

PROSPECTUS

Marker Therapeutics, Inc.**10,062,500 Shares of Common Stock**

This prospectus relates to the resale, from time to time, of up to 10,062,500 shares of our common stock, by the selling stockholders identified in this prospectus under “Selling Stockholders”. Our shares of common stock covered by this prospectus (the “Covered Shares”) consist of the following: 1,783,805 shares of common stock, 3,247,445 shares of common stock issuable upon exercise of Series B Warrants (the “Pre-Funded Warrants”) to purchase one share of our common stock for \$0.001 per share, and 5,031,250 shares of common stock issuable upon exercise of five-year Series A Warrants (the “Private Placement Warrants”) to purchase one share of our common stock for \$4.00, which we issued in a private placement transaction (the “Private Placement”).

The prices at which the selling stockholders may sell the Covered Shares will be determined by the prevailing market price for the shares or in negotiated transactions. We provide more information on how the selling stockholders may resell their respective Covered Shares in the Section titled “Plan of Distribution” beginning on page [20](#). We are not selling any securities under this prospectus and we will not receive proceeds from the sale of the Covered Shares by the selling stockholders. However, we may receive cash proceeds from the exercise of the Pre-Funded Warrants and the Private Placement Warrants, which if exercised for cash at the current applicable exercise price with respect to all of the Pre-Funded Warrants and Private Placement Warrants would result in aggregate gross proceeds to us of \$20,128,247 million.

We are obligated to pay the expenses of registering the Covered Shares, but all selling and other expenses incurred by the selling stockholders will be paid by the selling stockholder.

Our common stock is quoted on the Nasdaq Capital Market under the symbol “MRKR.” On January 8, 2025, the last reported sale price of our common stock on the Nasdaq Capital Market was \$2.86 per share, and we had 10,707,295 shares of common stock outstanding.

This prospectus provides a general description of the securities being offered. You should carefully read this prospectus and the registration statement of which it forms a part carefully before you invest in any securities.

Investing in our securities involves risks. You should review carefully the risks and uncertainties described under the heading “Risk Factors” beginning on page [11](#).

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

The date of this prospectus is January 17, 2025.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the United States Securities and Exchange Commission (the “SEC”). Under this registration statement, the selling stockholders, which as used herein include donees, pledgees, transferees, distributees or other successors-in-interest selling shares of our common stock or interests in our common stock received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer identified in this prospectus, may sell, at any time and from time to time, in one or more offerings, up to 10,062,500 shares of common stock. This prospectus provides a general description of the shares of our common stock the selling stockholders may offer. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders. For general information about the distribution of shares of common stock offered by the selling stockholders, see the section in this prospectus titled “Plan of Distribution.”

A prospectus supplement or post-effective amendment may also add, update or change information included in this prospectus. Any statement contained in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in such prospectus supplement or post-effective amendment modifies or supersedes such 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 or incorporated by reference in this prospectus, any applicable prospectus supplement, post-effective amendment or any related free writing prospectus.

You should read both this prospectus and any applicable prospectus supplement together with the additional information about our company to which we refer you in the sections of this prospectus entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference.” You should rely only on the information contained in or incorporated by reference into this prospectus and any prospectus supplement. Neither we nor the selling stockholders have authorized any dealer, salesperson or other person to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents or that any document incorporated by reference is accurate as of any date other than its filing date. You should not consider this prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information and all of such summaries are qualified in their entirety by the actual documents they purport to summarize. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference.”

In this prospectus, all references to (i) “Marker” “we,” “us,” “our” or the “Company” collectively refers to Marker Therapeutics, Inc. (formerly known as TapImmune, Inc.) and its subsidiaries; (ii) “SEC” refers to the Securities and Exchange Commission; (iii) “Securities Act” refers to the United States Securities Act of 1933, as amended; (iv) “Exchange Act” refers to the United States Securities Exchange Act of 1934, as amended; and (v) all dollar amounts refer to United States dollars unless otherwise indicated.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements. These are based on our management’s current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the sections entitled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in the documents incorporated by reference herein.

Any statements in this prospectus, or incorporated herein, about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements. Within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, these forward-looking statements include statements regarding:

- our ability to continue as a going concern;
- the timing, progress and results of clinical trials of multi antigen recognizing (MAR) T cell therapies and our other product candidates, including statements regarding the timing of initiation and completion of preclinical studies or clinical trials or related preparatory work, the period during which the results of the trials will become available and our research and development programs;
- the timing of any submission of filings for regulatory approval of product candidates and our ability to obtain and maintain regulatory approvals for product candidates for any indication;
- our ability to successfully commercialize product candidates;
- our expectations regarding the potential benefits, activity, effectiveness and safety of our product candidates;
- our expectations regarding the size of the patient populations, market acceptance and opportunity for and clinical utility of product candidates, if approved for commercial use;
- our manufacturing capabilities and strategy, including the ease, scalability and commercial viability of our manufacturing methods and processes;
- our expectations regarding the scope of any approved indications for product candidates;
- the potential benefits of and our ability to maintain our relationships and collaborations with BCM and other potential collaboration or strategic relationships;
- our ability to use the MAR-T cell platform to develop future product candidates;
- our estimates of our expenses, ongoing losses, future revenue (including grant revenues), capital requirements and our needs for or ability to obtain additional funding;
- our ability to identify, recruit and retain key personnel;
- our ability to protect and enforce our intellectual property position for our product candidates, and the scope of such protection;
- our financial performance;
- our competitive position and the development of and projections relating to our competitors or our industry; and
- the impact of laws and regulations.

In some cases, you can identify forward-looking statements by the words “may,” “might,” “can,” “will,” “to be,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “likely,” “continue” and “ongoing,” or the negative of these terms, or other comparable terminology intended to identify statements about the future, although not all forward- looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements.

