

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

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

**MARKER THERAPEUTICS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**45-4497941**  
(I.R.S. Employer  
Identification No.)

**4551 Kennedy Commerce Dr.  
Houston, Texas 77027  
(713) 400-6400**

**Peter Hoang**  
**President, Chief Executive Officer and Director**  
**Marker Therapeutics, Inc.**  
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Approximate date of commencement of proposed sale to the public:

As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.**

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

Subject to Completion, Dated December 23, 2022

## PRELIMINARY PROSPECTUS



### Up to 25,770,990 Shares of Common Stock

This prospectus relates to the offer and sale of an aggregate of up to 25,770,990 shares of our common stock, \$0.001 par value per share, by Lincoln Park Capital Fund, LLC (“Lincoln Park” or the “Selling Stockholder”). The shares included in this prospectus consist of shares of common stock that we have issued or that we may, in our discretion, elect to issue and sell to Lincoln Park, from time to time after the date of this prospectus and the date of the satisfaction of the conditions to the Selling Stockholder’s purchase obligations (the “Commencement Date”) as set forth in the common stock purchase agreement we entered into with Lincoln Park on December 12, 2022 (the “Purchase Agreement”). Pursuant to the Purchase Agreement, Lincoln Park has committed to purchase from us, at our direction, up to \$25,000,000 of our common stock, subject to the terms and conditions specified in the Purchase Agreement. The shares included in this prospectus also include the 1,804,098 shares of common stock (the “Commitment Shares”) that we issued to Lincoln Park concurrently with our execution of the Purchase Agreement on December 12, 2022 as consideration for its irrevocable commitment to purchase shares of our common stock at our election in our sole discretion, from time to time after the date of this prospectus, upon the terms and subject to the satisfaction of the conditions set forth in the Purchase Agreement. See the section titled “Committed Equity Financing” for a description of the Purchase Agreement and the section titled “Selling Stockholder” for additional information regarding Lincoln Park.

We are not selling any shares of common stock being offered by this prospectus and will not receive any of the proceeds from the sale of such shares by Lincoln Park. However, we may receive up to \$25,000,000 in aggregate gross proceeds from sales of our common stock to Lincoln Park that we may, in our discretion, elect to make, from time to time after the date of this prospectus, pursuant to the Purchase Agreement.

Lincoln Park may sell or otherwise dispose of the shares of common stock included in this prospectus in a number of different ways and at varying prices. See the section titled “Plan of Distribution” for more information about how Lincoln Park may sell or otherwise dispose of the common stock being offered in this prospectus. Lincoln Park is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the “Securities Act”).

The common stock is listed on The Nasdaq Capital Market (“Nasdaq”) under the symbol “MRKR”. On December 22, 2022, the last reported sales price of the common stock as reported on Nasdaq was \$0.285 per share.

We are a “smaller reporting company” under applicable Securities and Exchange Commission (the “SEC”) rules and are subject to reduced public company reporting requirements for this prospectus and future filings. This prospectus complies with the requirements that apply to an issuer that is a smaller reporting company. We are incorporated in Delaware.

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**Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described in the section titled “Risk Factors” beginning on page 5 of this prospectus, and under similar headings in any amendments or supplements to this prospectus and in the documents incorporated by reference herein.**

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

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You should rely only on the information contained in this prospectus or any supplement to this prospectus, filed with the Securities and Exchange Commission. Neither we nor the Selling Stockholder have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the Securities and Exchange Commission. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The Selling Stockholder is offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: Neither we nor the Selling Stockholder have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our securities and the distribution of this prospectus outside the United States.

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the Securities and Exchange Commission before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

This prospectus and the information incorporated herein by reference contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. 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 or are 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 the heading “Where You Can Find More Information.”

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.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains or incorporates statements that constitute forward-looking statements within the meaning of the federal securities laws. Forward-looking statements relate to expectations, beliefs, projections, future plans and strategies, anticipated events or trends and similar expressions concerning matters that are not historical facts. These forward-looking statements include statements about future financial and operating results of Marker; statements about the plans, strategies and objectives of management for future operations of Marker; and other statements regarding future performance. In some cases, you can identify these forward-looking statements by the use of terminology such as “outlook,” “believes,” “expects,” “potential,” “continues,” “may,” “will,” “should,” “could,” “seeks,” “approximately,” “predicts,” “intends,” “plans,” “estimates,” “anticipates” or the negative version of these words or other comparable words or phrases.

The forward-looking statements contained in this prospectus, including the information incorporated by reference into this prospectus, reflect our current views about our business and future events and are subject to numerous known and unknown risks, uncertainties, assumptions and changes in circumstances that may cause its actual results to differ significantly from those expressed in any forward-looking statement. There are no guarantees that the transactions and events described will happen as described (or that they will happen at all). The following factors, among others, could cause actual results and future events to differ materially from those set forth or contemplated in the forward-looking statements:

- the timing, progress and results of clinical trials of MultiTAA-specific 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 the Baylor College of Medicine and other potential collaboration or strategic relationships;
- our ability to use the MultiTAA-specific T cell platform to develop future product candidates;
- our estimates of our expenses, ongoing losses, future revenue, 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;
- the impact of laws and regulations;
- our ability to maintain the listing of our common stock on The Nasdaq Capital Market; and
- the anticipated use of proceeds from the potential sales of our common stock to Lincoln Park.

In addition, statements that “Marker believes” or “we believe” and similar statements reflect Marker beliefs and opinions on the relevant subject. These statements are based upon information available to Marker as of the date of this prospectus, or in the applicable document incorporated by reference, and while Marker believes such information forms a reasonable basis for such statements, such information may be limited or incomplete, and such statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

While forward-looking statements reflect Marker’s good faith beliefs, they are not guarantees of future performance. Except to the extent required by applicable law, Marker is under no obligation (and expressly disclaims any such obligation) to update or revise their forward-looking statements whether as a result of new information, future events, or otherwise. For a further discussion of these and other factors that could cause Marker’s future results, performance or transactions to differ significantly from those expressed in any forward-looking statement, please see the “*Risk Factors*” section in this prospectus and the documents incorporated by reference herein. You should not place undue reliance on any forward-looking statements, which are based only on information currently available to Marker (or to third parties making the forward-looking statements).

## PROSPECTUS SUMMARY

*The following summary highlights information contained or incorporated by reference elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including our financial statements and the related notes and other documents incorporated by reference in this prospectus, as well as the information under the caption “Risk Factors” herein and under similar headings in the other documents that are incorporated by reference into this prospectus.*

### 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. We developed our lead product candidates from our MultiTAA-specific T cell technology, which is based on the manufacture of non-engineered, tumor-specific T cells that recognize multiple tumor-associated antigens (“TAAs”). MultiTAA-specific T cells are able to recognize multiple tumor targets to produce broad spectrum anti-tumor activity. When infused into a cancer patient, the MultiTAA-specific T cells are designed to kill cancer cells expressing the TAA targets and potentially recruit the patient’s immune system to participate in the cancer killing process.

We licensed the underlying technology for MultiTAA-specific T cell therapy from The Baylor College of Medicine (“BCM”) in March 2018. BCM had utilized the therapy in seven exploratory clinical trials. In these studies, BCM treated over 170 patients suffering from a variety of cancers including lymphoma, multiple myeloma, acute myeloid leukemia, acute lymphoblastic leukemia, pancreatic cancer, breast cancer and various sarcomas. In those studies, BCM saw evidence of clinical benefit, expansion of infused cells, epitope spreading, and decreased toxicity compared to other cellular therapies.

We are advancing three product candidates as part of our MultiTAA-specific T cell program for:

- autologous treatment of lymphoma, and selected solid tumors
- allogeneic T cells for the treatment of acute myeloid leukemia, (“AML”)
- off-the-shelf products in various indications

Our current clinical development programs are:

- MT-401 for the treatment of post-transplant AML, currently in a Phase 2 clinical trial
- MT-401-OTS for the treatment of AML, for which we expect to dose the first patient in a Phase 1 clinical trial in 2023
- MT-601 for the treatment of pancreatic cancer, for which we plan to submit an IND to the U.S. Food and Drug Administration (the “FDA”) in 2022 to initiate a Phase 1 trial in 2023, with the first patient expected to be enrolled in the first quarter of 2023
- MT-601 for the treatment of lymphoma, for which we have a cleared IND from the FDA to initiate a Phase 1 trial in 2023

We believe that the simplicity of our manufacturing process allows additional modifications to expand MultiTAA-specific T cell recognition of cancer targets. For example, we are currently analyzing the potential for a 12-antigen MultiTAA-specific T cell therapy and assessing the potential for combination therapies for our MultiTAA-specific T cell products.

We have positioned ourselves to be in full control of our research and development and clinical manufacturing needs by establishing a fully validated, FDA registered, manufacturing facility. We believe that this has key advantages that distinguish us from our competitors, particularly because we are less reliant on contract manufacturing organizations, which are expensive and often have long lead times, shortages of skilled labor and a backlog of customers.

