Cohen	Director	July 31, 2026
<u>/s/ David Gobel</u> David Gobel	Director	July 31, 2026
<u>/s/ Alison Milhous</u> Alison Milhous	Director	July 31, 2026

July 31, 2026

VivoSim Labs, Inc.
11555 Sorrento Valley Road, Suite 100
San Diego, CA 92121

Ladies and Gentlemen:

We have acted as counsel to VivoSim Labs, Inc., a Delaware corporation (the “**Company**”), in connection with the preparation and filing with the U.S. Securities and Exchange Commission (the “**Commission**”), pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), of the Registration Statement on Form S-1 of the Company (including all exhibits thereto, the “**Registration Statement**”), including a related prospectus filed with the Registration Statement (the “**Prospectus**”) relating to the proposed public offering (the “**Offering**”) of 9,411,766 shares of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), which consists of (i) 4,705,883 shares of Common Stock (the “**Pre-Funded Warrant Shares**”) issuable upon the exercise of those certain pre-funded warrants (the “**Pre-Funded Warrants**”) to purchase Common Stock issued to the selling stockholder (the “**Selling Stockholder**”) on July 17, 2026 pursuant to that certain Securities Purchase Agreement, dated as of July 16, 2026, by and between the Company and the Selling Stockholder (the “**Securities Purchase Agreement**”), and (ii) 4,705,883 shares of Common Stock (the “**Common Warrant Shares**” and, together with the Pre-Funded Warrant Shares, the “**Warrant Shares**”) issuable upon the exercise of those certain warrants to purchase Common Stock issued to the Selling Stockholder on July 17, 2026 pursuant to the Securities Purchase Agreement (the “**Common Warrants**” and, together with the Pre-Funded Warrants, the “**Warrants**”).

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the form of Securities Purchase Agreement, the form of Pre-Funded Warrant, the form of Common Warrant, the Company’s Certificate of Incorporation, as amended, and the Company’s Amended and Restated Bylaws, each as currently in effect, and the originals or copies, certified or otherwise identified to our satisfaction, of such documents, resolutions, certificates and other instruments of the Company and such other instruments and documents as we have deemed necessary or appropriate as a basis for the opinion set forth below.

As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies thereof.

Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion herein is expressed solely with respect to the federal laws of the United States and the General Corporation Law of the State of Delaware. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof. Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. We express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter hereof.

July 31, 2026
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On the basis of the foregoing, and in reliance thereon, we are of the opinion that:

The Warrant Shares have been duly authorized by all necessary corporate action on the part of the Company and assuming sufficient authorized but unissued shares of Common Stock are available for issuance when the Warrants are exercised, the Warrant Shares, when issued, delivered and paid for in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

Without limiting any of the other limitations, exceptions, assumptions and qualifications stated elsewhere herein, we express no opinion with regard to the applicability or effect of the laws of any jurisdiction other than the General Corporation Law of the State of Delaware, as in effect on the date of this opinion letter. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

This opinion letter deals only with the specified legal issues expressly addressed herein, and you should not infer any opinion that is not explicitly stated herein from any matter addressed in this opinion letter.

This opinion letter is rendered solely in connection with the offering of the Warrant Shares as described in the Registration Statement. This opinion letter is rendered as of the date hereof, and we assume no obligation to advise you or any other person with regard to any change after the date hereof in the circumstances or the law that may bear on the matters set forth herein, even if the change may affect the legal analysis or a legal conclusion or other matters in this opinion letter.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to our firm in the Prospectus under the heading "Legal Matters." In giving such consent, we do not hereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules or regulations of the Commission thereunder.

Very truly yours,

/s/ Paul Hastings LLP



ROSENBERG RICH BAKER BERMAN, P.A.

www.rrb.com

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated July 14, 2026 (which report includes an explanatory paragraph relating to the existence of substantial doubt about the Company's ability to continue as a going concern), with respect to the consolidated financial statements of VivoSim Labs, Inc., formerly known as Organovo Holdings, Inc., as of March 31, 2026 and 2025 and for the years then ended, included in the Company's Annual Report on Form 10-K for the year ended March 31, 2026 and to the reference to our Firm under the caption "Experts" in the Registration Statement.

/s/ Rosenberg Rich Baker Berman, P.A.

Somerset, New Jersey

July 31, 2026

"RRBB" is the brand name under which Rosenberg Rich Baker Berman, P.A. and RRBB Advisors, LLC, and its subsidiary entities, including CFO Financial Partners LLC, provide professional services. Rosenberg Rich Baker Berman, P.A. and RRBB Advisors, LLC (and its subsidiary entities) practice as an alternative practice structure in accordance with the AICPA Code of Professional Conduct and applicable laws, regulations, and professional standards. Rosenberg Rich Baker Berman, P.A. is a licensed independent CPA firm that provides attest services to its clients, and RRBB Advisors, LLC, and its subsidiary entities provide tax and business consulting services to their clients. RRBB Advisors, LLC, and its subsidiary entities are not licensed CPA firms.

Calculation of Filing Fee Tables

S-1

VivoSim Labs, INC.

Table 1: Newly Registered and Carry Forward Securities

☐ Not Applicable

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to be Paid	1 Equity	Common Stock, par value \$0.001 per share, issuable upon exercise of warrants	457(a)	9,411,766	\$ 0.3477	3,272,471.04	\$ 0.0001381	\$ 451.93				
Fees Previously Paid												
Carry Forward Securities												
Carry Forward Securities												
Total Offering Amounts:						\$ 3,272,471.04		\$ 451.93				
Total Fees Previously Paid:								\$ 0.00				
Total Fee Offsets:								\$ 0.00				
Net Fee Due:								\$ 451.93				

Offering Note

¹ (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's Common Stock ("Common Stock") in connection with any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of Common Stock. (2) Consists of 9,411,766 shares of Common Stock registered for resale by the Selling Stockholder named in this Registration Statement, including (i) 4,705,883 Pre-Funded Warrant Shares (as defined in this Registration Statement) and (ii) 4,705,883 Common Warrant Shares (as defined in this Registration Statement). (3) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act. The proposed maximum offering price per share and the proposed maximum aggregate offering price with respect to the shares are calculated based on \$0.3477 per share, the average of the high and low prices of the Common Stock, as reported on the Nasdaq Capital Market on July 29, 2026, a date within five business days prior to the filing of this Registration Statement.

Table 2: Fee Offset Claims and Sources

☒ Not Applicable

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rules 457(b) and 0-11(a)(2)											
Fee Offset Claims											
Fee Offset Sources											
Rule 457(p)											
Fee Offset Claims											
Fee Offset Sources											

Table 3: Combined Prospectuses

☒ Not Applicable

Security Type	Security Class Title	Amount of	Maximum Aggregate	Form	File Number	Initial
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			Securities Previously Registered	Offering Price of Securities Previously Registered	Type		Effective Date
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