You should refer to the “Risk Factors” section 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, for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Given these risks, uncertainties and other factors, many of which are beyond our control, we cannot assure you that the forward- looking statements in this prospectus will prove to be accurate, and you should not place undue reliance on these forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus, even if new information becomes available in the future.

PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “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 related notes, and the exhibits to the registration statement of which this prospectus is a part, before making your investment decision.

Unless the context indicates otherwise, as used in this prospectus, references to “we,” “us,” “our,” “the company” and “Marker Therapeutics” refer to Marker Therapeutics, Inc., formerly known as TapImmune, Inc., and its subsidiaries. We own various U.S. federal trademark applications and unregistered trademarks, including our company name. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indication that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

Company Overview

We are a clinical-stage immuno-oncology company specializing in the development and commercialization of novel T cell-based immunotherapies for the treatment of hematological malignancies and solid tumor indications. Harnessing millions of years of immunologic evolution, Marker’s multi antigen recognizing (“MAR”) T cell technology (formerly known as multi-tumor associated antigen-specific T cells, or multiTAA) is designed to recognize and kill highly heterogeneous tumors without the need for genetic modifications. This approach selectively expands natural tumor-specific T cells from a patient’s/donor’s blood that are capable of recognizing a broad range of tumor associated antigens, or TAAs. Unlike other T cell therapies, MAR-T cells are able to recognize hundreds of different epitopes within up to six tumor-specific antigens to produce broad spectrum anti-tumor activity. Targeting multiple antigens simultaneously exploits the natural capacity of T cells to recognize and kill tumor targets via native T cell receptors (“TCR”), while limiting tumor adaptation/escape by antigen-negative selection or antigen down-regulation. When infused into a patient with cancer, the MAR-T cells are designed to kill cancer cells expressing the TAA and potentially recruit the patient’s immune system to participate in the cancer killing process.

We licensed the underlying technology for MAR-T cell therapy from Baylor College of Medicine, or BCM, in March 2018. BCM had utilized the therapy in seven exploratory clinical trials. In these studies, BCM treated over 150 patients suffering from a variety of cancers including lymphoma, multiple myeloma, acute myeloid leukemia, or AML, acute lymphoblastic leukemia, or ALL, pancreatic cancer, breast cancer and various sarcomas. In those studies, BCM saw evidence of clinical benefit, expansion of infused cells, and decreased toxicity compared to other cellular therapies.

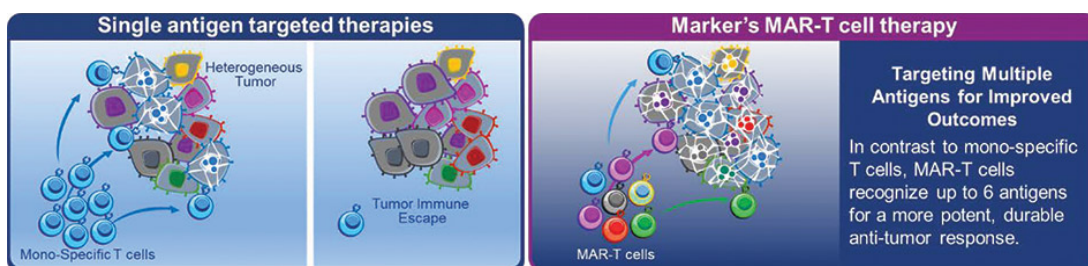
We are advancing two product candidates for 3 clinical indications as part of our MAR-T cell program for:

- Autologous MAR-T product for the treatment of lymphoma and pancreatic cancer (MT-601)
- Off-the-Shelf (OTS) product in various indications (e.g., MT-401-OTS)

We do not genetically engineer our MAR-T cell therapies and we believe that our product candidates are superior to T cells engineered with chimeric antigen receptors, or CAR-T, for several reasons including:

- Multiple targets → enhanced tumoricidal effect → minimized tumor immune escape
- Clinical safety → no treatment-related side effects, including immune effector cell-associated neurotoxicity syndrome (ICANS) or other severe adverse effects (SAEs), were attributed to the use of MAR-T cell therapies to date

- Non-genetically engineered T cell products → selective expansion of tumor-specific T cells from a patient's or donor's blood capable of recognizing a broad range of tumor antigens → no risk of mutagenesis and reduced manufacturing complexity → lower cost



For these reasons, we believe our endogenous T cell receptor-based therapies may provide meaningful clinical benefit and safety to patients with both hematological and solid tumors.

We believe that the simplicity of our manufacturing process allows additional modifications to expand MAR-T cell recognition of cancer targets. For example, we are assessing the potential of combining MAR-T cell products with other products.

On December 19, 2024, we issued a press releasing providing an updated on the progress and clinical observations from the Phase 1 APOLLO study, with a data cutoff date of September 10, 2024. Our Phase 1 APOLLO study is investigating MT-601, a MAR-T cell product, in patients with lymphoma who have relapsed after anti-CD19 chimeric antigen receptor (CAR) T cell therapy or where anti-CD19 CAR-T cells are not an option. A total of 10 patients have been treated in the study, for which clinical data is currently available for 9 patients from 5 clinical sites across the United States. Study participants showed early objective responses with and without lymphodepletion. However, immunomonitoring data confirmed that lymphodepletion enhanced the expansion and persistence of MAR-T cell clones in vivo. Key findings from the APOLLO study include:

- **Safety** — Infusion of MT-601 was well tolerated in all study participants, with no observation of immune-effector cell associated neurotoxicity syndrome (ICANS) and one reported Grade 1 cytokine release syndrome (CRS). No dose limiting toxicities (DLTs) have been reported to date.
- **Efficacy** — In the first dose cohort, 7 out of 9 patients achieved objective responses (78%) at first response assessment, with 4 patients demonstrating complete response (CR; 44.4%) (Table 1).
- **Time in Follow-Up** — Long-term follow-up of 6 to 12 months is currently available for three patients (Table 2). Ongoing follow-up visits are being conducted to assess the durability of responses. All study participants are monitored closely to ensure comprehensive data collection and patient safety.