### **Risks Associated with Our Business**

Our business is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the “Risk Factors” section and include, among others:

- We are a development stage company with a history of operating losses, and we expect losses to continue for the indefinite future. These factors raise substantial doubt regarding our ability to continue as a going concern.
- Our business and operations are likely to be adversely affected by the evolving and ongoing COVID-19 global pandemic.
- All of our product candidates are in clinical development. If we are unable to successfully develop, receive regulatory approval for and commercialize our product candidates, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.
- The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.
- The results of earlier preclinical and clinical trials may not be predictive of future clinical trial results.
- Our preclinical studies and clinical trials may fail to demonstrate the safety and efficacy of our product candidates, or serious adverse or unacceptable side effects may be identified during the development of our product candidates, which could prevent or delay regulatory approval and commercialization, increase our costs or necessitate the abandonment or limitation of the development of some of our product candidates.
- Establishing and maintaining our own current Good Manufacturing Practices (“cGMP”), manufacturing facility is subject to many risks. Although we established our own cGMP manufacturing facility, in the future we may be dependent on third-party vendors to design, build, maintain and support our manufacturing and cell processing facilities.
- Our strategic relationship with BCM is dependent, in part, upon our ongoing relationship with key medical and scientific personnel and advisors.
- Our commercial success depends upon attaining significant market acceptance of our product candidates, if approved, among physicians, patients, healthcare payors and the medical community.
- The biotechnology and immunotherapy industries are characterized by rapid technological developments and a high degree of competition. We may be unable to compete with more substantial enterprises.
- If we are unable to protect our proprietary rights, we may not be able to compete effectively or operate profitably.
- We are subject to extensive regulation, which can be costly, time consuming and can subject us to unanticipated delays. Even if we receive regulatory approval of our product candidates, we will be subject to ongoing quality and regulatory obligations and continued regulatory review, which may result in significant additional expense, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.
- The price of our stock may be volatile.
- Our failure to maintain compliance with Nasdaq continued listing requirements could result in the delisting of our common stock.

### **Corporate Information**

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 4551 Kennedy Commerce Dr., Houston, Texas 77027, 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.

**THE OFFERING**

Shares of common stock offered by us	25,770,990 shares of common stock, which includes 1,804,098 shares of our common stock issued to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement (the “Commitment Shares”). We will not receive any cash proceeds from the issuance of these Commitment Shares.
Shares of common stock outstanding	83,599,187 shares.
Shares of common stock outstanding after giving effect to the issuance of the shares registered hereunder	109,370,177 shares. The actual number of shares outstanding after the offering will vary depending upon the actual number of shares we issue and sell to Lincoln Park under the Purchase Agreement after the date of this prospectus.
Use of proceeds	<p>We will not receive any proceeds from the resale of shares of common stock included in this prospectus by the Selling Stockholder. However, we may receive up to \$25 million in aggregate gross proceeds under the Purchase Agreement from sales of common stock that we may elect to make to the Selling Stockholder pursuant to the Purchase Agreement, if any, from time to time in our sole discretion, from and after the Commencement Date.</p> <p>We expect to use the net proceeds that we receive from sales of our common stock to the Selling Stockholder, if any, under the Purchase Agreement to fund our ongoing Phase 2 clinical trial of MT-401 for the treatment of post-transplant AML, to advance our clinical programs in lymphoma and pancreatic cancer and for working capital and general corporate purposes. See the section titled “Use of Proceeds.”</p>
Risk factors	This investment involves a high degree of risk. See the section titled “Risk Factors” herein and under similar headings in the other documents that are incorporated by reference herein for a discussion of the risks you should consider carefully before deciding to invest in our common stock.
Nasdaq Capital Market symbol	“MRKR”

The number of shares of common stock to be outstanding is based on 83,599,187 shares of common stock outstanding as of September 30, 2022 and excludes:

- 9,961,686 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2022, at a weighted-average exercise price of \$4.27 per share;
- 18,482,000 shares of our common stock issuable upon the exercise of warrants outstanding as of September 30, 2022, at a weighted-average exercise price of \$4.45 per share;
- 9,309,981 shares of our common stock reserved for future issuance under our 2020 Equity Incentive Plan, as amended; and
- 458,496 shares of our common stock sold subsequent to September 30, 2022, pursuant to our at-the-market sales agreement with Cantor Fitzgerald & Co. and RBC Capital Markets, LLC.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options and warrants described above.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should consider carefully the following risks and uncertainties as well as the risks and uncertainties described in the section entitled “Risk Factors” described in our most recent Annual Report on Form 10-K and our other periodic reports filed with the SEC and incorporated by reference herein. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment. You should carefully consider the following information about risks, together with the other information contained in this prospectus, before making an investment in our common stock.*

### **Risks Related to this Offering and Ownership of Our common stock**

***The sale or issuance of our common stock to Lincoln Park may cause dilution and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall.***

On December 12, 2022, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to \$25,000,000 of our common stock (the “Total Commitment”). Concurrently with entering into the Purchase Agreement, we issued 1,804,098 Commitment Shares to Lincoln Park as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement. The remaining shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 24-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, which date is referred to as the Commencement Date, including that the registration statement of which this prospectus forms a part has become effective. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

***It is not possible to predict the actual number of shares we will sell under the Purchase Agreement to the Selling Stockholder, or the actual gross proceeds resulting from those sales.***

Because the purchase price per share to be paid by Lincoln Park for the shares of common stock that we may elect to sell to Lincoln Park under the Purchase Agreement, if any, will fluctuate based on the market prices of our common stock during the applicable period for each purchase made pursuant to the Purchase Agreement, if any, it is not possible for us to predict, as of the date of this prospectus and prior to any such sales, the number of shares of common stock that we will sell to Lincoln Park under the Purchase Agreement, the purchase price per share that Lincoln Park will pay for shares purchased from us under the Purchase Agreement, or the aggregate gross proceeds that we will receive from those purchases by Lincoln Park under the Purchase Agreement, if any.

Moreover, although the Purchase Agreement provides that we may sell up to an aggregate of \$25,000,000 of our common stock to Lincoln Park, only 25,770,990 shares of our common stock, which includes 1,804,098 Commitment Shares, are being registered for resale by Lincoln Park under the registration statement

that includes this prospectus, consisting of shares of common stock that we may elect to sell to Lincoln Park, in our sole discretion, from time to time from and after the Commencement Date under the Purchase Agreement. If after the Commencement Date we elect to sell to Lincoln Park all of the 23,966,892 remaining shares of common stock being registered for resale under this prospectus that are available for sale by us to Lincoln Park in Purchases under the Purchase Agreement, depending on the market prices of our common stock during the applicable period for each Purchase made pursuant to the Purchase Agreement, the actual gross proceeds from the sale of all such shares may be substantially less than the \$25,000,000 Total Commitment available to us under the Purchase Agreement, which could materially adversely affect our liquidity.

If it becomes necessary for us to issue and sell to Lincoln Park under the Purchase Agreement more than the 25,770,990 shares being registered for resale under the registration statement that includes this prospectus in order to receive aggregate gross proceeds equal to the Total Commitment of \$25,000,000 under the Purchase Agreement, we must file with the SEC one or more additional registration statements to register under the Securities Act the resale by Lincoln Park of any such additional shares of our common stock we wish to sell from time to time under the Purchase Agreement, which the SEC must declare effective and we will need to obtain stockholder approval to issue shares of common stock in excess of 17,132,289 shares (the “Exchange Cap”), which is 19.99% of the shares of common stock outstanding immediately prior to the execution of the Purchase Agreement, under the Purchase Agreement in accordance with applicable Nasdaq rules, unless the average per share purchase price paid by Lincoln Park for all shares of common stock sold under the Purchase Agreement equals or exceeds \$0.2883, in which case, under applicable Nasdaq rules, the Exchange Cap limitation will not apply to issuances and sales of common stock under the Purchase Agreement, in each case, before we may elect to sell any additional shares of our common stock to Lincoln Park under the Purchase Agreement. Any issuance and sale by us under the Purchase Agreement of a substantial amount of shares of common stock in addition to the 25,770,990 shares of common stock being registered for resale by Lincoln Park under this prospectus could cause additional substantial dilution to our stockholders. The number of shares of our common stock ultimately offered for sale by Lincoln Park is dependent upon the number of shares of common stock, if any, we ultimately sell to Lincoln Park under the Purchase Agreement.

***We have broad discretion to determine how to use the funds from our sale of shares of common stock to Lincoln Park, 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 as to the application of the net proceeds from our sale of shares of common stock to Lincoln Park and could use them for purposes other than those contemplated at the time of the offering. We could spend the proceeds from our sale of shares of common stock to Lincoln Park in ways our stockholders may not agree with or that do not yield a favorable return, if at all. We intend to use the net proceeds, if any, that we receive under the Purchase Agreement to fund our ongoing Phase 2 clinical trial of MT-401 for the treatment of post-transplant AML, to advance our clinical programs in lymphoma and pancreatic cancer and for working capital and general corporate purposes. However, our actual use of these proceeds may differ from our current plans. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used in ways with which you would agree. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow. See “Use of Proceeds.”

***Investors who buy shares at different times will likely pay different prices.***

Pursuant to the Purchase Agreement, we will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold to Lincoln Park. If and when we do elect to sell shares of our common stock to Lincoln Park pursuant to the Purchase Agreement, after Lincoln Park has acquired such shares, Lincoln Park may resell all, some or none of such shares at any time or from time to time in its discretion and at different prices. As a result, investors who purchase shares from Lincoln Park in this offering at different times will likely pay different prices for those shares, and so may experience different levels of dilution and in some cases substantial dilution and different outcomes in their investment results.

Investors may experience a decline in the value of the shares they purchase from Lincoln Park in this offering as a result of future sales made by us to Lincoln Park at prices lower than the prices such investors paid for their shares in this offering.

***We are a development stage company with a history of operating losses, and we expect losses to continue for the indefinite future. These factors raise substantial doubt regarding our ability to continue as a going concern.***

We are a clinical-stage immunotherapy company with a history of losses, and we may always operate at a loss. We expect that we will continue to operate at a loss throughout our development stage, and as a result, we may exhaust our financial resources and be unable to complete the development of our product candidates. We anticipate that our ongoing operational costs will increase significantly, and our deficit will continue to grow, as we continue conducting our clinical development program.

