

PROSPECTUS SUPPLEMENT
(To Prospectus dated April 18, 2025)



1,890,625 Shares of Common Stock
Warrants to Purchase up to 1,734,375 Shares of Common Stock
Up to 1,734,375 Shares of Common Stock Issuable Upon Exercise of the Warrants

Pursuant to this prospectus supplement and the accompanying base prospectus, we are offering: (i) 156,250 shares of our common stock, par value \$0.001 per share (our “common stock”), to certain of our directors and executive officers (collectively, the “Insider Investors”) at an offering price of \$0.64 per share (the “Insider Shares”), and (ii) 1,734,375 shares of our common stock (the “Warrant Investor Shares” and, together with the Insider Shares, the “Shares”), together with 1,734,375 common stock purchase warrants (the “Warrants”) to purchase up to 1,734,375 shares of our common stock, at a combined offering price of \$0.64 per Warrant Investor Share and accompanying Warrant, to certain of our existing stockholders (collectively, the “Warrant Investors”). The Shares and Warrants have been separately issued. Each Warrant has an exercise price per share of \$0.768. Each Warrant will be exercisable on or after August 5, 2025 (the “Initial Exercise Date”) through and until August 5, 2030 (the “Termination Date”). This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the Warrants (such shares, the “Warrant Shares”). We refer to the Shares, the Warrants, and the Warrant Shares, if any, issued in this offering collectively as the “Securities.”

Our common stock is listed on the NYSE American market (the “NYSE American”) under the symbol “VNRX.” On August 1, 2025, the last reported sale price of our common stock on the NYSE American was \$0.64 per share. There is no established public trading market for the Warrants, and we do not expect a market for the Warrants to develop. We do not intend to apply for a listing of the Warrants on any national securities exchange. Without an active trading market, the liquidity of the Warrants will be limited.

	Per Insider Share	Per Warrant Investor Share and Accompanying Warrant	Total
Offering price and proceeds, before expenses, to us ⁽¹⁾	\$ 0.64	\$ 0.64	\$ 1,210,000

⁽¹⁾ The amount of proceeds to us, before expenses, presented in this table does not give effect to any exercise of the Warrants.

Investing in our securities involves a high degree of risk. You should carefully consider all of the information set forth in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference in this prospectus supplement before deciding to invest in our securities. Please see “Risk Factors” on page S-7 of this prospectus supplement and page 4 of the accompanying base prospectus and in the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus to read about factors you should consider before buying our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities being offered by this prospectus supplement or the prospectus to which it relates, or determined if this prospectus supplement or the prospectus to which it relates are truthful or complete. Any representation to the contrary is a criminal offense.

The Company expects to deliver the Securities against payment on or about August 5, 2025, subject to customary closing conditions.

The date of this prospectus supplement is August 1, 2025.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is part of a registration statement that was filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process and consists of two parts. The first part is the prospectus supplement, including the documents incorporated by reference herein, which describes the specific terms of this offering. The second part, the accompanying prospectus, including the documents incorporated by reference therein, provides more general information. In general, when we refer only to the prospectus, we are referring to both parts of this document combined.

Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under the heading “*Where You Can Find More Information.*” These documents contain information you should carefully consider when deciding whether to invest in our common stock.

This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent there is a conflict between the information contained in this prospectus supplement and the accompanying prospectus, you should rely on information contained in this prospectus supplement, provided that if any statement in, or incorporated by reference into, one of these documents is inconsistent with a statement in another document having a later date, the statement in the document having the later date modifies or supersedes the earlier statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus.

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus, any document incorporated by reference herein or therein, or any free writing prospectuses we may provide to you in connection with this offering. We have not authorized anyone to provide you with any different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus supplement and the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide to you. The information contained in this prospectus supplement, the accompanying prospectus, and in the documents incorporated by reference herein or therein is accurate only as of the date such information is presented. Our business, financial condition, results of operations and prospects may have changed since those respective dates.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the Securities to which it relates, nor do this prospectus supplement and the accompanying prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

Unless otherwise indicated, information contained in or incorporated by reference into this prospectus concerning our industry and the markets in which we operate, including market position and market opportunity, is based on information from our management’s estimates, as well as from industry publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. In addition, while we believe that information contained in industry publications, surveys and studies has been obtained from reliable sources, the accuracy and completeness of such information is not guaranteed, and we have not independently verified any of the data contained in these third-party sources.

This prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, include statements that are based on various assumptions and estimates that are subject to numerous known and unknown risks and uncertainties. Some of these risks and uncertainties are described in the section entitled “*Risk Factors*” beginning on page S-7 of this prospectus supplement and in the section entitled “*Risk Factors*” starting on page 10 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 (our “Annual Report”), as well as the other documents we file with the SEC. These and other important factors could cause our future results to be materially different from the results expected as a result of, or implied by, these assumptions and estimates. You should read the information contained in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus, and the documents incorporated by reference herein and therein, completely and with the understanding that future results may be materially different from and worse than what we expect. See the information included under the heading “*Cautionary Note Regarding Forward-Looking Information*.”

This prospectus supplement does not contain all of the information included in the registration statement of which this prospectus supplement is a part. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The registration statement containing this prospectus supplement, including the exhibits to the registration statement, provides additional information about us and the securities offered pursuant to this prospectus supplement. The registration statement, including the exhibits, can be read on the SEC’s website mentioned under the heading “*Where You Can Find More Information*.”

Unless we state otherwise or the context indicates otherwise, references to the “Company,” “VolitionRx,” “Volition,” “we,” “us,” and “our” in this prospectus supplement refer to VolitionRx Limited and its wholly owned subsidiaries, Singapore Volition Pte. Limited, Belgian Volition SRL, Volition Global Services SRL, Volition Diagnostics UK Limited, and Volition America, Inc., and its majority-owned subsidiary, Volition Veterinary Diagnostics Development LLC. Our fiscal year ends on December 31st of each calendar year. NucleosomicsTM, Capture-PCRTM, Capture-SeqTM and Nu.Q[®] and their respective logos are trademarks and/or service marks of VolitionRx and its subsidiaries. All other trademarks, service marks and trade names referred to in this prospectus supplement are the property of their respective owners. Additionally, unless otherwise specified, all references to “\$” refer to the legal currency of the United States of America.

PROSPECTUS SUPPLEMENT SUMMARY

This prospectus supplement summary discusses the key aspects of the offering and highlights certain information appearing elsewhere in this prospectus supplement, in the accompanying prospectus and in the documents we incorporate by reference herein and therein. Because it is only a summary, it does not contain all of the information that you should consider before deciding to invest in our securities, and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information included elsewhere in this prospectus supplement. Before you decide whether to purchase our securities, you should carefully read this entire prospectus supplement and the accompanying prospectus, any free writing prospectus that we have been authorized to use and the documents incorporated by reference herein and in the accompanying prospectus. You should pay special attention to the information provided under the headings (i) “Risk Factors” in this prospectus supplement, in the accompanying prospectus, and in our Annual Report, as well as in the other documents we file with the SEC, and (ii) “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as our financial statements and the related notes thereto and the other documents incorporated by reference in this prospectus supplement and the accompanying prospectus.

Overview

Imagine a world where diseases like cancer and sepsis can be diagnosed early and monitored easily using routine blood tests. That’s the world Volition is trying to build by developing its innovative family of simple, easy to use, cost-effective blood tests.

Volition is a multi-national epigenetics company. It has patented technologies that use chromosomal structures, such as nucleosomes, and transcription factors as biomarkers in cancer and other diseases. The tests in the Company’s product portfolio detect certain characteristic changes that occur from the earliest stages of disease, enabling early detection and offering a better way to monitor disease progression and a patient’s response to treatment.

The tests offered by Volition and its subsidiaries are designed to detect and monitor a range of life-altering diseases, including certain cancers and diseases associated with NETosis, such as sepsis. Early diagnosis and monitoring have the potential to not only prolong the life of patients but also improve their quality of life.

We have several key pillars of focus:

- **Nu.Q[®] Vet** – cost-effective, easy-to-use blood tests for dogs and other companion animals. The Nu.Q[®] Vet Cancer Test is commercially available as a cancer screening test in dogs.
- **Nu.Q[®] NETs** – detects diseases associated with NETosis, such as sepsis.
- **Nu.Q[®] Discover** – a complete solution to profiling nucleosomes.
- **Nu.Q[®] Cancer** – from screening, diagnosis and staging, therapy decision, planning and treatment to monitoring response to treatment and disease progression.
- **Capture-PCRTM** – isolating and capturing circulating tumor-derived DNA from plasma samples for early cancer detection.

The Company has grown from a single two-meter lab bench at the University of Namur in Belgium to a purpose-built 17,000 square foot lab and 10,000 square foot production facility in Gembloux, Belgium, an Innovation Lab in California, and offices in California, London and Nevada. We now have a team of approximately 80 dedicated employees, spanning a wide range of disciplines; all united in our mission to improve outcomes for patients.

Cultivating successful, ongoing relationships with stakeholders worldwide has been fundamental to Volition’s development. We have fostered ties with leading academic institutions, clinical centers of excellence, multi-national diagnostic and pharmaceutical companies and financial institutions across the globe.

Recent Developments

Debt Financing

On May 20, 2025, we consummated a debt financing pursuant to a securities purchase agreement with Lind Global Asset Management XII LLC, a Delaware limited liability company (“Lind”). Under the securities purchase agreement, we received \$6,250,000 in funding in exchange for the issuance of a senior secured convertible promissory note in the amount of \$7,500,000 and a five-year common stock purchase warrant for the purchase of 13,020,834 shares of our common stock at a price of \$0.672 per share, subject to adjustment and cashless exercise in certain circumstances. The secured convertible note, which does not accrue interest, is repayable in eighteen (18) consecutive monthly installments in the amount of \$416,666 beginning six months from the issuance date, subject to certain exceptions including repayment in shares of common stock in limited circumstances. The secured convertible note may be converted by Lind from time to time at a price of \$0.72 per share, subject to adjustment. Issuance of shares of common stock upon repayment or conversion of the secured convertible note and upon exercise of the warrant is subject to an ownership limitation equal to 4.99% of the Company’s outstanding shares of common stock; provided, that if Lind and its affiliates beneficially own in excess of 4.99% of the Company’s outstanding shares of common stock, then such limitation shall automatically increase to 9.99% so long as Lind and its affiliates own in excess of 4.99% of such common stock (and shall automatically decrease to 4.99% upon Lind and its affiliates ceasing to own in excess of 4.99% of such common stock). Additionally, the issuance in the aggregate of any shares upon repayment or conversion of the secured convertible note and upon exercise of the warrant in excess of 19.99% of the outstanding common stock is subject to stockholder approval in accordance with NYSE American Rule 713. The secured promissory note contains certain negative covenants, including restricting the Company from certain distributions, stock repurchases, borrowing, sale of assets, loans and exchange offers. Additionally, unless waived by Lind, the Company shall be required to utilize a portion of the proceeds from certain specified debt or equity transactions and asset sales to repay the outstanding principal amount due under the secured convertible note. The Company’s obligations under the secured convertible note are secured by a first-priority security interest in all of its assets pursuant to the terms of a security agreement in favor of Lind. The Company has also entered into a pledge agreement in favor of Lind with respect to the equity that it holds in its subsidiaries. In addition, the Company’s subsidiaries have guaranteed all of the obligations of the Company in connection with the transaction pursuant to the terms of a guaranty in favor of Lind and certain of the subsidiaries have entered into a guarantor security agreement and a pledge agreement.

