

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

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

PASITHEA THERAPEUTICS CORP.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

001-40804

(Primary Standard Industrial
Classification Code Number)

85-1591963

(I.R.S. Employer
Identification No.)

1111 Lincoln Road, Suite 500
Miami Beach, Florida 33139
Telephone: (786) 977-3380

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

Tiago Reis Marques
Chief Executive Officer
1111 Lincoln Road, Suite 500
Miami Beach, Florida 33139
(786) 977-3380

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

Please send copies of all communications to:

James O'Grady, Esq.
Lowenstein Sandler LLP
1251 Avenue of the Americas
New York, New York 10020
Telephone: (212) 262-6700

Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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 that 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 Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

PRELIMINARY PROSPECTUS

Subject to Completion

Dated: , 2025

The information contained 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 and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.



Up to Shares of Common Stock

Pre-Funded Warrants to Purchase up to Shares of Common Stock

Common Warrants to Purchase up to Shares of Common Stock

Shares of Common Stock underlying Pre-Funded Warrants and Common Warrants

We are offering shares of common stock, together with warrants to purchase shares of common stock, each a Common Warrant, at an assumed combined public offering price of \$ per share and Common Warrant, which is equal to the closing price per share of our common stock on The Nasdaq Capital Market (“Nasdaq”), on , 2025 pursuant to this prospectus. The shares of common stock and Common Warrants will be separately issued, but must be purchased together in this offering. Each share of common stock is being sold together with one Common Warrant to purchase one share of common stock. Each Common Warrant will have an exercise price of \$ per share (representing 100% of the combined price at which a share of common stock and accompanying Common Warrant are sold to the public in this offering), will expire years from the date of issuance and will be exercisable beginning on the effective date of stockholder approval of the issuance of the shares upon exercise of the Common Warrants (“Warrant Stockholder Approval”); provided, however, if the Pricing Conditions (as defined below) are met, the Common Warrants will be exercisable upon issuance (the “Initial Exercise Date”). As used herein, “Pricing Conditions” means that the combined offering price per share and accompanying Common Warrant is such that Warrant Stockholder Approval is not required under the rules of The Nasdaq Stock Market LLC (“Nasdaq”) because either (i) the offering is an at-the-market offering under Nasdaq rules and such price equals or exceeds the sum of (a) the applicable “Minimum Price” per share under Nasdaq Rule 5635(d) plus (b) \$0.125 per whole share of common stock underlying each Common Warrant or (ii) the offering is a discounted offering where the pricing and discount (including attributing a value of \$0.125 per whole share underlying each Common Warrant) meet the pricing requirements under Nasdaq’s rules.

We are also offering pre-funded warrants, or Pre-Funded Warrants, to purchase up to an aggregate of shares of common stock to those purchasers whose purchase of shares of common stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering in lieu of the shares of our common stock that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%). Each Pre-Funded Warrant will be exercisable for one share of common stock at an exercise price of \$0.001 per share. Each Pre-Funded Warrant is being issued together with the same Common Warrant described above being issued with each share common stock. The assumed combined public offering price for each such Pre-Funded Warrant, together with the Common Warrant, is \$, which is equal to the closing price of our common stock on Nasdaq on , 2025, less the \$0.001 per share exercise price of each such Pre-Funded Warrant. Each Pre-Funded Warrant will be exercisable upon issuance and will expire when exercised in full. The Pre-Funded Warrants and Common Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. This offering also relates to the shares of common stock issuable upon the exercise of the Pre-Funded Warrants and the Common Warrants.

This offering will terminate on , unless we decide to terminate the offering (which we may do at any time in our discretion) prior to that date. We will have one closing for all the securities purchased in this offering. The combined public offering price per share (or Pre-Funded Warrant) and Common Warrant will be fixed for the duration of this offering.

We have engaged , or the placement agent, to act as our exclusive placement agent in connection with this offering. The placement agent has agreed to use its reasonable best efforts to arrange for the sale of the securities offered by this prospectus. The placement agent is not purchasing or selling any of the securities we are offering and the placement agent is not required to arrange the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay to the placement agent the placement agent fees set forth in the table below, which assumes that we sell all of the securities offered by this prospectus. There is no arrangement for funds to be received in escrow, trust or similar arrangement. There is no minimum offering requirement. We will bear all costs associated with the offering. See “Plan of Distribution” on page 17 of this prospectus for more information regarding these arrangements.

Our common stock and certain of our outstanding warrants are currently listed on Nasdaq under the symbol “KTTA” and “KTTAW,” respectively. On March , 2025, the closing price of our common stock on Nasdaq was \$ per share. All share, Common Warrant, and Pre-Funded Warrant numbers are based on an assumed combined public offering price of \$ per share and accompanying Common Warrant and \$ per Pre-Funded Warrant and the accompanying Common Warrant. There is no established public trading market for the Pre-Funded Warrants or Common Warrants that are part of this offering, and we do not expect a market to develop. We do not intend to apply for listing of the Pre-Funded Warrants or Common Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Pre-Funded Warrants and Common Warrants will be limited.

Certain information in this prospectus is based on an assumed combined public offering price of \$ per share and accompanying Common Warrant, the last reported sale price of our common stock on Nasdaq on , 2025 (or assumed combined public offering price of \$ per Pre-Funded Warrant and accompanying Common Warrant). The actual combined public offering price per share and Common Warrant and the actual combined public offering price per Pre-Funded Warrant and Common Warrant, as the case may be, will be determined between us, the placement agent and investors in this offering based on market conditions at the time of pricing and may be at a discount to the current market price of our common stock. Therefore, the recent market price used throughout this prospectus may not be indicative of the final offering price.

You should read this prospectus, together with additional information described under the headings “Information Incorporated by Reference” and “Where You Can Find More Information,” carefully before you invest in any of our securities.

We are an “emerging growth company” as that term is used in the Jumpstart Our Business Startups Act of 2012 and a “smaller reporting company”, and as such, we have elected to take advantage of certain reduced public company reporting requirements for this prospectus and future filings. Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page 6 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities. See “Prospectus Summary — Implications of Being an Emerging Growth Company” and “Prospectus Summary — Implications of Being a Smaller Reporting Company.”

Investing in our securities involves a high degree of risk. See the section titled “Risk Factors” beginning on page6 of this prospectus and in the documents incorporated by reference into this prospectus for a discussion of risks that should be considered in connection with an investment in our securities.

	Per Share and Accompanying Common Warrant	Per Pre-Funded Warrant and Accompanying Common Warrant	Total
Public offering price	\$	\$	\$
Placement Agent Fees (1)	\$	\$	\$
Proceeds to us, before expenses (2)	\$	\$	\$

- (1) We have also agreed to reimburse the placement agent for certain of its offering related expenses. In addition, we have agreed to issue the placement agent or its designees warrants to purchase a number of shares of common stock equal to 7% of the shares of common stock sold in this offering (including the shares of common stock issuable upon the exercise of the Pre-Funded Warrants), at an exercise price of \$ per share, which represents 125% of the public offering price per share and accompanying Common Warrant. The registration statement of which this prospectus forms a part also registers the offer and sale of these placement agent warrants and the shares of common stock issuable upon exercise of these placement agent warrants. For a description of compensation to be received by the placement agent, see “Plan of Distribution” for more information.
- (2) Because there is no minimum number of securities or amount of proceeds required as a condition to closing in this offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above. For more information, see “Plan of Distribution.”

The delivery of the shares of common stock and any Pre-Funded Warrants and Common Warrants to purchasers is expected to be made on or about , 2025, subject to satisfaction of customary closing conditions.

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

The date of this prospectus is , 2025.

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ABOUT THIS PROSPECTUS

We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under “Where You Can Find More Information.” You should carefully read this prospectus as well as additional information described under “Information Incorporated by Reference,” before deciding to invest in our securities.

We have not, and the placement agent has not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The information incorporated by reference or provided in this prospectus contains statistical data and estimates, including those relating to market size and competitive position of the markets in which we participate, that we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believed to be reliable. While we believe our internal company research is reliable and the definitions of our market and industry are appropriate, neither this research nor these definitions have been verified by any independent source.

For investors outside the United States: We have not, and the placement agent has not, 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 the securities and the distribution of this prospectus outside the United States.

This prospectus and the information incorporated by reference into this prospectus contain references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus and the information incorporated by reference into this prospectus, including logos, artwork, and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other company.