We have no approved products or product candidates pending approval. As a result, we have not derived any revenue from the sales of products and have not yet demonstrated ability to obtain regulatory approval, formulate and manufacture commercial-scale products, or conduct sales and marketing activities necessary for successful product commercialization. We have no sources of significant revenue to provide incoming cash flows to sustain our future operations. Our ability to pursue our planned business activities depends upon our successful efforts to raise additional financing, which may be adversely impacted by potential worsening global economic conditions and the recent disruptions to and volatility in the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic.

We have sustained losses from operations in each fiscal year since our inception, and we expect losses to continue for the indefinite future due to the substantial investment in research and development. We expect to spend substantial additional sums on the continued administration and research and development of licensed and proprietary product candidates and technologies with no certainty that our approach and associated technologies will become commercially viable or profitable as a result of these expenditures. If we fail to raise a significant amount of capital, we may need to significantly curtail operations, allocate limited financial resources among our product candidates, or cease operations in the near future. If any of our product candidates fail in clinical trials or do not gain regulatory approval, we may never generate revenue. Even if we generate revenue in the future, we may not be able to become profitable or sustain profitability in subsequent periods.

We do not have sufficient cash and cash equivalents to fund our anticipated level of operations as they become due during the next twelve months. The aforementioned and other factors raise substantial doubt regarding our ability to continue as a going concern, which may create negative reactions to the price of our common stock. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our financial statements, and it is likely that investors will lose all or a part of their investment. Further, the perception that we may be unable to continue as a going concern may impede our ability to pursue strategic opportunities or operate our business due to concerns regarding our ability to discharge our contractual obligations. In addition, if there remains substantial doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding to us on commercially reasonable terms, or at all.

***Our share price may be volatile.***

The market price of our common stock has fluctuated in the past. For example, our stock price, and the stock price of many other public companies, experienced high volatility in 2022. Such volatility resulted in rapid and substantial increases and decreases in our stock price that may or may not be related to our operating performance or prospects. Consequently, the current market price of our common stock may not be indicative of future market prices, and we may be unable to sustain or increase the value of an investment in our common stock.

***We do not anticipate paying any dividends.***

We do not currently intend to pay any cash dividends on our common stock for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, stockholders are not likely to receive any dividends on their common stock for the foreseeable future. Since we do not intend

to pay dividends, stockholders' ability to receive a return on their investment will depend on any future appreciation in the market value of our common stock. Our common stock may not appreciate or even maintain the price at which our holders have purchased it.

***Our failure to maintain compliance with Nasdaq continued listing requirements could result in the delisting of our common stock.***

Our common stock is currently listed on the Nasdaq Capital Market under the symbol "MRKR." In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director independence and independent committee requirements, minimum stockholders' equity, minimum bid price, and certain corporate governance requirements. There can be no assurances that we will be able to comply with the applicable listing standards.

On February 16, 2022, we received a notice from Nasdaq that we were not in compliance with Nasdaq's Listing Rule 5450(a)(1), as the minimum bid price of our common stock had been below \$1.00 per share for 30 consecutive business days. On August 16, 2022, Nasdaq approved our application to transfer to the Nasdaq Capital Market, effective at the opening of business on August 18, 2022, and notified us that we had been granted an additional 180-calendar day compliance period, or until February 13, 2023, to regain compliance with the minimum bid price requirement. As part of the transfer, we provided notice to Nasdaq that we intended to cure the bid price deficiency by effecting a reverse stock split, if necessary, prior to the end of the compliance period. Our failure to regain compliance during this period could result in delisting, which the Company could appeal to a Nasdaq hearings panel. There can be no assurance that we will be able to regain compliance with Nasdaq's Listing Rule 5450 (a)(1) or will otherwise be in compliance with other Nasdaq listing criteria. If we do not regain compliance within the allotted compliance period(s), including any extensions that may be granted by Nasdaq, Nasdaq will provide notice that our common stock will be subject to delisting.

In the event that our common stock is delisted from Nasdaq and is not eligible for quotation or listing on another market or exchange, trading of our common stock could be conducted only in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it could become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely also be a reduction in our coverage by securities analysts and the news media, which could cause the price of our common stock to decline further. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange.

## COMMITTED EQUITY FINANCING

On December 12, 2022, we entered into the Purchase Agreement and the Registration Rights Agreement with Lincoln Park. Pursuant to the Purchase Agreement, we have the right to sell to Lincoln Park up to \$25 million of shares of our common stock, subject to certain limitations and conditions set forth in the Purchase Agreement, from time to time during the term of the Purchase Agreement. Sales of common stock pursuant to the Purchase Agreement, and the timing of any sales, are solely at our option, and we are under no obligation to sell any securities to Lincoln Park under the Purchase Agreement. In accordance with our obligations under the Registration Rights Agreement, we have filed the registration statement that includes this prospectus with the SEC to register under the Securities Act the resale by Lincoln Park of up to 25,770,990 shares of common stock, consisting of 1,804,098 Commitment Shares (as defined in the Purchase Agreement) that we issued to Lincoln Park as payment of a commitment fee for its commitment to purchase shares of common stock at our election under to the Purchase Agreement, and up to 23,966,892 shares of common stock that we may elect, in our sole discretion, to issue and sell to Lincoln Park, from time to time from and after the Commencement Date under the Purchase Agreement.

We do not have the right to commence any sales of our common stock to Lincoln Park under the Purchase Agreement until the Commencement Date, which is the date on which all of the conditions to Lincoln Park's purchase obligation set forth in the Purchase Agreement have been satisfied, including that the registration statement that includes this prospectus be declared effective by the SEC. From and after the Commencement Date, we will have the right, but not the obligation, from time to time at our sole discretion over the 24-month period commencing on the Commencement Date, to direct Lincoln Park to purchase up to 125,000 shares of our common stock on such business day (or the purchase date), which we refer to as a Regular Purchase, provided that (i) a Regular Purchase may be increased to up to 150,000 shares if the closing sale price of our common stock on Nasdaq is not below \$0.50 on the applicable purchase date, (ii) a Regular Purchase may be increased to up to 200,000 shares if the closing sale price of our common stock on Nasdaq is not below \$0.75 on the applicable purchase date, (iii) a Regular Purchase may be increased to up to 250,000 shares if the closing sale price of our common stock on Nasdaq is not below \$1.00 on the applicable purchase date and (iv) a Regular Purchase may be increased to up to 300,000 shares if the closing sale price of our common stock on Nasdaq is not below \$1.25 on the applicable purchase date.

From and after the Commencement Date, we will control the timing and amount of any sales of common stock to Lincoln Park. Actual sales of shares of our common stock to Lincoln Park under the Purchase Agreement will depend on a variety of factors to be determined by us from time to time, including, among other things, market conditions, the trading price of our common stock and determinations by us as to the appropriate sources of funding for our business and its operations.

Under the applicable Nasdaq rules, in no event may we issue to Lincoln Park under the Purchase Agreement more than 17,132,289 shares of common stock, which number of shares is equal to 19.99% of the shares of the common stock outstanding as of the date of the Purchase Agreement (the "Exchange Cap"), unless (i) we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap in accordance with applicable Nasdaq rules or (ii) the average price per share paid by Lincoln Park for all of the shares of common stock that we direct Lincoln Park to purchase from us pursuant to the Purchase Agreement, if any, equals or exceeds \$0.2883 per share (representing the lower of the official closing price of our common stock on Nasdaq on the trading day immediately preceding the date of the Purchase Agreement or the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement, as adjusted pursuant to applicable Nasdaq rules). Moreover, we may not issue or sell any shares of common stock to Lincoln Park under the Purchase Agreement which, when aggregated with all other shares of common stock then beneficially owned by Lincoln Park and its affiliates (as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 promulgated thereunder), would result in Lincoln Park beneficially owning shares of common stock in excess of the 9.99% Beneficial Ownership Limitation (as such term defined in the Purchase Agreement).

### **Purchase of Shares of Common Stock Under the Purchase Agreement**

#### *Regular Purchases*

Under the Purchase Agreement, after the Commencement Date (as defined below), on any business day selected by us, we may direct Lincoln Park to purchase up to 125,000 shares of our common stock on

such business day (or the purchase date), which we refer to as a Regular Purchase, provided, however, that (i) a Regular Purchase may be increased to up to 150,000 shares if the closing sale price of our common stock on Nasdaq is not below \$0.50 on the applicable purchase date, (ii) a Regular Purchase may be increased to up to 200,000 shares if the closing sale price of our common stock on Nasdaq is not below \$0.75 on the applicable purchase date, (iii) a Regular Purchase may be increased to up to 250,000 shares if the closing sale price of our common stock on Nasdaq is not below \$1.00 on the applicable purchase date and (iv) a Regular Purchase may be increased to up to 300,000 shares if the closing sale price of our common stock on Nasdaq is not below \$1.25 on the applicable purchase date. We may direct Lincoln Park to purchase shares in Regular Purchases as often as every business day. The foregoing share amounts and per share prices will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring after the date of the Purchase Agreement.

The purchase price per share for each such Regular Purchase will be equal to the lesser of:

- the lowest sale price for our common stock on Nasdaq on the purchase date of such shares; and
- the average of the three lowest closing sale prices for our common stock on Nasdaq during the 10 consecutive business days prior to the purchase date of such shares.