Table 1: MT-601 shows objective responses at first disease assessment.

| No. of Patients Treated | No. Prior Lines of Therapy | Response Rate at First Assessment | CR at First Assessment |
|-------------------------|----------------------------|-----------------------------------|------------------------|
| 9 | 3 – 12 | 78% | 44.4% |

CR, Complete Response. Data as of September 10, 2024.

Table 2: Duration of patient follow-up in Phase 1 APOLLO study;

| Longest Follow-Up | No. of Patients | Clinical Response |
|-------------------|-----------------|-------------------|
| ≥ 12 months | 1 | CR |
| ≥ 6 months | 2 | CR, PR |
| 1 – 4 months | 4 | CR, PR |

CR, Complete Response; PR, Partial Response. Data as of September 10, 2024.

Although CD19-targeting CAR-T cell therapies have gained acceptance as treatment for patients with lymphoma, 40-60% of patients relapse within the first year of treatment ([Chong et al, N Engl J Med, 2021](#); [Neelapu et al, Blood, 2023](#)). These post-CD19 CAR-T relapsed patients currently have no approved standard of care, illustrating a high unmet medical need and urgency for new therapies. In addition, CAR-T cells are associated with severe side effects such as CRS or ICANS and may increase the risk for secondary malignancies ([U.S. Food and Drug Administration, November 28, 2023](#)). Data from clinical trials to date have demonstrated that MAR-T cells are well tolerated with no evidence of ICANS. In addition, Marker's non-engineered MAR-T cell approach selectively expands natural tumor-specific T cells from a patient's blood that can recognize a broad range of tumor antigens, minimizing the risk of mutagenesis.

Pipeline

Our clinical-stage pipeline is set forth below:

HEMATOLOGIC MALIGNANCIES



SOLID TUMORS



Corporate Overview

We were incorporated under the laws of the State of Nevada in 1991 under the name "TapImmune, Inc." and reincorporated in Delaware in October 2018 under the name "Marker Therapeutics, Inc." On October 17, 2018, we completed a business combination with a Delaware corporation that was then known as "Marker Therapeutics, Inc.," or Private Marker, in accordance with the terms of the Agreement and Plan of Merger and Reorganization dated as of May 15, 2018, or the Merger Agreement, by and among us, Private Marker and Timberwolf Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of TapImmune, or Merger Sub, pursuant to which, among other matters, Merger Sub merged with and into Private Marker, with Private Marker continuing as a wholly owned subsidiary of TapImmune and the surviving corporation of the merger. In connection with the merger, we changed our name from "TapImmune, Inc." to "Marker Therapeutics, Inc." and Private Marker changed its name to "Marker Cell Therapy, Inc." and became our wholly owned subsidiary. Our principal executive offices are located at 2450 Holcombe Blvd, Suite BCM-A, MS: BCM251, Houston, Texas 77021, and our telephone number is (713) 400-6400. Our website is located at <http://www.markertherapeutics.com>. We do not incorporate by reference into this prospectus the information on, or accessible through, our website, and you should not consider it as part of this prospectus. We have included our website address as an inactive textual reference only.

Implications of Being a Smaller Reporting Company

We are a "smaller reporting company" as defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act. We may remain a smaller reporting company

until we have a non-affiliate public float in excess of \$250 million and annual revenues in excess of \$100 million, or a non-affiliate public float in excess of \$700 million, each as determined on an annual basis. A smaller reporting company may take advantage of relief from some of the reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting; and
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements.

Private Placement

On December 19, 2024, we entered into a Securities Purchase Agreement, or the Purchase Agreement, with the selling stockholders named in this prospectus, pursuant to which we issued and sold in a private Placement the following securities to the selling stockholders: (i) 1,783,805 shares of our common stock, (ii) Series B Warrants, or Pre-Funded Warrants, to purchase an aggregate of 3,247,445 shares of common stock in lieu of shares of common stock and (iii) Series A Warrants, or Private Placement Warrants, to purchase an aggregate of 5,031,250 shares of common stock. The purchase price per share of common stock and accompanying Private Placement Warrant to purchase a share of common stock was \$3.20, and the purchase price per Pre-Funded Warrant and accompanying Private Placement Warrant to purchase a share of common stock was \$3.199. Our total gross proceeds from the sale of securities in the Private Placement, before deducting commissions to the placement agent and estimated offering expenses, was approximately \$16.1 million, which does not include any proceeds that may be received upon exercise of any warrants issued in the Private Placement.

Pursuant to the Purchase Agreement, the Company is obligated to call a meeting of its stockholders to obtain stockholder approval, or Stockholder Approval, for the issuance of the shares issuable upon exercise of the Private Placement Warrants and Pre-Funded Warrants, which we collectively refer to as the Warrants, within 90 days of the closing date. If the Stockholder Approval is not obtained at such meeting, the Company is required to cause an additional stockholder meeting to be held on or prior to the 180th day after the closing date, and, if despite the Company’s reasonable best efforts the Stockholder Approval is not obtained after such subsequent stockholder meeting, the Company is required to cause an additional stockholder meeting to be held semi-annual thereafter until such Stockholder Approval is obtained. In connection therewith, the Company entered into voting agreements with certain stockholders pursuant to which such stockholders, who collectively own approximately 27% of the shares of common stock outstanding immediately prior to the closing of the Private Placement, agreed to vote in favor of the Private Placement.