At-the-Market Offering

On April 22, 2025, we entered into a Capital on DemandTM Sales Agreement (the “2025 CDSA”), with JonesTrading Institutional Services LLC (“Jones”), under which we may, from time to time, offer and sell common stock having an aggregate offering value of up to \$7.5 million, through an “at-the-market” offering with Jones pursuant our shelf registration statement on Form S-3, as amended (declared effective by the SEC on April 18, 2025, File No. 333-283088). To date, 545,467 shares of our common stock have been sold under the 2025 CDSA.

Corporate Information

We are a Delaware corporation. Our principal executive offices are located at 1489 West Warm Springs Road, Suite 110, Henderson, Nevada 89014, and our telephone number is +1 (646) 650-1351. We maintain a website at www.volition.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to such reports are available to you free of charge through the “Investors” section of www.volition.com as soon as practicable after such materials have been electronically filed with, or furnished to, the SEC. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding whether to purchase our securities. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

The Offering	
Issuer:	VolitionRx Limited
Offering price:	Offering price of \$0.64 per Insider Share and a combined offering price of \$0.64 per Warrant Investor Share and accompanying Warrant.
Common stock outstanding immediately prior to this offering:	100,746,467 shares.
Insider Shares offered by us:	156,250 Insider Shares.
Warrant Investor Shares and accompanying Warrants offered by us:	1,734,375 Warrant Investor Shares, each of which will be issued together with one Warrant to purchase one share of common stock. The Warrants have an exercise price equal to 120% of the per share offering price, or \$0.768 per share. The Warrants are exercisable on or after the Initial Exercise Date through and until the Termination Date. To better understand the terms of the Warrants, you should carefully read the “ <i>Description of Securities We Are Offering</i> ” section of this prospectus supplement. This prospectus supplement also relates to the offering of Warrant Shares.
Common stock to be outstanding immediately after this offering:	102,637,092 shares, assuming no exercise of the Warrants.
Use of proceeds:	The net proceeds of this offering, after deducting offering expenses paid or payable by us, will be approximately \$1,144,000, assuming no exercise of the Warrants. We intend to use the net proceeds from this offering for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions. For additional information, refer to the section entitled “ <i>Use of Proceeds</i> ” on page S-10.
Risk factors:	Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the section entitled “ <i>Risk Factors</i> ” beginning on page S-7 of this prospectus supplement and page 10 of our Annual Report, as well as the risks and uncertainties described in the other documents we file with the SEC.
NYSE American symbol:	Our common stock is listed on the NYSE American under the symbol “VNRX.” We do not intend to apply for the listing of the Warrants on any national securities exchange or other trading system. Without an active trading market, the liquidity of the Warrants will be limited.
The Insider Investors consist of certain directors and executive officers of the Company. These insiders have agreed to purchase an aggregate of 156,250 Insider Shares in this offering at the same price per share offered to the Warrant Investors for such Warrant Investors’ purchase of the Warrant Investor Shares and accompanying Warrants.	

Unless otherwise indicated, the number of shares of our common stock to be outstanding immediately after this offering is based on 100,746,467 shares of our common stock outstanding as of March 31, 2025 and excludes:

- 545,467 shares of our common stock sold through an “at-the-market” offering subsequent to March 31, 2025, pursuant to our Capital on Demand™ Sales Agreement with JonesTrading Institutional Services LLC;
- 13,020,834 shares of our common stock issuable upon exercise of a warrant issued in connection with a private transaction we consummated on May 20, 2025, at an exercise price of \$0.672 per share;
- 10,416,667 shares of our common stock issuable upon repayment and/or conversion of a secured convertible note in the principal amount of \$7,500,000, issued in connection with a private transaction we consummated on May 20, 2025, at a conversion price of \$0.72 per share;
- 33,332,033 shares of our common stock issuable upon the exercise of warrants outstanding as of March 31, 2025, with a weighted average exercise price of \$0.636 per share, which shares exclude 2,949,273 shares we issued subsequent to March 31, 2025 upon the exercise of warrants;
- 1,958,273 shares of our common stock issued upon the exercise of pre-funded warrants on May 1, 2025, at an exercise price of \$0.001 per share;
- 991,000 shares of our common stock issued upon the exercise of pre-funded warrants on July 8, 2025, at an exercise price of \$0.001 per share;
- 4,571,548 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2025 under our 2011 Equity Incentive Plan and 2015 Stock Incentive Plan, with a weighted average exercise price of \$3.89 per share;
- 3,365,119 shares of our common stock issuable upon vesting of restricted stock units, or RSUs, outstanding as of March 31, 2025 under our 2015 Stock Incentive Plan, with a weighted average price of \$0.77 per share;
- 4,047,678 shares of our common stock issuable upon vesting of RSUs outstanding as of March 31, 2025 under our 2024 Stock Incentive Plan, with a weighted average price of \$0.584 per share;
- 178,096 additional shares of common stock reserved for future issuance under our 2015 Stock Incentive Plan as of March 31, 2025; and
- 3,452,322 additional shares of common stock reserved for future issuance under our 2024 Stock Incentive Plan as of March 31, 2025.

Unless otherwise indicated, all information in this prospectus supplement reflects and assumes the following:

- no additional issuances, expirations or forfeitures of options, RSUs, convertible notes and warrants other than as described above;
- no exercise of the outstanding options or warrants, conversion of the secured convertible note or settlement of the outstanding RSUs described above;
- no exercise by the underwriters of their option to purchase additional shares of our common stock; and
- no exercise by the underwriters of the warrants to be issued to the underwriters in connection with this offering.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our securities, we urge you to carefully consider the risk, uncertainties and assumptions described in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, including the risks described under the heading “Risk Factors” beginning on page 10 of our Annual Report, as well as in our Quarterly Reports on Form 10-Q and the other documents we file with the SEC. You should also refer to the other information contained in this prospectus supplement and the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, including our financial statements and the notes to those statements and the information set forth in the section entitled “Cautionary Note Regarding Forward-Looking Statements.”

If one or more of the adverse events relevant to those risks and uncertainties actually occurs, our business, financial condition, results of operations, cash flows, or prospects could be materially adversely affected. This could cause the trading price of our securities to decline and you could lose all or part of your investment. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may have similar adverse effects on us. For more information, see the information set forth in the section entitled “Where You Can Find More Information.”

Risks Related to Our Securities and this Offering

We have a “going concern” opinion from our auditors, indicating the possibility that we may not be able to continue to operate.

Our independent registered public accountants have expressed substantial doubt about our ability to continue as a going concern. This opinion could materially limit our ability to raise additional funds by issuing new debt or equity securities or otherwise. If we fail to raise sufficient capital when needed, we will not be able to complete our proposed business plan. As a result, we may have to liquidate our business and investors may lose their investments. Our ability to continue as a going concern is dependent upon our ability to successfully accomplish our plan of operations described herein, obtain financing and eventually attain profitable operations. Investors should consider our independent registered public accountant’s comments when deciding whether to invest in the Company.

We may not raise the amount of capital we believe is required for our business plans, including our near-term business plans, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to pursue the business goals outlined in this prospectus.

We may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds to complete such short-term operations, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to support our business goals and continued operations, including our near-term continued operations. Such additional capital may not be available or available on terms acceptable to us, or at all.

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment. You may experience further dilution if we issue additional common stock in the future.

The offering price of our common stock is substantially higher than the net tangible book value per share of our common stock before giving effect to this offering. Our net tangible book value as of March 31, 2025 was approximately \$(29.3) million, or \$(0.291) per share of common stock. After giving effect to the issuance and sale of Securities in this offering at an offering price of \$0.64 per Insider Share and at a combined offering price of \$0.64 per Warrant Investor Share and accompanying Warrant offered in this offering, and after deducting offering expenses paid or payable by us, if you purchase our common stock in this offering, you will incur immediate substantial dilution of approximately \$0.915 per share. Furthermore, if outstanding options or warrants are exercised, RSUs are settled and/or the secured convertible note is repaid with shares of common stock or converted, you could experience further dilution. See the information included under the heading “Dilution” on page S-12.

If we issue additional shares of common stock, or securities exercisable for shares of common stock, including under our “at-the-market” offering program, our stockholders, including investors who purchase Securities in this offering, may experience additional dilution, and any such issuances may result in downward pressure on the price of our common stock. We also cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering.

There is no public market for the Warrants sold in this offering.

There is no established public trading market for the Warrants being sold in this offering. We do not intend to list the Warrants on any securities exchange or nationally recognized trading system, including the NYSE American. Therefore, we do not expect a market to ever develop for the Warrants. Without an active market, the liquidity of the Warrants will be limited.

The Warrants are speculative in nature. Holders of the Warrants offered hereby will have no rights as common stockholders with respect to the shares of our common stock underlying such warrants until such holders exercise their warrants and acquire our common stock, except as otherwise provided in the Warrants.

The Warrants do not confer any rights of common stock ownership on their holders, such as voting rights or the right to receive dividends, but merely represent the right to acquire shares of common stock at a fixed price. Commencing on the date of issuance, holders of the Warrants may exercise their right to acquire the underlying shares of common stock and pay the respective stated warrant exercise price per share. Following this offering, the market value of the Warrants is uncertain and there can be no assurance that the market value of the Warrants, if any, will equal or exceed their offering prices. There can be no assurance that the market price of the shares of common stock will ever equal or exceed the exercise price of the Warrants, and consequently, whether it will ever be profitable for holders of Warrants to exercise the Warrants.

Until holders of the Warrants acquire shares of our common stock upon exercise thereof, holders of such Warrants will have no rights with respect to shares of our common stock, except as provided in the Warrants. Upon exercise of the Warrants, such holders will be entitled to the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

A substantial number of shares of common stock may be sold in the market following this offering, which may depress the market price for our common stock.

Sales of a substantial number of shares of our common stock in the public market following this offering, or the perception that such sales might occur, could cause the market price of our common stock to decline. A substantial number of the outstanding shares of our common stock are, and the shares of common stock sold in this offering upon issuance will be, freely tradable without restriction or further registration under the Securities Act of 1933, as amended (the “Securities Act”).