#### *Accelerated Purchases*

We may also direct Lincoln Park, on any business day on which we have submitted a Regular Purchase notice for the maximum amount allowed for such Regular Purchase, to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, of up to the lesser of:

- three times the number of shares purchased pursuant to such Regular Purchase; and
- 30% of the aggregate shares of our common stock traded on Nasdaq during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase date we refer to as the “Accelerated Purchase Measurement Period”.

The purchase price per share for each such Accelerated Purchase will be equal to 97% of the lower of:

- the volume-weighted average price of our common stock on Nasdaq during the applicable Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date; and
- the closing sale price of our common stock on Nasdaq on the applicable Accelerated Purchase date.

#### *Additional Accelerated Purchases*

We may also direct Lincoln Park on any business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder have been delivered to Lincoln Park in accordance with the Purchase Agreement, to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- three times the number of shares purchased pursuant to the applicable corresponding Regular Purchase; and
- 30% of the aggregate shares of our common stock traded on Nasdaq during a certain portion of the normal trading hours on the applicable Additional Accelerated Purchase date as determined in accordance with the Purchase Agreement, which period of time on the applicable Additional Accelerated Purchase date we refer to as the “Additional Accelerated Purchase Measurement Period.”

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares to be purchased thereunder have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each such Additional Accelerated Purchase will be equal to 97% of the lower of:

- the volume-weighted average price of our common stock on Nasdaq during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase date; and
- the closing sale price of our common stock on Nasdaq on the applicable Additional Accelerated Purchase date.

In the case of Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

### **Events of Default**

Events of default under the Purchase Agreement include the following:

- the effectiveness of the registration statement of which this prospectus forms a part lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park of our common stock offered hereby, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period, but excluding a lapse or unavailability where (i) we terminate a registration statement after Lincoln Park has confirmed in writing that all of the shares of our common stock covered thereby have been resold or (ii) we supersede one registration statement with another registration statement, including (without limitation) by terminating a prior registration statement when it is effectively replaced with a new registration statement covering the shares of our common stock covered by the Purchase Agreement (provided in the case of this clause (ii) that all of the shares of our common stock covered by the superseded (or terminated) registration statement that have not theretofore been resold are included in the superseding (or new) registration statement);
- suspension by the principal market of our common stock from trading for a period of one business day;
- if any time the Exchange Cap is reached unless and until shareholder approval is obtained, to the extent applicable;
- the delisting of our common stock from the Nasdaq Capital Market, our principal market, unless our common stock is immediately thereafter trading on the Nasdaq Global Select Market, the Nasdaq Global Market, the New York Stock Exchange, the Nasdaq Capital Market, the NYSE American, the NYSE Arca, the OTC Bulletin Board or the OTCQB or the OTCQX operated by the OTC Markets Group, Inc. (or any nationally recognized successor to any of the foregoing);
- the failure for any reason by our transfer agent to issue shares of our common stock to Lincoln Park within two business days after any Regular Purchase date, Accelerated Purchase date or Additional Accelerated Purchase date, as applicable, on which Lincoln Park is entitled to receive such shares;
- any breach of the representations, warranties, covenants or other terms or conditions contained in the Purchase Agreement or Registration Rights Agreement or any other certificate, instrument or document executed by the Company contemplated in such transaction documents if such breach would reasonably be expected to have a Material Adverse Effect (as defined in the Purchase Agreement) except, in the case of a breach of a covenant that is reasonably curable, that is not cured within a period of at least five business days;
- if any Person (as defined in the Purchase Agreement) commences a proceeding against the Company pursuant to or within the meaning of any Bankruptcy Law;

- if the Company is at any time insolvent, or, pursuant to or within the meaning of any Bankruptcy Law, (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property, or (iv) makes a general assignment for the benefit of its creditors or is generally unable to pay its debts as the same become due;
- a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company or for all or substantially all of its property, or (iii) orders the liquidation of the Company; or
- if at any time the Company is not eligible to transfer its Common Stock electronically as DWAC Shares or if the Company fails to maintain the service of its Transfer Agent (or a successor Transfer Agent) with respect to the issuance of Purchase Shares under this Agreement, including but not limited to, maintaining the effectiveness of the Commencement Irrevocable Transfer Instructions, payment of all owed to the Transfer Agent and satisfaction of all conditions required by the Transfer Agent to issue Purchase Shares pursuant to the Commencement Irrevocable Transfer Agent Instructions.

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of default set forth above however, the Purchase Agreement will automatically terminate upon initiation of insolvency or bankruptcy proceedings by or against us. During an event of default, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

#### **Termination of the Purchase Agreement**

Unless earlier terminated as provided in the Purchase Agreement, the Purchase Agreement will terminate automatically on the earliest to occur of:

- the first day of the month immediately following the 24-month anniversary of the Commencement Date;
- the date on which the Company commences a voluntary bankruptcy case or any third party commences a bankruptcy proceeding against the Company, a custodian is appointed for the Company in a bankruptcy proceeding for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors; and
- the date on which Lincoln Park shall have purchased shares of our common stock under the Purchase Agreement for an aggregate gross purchase price equal to \$25 million.

We have the right to terminate the Purchase Agreement at any time after the Commencement Date for any reason or for no reason, without any liability whatsoever, upon one business day's notice to Lincoln Park.

We and Lincoln Park also have the option to terminate the Purchase Agreement in the event that the Commencement Date has not occurred on or before February 28, 2023, due to the other party's failure to satisfy its conditions set forth in the Purchase Agreement.

#### **No Short-Selling or Hedging by Lincoln Park**

Lincoln Park has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

#### **Prohibitions on Other Equity Lines of Credit**

Subject to specified exceptions included in the Purchase Agreement, until the expiration of the 24-month term of the Purchase Agreement, we are limited in our ability to enter into any "equity line of credit" or other similar continuous offering in which we may offer, issue or sell common stock or securities convertible into or exercisable for common stock at a future determined price, other than an "at the market offering" exclusively through a registered broker-dealer acting as our agent.

### Effect of Sales of our Common Stock under the Purchase Agreement on our Stockholders

All shares of common stock that may be issued or sold by us to Lincoln Park under the Purchase Agreement that are being registered under the Securities Act for resale by Lincoln Park in this offering are expected to be freely tradable. The shares of common stock being registered for resale in this offering may be issued and sold by us to Lincoln Park from time to time at our discretion over a period of up to 24 months commencing on the Commencement Date. The resale by Lincoln Park of a significant amount of shares registered for resale in this offering at any given time, or the perception that these sales may occur, could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock, if any, to Lincoln Park under the Purchase Agreement will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the shares of our common stock that may be available for us to sell to Lincoln Park pursuant to the Purchase Agreement.

If and when we do elect to sell shares of our common stock to Lincoln Park pursuant to the Purchase Agreement, after Lincoln Park has acquired such shares, Lincoln Park may resell all, some or none of such shares at any time or from time to time in its discretion and at different prices. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares to Lincoln Park under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our shares to Lincoln Park and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Lincoln Park to purchase up to \$25,000,000 of our common stock, exclusive of the 1,804,098 Commitment Shares issued to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement. The Purchase Agreement prohibits us from issuing or selling to Lincoln Park under the Purchase Agreement (i) shares of our common stock in excess of the Exchange Cap, unless we obtain stockholder approval to issue shares in excess of the Exchange Cap or the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$0.2883 per share, such that the transactions contemplated by the Purchase Agreement are exempt from the Exchange Cap limitation under applicable Nasdaq rules and (ii) any shares of our common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park, would exceed the 9.99% of our outstanding shares of common stock.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of shares of common stock to Lincoln Park under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase <sup>(1)</sup>	Percentage of Outstanding Shares After Giving Effect to the Issuance to the Selling Securityholder <sup>(2)</sup>	Gross Proceeds from the Sale of Shares to the Selling Securityholder Under the Purchase Agreement
\$0.25	23,966,892	21.91%	\$ 5,991,723
\$0.2883 <sup>(3)</sup>	23,966,892	21.91%	\$ 6,909,655
\$0.50	23,966,892	21.91%	\$ 11,983,446
\$1.00	23,966,892	21.91%	\$ 23,966,892
\$2.00	12,500,000	12.77%	\$ 25,000,000

- (1) Although the Purchase Agreement provides that we may sell up to \$25 million of our common stock to Lincoln Park, we are only registering 23,966,892 shares of common stock, excluding 1,804,098 Commitment Shares, under this prospectus which represents shares which may be issued to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares to Lincoln Park under the

Purchase Agreement, and which may or may not cover all the shares we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share. As a result, we have included in this column only those shares that we are registering in this offering, without regard to the Beneficial Ownership Limitation or the Exchange Cap. If we seek to issue shares of our common stock, including shares from other transactions that may be aggregated with the transactions contemplated by the Purchase Agreement under the applicable rules of Nasdaq, in excess of 17,132,289 shares, or 19.99% of the total common stock outstanding immediately prior to the execution of the Purchase Agreement, we may be required to seek stockholder approval in order to be in compliance with the rules of Nasdaq. The assumed average purchase prices per share are solely for illustrative purposes and are not intended to be estimates or predictions of the future performance of our common stock.

- (2) The denominator is based on 85,403,285 shares of our common stock outstanding as of September 30, 2022 (which includes the 1,804,098 Commitment Shares we issued to Lincoln Park on December 12, 2022), adjusted to include the issuance of the number of shares set forth in the second column that we would have sold to Lincoln Park, assuming the average purchase price in the first column. The numerator is based on the number of shares of common stock set forth in the second column.
- (3) The Minimum Price as defined in the Purchase Agreement.

## USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. All of the common stock offered by Lincoln Park pursuant to this prospectus will be sold by Lincoln Park for its own account. We will not receive any of the proceeds from these sales. We may receive up to \$25 million aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement. The net proceeds from sales, if any, under the Purchase Agreement, will depend on the frequency and prices at which we sell shares of common stock to Lincoln Park after the date of this prospectus. Because we are not obligated to sell any shares of our common stock under the Purchase Agreement, other than the Commitment Shares, the actual total offering amount and proceeds to us, if any, are not determinable at this time. See the section titled “Plan of Distribution” elsewhere in this prospectus for more information.

We expect to use any proceeds that we receive under the Purchase Agreement to fund our ongoing Phase 2 clinical trial of MT-401 for the treatment of post-transplant AML, to advance our clinical programs in lymphoma and pancreatic cancer and for working capital and general corporate purposes. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus. Pending these uses, we intend to invest the net proceeds in investment-grade, interest-bearing securities. There can be no assurance that we will sell any shares under or fully utilize the Purchase Agreement as a source of financing.

## SELLING STOCKHOLDER

This prospectus relates to the offer and sale by Lincoln Park of up to 25,770,990 shares of common stock that have been and may be issued by us to Lincoln Park under the Purchase Agreement. For additional information regarding the shares of common stock included in this prospectus, see the section titled “Committed Equity Financing” above. We are registering the shares of common stock included in this prospectus pursuant to the provisions of the Registration Rights Agreement we entered into with Lincoln Park on December 12, 2022 in order to permit Lincoln Park to offer the shares included in this prospectus for resale from time to time. Except for the transactions contemplated by the Purchase Agreement and the Registration Rights Agreement and as set forth in the section titled “Plan of Distribution” in this prospectus, Lincoln Park has not had any material relationship with us within the past three years.

The table below presents information regarding Lincoln Park and the shares of common stock that may be resold by Lincoln Park from time to time under this prospectus. This table is prepared based on information supplied to us by Lincoln Park, and reflects holdings as of December 12, 2022. The number of shares in the column “Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus” represents all of the shares of common stock being offered for resale by Lincoln Park under this prospectus. Lincoln Park may sell some, all or none of the shares being offered for resale in this offering. We do not know how long Lincoln Park will hold the shares before selling them, and we are not aware of any existing arrangements between Lincoln Park and any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock being offered for resale by this prospectus.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act, and includes shares of common stock with respect to which Lincoln Park has sole or shared voting and investment power. The percentage of shares of common stock beneficially owned by Lincoln Park prior to the offering shown in the table below is based on an aggregate of 83,599,187 shares of our common stock outstanding on September 30, 2022. Because the purchase price to be paid by Lincoln Park for shares of common stock, if any, that we may elect to sell to Lincoln Park from time to time under the Purchase Agreement will be determined on the applicable dates for such purchases, the actual number of shares of common stock that we may sell to Lincoln Park under the Purchase Agreement may be fewer than the number of shares being offered for resale under this prospectus. The fourth column assumes the resale by Lincoln Park of all of the shares of common stock being offered for resale pursuant to this prospectus.

Name of Selling Securityholder	Number of Shares of Common Stock Owned Prior to Offering		Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus	Number of Shares of Common Stock Owned After Offering	
	Number <sup>(1)</sup>	Percent <sup>(2)</sup>		Number <sup>(3)</sup>	Percent <sup>(2)</sup>
Lincoln Park Capital Fund, LLC <sup>(4)</sup>	1,804,098	2.1%	25,770,990	0	—

- (1) Represents the 1,804,098 shares of common stock we issued to Lincoln Park on December 12, 2022 as Commitment Shares in consideration for entering into the Purchase Agreement with us. In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares beneficially owned prior to the offering all of the shares that Lincoln Park may be required to purchase under the Purchase Agreement, because the issuance of such shares is solely at our discretion and is subject to conditions contained in the Purchase Agreement, the satisfaction of which are entirely outside of Lincoln Park’s control, including the registration statement that includes this prospectus becoming and remaining effective. Also, the Purchase Agreement prohibits us from issuing and selling any shares of our common stock to Lincoln Park to the extent such shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park, would cause Lincoln Park’s beneficial ownership of our common stock to exceed the 9.99% Beneficial Ownership Limitation. The Purchase Agreement also prohibits us from issuing or selling shares of our common stock under the Purchase Agreement in excess of the 19.99% Exchange Cap, unless we obtain stockholder approval to do so, or unless the average price per share paid by Lincoln Park for all shares of common stock purchased by Lincoln Park under the Purchase Agreement equals or exceeds \$0.2883 per share, in which case the Exchange Cap limitation would no longer apply under applicable Nasdaq rules. Neither the Beneficial

Ownership Limitation nor the Exchange Cap (to the extent applicable under Nasdaq rules) may be amended or waived under the Purchase Agreement.

- (2) Applicable percentage ownership is based on 83,599,187 shares of our common stock outstanding as of September 30, 2022.
- (3) Assumes the sale of all shares being offered pursuant to this prospectus.
- (4) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus in connection with the transactions contemplated under the Purchase Agreement. Lincoln Park is not a licensed broker dealer or an affiliate of a licensed broker dealer.

## DESCRIPTION OF CAPITAL STOCK

*The following description of our capital stock and provisions of our certificate of incorporation and bylaws are summaries. You should also refer to the certificate of incorporation and the bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.*

### General

Our certificate of incorporation authorizes us to issue up to 300,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of September 30, 2022, we had outstanding 83,599,187 shares of common stock and no shares of preferred stock outstanding.

### Common Stock

#### *Voting Rights*

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. As a result, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. All other matters to be voted on by our stockholders must be approved by a majority of the votes cast on the matter unless otherwise provided by law, our certificate of incorporation or our bylaws.

#### *Dividends*

Holders of common stock are entitled to receive ratably any dividends as may be declared by our board of directors, subject to any preferential dividend rights of any series of preferred stock that our board of directors may designate and issue in the future.

#### *Liquidation*

In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to receive ratably our net assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock.

#### *Rights and Preferences*

Holders of common stock have no preemptive, subscription, redemption or conversion rights. There are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that our board of directors may designate and issue in the future.

### Preferred Stock

Pursuant to our certificate of incorporation, our board of directors has the authority, without further action by our stockholders, from time to time, to designate and issue up to 5,000,000 shares of preferred stock in one or more series. Our board of directors may determine the rights, preferences and limitations of each series, including voting rights, dividend rights and redemption and liquidation preferences. Satisfaction of any dividend preferences of outstanding shares of preferred stock would reduce the amount of funds available for the payment of dividends on shares of our common stock. Holders of shares of preferred stock may be entitled to receive a preference payment in the event of any liquidation, dissolution or winding-up of our company before any payment is made to the holders of shares of our common stock. In some circumstances, the issuance of shares of preferred stock may render more difficult or tend to discourage a merger, tender offer or proxy contest, the assumption of control by a holder of a large block of our securities or the removal of incumbent management. Upon the affirmative vote of our board of

directors, without stockholder approval, we may issue shares of preferred stock with voting and conversion rights which could adversely affect the holders of shares of our common stock.

Our board of directors will fix the designations, voting powers, preferences and rights of each series, as well as the qualifications, limitations or restrictions thereof, of the preferred stock of each series that we offer under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock or other securities of ours, including depositary shares and warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;
- voting rights, if any, of the preferred stock;
- preemption rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

The General Corporation Law of the State of Delaware, or DGCL, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some

cases, as a series) on an amendment to our certificate of incorporation if the amendment would change the par value or, unless the certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

The issuance of preferred stock could adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation. The issuance could have the effect of decreasing the market price of the common stock. The issuance of preferred stock also could have the effect of delaying, deterring or preventing a change in control of us.

### **Anti-Takeover Provisions**

#### *Section 203 of the DGCL*

We are subject to Section 203 of the DGCL, or Section 203, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) 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
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock that is not owned by the interested stockholder.

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

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

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

#### *Certificate of Incorporation and Bylaws*

Because our stockholders do not have cumulative voting rights, stockholders holding a plurality of the shares of our common stock outstanding will be able to elect all of our directors. Our bylaws also provide that directors may be removed by the stockholders upon the vote of a majority of the shares entitled to vote an election of directors, and if a director was elected by a voting group of stockholders, only stockholders

from that voting group may vote to remove such director, and such vacancy may be filled only by the stockholders of that voting group. Furthermore, the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum.

Our bylaws provide that only a majority of the authorized directors on our board of directors, the chairman of the board or the chief executive officer to call a special meeting of stockholders. Our bylaws also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and specify requirements as to the form and content of a stockholder's notice.

The combination of these provisions may make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

#### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is American Stock Transfer & Company, LLC, with offices at 6201 15th Avenue, Brooklyn, New York 11219. The transfer agent for any series of preferred stock that we may offer under this prospectus will be named and described in the prospectus supplement for that series.

#### **Listing on Nasdaq**

Our common stock is listed on The Nasdaq Capital Market under the symbol "MRKR."

## PLAN OF DISTRIBUTION

The shares of common stock offered by this prospectus are being offered by the Selling Stockholder, Lincoln Park Capital Fund, LLC. The shares may be sold or distributed from time to time by Lincoln Park directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the shares of our common stock offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers or underwriters who may act solely as agents;
- "at the market" into an existing market for our common stock;
- in other ways not involving market makes or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold 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 state or an exemption from the state's registration or qualification requirement is available and complied with.