The Warrants are exercisable at any time on or after the date that the Stockholder Approval is obtained and have a term of five years commencing upon the date that the Stockholder Approval is obtained. The Pre-Funded warrants are exercisable at a price of \$0.001 per share and the Private Placement Warrants have an exercise price of \$4.00 per share.

We may not effect the exercise of any Private Placement Warrant or Pre-Funded Warrant and a holder will not be entitled to request the exercise of any portion of any Private Placement Warrant or Pre-Funded Warrant if, upon giving effect to such exercise, the aggregate number of shares of our common stock beneficially owned by the holder (together with its affiliates and other specified parties) would exceed 4.99%, 9.99% or 19.99%, as applicable to each holder, of the number of shares of our common stock outstanding immediately after giving effect to the exercise, or the Beneficial Ownership Limitation. A holder may reset the Beneficial Ownership Limitation as to itself to a higher percentage (not to exceed 19.99%), effective 61 days after written notice to us.

In connection with the Private Placement, we entered into a registration rights agreement, or the Registration Rights Agreement, with the selling stockholders named in this prospectus pursuant to which we agreed to prepare and file, no later than January 14, 2025, a registration statement with the SEC to register

the resale of the following shares (i) shares of our common stock issued in the Private Placement and (ii) shares of our common stock issuable upon exercise of the Private Placement Warrants and Pre-Funded Warrants issued in the Private Placement, which we collectively refer to as the Covered Shares, and to use best efforts to cause such registration statement to become effective as promptly as practical thereafter, and in any event no later than the earlier of (A) February 14, 2024 and (B) the second business day after the date the Company is notified by the SEC that the Registration Statement will not be reviewed or will not be subject to further review.

For more information regarding the Private Placement, see our Current Report on [Form 8-K filed with the SEC on December 23, 2024](#) and incorporated herein by reference.

THE OFFERING

| | |
|---|---|
| Common stock outstanding: | 10,707,295 shares as of January 10, 2025 |
| Common stock offered by the selling stockholders | 10,062,500 shares consisting of (i) 1,783,805 shares of our common stock held by the selling stockholders, (ii) 3,247,445 shares of our common stock issuable upon exercise of outstanding Pre-Funded Warrants to purchase shares of our common stock held by the selling stockholders and (iii) 5,031,250 shares of common stock issuable upon the exercise of outstanding Private Placement Warrants held by the selling stockholders, which we collectively refer to as the Covered Shares |
| Common stock outstanding after the offering | 18,985,990 shares ⁽¹⁾ |
| Terms of the offering | Each selling stockholder will determine when and how it will sell the common stock offered in this prospectus, as described in “Plan of Distribution.” |
| Use of proceeds | <p>We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus. We will, however, receive the following net proceeds of any Warrants exercised for cash (to the extent the registration statement of which this prospectus is a part is then effective and, if applicable, the “cashless exercise” provision is not utilized by the holder):</p> <ul style="list-style-type: none"> • Up to \$3,247 if the outstanding Pre-Funded Warrants are exercised; and • Up to \$20,125,000 if the outstanding Private Placement Warrants are exercised. <p>Any cash proceeds received by us will be used for general corporate purposes and working capital or for other purposes that the Board of Directors, in their good faith, deems to be in the best interest of the Company. No assurances can be given that any of such warrants will be exercised. See “Use of Proceeds.”</p> |
| Risk Factors | An investment in our company is highly speculative and involves a significant degree of risk. See “Risk Factors” and other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock. |
| Nasdaq symbol | Our common stock is listed on the Nasdaq Capital Market under the symbol “MRKR.” |
| Dividend policy | We currently intend to retain any future earnings to fund the development and growth of our business. Therefore, we do not currently anticipate paying cash dividends on our common stock. |

(1) Assumes the exercise for cash of all of the outstanding Pre-Funded Warrants and the Private Placement Warrants, for which the underlying shares of common stock are registered herein, and that we do not issue any other shares of common stock.

The selling stockholders named in this prospectus may offer and sell up to 10,062,500 shares of our common stock. Our common stock is currently listed on Nasdaq under the symbol “MRKR.” Shares of our common stock that may be offered under this prospectus will be fully paid and non-assessable. We will not receive any of the proceeds of sales by the selling stockholders of any of the common stock covered by this

prospectus. We will, however, receive the exercise price of \$0.001 per share of any of the Pre-Funded Warrants exercised for cash and the exercise price of \$4.00 per share of any of the Private Placement Warrants exercised for cash. Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders for offer and resale, we are referring to the shares of common stock that have been issued to the selling stockholders and the shares of common stock issuable upon exercise of the Pre-Funded Warrants and Private Placement Warrants issued in the Private Placement as described above. When we refer to the selling stockholders in this prospectus, we are referring to the selling stockholders identified in this prospectus and, as applicable, their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part.

RISK FACTORS

Investing in securities issued by us involves certain risks. Before you invest in any securities issued by us, in addition to the other information included in, or incorporated by reference into, this prospectus, you should carefully consider the risk factors contained in Part I, Item 1A under the caption “Risk Factors” and elsewhere in our most recent Annual Report on Form 10-K, which is incorporated by reference into this prospectus, as updated by and in our updates to those Risk Factors in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, following the most recent Form 10-K and that are so incorporated and the risk factors contained in [our Definitive Proxy Statement on Schedule 14A filed on April 26, 2024](#), which is incorporated herein by reference. See “Where You Can Find More Information” for information about how to obtain a copy of these documents. You should also carefully consider the risks and other information that may be contained in, or incorporated by reference into, any prospectus supplement relating to specific offerings of securities. In addition to such other risks, set forth below are risks related to this Offering. The occurrence of any of the events described in the risk factors referred to above or set forth below might cause you to lose all or part of your investment in the common stock. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned elsewhere in this prospectus.