All of the Securities sold in this offering and the shares of our common stock outstanding prior to this offering (which include certain shares that are held by our affiliates, including our officers and directors) will not be subject to lock-up agreements with the Company, and such shares will generally be freely tradeable without restriction or further registration under the Securities Act, except for shares owned by one of our “affiliates,” as that term is defined in Rule 405 under the Securities Act. Shares held by “affiliates” may be sold in the public market if registered or if they qualify for an exemption from registration under Rule 144 under the Securities Act. The market price of our common stock could decline as a result of sales by our stockholders in the market following completion of this offering or the perception that these sales could occur.

Management will have broad discretion to determine how to use the funds raised in this offering, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion over the use of proceeds from this offering, and we could spend the proceeds from this offering in ways our stockholders may not agree with or that do not yield a favorable return. We intend to use the net proceeds of this offering for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions. However, our use of these proceeds may differ substantially from our current plans. If we do not invest or apply the proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could have a material adverse effect on our business, financial condition, operating results and cash flow, and which could cause our stock price to decline.

Because we do not currently intend to declare cash dividends on our shares of common stock in the foreseeable future, stockholders must rely on appreciation of the value of our common stock for any return on their investment.

We have never paid cash dividends on our common stock. We currently intend to retain any future earnings to fund the development and growth of our business. Additionally, our ability to pay dividends is limited by restrictions on our ability to pay dividends and make certain other restricted payments under the terms of our term loan. Accordingly, while payment of dividends rests within the discretion of our board of directors, no cash dividends on our common shares have been declared or paid by us and we have no intention of paying any such dividends in the foreseeable future. Any return to investors is expected to come, if at all, only from potential increases in the price of our common stock.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, contain “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact included in this prospectus supplement, the accompanying prospectus, or the documents incorporated by reference herein or therein, are forward-looking statements. Such statements are typically characterized by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate(s),” “expect,” “forecast,” “goal,” “intend,” “may,” “plan,” “potential,” “seek,” “should,” “strategy,” “will,” and similar expressions.

Forward-looking statements also include the assumptions underlying or relating to such statements. In particular, forward-looking statements contained in this prospectus supplement and the accompanying prospectus relate to, among other things, our future or assumed financial condition, results of operations, liquidity, business forecasts and plans, research and product development plans, manufacturing plans, strategic plans and objectives, capital needs and financing plans, product launches, regulatory approvals, competitive environment, and the application of accounting guidance. We caution you that the foregoing list may not include all of the forward-looking statements made in this prospectus supplement and the accompanying prospectus or documents incorporated by reference.

Our forward-looking statements are based on our management’s current assumptions and expectations about future events and trends, which affect or may affect our business, strategy, operations or financial performance. Although we believe that these forward-looking statements are based upon reasonable assumptions, they are subject to numerous known and unknown risks and uncertainties and are made in light of information currently available to us. Our actual financial condition and results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the section entitled “*Risk Factors*” beginning on page S-7 of this prospectus supplement and page 10 of our Annual Report, as well as those described in the other documents we file with the SEC. You should read this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, completely and with the understanding that our actual future results may be materially different from and worse than what we expect.

Some significant factors that may impact our estimates and forward-looking statements include:

- Our inability to generate significant revenue or achieve profitability;
- Our need to raise additional capital in the future;
- Our expansion of our product development and sales and marketing capabilities could give rise to difficulties in managing our growth;
- Our dependence on third-party distributors;
- Our limited experience with sales and marketing;
- The possibility that we may not be able to continue to operate, as indicated by the “going concern” opinion from our auditors;
- Our ability to successfully develop, manufacture, market, and sell our future products;
- Our ability to timely obtain necessary regulatory clearances or approvals to distribute and market our future products;
- The acceptance by the marketplace of our future products;
- The highly competitive and rapidly changing nature of the diagnostics market;
- Protection of our patents, intellectual property and trade secrets;
- Our reliance on third parties to manufacture and supply our intended products, and such manufacturers’ dependence on third party suppliers;
- The material weaknesses in our internal control over financial reporting that we have identified;
- Pressures related to macroeconomic and geopolitical conditions; and
- Other risks identified elsewhere in this prospectus supplement, as well as in our other filings with the SEC.

Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time and it is not possible for our management to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of our forward-looking statements by these cautionary statements.

Forward-looking statements speak only as of the date they were made, and, except to the extent required by law or the rules of the NYSE American, we undertake no obligation to update or review any forward-looking statement because of new information, future events or other factors. You should, however, review the risks and uncertainties we describe in the reports we will file from time to time with the SEC, after the date of this prospectus supplement. For additional information, refer to the section entitled “*Where You Can Find More Information*.”

Forward-looking statements involve risks and uncertainties and are not guarantees of future performance. As a result of such risks and uncertainties, including those described above, the forward-looking statements discussed in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein might not occur and our future results and our performance may differ materially from those expressed in these forward-looking statements due to, but not limited to, the factors mentioned above. Because of these uncertainties, you should not place undue reliance on these forward-looking statements when making an investment decision.

USE OF PROCEEDS

The net proceeds from this offering will be approximately \$1,144,000 after deducting offering expenses paid or payable by us and assuming no exercise of the Warrants. We will receive proceeds from the exercise of the Warrants we are issuing in this offering only if the Warrants are exercised.

If all of the Warrants offered hereby are exercised at the exercise price per share of \$0.768, we will receive additional proceeds of approximately \$1.3 million. We cannot predict when or if these Warrants will be exercised. It is possible that these Warrants may expire and may never be exercised.

We currently anticipate that we will use the net proceeds received by us for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions.

Our expected use of the net proceeds from this offering is based upon our present plans and business condition. As of the date of this prospectus supplement, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of proceeds will vary depending on numerous factors, including the factors described under the heading “*Risk Factors*” beginning on page S-7 of this prospectus supplement and page 10 of our Annual Report, as well as the other documents we file with the SEC. As a result, management will retain broad discretion over the allocation of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of the net proceeds.

DIVIDEND POLICY

We have not previously paid cash dividends on our common stock. It is our current intention to invest our cash flow and earnings in the growth of our business and, therefore, we have no plans to pay cash dividends for the foreseeable future. Additionally, our ability to pay dividends is limited by restrictions on our ability to pay dividends and make certain other restricted payments under the terms of our term loan. Investors should not purchase our common stock with the expectation of receiving cash dividends.

DILUTION

If you invest in our Securities in this offering, your ownership interest will be immediately diluted to the extent of the difference between the offering price per share of our common stock and the “as adjusted” net tangible book value per share of our common stock upon the closing of this offering.

Net tangible book value per share of our common stock is determined by subtracting our total liabilities from the amount of our total tangible assets (total assets less intangible assets) and then dividing the difference by the number of shares of our common stock deemed to be outstanding at that date. As of March 31, 2025, we had a net tangible book value of approximately \$(29.3) million, or \$(0.291) per share of common stock.

After giving effect to the issuance and sale of the Securities offered in this offering at an offering price of \$0.64 per Insider Share and a combined offering price of \$0.64 per Warrant Investor Share and accompanying Warrant, and after deducting \$66,000 of estimated offering expenses paid or payable by us, and assuming no exercise of the Warrants, our pro forma net tangible book value as of March 31, 2025 would have been \$(28.2) million, or \$(0.275) per share of common stock. This represents an immediate increase in net tangible book value per share of \$0.017 to existing stockholders, compared to the as adjusted net tangible book value per share, and immediate dilution of \$0.915 per share to investors purchasing Securities in this offering. Dilution per share to investors is determined by subtracting as adjusted net tangible book value per share after this offering from the offering price per Insider Share or per Warrant Investor Share and accompanying Warrant, as applicable, paid by the Insider Investors and Warrant Investors, respectively, in this offering.

The following table illustrates this dilution on a per share basis:

Offering price per Insider Share and combined offering price per Warrant Investor Share and accompanying Warrant	\$	0.64
Net tangible book value per share as of March 31, 2025	\$	(0.291)
Increase in net tangible book value per share attributable to this offering	\$	0.017
Pro forma net tangible book value per share after this offering	\$	(0.275)
Dilution per share to new investors purchasing in this offering	\$	0.915

Unless otherwise indicated, the number of shares of our common stock to be outstanding immediately after this offering is based on 100,746,467 shares of our common stock outstanding as of March 31, 2025 and excludes:

- 545,467 shares of our common stock sold through an “at-the-market” offering subsequent to March 31, 2025, pursuant to our Capital on DemandTM Sales Agreement with JonesTrading Institutional Services LLC;
- 13,020,834 shares of our common stock issuable upon exercise of a warrant issued in connection with a private transaction we consummated on May 20, 2025, at an exercise price of \$0.672 per share;
- 10,416,667 shares of our common stock issuable upon repayment and/or conversion of a secured convertible note in the principal amount of \$7,500,000, issued in connection with a private transaction we consummated on May 20, 2025, at a conversion price of \$0.72 per share;
- 33,332,033 shares of our common stock issuable upon the exercise of warrants outstanding as of March 31, 2025, with a weighted average exercise price of \$0.636 per share, which shares exclude 2,949,273 shares we issued subsequent to March 31, 2025 upon the exercise of warrants;
- 1,958,273 shares of our common stock issued upon the exercise of pre-funded warrants on May 1, 2025, at an exercise price of \$0.001 per share;
- 991,000 shares of our common stock issued upon the exercise of pre-funded warrants on July 8, 2025, at an exercise price of \$0.001 per share;
- 4,571,548 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2025 under our 2011 Equity Incentive Plan and 2015 Stock Incentive Plan, with a weighted average exercise price of \$3.89 per share;
- 3,365,119 shares of our common stock issuable upon vesting of restricted stock units, or RSUs, outstanding as of March 31, 2025 under our 2015 Stock Incentive Plan, with a weighted average price of \$0.77 per share;
- 4,047,678 shares of our common stock issuable upon vesting of RSUs outstanding as of March 31, 2025 under our 2024 Stock Incentive Plan, with a weighted average price of \$0.584 per share;
- 178,096 additional shares of common stock reserved for future issuance under our 2015 Stock Incentive Plan as of March 31, 2025; and
- 3,452,322 additional shares of common stock reserved for future issuance under our 2024 Stock Incentive Plan as of March 31, 2025.

Unless otherwise indicated, all information in this prospectus supplement reflects and assumes the following:

- no additional issuances, expirations or forfeitures of options, RSUs, convertible notes and warrants other than as described above;
- no exercise of the outstanding options or warrants, conversion of the secured convertible note or settlement of the outstanding RSUs described above;
- no exercise by the underwriters of their option to purchase additional shares of our common stock; and
- no exercise by the underwriters of the warrants to be issued to the underwriters in connection with this offering.