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

Except for historical information, this prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and

Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as “may,” “can,” “anticipate,” “assume,” “should,” “indicate,” “would,” “believe,” “contemplate,” “expect,” “seek,” “estimate,” “continue,” “plan,” “point to,” “project,” “predict,” “could,” “intend,” “target,” “potential” and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our lack of operating history;
- the expectation that we will incur significant operating losses for the foreseeable future and will need significant additional capital;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our plans to develop and commercialize our product candidates involves a lengthy and expensive process, with an uncertain outcome;
- the initiation, enrollment, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available;
- the timing of interim data and final results from our clinical trials for PAS-004;
- the potential safety and efficacy of our product candidates and the therapeutic implications of clinical and preclinical data;
- potential impacts of increased trade tariffs, import quotas or other trade restrictions or measures taken by the United States and other countries, including the recent and potential changes in U.S. trade policies that may be made by the Trump presidential administration;
- the timing and focus of our future preclinical studies and clinical trials, and the reporting of data from those studies and trials;
- the size of the market opportunity for our future product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting;
- the success of competing therapies that are or may become available;

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- the beneficial characteristics, safety, efficacy and therapeutic effects of our future product candidates;
- our ability to obtain and maintain regulatory approval of our future product candidates;
- our plans relating to the further development of our future product candidates, including additional disease states or indications we may pursue;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- our dependence on third parties;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- our plans and ability to obtain or protect intellectual property rights, including extensions of patent terms where available and our ability to avoid infringing the intellectual property rights of others;
- our financial performance and sustaining an active trading market for our common stock and our existing publicly traded warrants;
- our ability to restructure our operations to comply with any potential future changes in government regulation;
- the impact of global economic and market conditions and political developments on our business, including, among others, rising inflation and capital market disruptions, economic sanctions, bank failures, regional conflicts around the world, and economic slowdowns or recessions that may result from such developments which could harm our research and development efforts as well as the value of our common stock and our ability to access capital markets; and
- other factors discussed in our most recent Annual Report on Form 10-K.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in such forward-looking statements. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. You should refer to the “Risk Factors” section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. You should review the factors and risks and other information we describe in the reports we will file from time to time with the Securities and Exchange Commission (the “SEC”) after the date of this prospectus.

All forward-looking statements are expressly qualified in their entirety by this cautionary note. You are cautioned to not place undue reliance on any forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference into this prospectus. You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We have no obligation, and expressly disclaims any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

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PROSPECTUS SUMMARY

This summary highlights information about our company, this offering and information contained in greater detail in other parts of this prospectus or incorporated by reference into this prospectus from our filings with the SEC listed in the section titled “Information Incorporated by Reference.” Because it is only a summary, it does not contain all of the information that you should consider before purchasing our securities in this offering and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere or incorporated by reference into this prospectus. You should read the entire prospectus, the registration statement of which this prospectus is a part, and the information incorporated by reference into this prospectus in their entirety, including the “Risk Factors” and our financial statements and the related notes incorporated by reference into this prospectus, before purchasing our securities in this offering. Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to “Pasithea Therapeutics” “the Company,” “we,” “us” and “our” refer to Pasithea Therapeutics Corp.

Corporate Overview

We are a clinical-stage biotechnology company focused on the discovery, research and development of innovative treatments for central nervous system (CNS) disorders and other diseases, including RASopathies and certain cancers.

We are advancing a pipeline of three therapeutic product candidates, with a focus on our lead product candidate, PAS-004, a next-generation macrocyclic (as defined below) mitogen-activated protein kinase, or MEK inhibitor, that we believe may address the limitations and liabilities associated with existing drugs with a similar mechanism of action. PAS-004 is a small molecule allosteric inhibitor of MEK 1 and 2 for potential use in the treatment of a range of RASopathies, including neurofibromatosis type 1 (“NF1”), a number of MAPK pathway driven tumors, such as BRAFv600 and BRAF fusion tumors, among other indications including ETS2 driven diseases, such as inflammatory bowel disease, primary sclerosing cholangitis and ankylosing spondylitis.

In December 2023, the FDA cleared our Investigational New Drug application (the “IND”) for PAS-004 and we received a study may proceed letter for our first-in-human Phase 1 multicenter, open-label trial of PAS-004 in patients with MAPK pathway-driven advanced tumors with a documented RAS, NF1 or RAF mutation or patients who have failed BRAF/MEK inhibition (the “FIH Phase 1 Dose Escalation Study”). We are currently conducting the FIH Phase 1 Dose Escalation Study at four clinical sites in the U.S. and three sites in Eastern Europe. The primary objective of the FIH Phase 1 Dose Escalation Study is to assess the safety and tolerability of PAS-004 when administered as a single dose (day 1) and as multiple doses (28-day treatment cycles). Secondary objectives are (i) to characterize the PK profile of PAS-004 when administered as a single dose and as multiple doses, (ii) to evaluate the pharmacodynamics effect of PAS-004, (iii) to evaluate the preliminary anticancer activity (efficacy) of PAS-004 per Response Evaluation Criteria in Solid Tumors 1.1 criteria, and (iv) to define the preliminary recommended Phase 2 dose(s) of PAS-004 in adults with MAPK pathway driven advanced solid tumors.

On September 9, 2024, we announced the successful completion of long-term chronic toxicology studies for PAS-004. On September 26, 2024, we announced safety, tolerability, pharmacokinetic (PK) and preliminary efficacy data from the first two cohorts of patients in our FIH Phase 1 Dose Escalation Study. To date, we have completed dosing of a total of 17 patients through cohort 4 (15 mg capsule), including cohort 4b (4 mg tablet) and are currently dosing four patients in cohort 5 (22 mg capsule). We have observed no dose limiting toxicities, rash or ocular toxicities in any of the cohorts assessed to date, and all treatment related adverse events have been either Grade 1 or Grade 2, which support PAS-004’s potential favorable safety and tolerability profile. Additionally, PAS-004 has demonstrated favorable PK properties, including a long half-life of approximately 60 hours, a low peak to trough (C_{max} to C_{min}) ratio as compared to other FDA approved MEK inhibitors, and linear pharmacokinetics.

PAS-004 has received orphan-drug designation from the FDA for the treatment of NF1. Our clinical development plan for PAS-004 is to advance PAS-004 into a Phase 1/1b clinical trial in adult NF1-PN patients followed by pediatric NF1-PN patients and ultimately complete registrational clinical trials in these patient populations, as they represent the initial indication for which we plan to seek marketing approval for PAS-004.

Our remaining two programs, PAS-003 and PAS-001, are in the earlier stages of development and are based on novel targets for the treatment of CNS disorders. PAS-003 is being developed for amyotrophic lateral sclerosis (ALS), while PAS-001 is targeted for schizophrenia.

Our PAS-003 program aims to develop a proprietary humanized monoclonal antibody (“mAb”) with a mechanism-of-action targeting $\alpha 5 \beta 1$ integrin for the treatment of ALS and potentially address other CNS disorders, such as Multiple Sclerosis (MS) and stroke. We believe targeting $\alpha 5 \beta 1$ integrin may have a beneficial impact on disease due to modulation of multiple cell types and mechanisms involved in neuroinflammation, which occurs in ALS. We acquired PAS-003 in connection with our acquisition of Alpha-5 Integrin, LLC, a privately held biotechnology company, in June 2022.

In November 2023, we announced that we selected our PAS-003 lead development candidate, a humanized monoclonal antibody with optimal properties that targets $\alpha 5 \beta 1$ integrin for the treatment of both sporadic and familial ALS. PAS-003 is now ready for manufacturing and IND-enabling studies.

Our PAS-001 discovery program aims to develop a brain penetrant small molecule targeting the complement component 4A (“C4A”) for the treatment of schizophrenia. Recent findings implicate C4A in synaptic loss (fewer connections between nerve cells), which has been shown to occur in schizophrenia. In humans, structural variation in the complement 4 gene (C4) is an important genetic risk factor for schizophrenia.

During the year ended December 31, 2023, we determined to cease further development of our PAS-002 program for multiple sclerosis (“MS”) due to several factors including the significant capital, resources and time required to develop the program, and the current and projected availability of effective treatment options for MS patients, among others.

During the year ended December 31, 2023, we discontinued our support services to anti-depression clinics in the U.K. and related at-home services in New York, NY. In addition, we discontinued our clinical operations in Los Angeles, CA and disposed of the related property. Accordingly, we currently have one reportable segment, “Therapeutics,” related to the research and development of our therapeutic product candidates.

Private Placement

On September 26, 2024, we entered into a securities purchase agreement (the “Private Placement”) with an institutional investor, pursuant to which we agreed to sell pre-funded warrants to purchase up to an aggregate of 1,219,513 shares of our common stock at an exercise price of \$0.001 per share, Series A warrants to purchase up to an aggregate of 1,219,513 shares of our common stock at an exercise price of \$3.85 per share, and Series B warrants to purchase up to an aggregate of 1,219,513 shares of our common stock with an exercise price of \$3.85 per share. The combined purchase price per pre-funded warrant and accompanying warrants was \$4.099. Aggregate gross proceeds from the Private Placement were approximately \$4.5 million. The Private Placement closed on September 30, 2024.

Reverse Stock Split

On December 28, 2023, we filed a Certificate of Amendment to our Certificate of Incorporation (as defined below) reflecting a one-for-20 reverse stock split of our issued and outstanding shares of common stock which became effective at 12:01 a.m. Eastern Time on January 2, 2024 (the “Reverse Stock Split”). As a result of the Reverse Stock Split, every 20 shares of common stock issued and outstanding were converted into one share of Common Stock, with a corresponding reduction in the number of authorized shares of common stock from 495,000,000 to 100,000,000. The Reverse Stock Split affected all stockholders uniformly and did not alter any stockholder’s percentage interest in our equity, except to the extent that the Reverse Stock Split resulted in some stockholders owning a fractional share. No fractional shares were issued in connection with the Reverse Stock Split and stockholders who were otherwise entitled to receive a fractional share instead received a cash payment. All outstanding securities entitling their holders to purchase shares of common stock or acquire shares of common stock, including stock options, convertible debt and warrants, were adjusted as a result of the Reverse Stock Split, as required by the terms of those securities. Unless otherwise noted, the share and per share information in this prospectus reflects the Reverse Stock Split.