Additional Risks Relating to This Offering and Our Common Stock

The sale of a substantial amount of our common stock, including resale of the shares of common stock issuable upon the exercise of the Pre-Funded Warrants and Private Placement Warrants in the public market after this offering could adversely affect the prevailing market price of our common stock and cause stockholders to experience dilution.

We have an aggregate of 10,707,295 shares of our common stock outstanding as of January 10, 2025, including 1,783,805 shares of common stock being offered pursuant to this prospectus. The Pre-Funded Warrants and Private Placement Warrants are exercisable for an aggregate of 8,278,695 shares of common stock, subject to adjustment as provided in the Pre-Funded Warrants and Private Placement Warrants. Pursuant to the registration rights granted in the Private Placement, we agreed to register the resale by the selling stockholders named herein of the shares of common stock issued in the Private Placement, as well as those issuable upon exercise of the Pre-Funded Warrants and Private Placement Warrants. Upon such registration, these registered shares will become generally available for immediate resale.

Sales of substantial amounts of shares of our common stock in the public market, or the perception that such sales might occur, could adversely affect the market price of our common stock, and the market value of our other securities, and could result in dilution to stockholders who hold our common stock. In addition, we may issue additional shares of common stock or other equity or debt securities convertible into common stock in connection with future financings, acquisitions, employee arrangements or otherwise. Any such issuances could result in substantial dilution to our stockholders and could cause our stock price to decline.

A substantial number of shares of common stock are being offered by this prospectus, and we cannot predict if and when the selling stockholders may sell such shares in the public markets. We have also registered the offer and sale of all shares of common stock that we may issue under our equity compensation plans. Furthermore, in the future, we may issue additional shares of common stock or other equity or debt securities convertible into common stock in connection with a financing, acquisition, employee arrangement or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause our stock price to decline.

We have a substantial number of outstanding warrants and the exercise of currently outstanding warrants could result in significant dilution to the holders of our common stock.

As of January 10, 2025, we had outstanding warrants to purchase 8,278,695 shares of our common stock. The exercise of our outstanding warrants could result in significant dilution to existing common stockholders, adversely affect the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities.

Our share price may be volatile, which could subject us to securities class action litigation and our stockholders could incur substantial losses.

The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- the results of clinical trials or development activities of our programs, or any future programs we may acquire;
- actual or anticipated fluctuations in our financial condition and operating results;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;
- issuance of new or updated research or reports by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- additions or departures of key management or other personnel;
- disputes or other developments related to proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our technologies;
- announcement or expectation of additional debt or equity financing efforts;
- sales of our common stock by us, our insiders or our other stockholders; and
- general economic and market conditions.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, the stock market in general, and NASDAQ and smaller companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. In the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If in the future any of our stockholders brought a lawsuit against us, we could incur significant legal expenses, settlement costs or damage awards that are not covered by, or exceed the limits of, our available directors' and officers' liability insurance, which could adversely impact our financial condition, results of operations or cash flows. Such a lawsuit could also divert the time and attention of our management.

Securities analysts may not publish favorable research or reports about our business or may publish no information at all, which could cause our stock price or trading volume to decline.

The trading market for our common stock may be influenced to some extent by the research and reports that industry or financial analysts publish about us and our business. We do not control these analysts. If any of the analysts who cover us provide inaccurate or unfavorable research or issue an adverse opinion regarding our stock price, our stock price could decline. If one or more of these analysts cease coverage of us or fail to publish reports covering us regularly, we could lose visibility in the market, which in turn could cause our stock price or trading volume to decline.

In the event that our internal control over financial reporting is perceived as inadequate, or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the trading price of our common stock could decline.

We are subject to the periodic reporting requirements of the Exchange Act. As a result, our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. generally accepted accounting principles. As a public company, we are required, under Section 404(a) of the Sarbanes-Oxley Act of 2002, to furnish a report by management on, among other things, the effectiveness of our

internal control over financial reporting. We designed our disclosure controls and procedures to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC.

We believe that any disclosure controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur in the future and not be detected.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our certificate of incorporation and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include that:

- our board of directors has the exclusive right to expand the size of our board of directors and to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- our stockholders may not act by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- our certificate of incorporation prohibits cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- our board of directors may alter our bylaws without obtaining stockholder approval;
- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our certificate of incorporation regarding the election and removal of directors;
- stockholders must provide advance notice and additional disclosures in order to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors is authorized to issue shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of

the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. Furthermore, our certificate of incorporation specifies that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for most legal actions involving actions brought against us by stockholders. We believe this provision benefits us by providing increased consistency in the application of Delaware law by chancellors particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. However, the provision may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any applicable action brought against us, a court could find the choice of forum provisions contained in our certificate of incorporation to be inapplicable or unenforceable in such action.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares of common stock by the selling stockholders. We may receive gross proceeds of up to \$20,128,247 rounded to the nearest thousand dollars, if the Private Placement Warrants and Pre-Funded Warrants are exercised (to the extent the registration statement of which this prospectus is a part is then effective and, if applicable, the “cashless exercise” provision is not utilized by the holder) for cash at their applicable exercise prices. The Warrants are only exercisable on a net exercise cashless basis if there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of, the shares issuable upon exercise of common warrants. If any of the Pre-Funded Warrants or Common Warrants are exercised on a cashless basis, we would not receive any cash payment from the applicable selling stockholder upon any such exercise.

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

Any cash proceeds we receive from the exercise of Warrants will be used for general corporate purposes and working capital or other purposes that our Board of Directors deems to be in our best interest. As of the date of this prospectus, we cannot specify with certainty the particular uses for the proceeds we may receive. Accordingly, we will retain broad discretion over the use of these proceeds, if any.