DESCRIPTION OF SECURITIES WE ARE OFFERING

Overview

We are offering 156,250 Insider Shares in this offering. We are also offering 1,734,375 Warrant Investor Shares in this offering, each of which will be issued together with one Warrant to purchase one share of common stock. The Warrants have an exercise price equal to 120% of the per share offering price, or \$0.768 per share. The Warrants are exercisable on or after the Initial Exercise Date through and until the Termination Date. This prospectus supplement also relates to the offering of Warrant Shares.

Common Stock

The following is a summary of all material characteristics of our common stock as set forth in our second amended and restated certificate of incorporation (the “Certificate of Incorporation”) and amended and restated bylaws (the “Bylaws”), each as amended. This summary does not purport to be complete and is qualified in its entirety by reference to our Certificate of Incorporation and Bylaws, copies of which have been filed as exhibits to our SEC filings. For more information, see the sections entitled “Where You Can Find More Information” in this prospectus supplement and “Description of Capital Stock” in the accompanying prospectus.

General. We may issue shares of our common stock from time to time. We are currently authorized to issue 325,000,000 shares of common stock, par value \$0.001 per share. As of June 30, 2025, there were 103,982,020 shares of our common stock outstanding. Our common stock is listed on the NYSE American and traded under the symbol “VNRX.” On August 1, 2025, the last reported sale price of our common stock on the NYSE American was \$0.64.

Holders. Holders of shares of our common stock are entitled to one vote per share held of record on all matters submitted to a vote of stockholders, including the election of directors. The holders are entitled to receive dividends when, as and if declared by our board of directors, in its discretion, out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of our common stock are entitled to share ratably in all of our assets remaining after payment of liabilities. The holders of our common stock have no preemptive or other subscription rights, and there are no conversion rights or redemption or sinking fund provisions with respect to such shares. All of the outstanding shares of our common stock are, and the shares of our common stock when issued will be, fully paid and non-assessable.

As of June 30, 2025, there were approximately 170 holders of record of our common stock. The actual number of holders of our common stock is greater than the number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by banks, brokers, dealers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Registration Rights

Freedom Piggy-Back Registration. On June 1, 2023, in connection with an offering of 13,000,000 shares of our common stock underwritten by Prime Executions, Inc., doing business as Freedom Capital Markets, or Freedom, we issued as compensation to Freedom certain underwriter warrants (the “Freedom Warrants”), to purchase up to 448,500 shares of common stock at an exercise price of \$2.00 per share (the shares of common stock issuable upon exercise of the Freedom Warrants, the “Freedom Warrant Shares”). The Freedom Warrants were issued pursuant to an underwriting agreement we entered into with Freedom, as representative of the underwriters named therein, on June 1, 2023. Pursuant to the Freedom Warrants, Freedom is entitled to certain “piggy-back” registration rights where, if at any time while the Freedom Warrants are outstanding, there is not an effective registration statement covering all of the Freedom Warrant Shares and we determine to prepare and file with the SEC a registration statement relating to an offering for our own account or the account of others under the Securities Act of any of our equity securities (subject to certain exceptions), Freedom can require us to register its Freedom Warrant Shares, provided we shall not be required to register any Freedom Warrant Shares that are eligible for resale pursuant to Rule 144 and certain other exceptions set forth in the Freedom Warrants. The Freedom Warrants and the Freedom Warrant Shares were initially registered pursuant to a Registration Statement on Form S-3 (File No. 333-259783), declared effective by the SEC on November 8, 2021 (the “Original Shelf Registration Statement”). The Freedom Warrant Shares were subsequently registered pursuant to a Registration Statement on Form S-1 (File No. 333-286401) declared effective by SEC on April 15, 2025, and were effectively withdrawn from the Original Shelf Registration Statement.

Freedom Demand Registration. Pursuant to the Freedom Warrants, Freedom is entitled to certain “demand” registration rights where, if there is not an effective registration statement covering all of the Freedom Warrant Shares, then from December 5, 2023 through June 5, 2028, Freedom is entitled to one “demand” registration right at our expense and one “demand” registration right at Freedom’s expense, pursuant to which Freedom can require us to register its Freedom Warrant Shares.

Lind Registration. On May 20, 2025, in connection with the issuance to Lind Global Asset Management XII LLC (“Lind”), of a secured convertible note and a common stock purchase warrant, in a private transaction, Lind is entitled to the registration for resale of the shares of common stock issuable upon the repayment or conversion of the secured convertible note and upon exercise of the common stock purchase warrant. Lind is also entitled to certain “piggy-back” registration rights where, if we determine to prepare and file with the SEC a registration statement relating to an offering for our own account or the account of others under the Securities Act of any of our equity securities (subject to certain exceptions), Lind can require us to register the shares of common stock underlying the secured convertible note and the common stock purchase warrant. An aggregate of 23,437,501 shares of common stock underlying the secured convertible note and the common stock purchase warrant were included for resale registration in a Registration Statement on Form S-3 (File No. 333-288508) filed with the SEC on July 3, 2025.

Warrants

The following summary of certain terms and provisions of the Warrants offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Warrants. Investors should carefully review the terms and provisions of the form of Warrants for a complete description of the terms and conditions of the Warrants. For additional information, refer to the section entitled “*Where You Can Find More Information.*”

Duration, Exercise Price and Form. Each Warrant will have an exercise price equal to 120% of the per share offering price, or \$0.768 per share, and will be exercisable on or after the Initial Exercise Date through and until the Termination Date. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The Warrants will be issued separately from the Shares. The Warrants will be issued in certificated form only. The Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise.

Corporate Transactions. In the event of a corporate transaction, as described in the Warrants and generally including instances in which shares of our common stock are changed into or exchanged for a different number or different kind of shares or other securities, the holders of the Warrants will be entitled to receive upon exercise of the Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Warrants immediately prior to such corporate transaction, provided, however, that there will be substituted for each of the shares the number and kind of or other securities for which each share of common stock was exchanged or into which each share was changed.

Transferability. Subject to applicable laws, a Warrant may be transferred at the option of the holder upon surrender of the Warrants to us together with the appropriate instruments of transfer.

No Fractional Shares. No fractional shares of common stock will be issued upon the exercise of Warrants. Rather, the number of shares of common stock to be issued will, at our election, either be rounded up to the nearest whole number or we will pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

Trading Market and Listing. There is no established trading market for the Warrants, and we do not expect a market to develop. We do not intend to apply for a listing of the Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Warrants will be limited. The common stock issuable upon exercise of the Warrants is currently listed on the NYSE American.

Rights as a Stockholder. Except as otherwise provided in the Warrants or by virtue of the holders’ ownership of shares of common stock, the holders of the Warrants do not have the rights or privileges of holders of our shares of common stock, including any voting rights, until such Warrant holders exercise their Warrants.

Waivers and Amendments. The Warrants may be modified or amended, or the provisions thereof waived with the written consent of the Company and the respective holder.

MATERIAL UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following discussion describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of the Securities acquired in this offering. This discussion is based on the current provisions of the Internal Revenue Code of 1986, as amended (the “Code”), existing and proposed U.S. Treasury regulations promulgated thereunder, and administrative rulings and court decisions in effect as of the date hereof, all of which are subject to change at any time, possibly with retroactive effect. No ruling has been or will be sought from the Internal Revenue Service (the “IRS”) with respect to the matters discussed below, and there can be no assurance the IRS will not take a contrary position regarding the tax consequences of the acquisition, ownership or disposition of the Shares or Warrants, or that any such contrary position would not be sustained by a court. Except as provided herein, this summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive or prospective basis.

We assume in this discussion that the Shares and Warrants will be held as capital assets (generally, property held for investment). This discussion does not address all aspects of U.S. federal income taxes, does not discuss the potential application of the Medicare contribution tax or the alternative minimum tax and does not address state or local taxes or U.S. federal gift and estate tax laws, except as specifically provided below with respect to Non-U.S. Holders (as defined below), or any non-U.S. tax consequences that may be relevant to holders in light of their particular circumstances. In addition, except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. This discussion also does not address the special tax rules applicable to particular holders, such as:

- persons who acquired the Shares or Warrants as compensation for services;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than 5% of our common stock (except to the extent specifically set forth below);
- persons required for U.S. federal income tax purposes to conform the timing of income accruals to their financial statements under Section 451(b) of the Code (except to the extent specifically set forth below);
- persons for whom our common stock constitutes “qualified small business stock” within the meaning of Section 1202 of the Code or “Section 1244 stock” for purposes of Section 1244 of the Code;
- persons deemed to sell the Shares or Warrants under the constructive sale provisions of the Code;
- banks or other financial institutions;
- brokers or dealers in securities or currencies;
- tax-exempt organizations or tax-qualified retirement plans;
- S corporations (and stockholders thereof);
- partnerships or other entities treated as partnerships for U.S. federal income tax purposes (and partners or other owners thereof);
- corporations organized outside the United States, any state thereof, or the District of Columbia that are nonetheless treated as U.S. persons for U.S. federal income tax purposes;
- pension plans;
- regulated investment companies or real estate investment trusts;
- persons that hold the Shares or Warrants as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- insurance companies;
- controlled foreign corporations, passive foreign investment companies, or corporations that accumulate earnings to avoid U.S. federal income tax;
- U.S. Holders that are subject to taxing jurisdictions other than, or in addition to, the United States with respect to the Shares or Warrants; and
- certain U.S. expatriates, former citizens, or long-term residents of the United States.

In addition, this discussion does not address the tax treatment of partnerships (including any entity or arrangement classified as a partnership for U.S. federal income tax purposes) or other pass-through entities or persons who hold shares of common stock or Warrants through such partnerships or other entities which are pass-through entities for U.S. federal income tax purposes. If such a partnership or other pass-through entity holds shares of common stock or Warrants, the treatment of a partner in such partnership or investor in such other pass-through entity generally will depend on the status of the partner or investor and upon the activities of the partnership or other pass-through entity. A partner in such a partnership and an investor in such other pass-through entity that will hold Shares or Warrants should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of Shares or Warrants through such partnership or other pass-through entity, as applicable.

This discussion of U.S. federal income tax considerations is for general information purposes only and is not tax advice. Prospective investors should consult their own tax advisors regarding the U.S. federal, state, local and non-U.S. income and other tax considerations of acquiring, holding and disposing of our common stock and Warrants.

For the purposes of this discussion, a “U.S. Holder” means a beneficial owner of Shares or Warrants acquired in this offering that is for U.S. federal income tax purposes (a) an individual citizen or resident of the United States, (b) a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes), created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code) has the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a domestic trust. A “Non-U.S. Holder” is, for U.S. federal income tax purposes, a beneficial owner of Shares or Warrants that is not a U.S. Holder or a partnership for U.S. federal income tax purposes.

Allocation of Purchase Price

For U.S. federal income tax purposes, each Share and, with respect to the Warrant Investors, the accompanying Warrants, issued pursuant to this offering will be treated as an “investment unit.” The purchase price for each investment unit will be allocated between these components in proportion to their relative fair market values at the time the unit is purchased by the holder. This allocation of the purchase price for each unit will establish the holder’s initial tax basis for U.S. federal income tax purposes in the Share and Warrants included in each unit. The separation of the Share and Warrants included in a unit should not be a taxable event for U.S. federal income tax purposes. Each holder should consult his, her or its own tax advisor regarding the allocation of the purchase price between the Shares and Warrants.