Lincoln Park Capital Fund, LLC is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park Capital Fund, LLC has informed us that it intends to use an unaffiliated broker- to effectuate all sales, if any, of our common stock that it may acquire from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such registered broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park Capital Fund, LLC has informed us that each such broker-dealer, may receive commissions from Lincoln Park Capital Fund, LLC for executing such sales for Lincoln Park Capital Fund, LLC and, if so, such commissions will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the purchasers, for whom the broker-dealers may act as agent, of the shares sold by Lincoln Park through this prospectus. The compensation paid to any such particular broker-dealer by any such purchasers of shares of our common stock sold by Lincoln Park may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive from any purchasers of shares of our common stock sold by Lincoln Park.

We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement of which this prospectus forms a part to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares offered by this prospectus by Lincoln Park, including with respect to any compensation paid or payable by Lincoln Park to any brokers, dealers, underwriters or agents that participate in the distribution of such shares by Lincoln Park, and any other related information required to be disclosed under the Securities Act.

We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our common stock covered by this prospectus by Lincoln Park.

## LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Cooley LLP, Washington, D.C.

## EXPERTS

Marcum LLP, independent registered public accounting firm, has audited our consolidated financial statements as of and for the years ended December 31, 2021 and 2020, as set forth in its report included in our 2021 Annual Report on Form 10-K (which contains an explanatory paragraph relating to substantial doubt about the ability of Marker Therapeutics, Inc. to continue as a going concern as described in Note 2 to the consolidated financial statements). Our 2021 and 2020 financial statements are incorporated by reference in reliance on Marcum LLP's report, given on their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the securities being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to Marker and the securities offered by this prospectus, we refer you to the registration statement and its exhibits and to the documents incorporated by reference herein. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement or a document incorporated by reference herein. Each of these statements is qualified in all respects by this reference. You can read our SEC filings, including the registration statement, over the internet at the SEC's website at [www.sec.gov](http://www.sec.gov).

We are subject to the information reporting requirements of the Exchange Act, and we file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for review at the SEC's website at [www.sec.gov](http://www.sec.gov). We also maintain a website at [www.markertherapeutics.com](http://www.markertherapeutics.com), at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (Commission File No. 001-37939):

- [our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the SEC on March 17, 2022](#);
- [our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 15, 2022](#) (excluding those portions that are not incorporated by reference into our [Annual Report on Form 10-K for the fiscal year ended December 31, 2021](#));
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2022, June 30, 2022 and September 30, 2022, filed with the SEC on [May 13, 2022](#), [August 11, 2022](#) and [November 10, 2022](#), respectively;
- our Current Reports on Form 8-K filed with the SEC on [February 16, 2022](#), [February 18, 2022](#), [April 6, 2022](#), [April 26, 2022](#), [May 27, 2022](#), [August 19, 2022](#), [September 27, 2022](#), [October 20, 2022](#) and [December 13, 2022](#); and

- [the description of our common stock set forth in the amendment to the registration statement on Form 8-A 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.](#)

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

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (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 this 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 furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Marker Therapeutics, Inc., Attn: Corporate Secretary, 4551 Kennedy Commerce Dr., Houston, Texas, 77027 and our telephone number is (713) 400-6400.

You also may access these filings on our website at [www.markertherapeutics.com](http://www.markertherapeutics.com). We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

**25,770,990 Shares**

**Common Stock**



**, 202**

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**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the securities being registered. All amounts shown are estimates except for the SEC registration fee.

	<u>Amount</u>
SEC registration fee	\$ 792
Accountants' fees and expenses	\$ 10,000
Legal fees and expenses	\$125,000
Printing fees	\$ 12,500
Miscellaneous fees and expenses	\$ 6,708
Total expenses	<u>\$155,000</u>

Discounts, concessions, commissions and similar selling expenses attributable to the sale of shares of common stock covered by this prospectus will be borne by the selling securityholders. We will pay all expenses (other than discounts, concessions, commissions and similar selling expenses) relating to the registration of the shares with the SEC, as estimated in the table above.

**Item 14. Indemnification of Directors and Officers.**

We are incorporated under the laws of the State of Delaware. Subsection (a) of Section 145 of the General Corporation Law of the State of Delaware, or the DGCL, empowers a corporation to indemnify any person who was or is a party or who is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful on the merits or otherwise in the defense of any action, suit or proceeding referred to in subsections (a) and (b) of Section 145, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith; that indemnification provided for by Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and the indemnification provided for by Section 145 shall,

unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of such person's heirs, executors and administrators. Section 145 also empowers the corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify such person against such liabilities under Section 145.

Section 102(b)(7) of the DGCL provides that a corporation's certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL or (iv) for any transaction from which the director derived an improper personal benefit.

Our bylaws provide that we will indemnify each person made, or threatened to be made, a party to an action or proceeding by reason of the fact that he or she is or was a director or officer of our company, or a director officer of a predecessor corporation or of another corporation if such person served in such position at our request, against all expenses incurred in defending a criminal or civil action, suit or proceeding. Such expenses will be paid by us in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director to repay any advanced amounts if it is ultimately determined that he or she is not entitled to indemnification as authorized by relevant section of the DGCL. We are not obligated to advance expenses to an agent who is a party to an action, suit or proceeding brought by us and approved by a majority of our board of directors alleging willful misappropriation of corporate assets by such agent, disclosure of confidential information in violation of such agent's fiduciary or contractual obligations to us or any other willful and deliberate breach in bad faith of such agent's duty to us or our stockholders.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Pursuant to the terms of the Merger Agreement and subject to applicable law, from the effective time of the merger, or the Effective Time, through the sixth anniversary of the date on which the Effective Time occurs, we and TapImmune shall each jointly and severally indemnify and hold harmless each person who is, or has been at any time prior to the date thereof, or who became prior to the Effective Time, a director or officer of TapImmune or Private Marker, respectively, against all costs incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that such person is or was a director or officer of TapImmune or Private Marker, whether asserted or claimed prior to, at or after the Effective Time, in each case, to the fullest extent permitted under the DGCL for directors or officers of Delaware corporations, provided that any such person to whom expenses are advanced provides an undertaking, as applicable, to the extent then required by the DGCL, to repay such advances if it is ultimately determined that such person is not entitled to indemnification.

Further, pursuant to the Merger Agreement, the provisions of our certificate of incorporation and our bylaws shall contain provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers of each of TapImmune and Private Marker than were set forth in the certificate of incorporation and bylaws of TapImmune and Private Marker, as applicable, and such provisions shall not be amended, modified or repealed for a period of six years from

the Effective Time in a manner that would adversely affect the rights thereunder of individuals who, at or prior to the Effective Time, were officers or directors of TapImmune or Private Marker.

We shall pay all expenses, including reasonable attorneys' fees, that are incurred by indemnified persons in connection with their enforcement of the rights provided to such persons in the Merger Agreement. The director and officer indemnification provisions of the Merger Agreement are intended to be in addition to the rights otherwise available to the former officers and directors of TapImmune and Private Marker by law, charter, statute, bylaw or agreement, and shall operate for the benefit of, and shall be enforceable by, each of such indemnified persons, their heirs and their representatives.

In the event we or TapImmune (i) consolidates with or merges into any other person and shall not be the continuing or surviving corporation or entity of such consolidation or merger, or (ii) transfers all or substantially all of its properties and assets to any person, then, and in each such case, proper provision shall be made so that our successors and assigns shall succeed to the indemnification obligations set forth in the Merger Agreement.

#### **Item 15. Recent Sales of Unregistered Securities.**

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2019:

- On January 14, 2019, we issued 15,000 shares of common stock to a vendor;
- On March 20, 2019, we issued 15,000 shares of common stock to a vendor; and
- On September 30, 2019, we issued 17,400 shares of common stock to a vendor.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. We believe each of these transactions was exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D promulgated thereunder) as transactions by an issuer not involving any public offering or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

#### **Item 16. Exhibits and Financial Statement Schedules.**

(a) Exhibits. The exhibits listed below are filed as part of this registration statement:

#### **EXHIBIT INDEX**

Exhibit number	Exhibit description	Incorporated by Reference				Filed herewith
		Form	File no.	Exhibit	Filing date	
3.1	<a href="#">Certificate of Incorporation</a>	8-K	001-37939	3.4	10/17/18	
3.2	<a href="#">Bylaws of Marker Therapeutics, Inc.</a>	8-K	000-37939	3.6	10/17/18	
4.1	<a href="#">Form of Common Stock Certificate of Marker Therapeutics, Inc.</a>	8-A/A	000-37939	4.1	10/17/18	
4.2	<a href="#">Form of Marker Warrant</a>	8-K	001-37939	2.1	5/15/18	
4.3	<a href="#">Description of Common Stock of Marker Therapeutics, Inc.</a>	10-K	001-37939	4.25	3/12/20	
5.1	<a href="#">Opinion of Cooley LLP</a>					X
10.1	<a href="#">Form of Restructuring Agreement dated May 28, 2015</a>	8-K	000-27239	10.1	6/3/15	
10.2	<a href="#">Amended and Restated Restructuring Agreement, dated as of June 2, 2015</a>	8-K	000-27239	10.1	6/5/15	