SELLING STOCKHOLDERS

We have prepared this prospectus to permit the selling stockholders named below to, from time to time, sell, transfer or otherwise dispose of any or all of the Covered Shares. The shares of common stock being offered by the selling stockholders are those (i) issued to the selling stockholders in the Private Placement and (ii) issuable to the selling stockholders upon exercise of the warrants issued in the Private Placement. Notwithstanding the foregoing, the selling stockholders make no representations that the shares will be offered for sale. We are registering the offer and sale of the Covered Shares to satisfy registration rights we have granted to the selling stockholders.

We issued the shares to the selling stockholders pursuant to an exemption from the registration requirements of the Securities Act provided by Section 4(a)(2) thereof and Regulation D promulgated thereunder. In connection with such issuance, each of the selling stockholders represented that such stockholder was an “accredited investor,” as such term is defined in Rule 501(a) of Regulation D. Each of the selling stockholders also represented that the stockholder was acquiring the shares of our common stock for the stockholder’s own account and not on behalf of any other person and not with a view to any resale, distribution or other disposition of the shares.

The table below presents information regarding (i) the selling stockholders, (ii) the number of shares of common stock beneficially owned by each of them prior to the offering, based on their ownership of shares of common stock and Warrants, as of January 10, 2025, assuming exercise of the Warrants held by the selling stockholders on that date, without regard to any limitations on exercises, (iii) the number of shares of common stock that each of them may sell or otherwise dispose of from time to time under this prospectus and (iv) the number and percentage of the common stock the selling stockholders will own assuming all of the shares of common stock covered by this prospectus are sold by the selling stockholders. The amounts and information set forth below are based upon information provided to us by the selling stockholders, or his, her or its representatives, in Schedules 13G or 13D and other public documents filed with the SEC or on our records as of January 1, 2025.

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

Because the selling stockholders identified in the table may sell some or all of the Covered Shares, and because, other than the registration rights, there are currently no agreements, arrangements or understandings with respect to the sale of any of the Covered Shares, no estimate can be given as to the number of Covered Shares available for resale hereby that will be held by the selling stockholders upon termination of this offering. In addition, the selling stockholders may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the common stock they hold in transactions exempt from the registration requirements of the Securities Act after the date on which they acquired the Covered Shares pursuant to the Private Placement, as applicable. We have, therefore, assumed for the purposes of the following table that all the common stock covered by this prospectus will be sold by the selling stockholders.

To our knowledge, except as indicated in the footnotes to this table, each person named in the table has sole voting and investment power with respect to all shares of our common stock shown in the table to be beneficially owned by such person. Except as described below in the footnotes and in “Material Relationships Between Selling Stockholders and Marker” below, none of the selling stockholders has had any position, office or other material relationship with us or any of our predecessors or affiliates within the past three years. In addition, based on information provided to us, none of the selling stockholders that are affiliates of broker-dealers, if any, purchased the shares of our common stock outside the ordinary course of business or, at the time of their acquisition of such shares, had any agreements, understandings or arrangements with any other persons, directly or indirectly, to dispose of the shares. Information concerning the selling stockholders may change from time to time, and any changed information will be set forth in supplements to this prospectus to the extent required.

Any prospectus supplement may add, update, substitute, or change the information contained in this prospectus, including the identity of the selling stockholders and the number of shares of common stock

registered on its behalf. The selling stockholders may sell or otherwise transfer all, some or none of the common stock held by each of them in this offering. See “*Plan Of Distribution.*”

| | Number of Shares of Common stock Beneficially Owned Prior to Offering | Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus ⁽¹⁾ | Number of Shares of Common Stock Beneficially Owned After Offering ⁽²⁾ | Percentage of Shares of Common Stock Beneficially Owned After the Offering ⁽¹⁾⁽²⁾ |
|---|---|--|---|--|
| New Enterprise Associates 16, L.P.⁽³⁾ | 4,196,428 | 3,125,000 | 1,071,428 | 5.64% |
| Aisling Capital IV LP⁽⁴⁾ | 376,785 | 62,500 | 314,285 | 1.66% |
| Blue Owl Healthcare Opportunities IV Public Investments LP⁽⁵⁾ | 3,125,000 | 3,125,000 | 0 | 0% |
| Hudson Bay Master Fund Ltd.⁽⁶⁾ | 1,875,000 | 1,875,000 | 0 | 0% |
| Alyeska Master Fund, L.P.⁽⁷⁾ | 1,875,000 | 1,875,000 | 0 | 0% |
| Total | 11,448,213 | 10,062,500 | 1,385,713 | 7.30% |

* Less than one percent (1%)