Implications of Being an Emerging Growth Company

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earliest to occur of: the last day of the fiscal year in which we have more than \$1.235 billion in annual revenues; the date we qualify as a “large accelerated filer”; the issuance, in any three-year period, by us of more than \$1.0 billion in non-convertible debt securities; and the last day of the fiscal year ending after the fifth anniversary of our first sale of common equity securities pursuant to a U.S. registration.

As an emerging growth company, we may take advantage of certain exemptions from various reporting requirements that are applicable to other publicly traded entities that are not emerging growth companies. These exemptions include: (i) the option to present only two years of audited financial statements and related discussion in the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our filings with the SEC; (ii) not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002; (iii) not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board, or PCAOB, regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements (i.e., an auditor discussion and analysis); (iv) not being required to submit certain executive compensation matters to shareholder advisory votes, such as “say-on-pay,” “say-on-frequency,” and “say-on-golden parachutes”; and (v) not being required to disclose certain executive compensation related items such as the correlation between executive compensation and performance and comparisons of the chief executive officer’s compensation to median employee compensation.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of any fiscal year for so long as either (1) the market value of our shares of common stock held by non-affiliates does not equal or exceed \$250.0 million as of the prior June 30th, or (2) our annual revenues did not equal or exceed \$100.0 million during such completed fiscal year and the market value of our shares of common stock held by non-affiliates did not equal or exceed \$700.0 million as of the prior June 30th. To the extent we take advantage of any reduced disclosure obligations, it may make comparison of our financial statements with other public companies difficult or impossible.

Corporate Information

We were formed as a Delaware corporation in May 2020.

“Pasithea” and our other common law trademarks, service marks or trade names appearing herein are the property of Pasithea Therapeutics Corp. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Our mailing address is 1111 Lincoln Road, Suite 500, Miami Beach, FL 33139 and our telephone number is (786) 977-3380. Our website address is www.pasithea.com.

Information contained in, or accessible through, our website does not constitute part of this prospectus or registration statement and inclusions of our website address in this prospectus or registration statement are inactive textual references only. You should not rely on any such information in making your decision whether to purchase our securities.

THE OFFERING

Common Stock to be Offered

shares based on the sale of our common stock at an assumed combined public offering price of \$ per share of common stock and accompanying Common Warrant, which is the closing price of our common stock on , 2025, and no sale of any Pre-Funded Warrants.

Pre-Funded Warrants to be Offered

We are also offering to certain purchasers whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if such purchasers so choose, Pre-Funded Warrants to purchase shares of common stock, in lieu of shares of common stock that would otherwise result in any such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. Each Pre-Funded Warrant will be exercisable for one share of our common stock. The purchase price of each Pre-Funded Warrant and accompanying Common Warrant will equal the price at which the share of common stock and accompanying Common Warrant are being sold to the public in this offering, minus \$0.001, and the exercise price of each Pre-Funded Warrant will be \$0.001 per share. The Pre-Funded Warrants will be exercisable immediately and may be exercised at any time until all of the Pre-Funded Warrants are exercised in full. This offering also relates to the shares of common stock issuable upon exercise of the Pre-Funded Warrants sold in this offering.

For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. Because we will issue a Common Warrant for each share of our common stock and for each Pre-Funded Warrant to purchase one share of our common stock sold in this offering, the number of Common Warrants sold in this offering will not change as a result of a change in the mix of the shares of our common stock and Pre-Funded Warrants sold.

Common Warrants to be Offered

Each share of our common stock and each Pre-Funded Warrant to purchase one share of our common stock is being sold together with a Common Warrant to purchase one share of our common stock.

Each Common Warrant will have an exercise price of \$ per share (representing 100% of the price at which a share of common stock and accompanying Common Warrant are sold to the public in this offering), will expire on the anniversary of the original issuance date and be exercisable beginning on the effective date of Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance.

The shares of common stock and Pre-Funded Warrants, and the accompanying Common Warrants, as the case may be, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the Common Warrants.

Placement Agent Warrants

We have agreed to issue to the placement agent or its designees warrants, or the placement agent warrants, to purchase up to 7% of the aggregate number of shares of common stock sold in this offering (or common stock equivalent but excluding the shares of common stock underlying the Common Warrants (other than the Pre-Funded Warrants) issued in this offering), at an exercise price equal to 125% of the public offering price per share and accompanying Common Warrant to be sold in this offering. The placement agent warrants will be exercisable beginning on the effective date of Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the placement agent warrants will be exercisable upon issuance. The placement agent warrants will expire five years from the commencement of sales under this offering.

Common Stock to be Outstanding Immediately After this Offering⁽¹⁾

shares, (assuming we sell only shares of common stock and no Pre-Funded Warrants and assuming no exercise of the Common Warrants).

Use of Proceeds

We estimate that the net proceeds from this offering will be approximately \$ million, based on an assumed combined public offering price of \$ per share of common stock and accompanying Common Warrants which was the closing price of our common stock on Nasdaq on , 2025, after deducting the placement agent fees and estimated offering expenses payable by us, and assuming we sell only shares of common stock and no Pre-Funded Warrants and excluding the proceeds, if any, from the exercise of the Common Warrants in this offering.

We currently intend to use the net proceeds from the offering for general corporate purposes, which includes, without limitation, ongoing research and pre-clinical studies, clinical trials, the development of new biological and pharmaceutical technologies, investing in or acquiring companies that are synergistic with or complementary to our technologies, licensing activities related to our current and future product candidates, and to the development of emerging technologies, investing in or acquiring companies that are developing emerging technologies, licensing activities, or the acquisition of other businesses and working capital. See "Use of Proceeds" for additional information.

Risk Factors

An investment in our securities involves a high degree of risk. See "Risk Factors" beginning on page 6 of this prospectus and the other information included and incorporated by reference in this prospectus for a discussion of the risk factors you should carefully consider before deciding to invest in our securities.

National Securities Exchange Listing

Our common stock and certain of our outstanding warrants are currently listed on Nasdaq under the symbols "KTTA" and "KTTAW," respectively. There is no established public trading market for the Pre-Funded Warrants or Common Warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the Pre-Funded Warrants or Common Warrants on the Nasdaq Capital Market or on any other national securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Pre-Funded Warrants and Common Warrants will be limited.

(1) The above discussion and table are based on 2,705,263 shares outstanding as of March 24, 2025, and excludes:

- 164,846 shares of common stock issuable upon exercise of stock options, at a weighted-average exercise price of \$22.41 per share;
- 3,293,692 shares of common stock issuable upon exercise of currently outstanding warrants, at a weighted-average exercise price of \$15.62 per share;
- 165,875 shares of our common stock that are available for future issuance under our 2023 Stock Incentive Plan (the "2023 Plan") or shares that will become available under our 2023 Plan;
- the shares of common stock issuable upon exercise of the Common Warrants and/or Pre-Funded Warrants to be issued to investors in this offering; and
- the shares of common stock issuable upon the exercise of warrants to be issued to the placement agent or its designees in connection with this offering.

RISK FACTORS

Before purchasing any of the securities you should carefully consider the risk factors set forth below and incorporated by reference in this prospectus from our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, and any subsequent updates described in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as the risks, uncertainties and additional information set forth in our SEC reports on Forms 10-K, 10-Q, and 8-K and in the other documents incorporated by reference in this prospectus. For a description of these reports and documents, and information about where you can find them, see “Additional Information” and “Incorporation of Certain Information By Reference.” Additional risks not presently known or that we presently consider to be immaterial could subsequently materially and adversely affect our financial condition, results of operations, business, and prospects.

We have incurred losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We are not currently profitable, and we may never achieve or sustain profitability.

We have never generated revenue from operations, are unlikely to generate revenues for several years, and are currently operating at a loss and expect our operating costs will increase significantly as we incur costs related to preclinical development, the clinical trials for our drug candidates and to operating as a public company. We expect to incur substantial expenses without corresponding revenues unless and until we are able to obtain regulatory approval and successfully commercialize one or more of our drug candidates. We may never be able to obtain regulatory approval for the marketing of any of our drug candidates in any indication in the United States or internationally. Even if we are able to commercialize our drug candidates, there can be no assurance that we will generate significant revenues or ever achieve profitability. We have incurred losses in each year since we commenced operations. We incurred net losses of approximately \$13.9 million and approximately \$16.0 million for the years ended December 31, 2024, and 2023, respectively. As of December 31, 2024, we had an accumulated deficit of approximately \$49.6 million. The size of our future net losses will depend, in part, on our future expenses and our ability to generate revenue, if any. Revenue from our current and potential future collaborations is uncertain because milestones or other contingent payments under our agreements may not be achieved or received.