Exhibit number	Exhibit description	Incorporated by Reference				Filed herewith
		Form	File no.	Exhibit	Filing date	
10.3	<a href="#">Form of Securities Purchase Agreement (including registration rights)</a>	8-K	001-37939	10.1	6/8/18	
10.4	<a href="#">Registration Rights Agreement</a>	8-K	001-37939	2.1	5/15/18	
10.5	<a href="#">License and Assignment Agreement, dated July 21, 2015, with The Mayo Foundation for Medical Education and Research**</a>	10-Q	000-27239	10.1	8/14/15	
10.6	<a href="#">License and Assignment Agreement with Mayo Foundation for Medical Education and Research dated May 19, 2016**</a>	10-Q	000-27239	10.7	8/15/16	
10.7	<a href="#">Exclusive License Agreement between Baylor College of Medicine and Marker Therapeutics, Inc. dated March 16, 2018***</a>	10-K	001-37939	10.21	3/15/19	
10.8	<a href="#">Sponsored Research Contract between Baylor College of Medicine and Marker Therapeutics, Inc. dated November 16, 2018***</a>	10-K	001-37939	10.22	3/15/19	
10.9	<a href="#">2009 Stock Incentive Plan*</a>	DEF14-C	000-27239	B	1/29/10	
10.10	<a href="#">2014 Omnibus Stock Ownership Plan, as amended through August 29, 2017*</a>	8-K	001-37939	10.1	9/5/17	
10.11	<a href="#">Amendment to 2014 Omnibus Stock Ownership Plan, as amended *</a>	8-K	001-37939	4.4	10/17/18	
10.12	<a href="#">Form of Stock Option Award Agreement — Employee*</a>	8-K	001-37939	10.3	10/23/18	
10.13	<a href="#">Form of Stock Option Award Agreement — Non-Employee Director*</a>	S-8	333-228056	10.1	10/30/18	
10.14	<a href="#">Form of Stock Option Award Agreement — Consultant*</a>	8-K	001-37939	10.2	10/23/18	
10.15	<a href="#">Form of Restricted Stock Award Agreement — Consultant*</a>	10-Q	000-27239	10.7	11/16/15	
10.16	<a href="#">Employment Agreement between TapImmune Inc. and Peter Hoang dated as of September 22, 2017*</a>	8-K	001-37939	10.1	9/25/17	
10.17	<a href="#">Employment Agreement by and between TapImmune Inc. and Michael J. Loiacono dated as of August 25, 2016*</a>	8-K	000-27239	10.1	8/25/16	
10.18	<a href="#">Amendment to Employment Agreement between Marker Therapeutics, Inc. and Michael J. Loiacono dated as of November 27, 2018*</a>	8-K	001-37939	10.2	12/3/18	
10.19	<a href="#">Employment Agreement between Marker Therapeutics, Inc. and Anthony Kim dated as of November 27, 2018*</a>	8-K	001-37939	10.3	12/3/18	
10.20	<a href="#">Consulting Agreement between Dr. Juan Vera and Marker Therapeutics, Inc. dated October 19, 2018*</a>	8-K	001-37939	10.1	10/23/18	
10.21	<a href="#">Form of Director and Officer Indemnification Agreement*</a>	10-K	001-37939	10.39	3/15/19	
10.22	<a href="#">Amendment to Employment Agreement between Marker Therapeutics, Inc. and Peter Hoang, dated March 14, 2019*</a>	10-K	001-37939	10.40	3/15/19	
10.23	<a href="#">Employment Agreement between Marker Therapeutics, Inc. and Mythili Koneru, dated February 6, 2019.*</a>	10-Q	001-37939	10.3	5/10/19	
10.24	<a href="#">Marker Therapeutics, Inc. 2020 Equity Incentive Plan</a>	S-8	333-239136	99.1	6/12/20	
10.25	<a href="#">Form of Stock Option Grant Notice and Stock Option Agreement under the Marker Therapeutics, Inc. 2020 Equity Incentive Plan.</a>	10-Q	001-37939	10.1	11/9/20	
10.26	<a href="#">Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the Marker Therapeutics, Inc. 2020 Equity Incentive Plan.</a>	10-Q	001-37939	10.2	11/9/20	
10.27	<a href="#">Form of Common Stock Purchase Warrant</a>	8-K	000-27239	4.1	8/14/14	
10.28	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series A</a>	8-K	000-27239	4.6	1/12/15	
10.29	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series C</a>	8-K	000-27239	4.8	1/12/15	

Exhibit number	Exhibit description	Incorporated by Reference				Filed herewith
		Form	File no.	Exhibit	Filing date	
10.30	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series D</a>	8-K	000-27239	4.9	1/12/15	
10.31	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series E</a>	8-K	000-27239	4.10	1/12/15	
10.32	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series A-1</a>	8-K	000-27239	4.6	3/10/15	
10.33	<a href="#">Form of Placement Agent Warrant Common Stock Purchase Warrants-Series E-1</a>	8-K	000-27239	4.10	3/10/15	
10.34	<a href="#">Form of Amended Series A Warrant</a>	8-K	000-27239	4.2	8/11/16	
10.35	<a href="#">Form of Amended Series C Warrant</a>	8-K	000-27239	4.3	8/11/16	
10.36	<a href="#">Form of Amended Series D Warrant</a>	8-K	000-27239	4.4	8/11/16	
10.37	<a href="#">Form of Amended Series E Warrant</a>	8-K	000-27239	4.5	8/11/16	
10.38	<a href="#">Form of Amended Series A-1 Warrant</a>	8-K	000-27239	4.6	8/11/16	
10.39	<a href="#">Form of Amended Series D-1 Warrant</a>	8-K	000-27239	4.7	8/11/16	
10.40	<a href="#">Form of Series F Warrant</a>	8-K	000-27239	4.9	8/11/16	
10.41	<a href="#">Form of Series F-1 Warrant</a>	8-K	000-27239	4.10	8/11/16	
10.42	<a href="#">Form of August 2016 Private Placement Warrant</a>	8-K	000-27239	4.1	8/11/16	
10.43	<a href="#">Form of 2016 Private Placement Agent Warrant</a>	8-K	000-27239	4.11	8/11/16	
10.44	<a href="#">Form of June 2017 Private Placement Warrant</a>	8-K	001-37939	4.1	6/22/17	
10.45	<a href="#">Form of 2017 Private Placement Agent Warrant</a>	8-K	001-37939	4.2	6/22/17	
10.46	<a href="#">Form of Warrant Amendment Agreement August 2016 Private Placement</a>	8-K	000-27239	10.3	8/11/16	
10.47	<a href="#">Form of Warrant Exercise Agreement</a>	8-K	001-37939	10.3	6/22/17	
10.48	<a href="#">Form of Private Placement Warrant</a>	8-K	001-37939	4.1	6/8/18	
10.49	<a href="#">Form of Private Placement Warrant</a>	8-K	001-37393	4.2	6/8/18	
10.50	<a href="#">RSU AWARD GRANT NOTICE (2020 EQUITY INCENTIVE PLAN)</a>	10-Q	001-37939	10.1	5/13/22	
10.51	<a href="#">Services Agreement, effective April 12, 2022, between Wilson Wolf Manufacturing Corporation and Marker Therapeutics, Inc.</a>	8-K	001-37939	10.1	4/26/2022	
10.52	<a href="#">Marker Therapeutics, Inc. 2020 Equity Incentive Plan, as amended</a>	10-Q	001-37939	10.2	8/11/22	
10.53	<a href="#">Purchase Agreement, dated as of December 12, 2022, by and between the Company and Lincoln Park.</a>	8-K	001-37939	10.1	12/13/22	
10.54	<a href="#">Registration Rights Agreement, dated as of December 12, 2022, by and between the Company and Lincoln Park.</a>	8-K	001-37939	10.2	12/13/22	
21.1	<a href="#">List of Subsidiaries</a>	10-K	001-37939	21.1	3/17/22	
23.1	<a href="#">Consent of Marcum LLP, an independent public accounting firm.</a>					X
23.2	<a href="#">Consent of Cooley LLP (included in Exhibit 5.1)</a>					X
24.1	<a href="#">Powers of Attorney (included on signature page).</a>					
107	<a href="#">Filing Fee Table</a>					X

\* Executive management contract or compensatory plan or arrangement.

- \*\* Confidential treatment has been granted as to certain portions of this exhibit pursuant to Rule 406 of the Securities Act of 1933, as amended, or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.
- \*\*\* Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for conditional treatment and this exhibit has been submitted separately with the SEC.

(b) Financial Statement Schedules.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

**Item 17. Undertakings.**

(a) The undersigned registrant hereby undertakes as follows:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
  - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That, for the purpose of determining any liability under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are

offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or our securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the undersigned pursuant to the foregoing provisions, or otherwise, the undersigned has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the undersigned of expenses incurred or paid by a director, officer or controlling person of the undersigned in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the undersigned will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the Company has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Houston, State of Texas, on this 23 day of December, 2022.