- (1) Includes shares of common stock underlying Warrants held by the selling stockholder that are covered by this prospectus, including warrants that, due to contractual restrictions, may not be exercisable if such exercise would result in beneficial ownership greater than 4.9% and 9.9% of our outstanding common stock, as applicable.
- (2) Based on 18,985,990 shares of common stock, which includes 10,707,295 shares of common stock issued and outstanding on January 10, 2025, and 8,278,695 shares of common stock being offered in this prospectus that may be issued upon exercise of the Warrants. In determining this amount, we assumed that (i) all shares of common stock being offered in this prospectus that may be issued upon exercise of the Warrants will be sold and (ii) we issue no other shares of common stock. If these assumptions are incorrect, the number of shares and percentages included in this column will differ from what we have provided.
- (3) This information is based on information obtained from a Schedule 13D/A filed on December 23, 2024 with the SEC by New Enterprise Associates 16, L.P. (“NEA 16”) and its affiliates. Consists of 1,625,678 shares of common stock held directly by NEA 16 (“NEA Partners 16”) is the sole general partner of NEA 16, and NEA 16 GP, LLC (“NEA 16 LLC”) is the sole general partner of NEA Partners 16. The managers of NEA 16 LLC are Forest Baskett, Ali Behbahani, Carmen Chang, Anthony A. Florence, Jr., Mohamad H. Makhzoumi, Scott D. Sandell and Paul Walker (collectively, the “NEA 16 Managers”). NEA 16, NEA Partners 16, NEA 16 LLC and the NEA 16 Managers share voting and dispositive power with regard to the shares owned directly by NEA 16. The principal business address for all entities and individuals affiliated with NEA 16 is New Enterprise Associates, 1954 Greenspring Drive, Suite 600, Timonium, MD 21093. The Warrants held the stockholder prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of the stockholder, their affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 9.99%.
- (4) Shares beneficially owned prior to the offering consist of (i) 2,968 shares of common stock held directly by Mr. Elms, (b) 323,370 shares of common stock held directly by Aisling Capital for which Mr. Elms shares voting and dispositive power, (c) 9,250 shares of common stock issuable upon exercise of stock options within 60 days and (d) 51,415 shares of common stock issuable upon exercise of Private Placement Warrants and Pre-Funded Warrants. Aisling Capital Partners IV LLC is a general partner of Aisling Capital Partners IV, LP. Steve Elms and Andrew Schiff are the managing members of Aisling Capital Partners IV LLC. By virtue of these relationships, each of Aisling Capital Partners IV, LP, Aisling Capital Partners IV LLC, may be deemed to have sole voting and dispositive power with respect to the shares of our common stock beneficially owned by Aisling Capital IV, LP. Additionally, each of Mr. Elms and Mr. Schiff may be deemed to share the power to direct the voting and the

disposition of the shares of our common stock beneficially owned by Aisling Capital IV, LP. The address of the principal business offices of each of these entities and individuals is 888 Seventh Avenue, 12th Floor, New York, New York 10106 and 489 5th Avenue, 10th Floor, New York, New York 10017. The Warrants held the stockholder prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of the stockholder, their affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 4.99%.

- (5) Shares beneficially owned prior to the offering consist of (i) 554,250 shares of common stock held directly and (ii) shares of common stock issuable upon exercise of Private Placement Warrants and Pre-Funded Warrants. The selling stockholder is offering all of the shares of common stock beneficially owned thereby in the offering. Blue Owl Healthcare Opportunities Advisors, LLC (“**Blue Owl**”) is the investment manager of Blue Owl Healthcare Opportunities IV Public Investments LP and has voting and investment power over the shares held by Blue Owl Healthcare Opportunities IV Public Investments LP. Blue Owl Healthcare Opportunities Advisors LLC exercises voting and investment power through an investment committee comprised of Kevin Raidy, Timothy Anderson, Sandip Agarwala, and Brandyn Itzkowitz, who each disclaims beneficial ownership over these securities. The address of the selling stockholder is c/o Blue Owl, Healthcare Opportunities Advisors, LLC, 399 Park Avenue, 30th Floor, New York, New York 10022.
- (6) Shares beneficially owned prior to the offering consist of (i) 331,670 shares of common stock held directly and (ii) 1,543,330 shares of common stock issuable upon exercise of Private Placement Warrants and Pre-Funded Warrants. The selling stockholder is offering all of the shares of common stock beneficially owned thereby in the offering. Hudson Bay Capital Management LP (the “Investment Manager”) serves as the investment manager to Hudson Bay Master Fund Ltd., in whose name the securities reported herein are held, may be deemed to be the beneficial owner of all shares of Common Stock held by Hudson Bay Master Fund Ltd. Mr. Sander Gerber serves as the managing member of Hudson Bay Capital GP LLC, which is the general partner of the Investment Manager. The address of the selling stockholder is c/o Hudson Bay Capital Management, LP, 290 Harbor Drive, 3rd Floor, Stamford, Connecticut 06902. The Warrants held the stockholder prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of the stockholder, their affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 4.99%.
- (7) Shares beneficially owned prior to the offering consist of (i) 332,550 shares of common stock held directly and (ii) 1,875,000 shares of common stock issuable upon exercise of Private Placement Warrants and Pre-Funded Warrants. Alyeska Investment Group, L.P., the investment manager of Alyeska Master Fund, L.P. (“Alyeska”), has voting and investment control of the shares held by Alyeska. Anand Parekh is the Chief Executive Officer of Alyeska Investment Group, L.P. and may be deemed to be the beneficial owner of such shares. Mr. Parekh, however, disclaims any beneficial ownership of the shares held by Alyeska. The registered address of Alyeska is at c/o Maples Corporate Services Limited, P.O. Box 309, Ugland House, South Church Street George Town, Grand Cayman, KY1-1104, Cayman Islands. Alyeska Investment Group, L.P. is located at 77 W. Wacker, Suite 700, Chicago, Illinois 60601. The Warrants held the stockholder prohibit the exercise thereof if, after giving effect to such exercise, the beneficial ownership of the stockholder, their affiliates and any person whose beneficial ownership would be attributable to such entities, would exceed 9.99%.

Material Relationships Between Selling Stockholders and Marker

Voting Agreements with Marker Therapeutics Equity Holders

Certain of the selling stockholders that acquired their shares of our common stock in connection with the Private Placement have entered into voting agreements. The selling stockholders that acquired their shares in the Private Placement that have entered into voting agreements are: New Enterprise Associates 16, L.P. (“NEA”) and Aisling Capital IV, LP (“Aisling”).

Board Designation and Observer Rights

New Enterprise Associates 16, L.P. (“NEA”), one of the Private Placement investors and a selling stockholder, has the right to designate either a board observer or a board member to our board of directors.

NEA has the designation right until either (i) a Change of Control Transaction, or (ii) NEA ceases to own less than 2,500,000 Shares of the Company's stock. NEA has designated Ali Behbahani as their board observer.