Tax Considerations Applicable to U.S. Holders

Exercise and Expiration of Warrants

A U.S. Holder generally will not recognize gain or loss for U.S. federal income tax purposes upon exercise of Warrants. The U.S. Holder will take a tax basis in the shares acquired on the exercise of Warrants equal to the exercise price of the Warrants, increased by the U.S. Holder’s adjusted tax basis in the Warrants exercised (as determined pursuant to the rules discussed above). The U.S. Holder’s holding period in the shares of common stock acquired on the exercise of Warrants will begin on the date of exercise or possibly the day after such exercise, and will not include any period for which the U.S. Holder held the Warrants.

The lapse or expiration of Warrants will be treated as if the U.S. Holder sold or exchanged the Warrants and recognized a capital loss equal to the U.S. Holder’s tax basis in the Warrants. The deductibility of capital losses is subject to limitations.

Distributions

In the event that we make distributions on our common stock to a U.S. Holder, those distributions generally will constitute dividends for U.S. tax purposes to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a U.S. Holder’s adjusted tax basis in our common stock. Any remaining excess will be treated as gain realized on the sale or exchange of shares of common stock as described below under the section titled “*Disposition of Shares or Warrants.*”

Certain Adjustments to Warrants

The number of Warrant Shares issued upon the exercise of the Warrants and the exercise price of the Warrants are subject to adjustment in certain circumstances. Adjustments (or failure to make adjustments) that have the effect of increasing a U.S. Holder’s proportionate interest in our assets or earnings and profits may, in some circumstances, result in a constructive distribution to the U.S. Holder. Adjustments to the conversion rate made pursuant to a bona fide reasonable adjustment formula which has the effect of preventing the dilution of the interest of the holders of Warrants generally should not be deemed to result in a constructive distribution. If an adjustment is made that does not qualify as being made pursuant to a bona fide reasonable adjustment formula, a U.S. Holder of Warrants may be deemed to have received a constructive distribution from us, even though such U.S. Holder has not received any cash or property as a result of such adjustment. The tax consequences of the receipt of a distribution from us are described above under the section titled “*Distributions.*”

Disposition of Shares or Warrants

Upon a sale or other taxable disposition (other than a redemption treated as a distribution, which will be taxed as described above under the section titled “*Distributions*”) of Shares or Warrants, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized and the U.S. Holder’s adjusted tax basis in the Shares or Warrants sold. Capital gain or loss will constitute long-term capital gain or loss if the U.S. Holder’s holding period for the Shares or Warrants exceeds one year. The deductibility of capital losses is subject to certain limitations. U.S. Holders who recognize losses with respect to a disposition of Shares or Warrants should consult their own tax advisors regarding the tax treatment of such losses.

Information Reporting and Backup Reporting

Information reporting requirements generally will apply to payments of distributions (including constructive distributions) on the Shares and Warrants and to the proceeds of a sale or other disposition of Shares and Warrants paid by us to a U.S. Holder unless such U.S. Holder is an exempt recipient, such as a corporation. Backup withholding will apply to those payments if the U.S. Holder fails to provide the holder's taxpayer identification number, or certification of exempt status, or if the holder otherwise fails to comply with applicable requirements to establish an exemption.

Backup withholding is not an additional tax. Rather, any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against the U.S. Holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS. U.S. Holders should consult their own tax advisors regarding their qualification for exemption from information reporting and backup withholding and the procedure for obtaining such exemption.

Tax Considerations Applicable to Non-U.S. Holders

Exercise and Expiration of Warrants

In general, a Non-U.S. Holder will not recognize gain or loss for U.S. federal income tax purposes upon the exercise of Warrants into shares of common stock. The expiration of Warrants will be treated as if the Non-U.S. Holder sold or exchanged the Warrants and recognized a capital loss equal to the Non-U.S. Holder's tax basis in the Warrants. However, a Non-U.S. Holder will not be able to utilize a loss recognized upon expiration of Warrants against the Non-U.S. Holder's U.S. federal income tax liability unless the loss is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if an income tax treaty applies, is attributable to a permanent establishment or fixed base in the United States) or is treated as a U.S.-source loss and the Non-U.S. Holder is present 183 days or more in the taxable year of disposition and certain other conditions are met.

Certain Adjustments to Warrants

As described above under the section titled "*Tax Considerations Applicable to U.S. Holders—Certain Adjustments Warrants*," an adjustment to the Warrants could result in a constructive distribution to a Non-U.S. Holder, which would be treated as described below under the section titled "*Distributions*." Any resulting withholding tax attributable to deemed dividends would be collected from other amounts payable or distributable to the Non-U.S. Holder. Non-U.S. Holders should consult their own tax advisors regarding the proper treatment of any adjustments to the Warrants.

Distributions

In the event we make distributions on our common stock to a Non-U.S. Holder, those distributions generally will constitute dividends for U.S. federal income tax purposes as described above under the section titled "*U.S. Holders—Distributions*." To the extent those distributions do not constitute dividends for U.S. federal income tax purposes (*i.e.*, the amount of such distributions exceeds both our current and our accumulated earnings and profits), they will constitute a return of capital and will first reduce a Non-U.S. Holder's basis in our common stock (determined separately with respect to each share of common stock), but not below zero, and then will be treated as gain from the sale of that share common stock as described below under the section titled "*Disposition of Shares or Warrants*."

Any distribution (including constructive distributions) on shares of common stock that is treated as a dividend paid to a Non-U.S. Holder that is not effectively connected with the holder's conduct of a trade or business in the United States will generally be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and the Non-U.S. Holder's country of residence. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide the applicable withholding agent with a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. Such form must be provided prior to the payment of dividends and must be updated periodically. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent may then be required to provide certification to the applicable withholding agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid (or constructive dividends deemed paid) to a Non-U.S. Holder that are effectively connected with the holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base that the holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to the applicable withholding agent). In general, such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular tax rates applicable to U.S. persons. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

See also the sections below titled "*Backup Withholding and Information Reporting*" and "*Foreign Accounts*" for additional withholding rules that may apply to dividends paid to certain foreign financial institutions or non-financial foreign entities.

Disposition of Shares or Warrants

Subject to the discussions below under the sections titled “*Backup Withholding and Information Reporting*” and “*Foreign Accounts*,” a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax with respect to gain recognized on a sale or other disposition (other than a redemption treated as a distribution, which will be taxable as described above under the section titled “*Distributions*”) of Shares or Warrants unless:

- the gain is effectively connected with the Non-U.S. Holder’s conduct of a trade or business in the United States, and if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by the Non-U.S. Holder in the United States; in these cases, the Non-U.S. Holder will be taxed on a net income basis at the regular tax rates and in the manner applicable to U.S. persons, and if the Non-U.S. Holder is a corporation, an additional branch profits tax at a rate of 30%, or a lower rate as may be specified by an applicable income tax treaty, may also apply;
- the Non-U.S. Holder is a nonresident alien present in the United States for 183 days or more in the taxable year of the disposition and certain other requirements are met, in which case the Non-U.S. Holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence) on the net gain derived from the disposition, which may be offset by certain U.S.-source capital losses of the Non-U.S. Holder, if any; or
- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the Non-U.S. Holder’s holding period, if shorter) a “U.S. real property holding corporation,” unless our common stock is regularly traded on an established securities market and the Non-U.S. Holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the five-year period ending on the date of the disposition or the period that the Non-U.S. Holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that the common stock will be regularly traded on an established securities market for purposes of the rules described above.”

See the sections below titled “*Backup Withholding and Information Reporting*” and “*Foreign Accounts*” for additional information regarding withholding rules that may apply to proceeds of a disposition of the Shares or Warrants paid to foreign financial institutions or non-financial foreign entities.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each Non-U.S. Holder the gross amount of the distributions (including constructive distributions) on the Shares or Warrants paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. Holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate, currently 24%, with respect to dividends (or constructive dividends) on the Shares or Warrants. Generally, a holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN (or other applicable IRS Form W-8) or otherwise meets documentary evidence requirements for establishing that it is a Non-U.S. Holder, or otherwise establishes an exemption. Dividends paid to Non-U.S. Holders subject to withholding of U.S. federal income tax, as described above under the section titled “*Distributions*,” will generally be exempt from U.S. backup withholding.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of the Shares or Warrants by a Non-U.S. Holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a Non-U.S. Holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. Holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the Non-U.S. Holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a Non-U.S. Holder can be refunded or credited against the Non-U.S. Holder’s U.S. federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

Foreign Accounts

The Foreign Account Tax Compliance Act (the “FATCA”) generally imposes a 30% withholding tax on dividends (including constructive dividends) on the Shares and Warrants if paid to a non-U.S. entity unless (i) if the non-U.S. entity is a “foreign financial institution,” the non-U.S. entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the non-U.S. entity is not a “foreign financial institution,” the non-U.S. entity identifies certain of its U.S. investors, if any, or (iii) the non-U.S. entity is otherwise exempt under FATCA.

Withholding under FATCA generally will apply to payments of dividends (including constructive dividends) on the Shares and Warrants. While withholding under FATCA would have also applied to payments of gross proceeds from a sale or other disposition of the Shares or Warrants, under proposed U.S. Treasury Regulations withholding on payments of gross proceeds is not required. Although such regulations are not final, applicable withholding agents may rely on the proposed regulations until final regulations are issued.

An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Under certain circumstances, a holder may be eligible for refunds or credits of the tax. Holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in the Shares or Warrants.

Federal Estate Tax

Common stock owned or treated as owned by an individual who is not a citizen or resident of the United States (as specially defined for U.S. federal estate tax purposes) at the time of death will be included in the individual’s gross estate for U.S. federal estate tax purposes and, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise. The foregoing may also apply to the Warrants. A Non-U.S. Holder should consult his, her, or its own tax advisor regarding the U.S. federal estate tax consequences of the ownership or disposition of shares of the Shares and Warrants.

The preceding discussion of material U.S. federal tax considerations is for information only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of the Shares or Warrants, including the consequences of any proposed changes in applicable laws.

PLAN OF DISTRIBUTION

The terms of this offering are subject to market conditions and negotiations among us and prospective investors. We entered into a securities purchase agreement directly with the Insider Investors and Warrant Investors on August 1, 2025. The offering is expected to close on August 5, 2025.

Expenses and Net Proceeds

We estimate the total expenses of this offering paid or payable by us will be approximately \$66,000. After deducting our estimated expenses in connection with this offering, we expect the net proceeds from this offering will be approximately \$1,144,000, assuming no exercise of the Warrants.