**MARKER THERAPEUTICS, INC.**

By: /s/ Peter Hoang

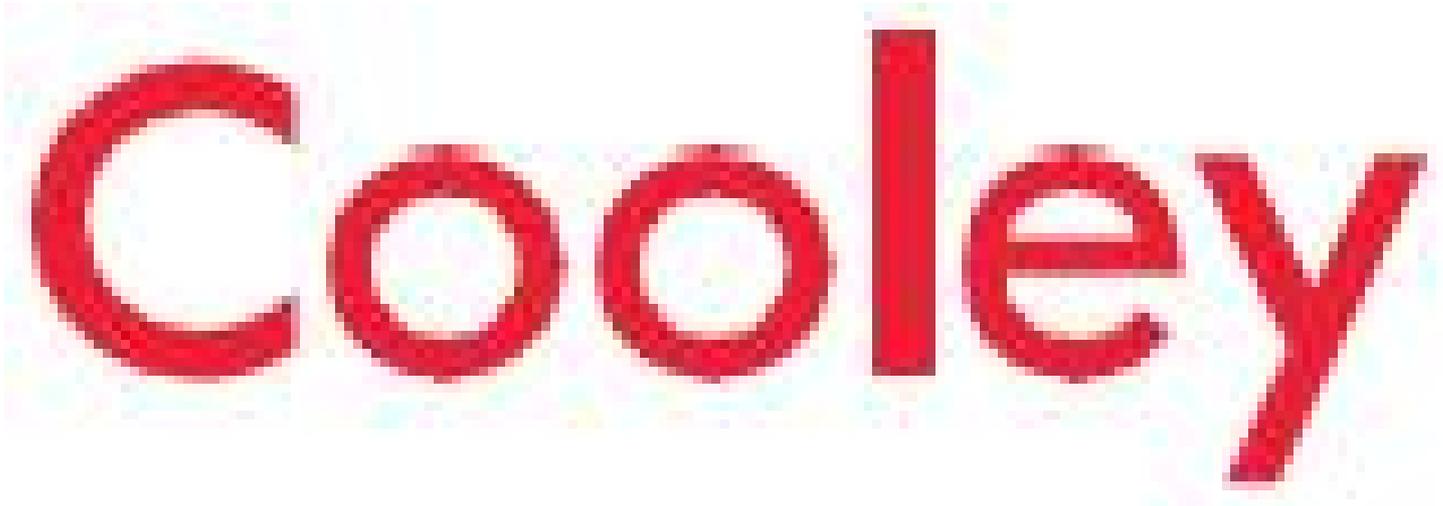
Peter Hoang  
President and Chief Executive Officer

**POWER OF ATTORNEY**

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Peter Hoang and Michael Loiacono, and each of them, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this Registration Statement, and any registration statement relating to the offering covered by this Registration Statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents, or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Peter Hoang</u> Peter Hang	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	December 23, 2022
<u>/s/ Michael Loiacono</u> Michael Loiacono	Chief Accounting Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	December 23, 2022
<u>/s/ N. David Eansor</u> N. David Eansor	Director	December 23, 2022
<u>/s/ Steven Elms</u> Steven Elms	Director	December 23, 2022
<u>/s/ Katharine Knobil</u> Katharine Knobil	Director	December 23, 2022
<u>/s/ David Laskow-Pooley</u> David Laskow-Pooley	Director	December 23, 2022
<u>/s/ Juan F. Vera</u> Juan F. Vera	Director	December 23, 2022
<u>/s/ John R. Wilson</u> John R. Wilson	Director	December 23, 2022



Madison A. Jones  
+1 202 728 7087  
madison.jones@cooley.com

December 23, 2022

Marker Therapeutics, Inc.  
4551 Kennedy Commerce Dr.  
Houston, TX 77027

Ladies and Gentlemen:

You have requested our opinion, as counsel to Marker Therapeutics, Inc., a Delaware corporation (the "**Company**"), with respect to certain matters in connection with the resale by the Purchaser (as defined below) of (i) 1,804,098 shares (the "**Commitment Shares**") of the Company's common stock, par value \$0.001 per share ("**Common Stock**"), and (ii) additional shares of Common Stock having aggregate sales proceeds of up to \$25,000,000 (the "**Purchase Shares**" and, together with the Commitment Shares, the "**Shares**"), pursuant to a Registration Statement on Form S-1 (the "**Registration Statement**"), filed with the Securities and Exchange Commission (the "**SEC**") under the Securities Act of 1933, as amended (the "**Securities Act**"), and the related prospectus contained therein (the "**Prospectus**"). The Commitment Shares have been issued and the Purchase Shares are to be sold by the Company in accordance with a Purchase Agreement, dated December 12, 2022 (the "**Agreement**"), between the Company and Lincoln Park Capital Fund, LLC (the "**Purchaser**"), as described in the Prospectus.

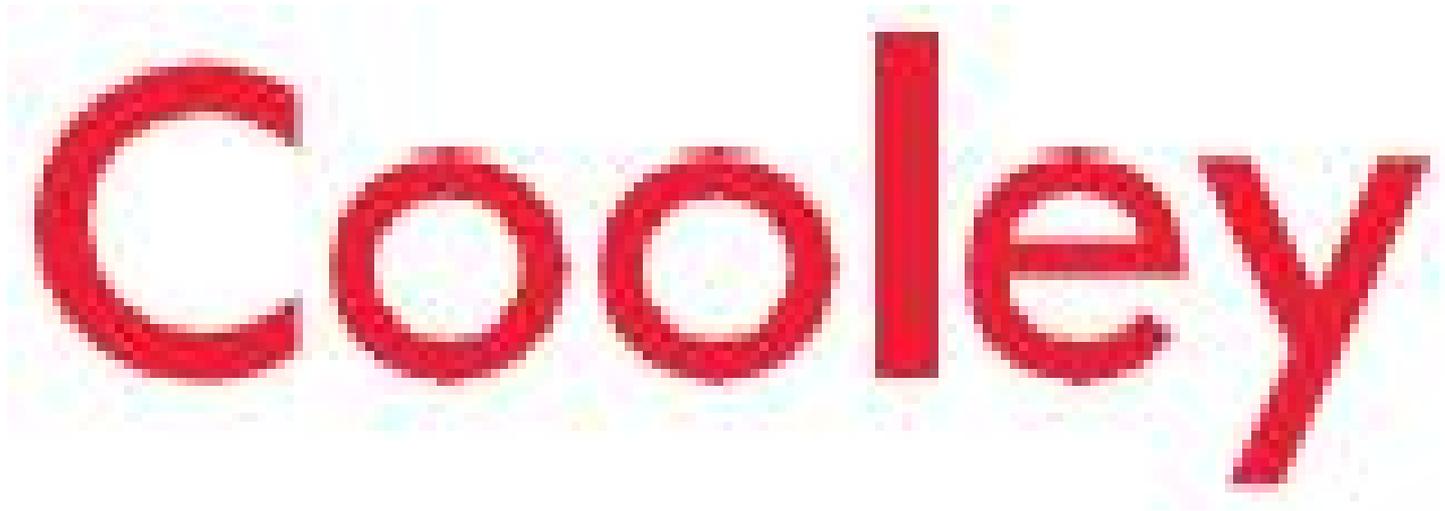
In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, the Agreement, the Company's certificate of incorporation and bylaws, each as currently in effect, and originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

We have assumed (i) that each sale of Purchase Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the "**DGCL**"), (ii) that no more than 23,966,892 Purchase Shares will be sold under the Agreement and (iii) that the price at which the Purchase Shares are sold will equal or exceed the par value of the Shares. We express no opinion to the extent that future issuances of securities of the Company, anti-dilution adjustments to outstanding securities of the Company and/or other matters cause the number of shares issuable under the Agreement to be available for issuance by the Company.

Our opinion herein is expressed solely with respect to the DGCL. Our opinion is based on these laws as in effect on the date hereof. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

Cooley LLP 1299 Pennsylvania Avenue NW STE 700  
Washington, DC 20004-2400

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Marker Therapeutics, Inc.  
Page Two

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Commitment Shares are validly issued, fully paid and nonassessable and (ii) the Purchase Shares, when sold and issued against payment therefor in accordance with the Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

**COOLEY LLP**

By: /s/ Madison A. Jones  
Madison A. Jones

Cooley LLP 1299 Pennsylvania Avenue NW STE 700  
Washington, DC 20004-2400

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INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Marker Therapeutics, Inc. on Form S-1 of our report dated March 17, 2022, with respect to our audits of the consolidated financial statements of Marker Therapeutics, Inc. as of and for the years ended December 31, 2021 and 2020, which report is included in the Annual Report on Form 10-K (which contains an explanatory paragraph relating to substantial doubt about the ability of Marker Therapeutics, Inc. to continue as going concern as described in Note 2 to the consolidated financial statements) of Marker Therapeutics for the year ended December 31, 2021. We also consent to the reference to our Firm under the heading "Experts" in such prospectus, which is part of this Registration Statement.

/s/ Marcum LLP

Marcum LLP  
Houston, Texas  
December 23, 2022

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## Calculation of Filing Fee Tables

**Form S-1**  
(Form Type)**Marker Therapeutics, Inc.**

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.001 par value per share, Total Offering Amount	457(c)	25,770,990	\$ 0.279 <sup>(2)</sup>	\$ 7,190,106.21	0.00011020	\$ 792.35
	Total Offering Amounts				\$ 7,190,106.21		—
	Total Fees Previously Paid						—
	Total Fee Offsets						—
	Net Fee Due						\$ 792.35

- (1) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of common stock that become issuable pursuant to that certain purchase agreement by and between Marker Therapeutics, Inc. (the “Registrant”) and Lincoln Park Capital Fund, LLC (the “Selling Stockholder”) dated as of December 12, 2022 (the “Purchase Agreement”) by reason of any stock dividend, stock split, recapitalization, or other similar transaction effected that results in an increase to the number of outstanding shares of the common stock, as applicable. Includes 1,804,098 shares of common stock previously issued by the Registrant to the Selling Stockholder and 90,000,000 shares of Common Stock that are available to be issued and sold by the Registrant to the Selling Stockholder from time to time at the Registrant’s election pursuant to the Purchase Agreement, subject to satisfaction of the conditions set forth therein.
- (2) Estimated pursuant to Rules 457(c) under the Securities Act, solely for the purposes of calculating the registration fee and based on the average of the high and low prices of the Registrant’s common stock as reported on The Nasdaq Capital Market on December 16, 2022, which date is within five business days prior to the filing of this Registration Statement.