In addition, another investor in the Private Placement and a selling stockholder, Aisling Capital IV, LP ("Aisling"), has the right to designate a board observer, so long as Aisling holds a number of shares of our common stock that is no less than 70% of the number of shares purchased in a prior financing.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling stockholders and issuable upon exercise of Warrants (Private Placement Warrants and Pre-Funded Warrants), which we collectively refer to as the Covered Shares, issued to the selling stockholders to permit the resale of those shares of common stock by the holders of the common stock and Warrants from time to time after the date of this prospectus. We will not receive any proceeds from the sale by the selling stockholders of the shares of common stock.

The selling stockholders and any of their respective pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell any or all their respective shares of our common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions from time to time directly or through one or more underwriters, broker-dealers or agents, subject to certain transfer restrictions imposed upon certain of the shares of common stock covered by this prospectus. See “*Selling Stockholders*.” Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions. The selling stockholders may use any one or more of the following methods when selling shares:

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

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1934, or amended (the “Securities Act”), or Section 4 (a) (1) under the Securities Act, rather than under this prospectus, provided that such transactions meet the criteria and conform to the requirements of those provisions.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. If the selling stockholders effect certain transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, except as set forth in a supplement to this prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with applicable Financial Industry Regulatory Authority, Inc., or FINRA, rules; and in the case of a principal transaction a markup or markdown in compliance with applicable FINRA rules. The maximum commission or discount to be received by any member FINRA or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the warrants or shares of our common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of our common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of the selling stockholder(s) to include the pledgee, donees, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of our common stock in other circumstances, in which case the pledgees, donees, transferees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

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

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. The selling stockholders reserve the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act.

In order to comply with the securities laws of certain states, if applicable, the shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We may suspend the sale of shares by the selling stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

If any of the selling stockholders use this prospectus for any sale of the shares of common stock, such selling stockholder will be subject to the prospectus delivery requirements of the Securities Act.

The anti-manipulation rules of Regulation M under the Exchange Act of 1934, as amended, (the “Exchange Act”) may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. We have advised the selling stockholders that while it is engaged in a distribution of the shares included in this prospectus it is required to comply with Regulation M promulgated under the

Exchange Act. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this prospectus.

We will make copies of this prospectus available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We agreed to keep the registration statement of which this prospectus is a part effective until the earlier of (i) the date as of which all of the selling stockholders may sell all of the Covered Shares without restriction pursuant to Rule 144 under the Securities Act (including, without limitation, volume restrictions) and without the need for current public information required by Rule 144(c)(1) (or Rule 144(i)(2), if applicable) or (ii) the date on which the selling stockholders shall have sold all of the Covered Shares. We will bear all fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including all fees and expenses in connection with the filing of any registration statement or prospectus supplement, fees and expenses of compliance with securities or “blue sky” laws, transfer agent fees, the maintenance of the effectiveness of the registration statement, and the listing of the shares on NASDAQ, including all registration, filing, qualification, printing, accounting and other fees and expenses, and shall be responsible for up to \$10,000 of fees for one legal counsel to the selling stockholders who acquired their shares at the closing our merger, including those with respect to any review and preparation of any registration statement or prospectus supplement. The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares.

We will indemnify the selling stockholders against certain liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreement and securities purchase agreement, as applicable, or the selling stockholders will be entitled to contribution, as applicable. We may be indemnified by the selling stockholders against certain liabilities, including some liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the related registration rights agreement and securities purchase agreement, as applicable, or we may be entitled to contribution, as applicable.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to this registration statement, of which this prospectus forms a part. Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

EXPERTS

Marcum LLP, independent registered public accounting firm, has audited our consolidated financial statements as of and for the years ended December 31, 2023 and 2022, as set forth in its report included in our 2023 Annual Report on Form 10-K. Our 2023 and 2022 financial statements are incorporated by reference in reliance on Marcum LLP's report, given on their authority as experts in accounting and auditing.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, certain legal matters in connection with the offering and the validity of the securities offered by this prospectus, and any supplement thereto, will be passed upon by Shumaker, Loop & Kendrick, LLP, Tampa, Florida. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference in this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers, such as us, that file electronically with the SEC.

Copies of certain information filed by us with the SEC are also available on our website at <http://www.markertherapeutics.com>. Information contained in or accessible through our website does not constitute a part of this prospectus and is not incorporated by reference in this prospectus. We have included our website address as an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-37939. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this document:

- [our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on March 26, 2024;](#)
- the information specifically incorporated by reference into [our Annual Report on Form 10-K for the year ended December 31, 2023](#) from [our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 26, 2024;](#)
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2024, June 30, 2024, and September 30, 2024, filed with the SEC on [May 15, 2024](#), [August 14, 2024](#), and [November 14, 2024](#), respectively;
- our Current Reports on Form 8-K filed with the SEC on [March 26, 2024](#), [April 8, 2024](#), [May 15, 2024](#), [June 12, 2024](#), [August 12, 2024](#), [August 14, 2024](#), [November 14, 2024](#), [December 17, 2024](#), [December 19, 2024](#) and [December 23, 2024](#); and
- [the description of our common stock set forth in the amendment to the registration statement on Form 8-A12B registering our common stock under Section 12 of the Exchange Act, which was filed with the SEC on October 17, 2018, including any amendments or reports filed for purposes of updating such description.](#)

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You should direct any requests for documents to Marker Therapeutics, Inc., Attn: Corporate Secretary, 2450 Holcombe Blvd, Suite BCM-A, MS: BCM251, Houston, Texas 77021, and our telephone number is (713) 400-6400.

Any statement contained in this prospectus or contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded to the extent that a statement contained in this prospectus or any subsequently filed supplement to this prospectus, or document deemed to be incorporated by reference into this prospectus, modifies or supersedes such statement.

10,062,500 Shares



Marker Therapeutics, Inc.

Common Stock

PROSPECTUS

January 17, 2025