Insider Participation

The Insider Investors consist of certain directors and executive officers of the Company, and certain of our existing stockholders. These insiders have agreed to purchase an aggregate of 156,250 Insider Shares in this offering at the same price per share offered to the Warrant Investors for their purchase of the Warrant Investor Shares and accompanying Warrants.

Listing and Transfer Agent

Our common stock is listed on the NYSE American and trades under the symbol “VNRX.” The transfer agent of our common stock is VStock Transfer, LLC. There is no established public trading market for the Warrants, and we do not plan on making an application to list the Warrants on the NYSE American, any national securities exchange or other nationally recognized trading system. We will act as the registrar and transfer agent for the Warrants.

LEGAL MATTERS

Certain legal matters relating to this offering will be passed upon for us by Stradling Yocca Carlson & Rauth LLP, Newport Beach, California.

EXPERTS

The consolidated financial statements of VolitionRx Limited as of December 31, 2024 and 2023 and for each of the years in the two-year period ended December 31, 2024, have been incorporated by reference herein in reliance upon the reports of Sadler, Gibb & Associates, LLC, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate” into this prospectus supplement information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. Any information that we incorporate by reference into this prospectus supplement is considered part of this prospectus supplement.

Information contained in this prospectus supplement and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement automatically modifies and supersedes previously filed information, including information in previously filed documents or reports that have been incorporated by reference in this prospectus supplement, to the extent the new information differs from or is inconsistent with the old information. Any statement so modified will be deemed to constitute a part of this prospectus supplement only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus supplement. For more information, see the section entitled “*About this Prospectus Supplement*.”

We incorporate by reference, as of their respective dates of filing, the documents listed below that we have filed with the SEC and any additional documents that we may file in the future with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, between the date of this prospectus supplement until the offering of the securities covered by this prospectus supplement has been completed, other than, in each case, documents or information deemed to have been “furnished” and not “filed” in accordance with SEC rules:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on March 31, 2025;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025, filed with the SEC on May 15, 2025;
- our Current Reports on Form 8-K, filed with the SEC on March 26, 2025, April 22, 2025, and June 20, 2025;
- our definitive proxy statement on Schedule 14A, as filed with the SEC on April 29, 2025 (to the extent incorporated by reference into Part III of our Annual Report); and
- the description of our common stock contained in our registration statement on Form 8-A, as filed with the SEC on February 3, 2015, Exhibit 4.1 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as filed with the SEC on February 20, 2020, and any other amendments or reports filed for the purpose of updating such description.

These filings have not been included in or delivered with this prospectus supplement. We hereby undertake to provide without charge to each person, including any beneficial owner, to whom this prospectus supplement is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus supplement, but not delivered with the prospectus supplement, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into this prospectus supplement. To request such materials, please contact Mr. Rodney Rootsaert, our Corporate Secretary, at c/o Corporate Secretary, VolitionRx Limited, 1489 West Warm Springs Road, Suite 110, Henderson, Nevada 89014, by telephone at +1 (646) 650-1351 or by email at notice@volition.com. These documents are also available free of charge through the “*Investors*” section on our website at www.volition.com as soon as practicable after such materials have been electronically filed with, or furnished to, the SEC.

You should rely only on the information contained in this prospectus supplement, in the accompanying prospectus, in any document incorporated by reference herein or therein, or in any free writing prospectuses we may provide to you in connection with this offering. We have not authorized anyone to provide you with any different information. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide to you.

The information contained in this prospectus supplement, in the accompanying prospectus, and in the documents incorporated by reference herein or therein, is accurate only as of the date such information is presented. Our business, financial condition, results of operations and future prospects may have changed since those respective dates.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC. The SEC maintains an internet website at www.sec.gov that contains periodic and current reports, proxy and information statements, and other information regarding registrants that are filed electronically with the SEC.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by the accompanying prospectus. This prospectus supplement and the accompanying prospectus, filed as part of the registration statement, do not contain all the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us and our securities, we refer you to the registration statement and to its exhibits and schedules. You can obtain a copy of the registration statement from the SEC's website.

These documents are also available, free of charge, through the "*Investors*" section of our website, which is located at www.volition.com. Information contained on our website is not incorporated by reference into this prospectus supplement and you should not consider information on our website to be part of this prospectus supplement.



\$100,000,000

**Common Stock
Warrants
Units**

We may offer and sell, from time to time in one or more offerings, any combination of common stock, par value \$0.001 per share (“common stock”), warrants exercisable for shares of common stock, or units having an aggregate initial offering price not to exceed \$100,000,000. The units may consist of any combination of securities described in this prospectus.

This prospectus provides a general description of the securities we may offer. We will provide you with the specific terms of any offering in one or more supplements to this prospectus. The prospectus supplement may also add, update or change information in this prospectus. You should read this prospectus and any prospectus supplement, as well as the documents incorporated by reference or deemed to be incorporated by reference herein or therein, carefully before you invest in any of the securities offered pursuant to this prospectus. **This prospectus may not be used to offer or sell our securities unless accompanied by a prospectus supplement relating to the offered securities.**

These securities may be sold directly by us, through dealers or agents designated from time to time, to or through underwriters or dealers, or through a combination of these methods on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section entitled “*Plan of Distribution*” in this prospectus. We will describe the plan of distribution for any particular offering of our securities in a prospectus supplement. If any agents, underwriters or dealers are involved in the sale of any securities with respect to which this prospectus is being delivered, we will set forth in a prospectus supplement the names of such agents, underwriters or dealers and any applicable fees, commissions, discounts and over-allotment options. We will also set forth in a prospectus supplement the price to the public of such securities and the net proceeds that we expect to receive from such sale.

Our common stock is currently listed on the NYSE American under the symbol “VNRX.” On November 7, 2024 the last reported sale price of our common stock on the NYSE American was \$0.6579 per share.

Investing in our securities involves a high degree of risk. See the section of this prospectus entitled “*Risk Factors*” beginning on page 4, and under similar headings in the documents incorporated by reference into this prospectus, any applicable prospectus supplement, or any related free writing prospectus for a discussion of the factors we urge you to consider carefully before deciding to purchase our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or the accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 18, 2025

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, we may from time to time offer and sell any combination of the securities described in this prospectus in one or more offerings with an aggregate initial offering price not to exceed \$100,000,000. We have provided to you in this prospectus a general description of the securities we may offer. Each time we sell any of our securities under this prospectus, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering.

It is important for you to read and consider all of the information contained in or incorporated by reference into this prospectus and any applicable prospectus supplement before making any decision whether to invest in our securities. This prospectus does not contain all of the information included in the registration statement, and incorporates by reference important business and financial information about us that is not included in or delivered with this document. For a more complete understanding of the offering of our securities, you should refer to the registration statement, including its exhibits. You should also read and consider the additional information contained in the documents that we have incorporated into this prospectus by reference, as described in “*Incorporation of Certain Information by Reference*” and “*Where You Can Find More Information*” in this prospectus.

We may add, update or change any of the information contained in this prospectus or in any accompanying prospectus supplement we may authorize to be delivered to you. To the extent there is a conflict between the information contained in this prospectus and any accompanying prospectus supplement, you should rely on the information in the prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date – for example, a document incorporated by reference in this prospectus or any prospectus supplement – the statement in the document having the later date shall modify or supersede such earlier statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. This prospectus, together with any accompanying prospectus supplement, includes all material information relating to an offering pursuant to this registration statement.

You should rely only on the information contained in this prospectus, in any accompanying prospectus supplement, or in any document incorporated by reference herein or therein. We have not authorized anyone to provide you with any different information. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide to you. The information contained in this prospectus, in any applicable prospectus supplement, and in the documents incorporated by reference herein or therein is accurate only as of the date such information is presented. Our business, financial condition, results of operations and prospects may have changed since those respective dates. You should not assume that the information contained in this prospectus and any prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or the shares are sold on a later date.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus and any accompanying prospectus supplement does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus and any accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. This prospectus may not be used to offer or sell our securities unless accompanied by a prospectus supplement relating to the offered securities.

Unless otherwise indicated, information contained in or incorporated by reference into this prospectus concerning our industry and the markets in which we operate, including market position and market opportunity, is based on information from our management’s estimates, as well as from industry publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. In addition, while we believe that information contained in industry publications, surveys and studies has been obtained from reliable sources, the accuracy and completeness of such information is not guaranteed, and we have not independently verified any of the data contained in these third-party sources.

We may sell the securities to or through underwriters, dealers or agents or directly to purchasers. We and our agents reserve the sole right to accept or reject in whole or in part any proposed purchase of securities. The prospectus supplement, which we will provide to you each time we offer securities, will set forth the names of any underwriters, dealers or agents involved in the sale of the securities, and any applicable fee, commission or discount arrangements with them. See “*Plan of Distribution*.”

This prospectus and any accompanying prospectus supplement, including the documents incorporated by reference herein and therein, include statements that are based on various assumptions and estimates that are subject to numerous known and unknown risks and uncertainties. Some of these risks and uncertainties are described in the section entitled “*Risk Factors*” on page 4 of this prospectus and beginning on page 10 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as well as the other documents we file with the SEC. These and other important factors could cause our future results to be materially different from the results expected as a result of, or implied by, these assumptions and estimates. You should read the information contained in, or incorporated by reference into, this prospectus and any accompanying prospectus supplement, and the documents incorporated by reference herein and therein, completely and with the understanding that future results may be materially different from and worse than what we expect. See the information included under the section entitled “*Cautionary Note Regarding Forward-Looking Statements*” in this prospectus.

Unless we state otherwise or the context indicates otherwise, references to the “Company,” “VolitionRx,” “we,” “us,” and “our” in this prospectus refer to VolitionRx Limited and its wholly owned subsidiaries, Singapore Volition Pte. Limited, Belgian Volition SRL, Volition Global Services SRL, Volition Diagnostics UK Limited, and Volition America, Inc., and its majority-owned subsidiary, Volition Veterinary Diagnostics Development LLC. Our fiscal year ends on December 31 of each calendar year. NucleosomicsTM, Capture-PCRTM, and Nu.Q[®] and their respective logos are trademarks and/or service marks of VolitionRx Limited and its subsidiaries. All other trademarks, service marks and trade names referred to in this prospectus are the property of their respective owners. Additionally, unless otherwise specified, all references to “\$” refer to the legal currency of the United States of America.

PROSPECTUS SUMMARY

This summary highlights selected information that is presented in greater detail elsewhere in this prospectus or incorporated by reference in this prospectus. Because it is only a summary, it does not contain all of the information you should consider before investing in our securities, and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information included elsewhere in this prospectus. Before you decide whether to purchase our securities, you should read this entire prospectus, the applicable prospectus supplement and any related free writing prospectus carefully, including the risks of investing in our securities discussed under the section entitled “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Overview

VolitionRx is a multi-national epigenetics company. It has patented technologies that use chromosomal structures, such as nucleosomes, and transcription factors as biomarkers in cancer and other diseases. The tests in the Company’s product portfolio detect certain characteristic changes that occur from the earliest stages of disease, enabling early detection and offering a better way to monitor disease progression and a patient’s response to treatment.