As of December 31, 2024, we had capital resources consisting of cash and cash equivalents of \$6.9 million. We will continue to expend substantial cash resources for the foreseeable future for the clinical development of our product candidates and development of any other indications and product candidates we may choose to pursue. These expenditures will include costs associated with research and development, conducting preclinical studies and clinical trials, manufacturing and supply, as well as marketing and selling any products approved for sale. In particular, our Phase 3 clinical studies for our product candidates will require substantial funds to complete. Because the conduct and results of any clinical trial are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our current and any future product candidates.

We are uncertain when or if we will be able to achieve or sustain profitability. If we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Failure to become and remain profitable would impair our ability to sustain operations and adversely affect the price of our securities and our ability to raise capital.

We will require additional capital to fund our operations, and if we fail to obtain necessary financing, we may not be able to complete the development and commercialization of our drugs.

We believe that our existing cash and cash equivalents, together with interest or dividends thereon, before giving effect to the proceeds of this offering, will be sufficient to fund our operations into June 2025. We have based these estimates, however, on assumptions that may prove to be wrong, and we could spend our available capital resources much faster than we currently expect or require more capital to fund our operations than we currently expect. Our currently anticipated expenditures for the development of our product candidates, PAS-004, PAS-003, and PAS-001, exceed our existing cash resources. Even after the completion of this offering, we will need to raise additional capital to fund our operations and continue to support our planned development and commercialization activities.

The report of our independent registered public accounting firms for the fiscal year ended December 31, 2024 contains an explanatory paragraph regarding substantial doubt about our ability to continue as a going concern.

Due to the uncertainty of our ability to meet our current operating and capital expenses, in its report on our audited annual financial statements as of and for the year ended December 31, 2024, our independent audit firm included an explanatory paragraph regarding concerns about our ability to continue as a going concern. Substantial doubt about our ability to continue as a going concern may materially and adversely affect the price per share of our common stock and certain of our warrants and we may have a more difficult time obtaining financing. Further, the perception that we may be unable to continue as a going concern may impede our ability to raise additional funds or operate our business due to concerns regarding our ability to discharge our contractual obligations. In addition, as an “best efforts offering” in which no minimum number or dollar amount of securities is required to be sold, we may be unable to raise sufficient capital to extend our cash runway beyond June 2025.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds, including for any of the purposes described in the section of this prospectus titled “Use of Proceeds”. 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 net proceeds are being used appropriately. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our securities to decline and delay the development of our product candidates. Pending the application of these funds, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

You will experience immediate and substantial dilution in the net tangible book value of the shares you purchase in this offering and may experience additional dilution in the future.

The combined public offering price per share of common stock and related Common Warrant, and the combined public offering price of each Pre-Funded Warrant and related Common Warrant, will be substantially higher than the as adjusted net tangible book value per share of our common stock after giving effect to this offering.

Assuming the sale of shares of our common stock and Common Warrants to purchase up to shares of common stock at an assumed combined public offering price of \$ per share and related Common Warrant, the closing sale price per share of our common stock on Nasdaq on March , 2025, assuming no sale of any Pre-Funded Warrants in this offering, no exercise of the Common Warrants being offered in this offering and after deducting the placement agent fees and commissions and estimated offering expenses payable by us, you will incur immediate dilution of approximately \$ per share. As a result of the dilution in net tangible book value to investors purchasing securities in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of the liquidation of our company. See the section titled “Dilution” below for a more detailed discussion of the dilution you will incur if you participate in this offering. To the extent shares are issued under outstanding options and warrants at exercise prices lower than the public offering price of our common stock in this offering, including the shares underlying the Pre-Funded Warrants, holders will incur further dilution.

There is no public market for the Common Warrants or Pre-Funded Warrants being offered by us in this offering.

There is no established public trading market for the Common Warrants or the Pre-Funded Warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the Common Warrants or Pre-Funded Warrants on the Nasdaq Capital Market or any other national securities exchange or other nationally recognized trading system. Without an active market, the liquidity of the Common Warrants and Pre-Funded Warrants will be limited.

The Common Warrants and Pre-Funded Warrants are speculative in nature.

The Common Warrants and Pre-Funded Warrants offered hereby do not confer any rights of share of common stock ownership on their holders, such as voting rights, but rather merely represent the right to acquire shares of common stock at a fixed price. Specifically, commencing on the date of issuance, holders of the Common Warrants may acquire the shares of common stock issuable upon exercise of such warrants at an exercise price of \$ _____ per share of common stock, and holders of the Pre-Funded Warrants may acquire the shares of common stock issuable upon exercise of such warrants at an exercise price of \$0.001 per share of common stock. Moreover, following this offering, the market value of the Common Warrants and Pre-Funded Warrants is uncertain and there can be no assurance that the market value of the Common Warrants or Pre-Funded Warrants will equal or exceed their respective public offering prices. There can be no assurance that the market price of the shares of common stock will ever equal or exceed the exercise price of the Common Warrants or Pre-Funded Warrants, and consequently, whether it will ever be profitable for holders of Common Warrants to exercise the Common Warrants or for holders of the Pre-Funded Warrants to exercise the Pre-Funded Warrants.

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

Until holders of the Common Warrants and the Pre-Funded Warrants acquire shares of our common stock upon exercise thereof, such holders will have no rights with respect to the shares of our common stock underlying such warrants, except to the extent that holders of such Common Warrants and Pre-Funded Warrants will have certain rights to participate in distributions or dividends paid on our common stock as set forth in the Common Warrants and the Pre-Funded Warrants. Upon exercise of the Common Warrants and the Pre-Funded Warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

The Common Warrants are not exercisable until the Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance.

The Common Warrants will have an exercise price of \$ _____ per share and will be exercisable beginning on the effective date of the Warrant Stockholder Approval;provided, however, that if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance (the “Initial Exercise Date”). The Common Warrants will expire on _____-year anniversary of the Initial Exercise Date.

While we intend to promptly seek Warrant Stockholder Approval, there is no guarantee that the Warrant Stockholder Approval will ever be obtained. If we are unable to obtain the Warrant Stockholder Approval, the Common Warrants may have no value.

Purchasers who purchase our securities in this offering pursuant to a securities purchase agreement may have rights not available to purchasers who purchase without the benefit of a securities purchase agreement.

In addition to rights and remedies available to all purchasers in this offering under federal securities and state law, the purchasers who enter into a securities purchase agreement will also be able to bring claims of breach of contract against us. The ability to pursue a claim for breach of contract provides those investors with the means to enforce the covenants uniquely available to them under the securities purchase agreement including, but not limited to: (i) timely delivery of securities; (ii) agreement to not enter into variable rate financings for one year from closing, subject to certain exceptions; (iii) agreement to not enter into any financings for 90 days from closing, subject to certain exceptions; and (iv) indemnification for breach of contract.

This is a best efforts offering, with no minimum amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans, including our near-term business plans.

The placement agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. There is no required minimum number of securities that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to support our continued operations, including our near-term continued operations. Thus, we may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds, which may not be available or available on terms acceptable to us.

Our failure to maintain compliance with Nasdaq’s continued listing requirements could result in the delisting of our securities.

Our common stock is currently listed on the Nasdaq Capital Market. Continued listing of a security on Nasdaq Capital Market is conditioned upon compliance with various continued listing standards. In the past, we have received notices from Nasdaq’s Listing Qualifications Department indicating that we had not complied with certain of the Nasdaq Capital Market’s continued listing standards. While we have regained compliance for each instance, there can be no assurance that we will continue to maintain compliance with the Nasdaq listing requirements. A delisting could substantially decrease trading in our common stock, adversely affect the market liquidity of our common stock as a result of the loss of market efficiencies associated with Nasdaq and the loss of federal preemption of state securities laws, adversely affect our ability to obtain financing on acceptable terms, if at all, and may result in the potential loss of confidence by investors, suppliers, and employees and lead to fewer business development opportunities. Additionally, the market price of our common stock may decline further, and stockholders may lose some or all of their investment.

In the event of a delisting, we anticipate that we would take actions to restore our compliance with the Nasdaq Capital Market or another national exchange’s listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock to regain listing on the Nasdaq Capital Market, stabilize our market price, improve the liquidity of our common stock, prevent our common stock from dropping below the Nasdaq Capital Market’s minimum bid price requirement, or prevent future non-compliance with the Nasdaq Capital Market or another national securities exchange’s listing requirements.

USE OF PROCEEDS

We estimate that the net proceeds from the offering will be approximately \$ million, assuming a combined public offering price per share of common stock and accompanying Common Warrant of \$, the closing price per share of our common stock on Nasdaq on March , 2025, after deducting the placement agent fees and estimated offering expenses payable by us, assuming no sale of any fixed combinations of Pre-Funded Warrants and Common Warrants offered hereunder and excluding the proceeds, if any, from the exercise of the Common Warrants issued in this offering. If the Common Warrants are exercised in full for cash, the estimated net proceeds will increase to \$. However, because this is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, the placement agent's fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus. In addition, we may receive proceeds from the exercise of the placement agent warrants, to the extent such placement agent warrants are exercised for cash, but we will not receive any proceeds from any sale of the shares underlying the placement agent warrants.