The tests offered by VolitionRx and its subsidiaries are designed to diagnose and monitor a range of life-altering diseases, including certain cancers and diseases associated with NETosis, such as sepsis and COVID-19. Early diagnosis and monitoring have the potential to not only prolong the life of patients but also improve their quality of life.

The Company’s key pillars of focus are:

- **Nu.Q[®] Vet** – cost-effective, easy-to-use blood tests for dogs and other companion animals. The Nu.Q[®] Vet Cancer Test is commercially available as a cancer screening test in dogs.
- **Nu.Q[®] NETs** – monitoring the immune system to save lives.
- **Nu.Q[®] Discover** – a complete solution to profiling nucleosomes.
- **Nu.Q[®] Cancer** – monitoring disease progression, response to treatment and minimal residual disease.
- **Capture-PCR[™]** – isolating and capturing circulating tumor-derived DNA from plasma samples for early cancer detection.

The Company has grown from a single two-meter lab bench at the University of Namur in Belgium to a purpose-built 17,000 square foot lab and 10,000 square foot production facility in Gembloux, Belgium, an Innovation Lab in California, and offices in California, London, Singapore and Nevada.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” and accordingly may provide less public disclosure than larger public companies. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

Corporate Information

We are a Delaware corporation. Our principal executive offices are located at 1489 West Warm Springs Road, Suite 110, Henderson, Nevada 89014, and our telephone number is +1 (646) 650-1351. We maintain a website at www.volition.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to such reports are available to you free of charge through the “Investors” section of www.volition.com as soon as practicable after such materials have been electronically filed with, or furnished to, the SEC. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding whether to purchase our securities. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

RISK FACTORS

Investing in our securities involves a high degree of risk and uncertainty. Before making an investment decision with respect to our securities, we urge you to carefully consider the risks, uncertainties and assumptions described in this prospectus, the applicable prospectus supplement and the documents incorporated by reference herein and therein, including the risks described on page 10 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 and in our subsequent Quarterly Reports on Form 10-Q filed with the SEC. You should also refer to the other information contained in this prospectus and the applicable prospectus supplement and the documents incorporated by reference into this prospectus and the applicable prospectus supplement, including our financial statements and the notes to those statements and the information set forth in the section entitled “*Cautionary Note Regarding Forward-Looking Statements.*”

If one or more of the adverse events relevant to those risks and uncertainties actually occurs, our business, financial condition, results of operations, cash flows or prospects could be materially adversely affected. This could cause the trading price of our securities to decline, and you could lose all or part of your investment. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may have similar adverse effects on us. For more information, see the information set forth in the section entitled “*Where You Can Find More Information.*”

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement, and the documents incorporated by reference herein and therein, contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934 (the “Exchange Act”). These forward-looking statements are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact included in this prospectus supplement, the accompanying base prospectus, or the documents incorporated by reference herein or therein, are forward-looking statements. Such statements are typically characterized by terminology such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “plan,” “potential,” “seek,” “should,” “strategy,” “will,” and similar expressions.

Forward-looking statements also include the assumptions underlying or relating to such statements. In particular, forward-looking statements contained in this prospectus and that may be included in any accompanying prospectus supplement or incorporated by reference relate to, among other things, our future or assumed financial condition, results of operations, liquidity, business forecasts and plans, research and product development plans, manufacturing plans, strategic plans and objectives, capital needs and financing plans, product launches, regulatory approvals, competitive environment, and the application of accounting guidance. We caution you that the foregoing list may not include all of the forward-looking statements made in this prospectus and in any accompanying prospectus supplement or documents incorporated by reference.

Our forward-looking statements are based on our management's current assumptions and expectations about future events and trends, which affect or may affect our business, strategy, operations or financial performance. Although we believe that these forward-looking statements are based upon reasonable assumptions, they are subject to numerous known and unknown risks and uncertainties and are made in light of information currently available to us. Our actual financial condition and results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth in the section entitled "*Risk Factors*" beginning on page 4 of this prospectus supplement and page 10 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, as well as those described in the other documents we file with the SEC. You should read this prospectus, any accompanying base prospectus, and the documents incorporated by reference herein and therein, completely and with the understanding that our actual future results may be materially different from and worse than what we expect.

Some significant factors that may impact our estimates and forward-looking statements include:

- Our inability to generate significant revenue or achieve profitability;
- Our need to raise additional capital in the future;
- Our expansion of our product development and sales and marketing capabilities could give rise to difficulties in managing our growth;
- Our dependence on third-party distributors;
- Our limited experience with sales and marketing;
- The possibility that we may not be able to continue to operate, as indicated by the "going concern" opinion from our auditors;
- Our ability to successfully develop, manufacture, market, and sell our future products;
- Our ability to timely obtain necessary regulatory clearances or approvals to distribute and market our future products;
- The acceptance by the marketplace of our future products;
- The highly competitive and rapidly changing nature of the diagnostics market;
- Protection of our patents, intellectual property and trade secrets;
- Our reliance on third parties to manufacture and supply our intended products, and such manufacturers' dependence on third party suppliers;
- The material weaknesses in our internal control over financial reporting that we have identified;
- Pressures related to macroeconomic and geopolitical conditions; and
- Other risks identified elsewhere in this prospectus, as well as in our other filings with the SEC.

Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time and it is not possible for our management to predict all risk factors and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of our forward-looking statements by these cautionary statements.

Forward-looking statements speak only as of the date they were made, and, except to the extent required by law or the rules of the NYSE American, we undertake no obligation to update or review any forward-looking statement because of new information, future events or other factors. You should, however, review the risks and uncertainties we describe in the reports we will file from time to time with the SEC, after the filing date of this prospectus. For additional information, refer to the section entitled "*Where You Can Find More Information.*"

Forward-looking statements involve risks and uncertainties and are not guarantees of future performance. As a result of such risks and uncertainties, including those described above, the forward-looking statements discussed in this prospectus supplement, the accompanying base prospectus, and the documents incorporated by reference herein and therein might not occur and our future results and our performance may differ materially from those expressed in these forward-looking statements due to, but not limited to, the factors mentioned above. Because of these uncertainties, you should not place undue reliance on these forward-looking statements when making an investment decision.

USE OF PROCEEDS

We intend to use the net proceeds, if any, we receive from the sale of our securities offered by us hereby for research and continued product development, clinical studies, product commercialization, working capital and other general corporate purposes, including potential strategic acquisitions.

We may set forth additional information regarding the use of proceeds from the sale of securities we offer under this prospectus in a prospectus supplement relating to the specific offering. We have not determined the amount of net proceeds to be used specifically for the foregoing purposes. As a result, our management will have broad discretion in the allocation of net proceeds.

DIVIDEND POLICY

We have not previously paid cash dividends on our common stock. It is our current intention to invest our cash flow and earnings in the growth of our business and, therefore, we have no plans to pay cash dividends for the foreseeable future. Additionally, our ability to pay dividends is limited by restrictions on our ability to pay dividends and make certain other restricted payments under the terms of our term loan. You should not invest in our securities with the expectation of receiving cash dividends.

GENERAL DESCRIPTION OF SECURITIES

We, directly or through agents, dealers or underwriters designated from time to time, may offer, issue and sell, together or separately, in one or more offerings, up to \$100,000,000 in the aggregate, inclusive of any exercise price thereof, of:

- shares of common stock;
- warrants to purchase shares of common stock;
- units comprised of one or more shares of common stock and warrants in any combination; or
- any combination of the foregoing, each on terms to be determined at the time of sale.

The common stock, warrants and units are collectively referred to herein as the securities. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this prospectus, we will, to the extent required by law, provide you with a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information in this prospectus. The securities involve various risks that we will describe in the section entitled “*Risk Factors*” that will be included in each prospectus supplement. For more details, see the information included in the section entitled “*About this Prospectus*.”

DESCRIPTION OF CAPITAL STOCK

The following is a summary of all material characteristics of our capital stock as set forth in our second amended and restated certificate of incorporation and amended and restated bylaws, each as amended (respectively, our “Certificate of Incorporation” and our “Bylaws”). This summary does not purport to be complete and is qualified in its entirety by reference to our Certificate of Incorporation and Bylaws, copies of which have been filed as exhibits to our SEC filings. For more information, see the section entitled, “*Where You Can Find More Information*.”

Common Stock

General. We may issue shares of our common stock from time to time. We are currently authorized to issue 175,000,000 shares of common stock. As of November 7, 2024, there were 92,664,812 shares of our common stock outstanding. Our common stock is listed on the NYSE American and traded under the symbol “VNRX.” On November 7, 2024, the last reported sale price of our common stock on the NYSE American was \$0.6579.

As of November 7, 2024 there were approximately 167 holders of record of our common stock. The actual number of holders of our common stock is greater than the number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by banks, brokers, dealers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Holders. Holders of shares of our common stock are entitled to one vote per share held of record on all matters submitted to a vote of stockholders, including the election of directors. The holders are entitled to receive dividends when, as and if declared by our board of directors, in its discretion, out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of our common stock are entitled to share ratably in all of our assets remaining after payment of liabilities. The holders of our common stock have no preemptive or other subscription rights, and there are no conversion rights or redemption or sinking fund provisions with respect to such shares. All of the outstanding shares of our common stock are, and the shares of our common stock when issued will be, fully paid and non-assessable.

Registration Rights

Piggy-Back Registration. On June 1, 2023, in connection with an offering of 13,000,000 shares of our common stock underwritten by Prime Executions, Inc., doing business as Freedom Capital Markets (“Freedom”), we issued as compensation to Freedom certain underwriter warrants (the “Freedom Warrants”) to purchase up to 448,500 shares of common stock at an exercise price of \$2.00 per share (the shares of common stock issuable upon exercise of the Freedom Warrants, the “Warrant Shares”). The Freedom Warrants were issued pursuant to an underwriting agreement we entered into with Freedom, as representative of the underwriters named therein, on June 1, 2023. Pursuant to the Freedom Warrants, Freedom is entitled to certain “piggy-back” registration rights where, if at any time while the Freedom Warrants are outstanding, there is not an effective registration statement covering all of the Warrant Shares and we determine to prepare and file with the SEC a registration statement relating to an offering for our own account or the account of others under the Securities Act of any of our equity securities (subject to certain exceptions), Freedom can require us to register its Warrant Shares, provided we shall not be required to register any Warrant Shares that are eligible for resale pursuant to Rule 144 and certain other exceptions set forth in the Freedom Warrants. The Freedom Warrants and the Warrant Shares were registered pursuant to a Registration Statement on Form S-3, File No. 333-259783, initially declared effective by the SEC on November 8, 2021.