We intend to use the net proceeds from the offering for general corporate purposes, which includes, without limitation, ongoing research and pre-clinical studies, clinical trials, the development of new biological and pharmaceutical technologies, investing in or acquiring companies that are synergistic with or complementary to our technologies, licensing activities related to our current and future product candidates, and to the development of emerging technologies, investing in or acquiring companies that are developing emerging technologies, licensing activities, or the acquisition of other businesses and working capital. These expected uses represent our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of these expenditures will depend on numerous factors, including the development of our current business initiatives. We have no specific acquisition contemplated at this time. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds from this offering. As a result, our management will have broad discretion in the application of the net proceeds from this offering, and the investors will be relying on the judgment of our management regarding the application of the net proceeds from this offering. The amounts and timing of our actual expenditures will depend on numerous factors, including factors described under "Risk Factors" in this prospectus and the documents incorporated by reference herein and therein.

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DILUTION

If you invest in our securities in this offering, your interest will be diluted immediately to the extent of the difference between the public offering price paid by the purchasers of the shares of common stock and Common Warrants sold in this offering and the as-adjusted net tangible book value per shares of common stock after this offering.

The net tangible book value of our common stock as of December 31, 2024, was approximately \$6.2 million, or approximately \$4.45 per share of common stock. Net tangible book value per share represents the amount of our total tangible assets less total liabilities divided by the total number of our shares of common stock outstanding as of December 31, 2024.

After giving effect to the sale by us in this offering of shares of common stock and accompanying Common Warrants at a price per share and accompanying Common Warrant of \$, our as adjusted net tangible book value as of December 31, 2024, would have been approximately \$ million, or approximately \$ per share of common stock. This represents an immediate increase in net tangible book value of approximately \$ per share of common stock to our existing security holders and an immediate dilution in as adjusted net tangible book value of approximately \$ per share of common stock to purchasers of common stock in this offering, as illustrated by the following table:

Assumed public offering price per share and accompanying Common Warrant	\$	
Historical net tangible book value per share as of December 31, 2024	\$	4.45
Increase in net tangible book value per share attributable to new investors	\$	
As adjusted net tangible book value per share as of December 31, 2024 after, giving effect to this offering	\$	
Dilution per share to new investors purchasing common stock in this offering	\$	

In accordance with the rules of the SEC, in the event that the actual combined public offering per share of common stock and accompanying Common Warrant is more or less than the assumed combined public offering price of \$ per share and accompanying Common Warrant (the closing price of our common stock on Nasdaq on March , 2025), the number of shares and/or Pre-Funded Warrants and Common Warrants we sell may be decreased or increased so long as the aggregate offering amount does not exceed the total amount registered on the registration statement of which this prospectus forms a part. Assuming a total offering amount of \$, for every \$0.10 increase in the assumed combined public offering price per share and accompanying Common Warrant, we would sell fewer shares of common stock and/or Pre-Funded Warrants and Common Warrants and for every \$0.10 decrease in the assumed combined public offering price per share and accompanying Common Warrant, we would sell additional shares of common stock and/or Pre-Funded Warrants and Common Warrants. Each \$0.10 increase in the assumed combined public offering price per share and accompanying Common Warrant would increase the as adjusted net tangible book value per share by \$ per share and increase the dilution per share to investors participating in this offering by \$ per share after deducting estimated offering expenses payable by us. Each \$0.10 decrease in the assumed combined public offering price per share and accompanying Common Warrant would decrease the as adjusted net tangible book value per share by \$ per share and decrease the dilution per share to investors participating in this offering by \$ per share, after deducting estimated offering expenses payable by us.

The table and discussion above are based on 1,394,263 shares of common stock outstanding as of December 31, 2024, and excludes:

- 182,034 shares of common stock issuable upon exercise of stock options, at a weighted-average exercise price of \$21.17 per share;
- 3,293,692 shares of common stock issuable upon exercise of then outstanding warrants, at an exercise price of \$15.62 per share;
- 871,000 shares of common stock issuable upon exercise of then outstanding pre-funded warrants issued in the Private Placement;
- 101,609 shares of our common stock that are available for future issuance under our 2023 Plan or shares that will become available under our 2023 Plan;
- the shares of common stock issuable upon exercise of the Common Warrants and any Pre-Funded Warrants issued to the investors in this offering; and
- the shares of common stock issuable upon the exercise of warrants to be issued to the placement agent or its designees in connection with this offering.

The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of shares and Common Warrants that we offer in this offering, and other terms of this offering determined at pricing. Except as indicated otherwise, the discussion and table above each assume (i) no sale of Pre-Funded Warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis, (ii) no exercise of Common Warrants accompanying the shares of common stock sold in this offering, and (iii) no exercise of the warrants to be issued to the placement agent or its designees in connection with this offering.

DESCRIPTION OF CAPITAL STOCK

The following summary of the rights of our capital stock is not complete and is subject to and qualified in its entirety by reference to our Second Amended and Restated Certificate of Incorporation, as amended (“Certificate of Incorporation”), and Second Amended and Restated Bylaws (“Bylaws”), copies of which are filed as exhibits to our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 24, 2025, and the forms of securities, copies of which are filed as exhibits to the registration statement of which this prospectus forms a part, which are incorporated by reference herein.

General

We are authorized to issue an aggregate of 105,000,000 shares. The authorized capital stock is divided into 100,000,000 shares of common stock having a par value of \$0.0001 per share and 5,000,000 shares of preferred stock having a par value of \$0.0001 per share. As of March 24, 2025, there were 2,705,263 shares of common stock outstanding. In addition, as of March 24, 2025, we had outstanding stock options to purchase an aggregate of 164,846 shares of our common stock, at a weighted average exercise price equal to \$22.41 per share. Our authorized but unissued shares of common stock and preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded in the future.

Common Stock

All shares of our common stock are one and the same class, identical in all respects and have equal rights, powers and privileges.

Voting. Except as otherwise provided by law or by the resolution or resolutions providing for the issue of any series of preferred stock, the holders of outstanding shares of common stock have the exclusive right to vote for the election and removal of directors and for all other purposes. On each matter on which holders of common stock are entitled to vote, each outstanding share of such common stock is entitled to one vote.

Dividends. Subject to the rights of the holders of preferred stock, holders of shares of common stock are entitled to receive such dividends and distributions and other distributions of our cash, stock or property when, as and if declared by our board of directors (the “Board”).

Liquidation. Subject to the rights of the holders of preferred stock, shares of common stock are entitled to receive our assets and funds available for distribution in the event of any liquidation, dissolution or winding up of the affairs of us, whether voluntary or involuntary.

Rights and Preferences. Holders of our common stock will have no preemptive, conversion or subscription rights, and there will be no redemption or sinking funds provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of share of any series of our preferred stock that we may designate and issue in the future.

Preferred Stock

Our Board has the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more classes or series. Our Board is able to determine, with respect to any series of preferred stock, the powers (including voting powers), preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions thereof, including, without limitation:

- the designation of the series;
- the number of shares of the series, which our Board may, except where otherwise provided in the preferred stock designation, increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares then outstanding);
- whether dividends, if any, will be cumulative or non-cumulative and the dividend rate of the series;
- the dates at which dividends, if any, will be payable;

- the redemption or repurchase rights and price or prices, if any, for shares of the series;
- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;
- the amounts payable on, and the preferences, if any, of shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding-up of our affairs;
- whether the shares of the series will be convertible into shares of any other class or series, or any other security, of us or any other entity, and, if so, the specification of the other class or series or other security, the conversion price or prices or rate or rates, any rate adjustments, the date or dates as of which the shares will be convertible and all other terms and conditions upon which the conversion may be made;
- restrictions on the issuance of shares of the same series or of any other class or series;
- the voting rights, if any, of the holders of the series; and
- any other powers, preferences and relative, participating, optional or other special rights of each series of preferred stock, and any qualifications, limitations or restrictions thereof, all as may be determined from time to time by our Board and stated in the resolution or resolutions providing for the issuance of such preferred stock.

We could issue a series of preferred stock that could, depending on the terms of the series, impede or discourage an acquisition attempt or other transaction that some, or a majority, of the holders of our common stock might believe to be in their best interests or in which the holders of our common stock might receive a premium over the market price of the shares of our common stock. Additionally, the issuance of preferred stock may adversely affect the rights of holders of our common stock by restricting dividends on the common stock, diluting the voting power of the common stock or subordinating the liquidation rights of the common stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our common stock.

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

Our Certificate of Incorporation, Bylaws and the Delaware General Corporation Law (the “DGCL”) contain provisions that are intended to enhance the likelihood of continuity and stability in the composition of our Board. These provisions are intended to avoid costly takeover battles, reduce our vulnerability to a hostile or abusive change of control and enhance the ability of our Board to maximize stockholder value in connection with any unsolicited offer to acquire us. However, these provisions may have an anti-takeover

effect and may delay, deter or prevent a merger or acquisition of our company by means of a tender offer, a proxy contest or other takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the prevailing market price for the shares of common stock held by stockholders.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the DGCL, 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 stockholder, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

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

- any merger or consolidation involving the corporation and the interested stockholder;
- any merger or consolidation involving the corporation and 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 loss, 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.