Demand Registration. Pursuant to the Freedom Warrants, Freedom is entitled to certain “demand” registration rights where, if there is not an effective registration statement covering all of the Warrant Shares, then from December 5, 2023 through June 5, 2028, Freedom is entitled to one “demand” registration right at our expense and one “demand” registration right at Freedom’s expense, pursuant to which Freedom can require us to register its Warrant Shares.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Certain provisions of Delaware law, 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, are expected to discourage certain types of coercive takeover practices and inadequate 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 such proposals, including proposals that are priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could result in an improvement of their terms.

Certificate of Incorporation and Bylaws. Our Certificate of Incorporation and Bylaws include provisions that:

- require that any action to be taken by our stockholders be effected at a duly-called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by the board of directors, the chairman of the board, or the chief executive officer (or the president if there is no chief executive officer);
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors;
- provide that the number of directors on our board of directors is fixed exclusively by our board of directors;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- establish the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain derivative actions or proceedings brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim against us arising pursuant to the General Corporation Law of the State of Delaware (the “DGCL”), or any action asserting a claim governed by the internal affairs doctrine; and
- provide that there is no right to cumulate votes with respect to any shares of capital stock.

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

- prior to the date of the transaction, our board of directors 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 our voting stock 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, those shares owned by (1) persons who are directors and also officers and (2) 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 such time the business combination or transaction is approved by our board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3 % of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the “interested stockholder” and an “interested stockholder” is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation’s outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in a premium over the market price for the shares of common stock held by our stockholders. The provisions of 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 could 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 VStock Transfer, LLC. The address of VStock Transfer, LLC is 18 Lafayette Place, Woodmere, New York 11598, and the telephone number is (212) 828-8436.

DESCRIPTION OF WARRANTS

We may offer, sell and issue, from time to time, warrants to purchase shares of our common stock. The warrants may be issued independently or together with shares of our common stock and may be attached to or separate from the shares of our common stock. If we issue warrants, they will be evidenced by warrant agreements or warrant certificates issued under one or more warrant agreements, which will be contracts between us and/or a bank or trust company, as warrant agent, and the holders of the warrants or an agent for the holders of the warrants, all as shall be set forth in the prospectus supplement relating to warrants being offered pursuant to such prospectus supplement. The forms of warrant agreements or warrant certificates, as applicable, relating to the warrants will be filed as exhibits to the registration statement of which this prospectus is part and/or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the warrants and warrant agreements are subject to, and qualified in their entirety by reference to, all of the provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

Whenever warrants are to be issued and sold pursuant to this prospectus, we will file a prospectus supplement relating to that offer and sale which will specify (in each case as applicable):

- the number of shares of common stock purchasable upon exercise of the warrants and the exercise price at which such number of shares may be purchased upon exercise;
- the price or prices at which the warrants will be issued;
- the provisions, if any, for changes to or adjustments in the exercise price;
- the provisions, if any, for call rights or put rights relating to the warrants or the underlying shares of common stock;
- the date on which the right to exercise the warrants shall commence and the date on which the right will expire;
- if applicable, the number of warrants issued with each share of our common stock;
- if applicable, the date on and after which the warrants and the related common stock will be separately transferable; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange, exercise and settlement of the warrants.

Until any warrants to purchase common stock are exercised, the holders of warrants will not be entitled, by virtue of being such holders, to vote, consent, receive dividends, receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter, or to exercise any rights whatsoever as our stockholders.

Each warrant will entitle the holder to purchase for cash such shares of our common stock at such exercise price as shall be in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the warrants offered thereby. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the prospectus supplement relating to the warrants offered thereby. After the close of business on the expiration date, unexercised warrants will become void.

The warrants may be exercised as set forth in the prospectus supplement relating to the warrants offered. Upon receipt of payment and the warrant certificate properly completed and duly executed at the Company or the corporate trust office of the warrant agent, as applicable, or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the shares of our common stock purchasable upon such exercise. If less than all of the warrants represented by such warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

DESCRIPTION OF UNITS

We may issue units comprised of one or more of the other securities described in this prospectus in any combination from time to time. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. If we issue units, they will be evidenced by unit agreements or unit certificates issued under one or more unit agreements, which will be contracts between us and the holders of the units or an agent for the holders of the units. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The forms of unit agreements or unit certificates, as applicable, relating to the units will be filed as exhibits to the registration statement that includes this prospectus, or as an exhibit to a filing with the SEC that is incorporated by reference into this prospectus.

PLAN OF DISTRIBUTION

We may sell our securities from time to time in any manner permitted by the Securities Act, including any one or more of the following ways:

- to investors through agents;
- directly to agents;
- to or through underwriters;
- to or through broker-dealers (acting as agent or principal);
- in a block trade;
- in ordinary brokerage transactions and transactions in which a broker solicits purchasers;
- in privately negotiated transactions;
- in “at the market” offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise; and/or
- directly to purchasers, through a specific bidding or auction process or otherwise.

The securities may be sold at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices.

Offers to purchase offered securities may be solicited by agents designated by us from time to time. Any agent involved in the offer or sale of the offered securities in respect of which this prospectus is delivered will be named, and any commissions payable by us will be set forth, in the applicable prospectus supplement. Unless otherwise set forth in the applicable prospectus supplement, any agent will be acting on a reasonable best efforts basis for the period of its appointment. Any agent may be deemed to be an underwriter, as that term is defined in the Securities Act, of the offered securities so offered and sold.

We will set forth in a prospectus supplement the terms of the offering of our securities, including:

- the name or names of any agents, underwriters or dealers;
- the purchase price of our securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and commissions and other items constituting agents’ or underwriters’ compensation;
- the public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchanges on which such securities may be listed.

If offered securities are sold to the public by means of an underwritten offering, either through underwriting syndicates represented by managing underwriters or directly by the managing underwriters, we will execute an underwriting agreement with an underwriter or underwriters, and the names of the specific managing underwriter or underwriters, as well as any other underwriters, will be set forth in the applicable prospectus supplement. In addition, the terms of the transaction, including commissions, discounts and any other compensation of the underwriters and dealers, if any, will be set forth in the applicable prospectus supplement, which prospectus supplement will be used by the underwriters to make resales of the offered securities. If underwriters are utilized in the sale of the offered securities, the offered securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including:

- transactions on the NYSE American or any other organized market where the securities may be traded;
- in the over-the-counter market;
- in negotiated transactions; or
- under delayed delivery contracts or other contractual commitments.

We may grant to the underwriters options to purchase additional offered securities to cover over-allotments, if any, at the public offering price with additional underwriting discounts or commissions, as may be set forth in the applicable prospectus supplement. If we grant any over-allotment option, the terms of the over-allotment option will be set forth in the applicable prospectus supplement.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may indemnify agents, underwriters and dealers against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. Agents, underwriters or dealers, or their respective affiliates, may be customers of, engage in transactions with or perform services for us or our respective affiliates, in the ordinary course of business.

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is traded on the NYSE American. We may elect to list any other class or series of securities on any exchange and, in the case of our common stock, on any additional exchange. However, unless otherwise specified in the applicable prospectus supplement, we will not be obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the offered securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

To comply with the securities laws of certain states, if applicable, the securities offered by this prospectus will be offered and sold in those states only through registered or licensed brokers or dealers.

In compliance with guidelines of the Financial Industry Regulatory Authority ("FINRA"), the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

LEGAL MATTERS

Certain legal matters, including the validity of the issuance of the securities offered by this prospectus, will be passed upon for us by Stradling Yocca Carlson & Rauth LLP, Newport Beach, California.

EXPERTS

The consolidated financial statements of VolitionRx Limited as of December 31, 2023 and 2022 and for each of the years in the two-year period ended December 31, 2023, have been incorporated by reference herein and in the registration statement in reliance upon the reports of Sadler, Gibb & Associates, LLC, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate” into this prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. Any information that we incorporate by reference into this prospectus is considered part of this prospectus.

Information contained in this prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus automatically modifies and supersedes previously filed information, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. For more information, see the section entitled, “*About this Prospectus*.”

We incorporate by reference, as of their respective dates of filing, the documents listed below that we have filed with the SEC and any additional documents that we may file in the future with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including any documents filed after the date on which the registration statement of which this prospectus is a part is initially filed until the offering of the security covered by this prospectus has been completed, other than, in each case, documents or information deemed to have been “furnished” and not “filed” in accordance with SEC rules:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, as filed with the SEC on March 25, 2024;
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended [March 31, 2024](#) and [June 30, 2024](#), as filed with the SEC on May 13, 2024 and August 14, 2024, respectively;
- our Current Reports on Form 8-K as filed with the SEC on each of [January 2, 2024](#), [March 19, 2024](#), [April 26, 2024](#), [July 3, 2024](#), [August 12, 2024](#), [September 27, 2024](#), [September 30, 2024](#) and [November 6, 2024](#); and
- the description of our common stock contained in our registration statement on [Form 8-A](#), as filed with the SEC on February 3, 2015, [Exhibit 4.1](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as filed with the SEC on February 20, 2020, and any other amendments or reports filed for the purpose of updating such description.

These filings have not been included in or delivered with this prospectus. We hereby undertake to provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into this prospectus. To request such materials, please contact Mr. Rodney Rootsart, our Corporate Secretary at c/o Corporate Secretary, VolitionRx Limited, 1489 West Warm Springs Road, Suite 110, Henderson, Nevada 89014 by telephone at +1 (646) 650-1351 or by email at notice@volition.com. These documents are also available free of charge through the “*Investors*” section on our website at www.volition.com as soon as practicable after such materials have been electronically filed with, or furnished to, the SEC.

You should rely only on the information contained in this prospectus, in any accompanying prospectus supplement, or in any document incorporated by reference herein or therein. We have not authorized anyone to provide you with any different information. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide to you.

The information contained in this prospectus, in any applicable prospectus supplement, and in the documents incorporated by reference herein or therein is accurate only as of the date such information is presented. Our business, financial condition, results of operations and future prospects may have changed since those respective dates.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC. The SEC maintains an internet website at www.sec.gov that contains periodic and current reports, proxy and information statements, and other information regarding registrants that are filed electronically with the SEC.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus. This prospectus, filed as part of the registration statement, does not contain all the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us, we refer you to the registration statement and to its exhibits and schedules. You can obtain a copy of the registration statement from the SEC's website.

These documents are also available, free of charge, through the “*Investors*” section of our website, which is located at www.volition.com. Information contained on our website is not incorporated by reference into this prospectus and you should not consider information on our website to be part of this prospectus.



VOLITIONRX LIMITED
1,890,625 Shares of Common Stock
Warrants to Purchase up to 1,734,375 Shares of Common Stock
Up to 1,734,375 Shares of Common Stock Issuable Upon Exercise of the Warrants

PROSPECTUS SUPPLEMENT

August 1, 2025