Potential Effects of Authorized but Unissued Stock

Pursuant to our Certificate of Incorporation, we have shares of common stock and preferred stock available for future issuance without stockholder approval. We may utilize these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, to facilitate corporate acquisitions or payment as a dividend on the capital stock.

The existence of unissued and unreserved common stock and preferred stock may enable our Board to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, our Board has the discretion to determine designations, rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of each series of preferred stock, all to the fullest extent permissible under the DGCL and subject to any limitations set forth in our Certificate of Incorporation. The purpose of authorizing our Board to issue preferred stock and to determine the rights and preferences applicable to such preferred stock is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible financings, acquisitions and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from acquiring, a majority of our outstanding voting stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is VStock Transfer, LLC.

National Securities Exchange Listing

Our common stock is currently listed on Nasdaq under the symbol “KTTA.”

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering shares of our common stock and Common Warrants to purchase up to shares of common stock. We are also offering Pre-Funded Warrants to those purchasers whose purchase of shares of common stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding shares of common stock following the consummation of this offering in lieu of the shares of common stock that would result in such excess ownership. Each Pre-Funded Warrant will be exercisable for one share of common stock. For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. No warrant for fractional shares of common stock will be issued, rather warrants will be issued only for whole shares of common stock. We are also registering the offer and sale of the shares of common stock issuable from time to time upon exercise of the Pre-Funded Warrants and Common Warrants offered hereby.

Common Stock

The material terms and provisions of our common stock are described under the caption “Description of Capital Stock” in this prospectus.

Common Warrants

The following is a summary of certain terms and provisions of the Common Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Common Warrant, the form of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Common Warrant for a complete description of the terms and conditions of the Common Warrants.

Duration and Exercise Price. Each Common Warrant offered hereby will have an exercise price equal to \$ (representing 100% of the price at which a share of common stock and accompanying Common Warrant are sold to the public in this offering). The Common Warrants will be exercisable beginning on the effective date of Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the Common Warrants will be exercisable upon issuance (the “Initial Exercise Date”). The Common Warrants may be exercised from the Initial Exercise Date until the anniversary of the issuance date. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The Common Warrants will be issued separately from the common stock or Pre-Funded Warrants, respectively, and may be transferred separately immediately thereafter. The Common Warrants will be issued in certificated form only.

We intend to promptly, and in no event later than 90 days after the consummation of this offering, seek stockholder approval for the issuance of shares of common stock issuable upon exercise of the Common Warrants but we cannot assure you that such stockholder approval will be obtained; provided, however, that, if and only if the Pricing Conditions are satisfied, then we will not seek Warrant Stockholder Approval. We have agreed with the investors in this offering that, if we do not obtain stockholder approval for the issuance of the shares of common stock upon exercise of the Common Warrants at the first stockholder meeting for such purpose after this offering, we will call a stockholder meeting every 90 days thereafter until the earlier of the date we obtain such approval or the Common Warrants are no longer outstanding, provided, however, that, if and only if the Pricing Conditions are satisfied, then we will not seek Warrant Stockholder Approval.

Exercisability. The Common Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of such holder’s Common Warrants to the extent that the holder would own more than 4.99% of the outstanding common stock immediately after exercise, except that upon at least 61 days’ prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder’s Common Warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Common Warrants.

Cashless Exercise. If, at the time a holder exercises its Common Warrants, a registration statement registering the issuance or resale of the shares of common stock underlying the Common Warrants under the Securities Act is not then effective or available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Common Warrant.

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Fundamental Transactions. In the event of any fundamental transaction, as described in the Common Warrants and generally including any merger or consolidation with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a Common Warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the Common Warrant is exercisable immediately prior to such event. Notwithstanding the foregoing, in the event of a fundamental transaction, the holders of the Common Warrants have the right to require us or a successor entity to redeem the Common Warrants for cash in the amount of the Black-Scholes Value (as defined in each Common Warrant) of the remaining unexercised portion of the Common Warrants on the date of the consummation of such fundamental transaction, concurrently with or within 30 days following the consummation of a fundamental transaction.

However, in the event of a fundamental transaction which is not in our control, including a fundamental transaction not approved by our board of directors, the holders of the Common Warrants will only be entitled to receive from us or our successor entity, as of the date of consummation of such fundamental transaction the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of the Common Warrant that is being offered and paid to the holders of our common stock in connection with the fundamental transaction, whether that consideration is in the form of cash, stock or any combination of cash and stock, or whether the holders of our common stock are given the choice to receive alternative forms of consideration in connection with the fundamental transaction.

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

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

Trading Market. There is no established trading market for the Common Warrants, and we do not expect an active trading market to develop. We do not intend to apply to list the Common Warrants on the Nasdaq Capital market or any other securities exchange or other trading market. Without a trading market, the liquidity of the Common Warrants will be extremely limited.

Right as a Stockholder. Except as otherwise provided in the Common Warrants or by virtue of the holder’s ownership of shares of our common stock, such holder of Common Warrants does not have the rights or privileges of a holder of our common stock, including any voting rights, until such holder exercises such holder’s Common Warrants.

Waivers and Amendments. No term of the Common Warrants may be amended or waived without the written consent of the majority of the holders of the Common Warrants purchased in this offering.

Pre-Funded Warrants

The following summary of certain terms and provisions of the Pre-Funded Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Pre-Funded Warrant, the form of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

Duration and Exercise Price. Each Pre-Funded Warrant offered hereby will have an initial exercise price per share of common stock equal to \$0.001. The Pre-Funded Warrants will be immediately exercisable and will expire when exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our shares of common stock and the exercise price.

Exercisability. The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would own more than 4.99% of the outstanding shares of common stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of beneficial ownership of outstanding shares after exercising the holder's Pre-Funded Warrants up to 9.99% of the number of our shares of common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. Purchasers of Pre-Funded Warrants in this offering may also elect prior to the issuance of the pre-funded warrants to have the initial exercise limitation set at 9.99% of our outstanding shares of common stock.

Cashless Exercise. In lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the number of shares of common stock determined according to a formula set forth in the Pre-Funded Warrants.

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

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

Trading Market. There is no trading market available for the Pre-Funded Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list the Pre-Funded Warrants on the Nasdaq Capital Market or any other securities exchange or nationally recognized trading market. Without a trading market, the liquidity of the Pre-Funded Warrants will be extremely limited. The shares of common stock issuable upon exercise of the Pre-Funded Warrants are currently traded on Nasdaq.

Right as a Shareholder. Except as otherwise provided in the Pre-Funded Warrants or by virtue of such holder's ownership of shares of common stock, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of our shares of common stock, including any voting rights, until they exercise their Pre-Funded Warrants. The Pre-Funded Warrants will provide that holders have the right to participate in distributions or dividends paid on our shares of common stock.

Fundamental Transaction. In the event of a fundamental transaction, as described in the Pre-Funded Warrants and generally including any reorganization, recapitalization or reclassification of our shares of common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding securities, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding shares of securities, the holders of the Pre-Funded Warrants will be entitled to receive upon exercise of the pre-funded warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Pre-Funded Warrants immediately prior to such fundamental transaction on a net exercise basis.

Placement Agent Warrants

In addition, we have agreed to issue to the placement agent or its designees the placement agent warrants to purchase up to 7% of the aggregate number of shares of common stock sold in this offering (or common stock equivalent but excluding the shares of common stock underlying the Common Warrants (other than Pre-Funded Warrants) issued in this offering), at an exercise price equal to 125% of the public offering price per share of common stock and accompanying Common Warrant to be sold in this offering. The placement agent warrants will be exercisable beginning on the effective date of Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the placement agent warrants will be exercisable upon issuance. The placement agent warrants will expire five years from the commencement of sales under this offering. The placement agent warrants issued in this offering will otherwise have substantially the same terms as the Common Warrants.

PLAN OF DISTRIBUTION

We engaged _____ to act as our exclusive placement agent to solicit offers to purchase the securities offered by this prospectus on a reasonable best efforts basis. _____ is not purchasing or selling any securities, nor are they required to arrange for the purchase and sale of any specific number or dollar amount of securities, other than to use their "reasonable best efforts" to arrange for the sale of the securities by us. Therefore, we may not sell the entire amount of securities being offered.

The terms of this offering are subject to market conditions and negotiations between us, the placement agent and prospective investors. The placement agent will have no authority to bind us by virtue of the engagement letter. This is a best efforts offering and there is no minimum amount of proceeds that is a condition to closing of this offering. Investors purchasing securities offered hereby will have the option to execute a securities purchase agreement with us. In addition to rights and remedies available to all purchasers in this offering under federal securities and state law, the purchasers which enter into a securities purchase agreement will also be able to bring claims of breach of contract against us. _____ may engage one or more sub-agents or selected dealers in connection with the offering. The ability to pursue a claim for breach of contract is material to larger purchasers in this offering as a means to enforce the following covenants uniquely available to them under the securities purchase agreement: (i) a covenant to not enter into variable rate financings for a period of one year following the closing of the offering, subject to an exception; and (ii) a covenant to not enter into any equity financings for _____ days from closing of the offering, subject to certain exceptions.

The nature of the representations, warranties and covenants in the securities purchase agreements will include:

- standard and customary issuer representations and warranties on matters such as due organization, qualification, authorization, no conflict, no governmental filings required, currentness and accuracy of SEC filings, absence of litigation, labor or other compliance issues, environmental, intellectual property and title matters and compliance with various laws such as the Foreign Corrupt Practices Act; and
- covenants regarding matters such as registration of the offering of the warrant shares, the filing of a Current Report on Form 8-K to disclose entering into these securities purchase agreements, the providing of material nonpublic information, use of proceeds, indemnification of purchasers, reservation and listing of common stock, and prohibitions on subsequent equity sales for _____ days.

Delivery of the securities offered hereby is expected to occur on or about _____, 2025, subject to satisfaction of certain customary closing conditions.

Fees and Expenses

The following table shows the per share and accompanying Common Warrant, and per Pre-Funded Warrant and accompanying Common Warrant, and total placement agent fees we will pay in connection with the sale of the securities in this offering.

Per Pre-Funded Warrant and Common Warrant placement agent cash fees

Total

\$

\$

We have agreed to pay the placement agent a total cash fee equal to _____ % of the aggregate gross proceeds raised in the offering and a management fee equal to _____ % of the gross proceeds raised in this offering. We will reimburse the placement agent a nonaccountable expense allowance of \$ _____, its legal fees and expenses in an amount up to \$ _____ and its clearing expense in an amount up to \$ _____ in connection with this offering. We estimate the total offering expenses of this offering that will be payable by us, excluding the placement agent fees and expenses, will be approximately \$ million. After deducting the placement agent fees and our estimated offering expenses, we expect the net proceeds from this offering to be approximately \$ million.

Placement Agent Warrants

In addition, we have agreed to issue the placement agent warrants to the placement agent or its designees to purchase up to _____ % of the aggregate number of shares of common stock sold in this offering (or common stock equivalent but excluding the shares of common stock underlying the Common Warrants (other than the Pre-Funded Warrants) issued in this offering), at an exercise price equal to _____ % of the public offering price per share and accompanying Common Warrant to be sold in this offering. The placement agent warrants will be exercisable beginning on the effective date of Warrant Stockholder Approval; provided, however, that if the Pricing Conditions are met, the placement agent warrants will be exercisable upon issuance. The placement agent warrants will expire five years from the commencement of sales under this offering.

If at the time of exercise there is no effective registration statement registering, or the prospectus contained therein is not available for the resale of warrant shares by the holders of the placement agent warrants, then the placement agent warrants may be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the holders shall be entitled to receive a number of warrant shares as calculated in the form of placement agent warrants.

The placement agent warrants provide for customary anti-dilution provisions (for share dividends, splits and recapitalizations and the like) consistent with FINRA Rule 5110.

Right of First Refusal

Subject to consummation of the offering, we have granted a right of first refusal to the placement agent pursuant to which it has the right to act as the exclusive book-running manager, underwriter or placement agent, as applicable, if we decide to raise capital through a public offering (including an at-the-market facility) or private placement or any other capital-raising financing of equity, equity-linked or debt securities (other than a traditional debt facility or venture debt facility or an equity line of credit) at any time prior to the 12 months following the consummation of this offering.

Tail

In the event that any investors that were contacted by the placement agent or were introduced to us by the placement agent during the term of our engagement agreement with the placement agent provide any capital to us in a public or private offering or other financing or capital-raising transaction of any kind (each, a “Tail Financing”) within twelve months following the termination or expiration of our engagement agreement with the placement agent, we shall pay the placement agent the cash and warrant compensation provided above on the gross proceeds raised in such Tail Financing from such investors.

Determination of Offering Price

The combined public offering price per share and accompanying Common Warrant and the combined public offering price per Pre-Funded Warrant and accompanying Common Warrant we are offering and the exercise prices and other terms of the Pre-Funded Warrants and Common Warrants were negotiated between us and the investors, in consultation with the placement agent based on the trading of our common stock prior to this offering, among other things. Other factors considered in determining the public offering prices of the securities we are offering and the exercise prices and other terms of the Pre-Funded Warrants and Common Warrants include the history and prospects of our company, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

Lock-up Agreements

We and each of our officers and directors have agreed with the placement agent to be subject to a lock-up period of _____ days following the date of this prospectus. This means that, during the applicable lock-up period, we may not offer for sale, contract to sell, or sell any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock subject to certain customary exception such as issuing stock options to directors, officers, employees and consultants under our existing plans. The placement agent may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements. In addition, we have agreed to not issue any shares of common stock or securities exercisable or convertible into shares of common stock for a period of _____ days following the closing date of this offering, subject to certain exceptions, and to not issue any securities that are subject to a price reset based on trading prices of our common stock or upon a specified or contingent event in the future, or enter into an agreement to issue securities at a future determined price, until the date that is _____ months following the closing date of the offering.

Transfer Agent and Registrar

The transfer agent for our common stock is VStock Transfer, LLC .

National Securities Exchange Listing

Our common stock and certain of our outstanding warrants are currently listed on Nasdaq under the symbols “KTTA” and “KTTAW,” respectively. On March _____, 2025, the closing price per share of our common stock was \$ _____.

Indemnification

We have agreed to indemnify the placement agent against certain liabilities, including certain liabilities arising under the Securities Act and liabilities arising from breaches of representations and warranties contained in our engagement letter with the placement agent. We have also agreed to contribute to payments that the placement agent may be required to make for these liabilities.

In addition, we will indemnify the purchasers of securities in this offering against liabilities arising out of or relating to (i) any breach of any of the representations, warranties,

covenants or agreements made by us in the securities purchase agreement or related documents or (ii) any action instituted against a purchaser by a third party (other than a third party who is affiliated with such purchaser) with respect to the securities purchase agreement or related documents and the transactions contemplated thereby, subject to certain exceptions.

Regulation M

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act and any fees received by it and any profit realized on the sale of the securities by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. The placement agent will be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the placement agent. Under these rules and regulations, the placement agent may not (i) engage in any stabilization activity in connection with our securities; and (ii) bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

Other Relationships

The placement agent and its affiliates may in the future engage in investment banking transactions and other commercial dealings in the ordinary course of business with us or our affiliates. The placement agent may in the future receive customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the placement agent and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The placement agent and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Except as disclosed in this prospectus, we have no present arrangements with the placement agent for any further services.

Electronic Distribution

A prospectus in electronic format may be made available on a website maintained by the placement agent and the placement agent may distribute prospectuses electronically. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the placement agent and should not be relied upon by investors.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it into this prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus.

We incorporate by reference the following documents or information that we have filed with the SEC:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2024 filed with the SEC on March 24, 2025.

All other reports and documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date that this registration statement becomes effective and after the date of this prospectus but before the termination of the offering of the securities described in this prospectus shall be deemed to be incorporated by reference into this prospectus.

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.

Any statement contained in this prospectus or contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded to the extent that a statement contained in this prospectus or any subsequently filed supplement to this prospectus, or document deemed to be incorporated by reference into this prospectus, modifies or supersedes such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these filings at no cost, by writing or telephoning us at the following address:

Pasithea Therapeutics Corp.
Atten: Tiago Reis Marques
Chief Executive Officer
1111 Lincoln Road, Suite 500
Miami Beach, Florida 33139
Telephone: (786) 977-3380

You may also access these filings on our website at www.pasithea.com. You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide different or additional information on our behalf. An offer of these securities is not being made in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date of those respective documents.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement.

For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed

as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference into this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information contained in this prospectus, or any document incorporated by reference in this prospectus, is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any sale of our securities.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from commercial document retrieval services and over the Internet at the SEC's website at <http://www.sec.gov>.

We maintain a website at www.pasithea.com. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference into, and is not part of, this prospectus.

LEGAL MATTERS

The validity of the securities being offered hereby and certain other legal matters will be passed upon for us by Lowenstein Sandler LLP, New York, New York.

EXPERTS

The audited annual consolidated financial statements of Pasithea Therapeutics Corp. incorporated by reference in this prospectus and elsewhere in the registration statement have been incorporated by reference in reliance upon the report of Marcum LLP, independent registered public accounting firm, which includes an explanatory paragraph as to our ability to continue as a going concern, upon the authority of said firm as experts in accounting and auditing. The 2024 and 2023 audited annual consolidated financial statements of Pasithea Therapeutics Corp. as of and for the years ended December 31, 2024 and 2023, have been audited by Marcum LLP, independent registered public accounting firm.

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Up to Shares of Common Stock

Pre-Funded Warrants to Purchase up to Shares of Common Stock

Common Warrants to Purchase up to Shares of Common Stock

Shares of Common Stock underlying Pre-Funded Warrants and Common Warrants

PRELIMINARY PROSPECTUS

The date of this prospectus is , 2025.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than placement agent fees and commissions, payable by us in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates, except for the SEC registration fee and the FINRA filing fee:

	Amount to be paid
SEC registration fee	\$
FINRA filing fee	
Legal fees and expenses	
Accounting fees and expenses	\$
Miscellaneous	
Total expenses	

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 102 of the DGCL permits a corporation to eliminate the personal liability of directors and officers of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director or officer, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, obtained an improper personal benefit, in the case of a director, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law, or in the case of an officer, a breach of fiduciary duty in any action by or in the right of the corporation. Our Certificate of Incorporation provides that no director or officer shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director or officer to the fullest extent permitted by the DGCL.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our Certificate of Incorporation and Bylaws provide that we will indemnify each person who was or is a party to or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative by reason of the fact that the person is or was a director, officer, employee or agent of us, or is or was serving at the request of us as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our Certificate of Incorporation and Bylaws provide that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was a director or officer, or is or was serving at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

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We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements 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 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 our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of our common stock, the underwriters will agree to indemnify, under certain conditions, us, our officers and directors, and persons who control us within the meaning of the Securities Act, against certain liabilities.

Item 15. Recent Sales of Unregistered Securities.

September 2024 Private Placement

On September 26, 2024, we entered into a securities purchase agreement with an institutional investor for the issuance and sale in the Private Placement of (i) pre-funded warrants to purchase up to 1,219,513 shares of our common stock at an exercise price of \$0.001 per share, (ii) Series A warrants to purchase up to 1,219,513 shares of our common stock at an exercise price of \$3.85 per share, and (iii) Series B warrants to purchase up to 1,219,513 shares of our common stock with an exercise price of \$3.85 per share. The pre-funded warrants were exercisable immediately upon issuance and expire when exercised in full. The Series A warrants were exercisable immediately upon issuance and have a term of exercise equal to five years from the date of issuance. The Series B warrants were exercisable immediately upon issuance and have a term of exercise equal to 18 months from the date of issuance. The combined purchase price per pre-funded warrant and accompanying warrants was \$4.099. The Private Placement closed on September 30, 2024. The net proceeds from the Private Placement were approximately \$4.5 million, after deducting placement agent fees and estimated offering expenses payable by us. We intend to use the net proceeds received from the Private Placement for working capital and general corporate purposes.

H.C. Wainwright & Co., LLC ("H.C. Wainwright") acted as our exclusive placement agent in connection with the Private Placement, pursuant to that certain engagement letter, dated as of September 6, 2024, as amended, between us and H.C. Wainwright. Pursuant to the engagement letter, we paid H.C. Wainwright (i) a total cash fee equal to 7.0% of the aggregate gross proceeds of the Private Placement, (ii) a management fee of 1.0% of the aggregate gross proceeds of the Private Placement and (iii) \$50,000 for non-accountable expenses. In addition, we issued to H.C. Wainwright or its designees placement agent warrants to purchase up to an aggregate of 85,366 shares of common stock at an exercise price equal to \$5.125 per share. The placement agent warrants have substantially the same terms as the Series A warrants and Series B warrants, are exercisable immediately upon issuance and have a term of exercise equal to five years from the date of issuance. In addition, pursuant to the engagement letter, upon any exercise of the Series A warrants and Series B warrants for cash, we agreed to (i) pay H.C. Wainwright a total cash fee equal to 7.0% of the aggregate gross proceeds from such exercise and (ii) issue to H.C. Wainwright or its designees additional placement agent warrants to purchase the number of shares of common stock equal to 7.0% of the aggregate number of such shares of common stock underlying the Series A warrants and Series B warrants that have been exercised (or up to an aggregate of 170,732 shares of common stock, assuming full exercise of the Series A warrants and Series B warrants for cash). Any additional placement agent warrants will have the same terms as the placement agent warrants.

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Neither the issuance of the pre-funded warrants, the Series A warrants, the Series B warrants, the placement agent warrants nor the shares of common stock issuable upon exercise thereof, as applicable, were registered under the Securities Act or any state securities laws. The pre-funded warrants, the Series A warrants, the Series B warrants and the placement agent warrants were, and the shares of common stock issuable upon the exercise thereof will be, issued in reliance on the exemptions from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder. The additional placement agent warrants and the shares of common stock issuable upon the exercise thereof will be issued in reliance on the exemptions from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder.

October 2022 AlloMek Acquisition

On October 11, 2022, we entered into a Membership Interest Purchase Agreement, dated October 11, 2022 (the "AlloMek Agreement"), by and among us, AlloMek

Therapeutics, LLC (“AlloMek”), the persons listed on Schedule 1.1 thereto (the “AlloMek Sellers”), and Uday Khire, as the representative of the AlloMek Sellers, pursuant to which the AlloMek Sellers sold all of the issued and outstanding equity of AlloMek to the us. The AlloMek Sellers were the sole title and beneficial owners of 100% of the equity interests of AlloMek. In consideration of the sale of the equity of AlloMek, the AlloMek Sellers received (i) an aggregate of 135,000 shares of our common stock, (ii) an aggregate of 50,000 warrants to purchase shares of our common stock at an exercise price of \$37.60 per share, which may be exercised on a cashless basis, for a period of five years from the date of issuance, (iii) a cash payment in the amount of \$1,050,000, (iv) the right to certain milestone payments in an amount up to \$5,000,000, and (v) the right to contingent earn-out payments ranging from 3% to 5% of net sales of the Drug (as defined in the AlloMek Agreement) depending on the amount of such net sales in the applicable measurement period. Closing of the transactions contemplated in the AlloMek Agreement occurred on October 11, 2022. The common stock and warrants were issued to the AlloMek Sellers without registration under the Securities Act, or any state securities laws, in a transaction not involving a public offering. We relied on the exclusion from the registration requirements of the Securities Act afforded by Section 4(a)(2) thereof.

June 2022 Alpha-5 Acquisition

On June 21, 2022, we entered into a Membership Interest Purchase Agreement (the “Alpha-5 Agreement”) with Lawrence Steinman, who is the Executive Chairman of our board of directors and one of our co-founders and as such is a related party, and PD Joint Holdings, LLC Series 2016-A (the “Alpha-5 Sellers”), pursuant to which the Alpha-5 Sellers sold all of the issued and outstanding equity of Alpha-5 integrin, LLC (“Alpha-5”) to us. The Alpha-5 Sellers were the sole title and beneficial owners of 100% of the equity interests of Alpha-5. In consideration of the equity of Alpha-5, the Sellers received (i) an aggregate of 163,043 shares of our common stock, (ii) an aggregate of 50,000 warrants to purchase shares of our common stock at an exercise price of \$37.60 per share, which may be exercised on a cashless basis, for a period of five years from the date of issuance, and (iii) the right to contingent earn-out payments of an aggregate of 2% to 4% of net sales generated from the sale of a drug in development by Alpha-5. The transaction closed on June 21, 2022. The warrants and shares were sold to the Alpha-5 Sellers without registration under the Securities Act, or any state securities laws in a transaction not involving a public offering and the Alpha-5 Sellers represented they are an accredited investor. We relied on the exclusion from the registration requirements of the Securities Act afforded by Section 4(a)(2).

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Item 16. Exhibits.

Exhibit No.	Description of Document
2.1	Membership Interest Purchase Agreement entered into June 21, 2022, by and among Pasithea Therapeutics Corp., Alpha-5 integrin, LLC, and certain Sellers (as defined in the agreement) (incorporated by reference to Exhibit 2.01 of the Company’s Form 10-Q, filed with the SEC on August 15, 2022).
2.2	Membership Interest Purchase Agreement dated October 11, 2022 by and among Pasithea Therapeutics Corp., AlloMek Therapeutics, LLC, the Persons listed on Schedule 1.1 thereto, and Uday Khire, not individually but in his capacity as the representative of the Persons listed on Schedule 1.1 thereto (incorporated by reference to Exhibit 2.1 of the Company’s Form 8-K, filed with the SEC on October 12, 2022).
2.3	Form of Lock-up Agreement dated October 11, 2022 (incorporated by reference to Exhibit 2.2 of the Company’s Form 8-K, filed with the SEC on October 12, 2022).
3.1	Second Amended and Restated Certificate of Incorporation of Pasithea Therapeutics Corp., dated December 29, 2023, (incorporated by reference to Exhibit 3.1 of the Company’s Form 8-K, filed with the SEC on January 2, 2024).
3.2	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of Pasithea Therapeutics Corp., dated December 29, 2023 (incorporated by reference to Exhibit 3.4 of the Company’s Form 8-K, filed with the SEC on January 2, 2024).
3.3	Second Amended and Restated Bylaws of Pasithea Therapeutics Corp., dated December 29, 2023, (incorporated by reference to Exhibit 3.2 of the Company’s Form 8-K, filed with the SEC on January 2, 2024).
4.1	Specimen Common Stock Certificate evidencing the shares of Common Stock (incorporated by reference to Exhibit 4.1 of the Company’s Form S-1 (File No. 333-255205), filed with the SEC on April 13, 2021, as amended).
4.2	Form of Warrant Agent Agreement, including Form of Warrant Certificate (incorporated by reference to Exhibit 4.2 of the Company’s Form S-1 (File No. 333-255205), filed with the SEC on April 13, 2021, as amended).
4.3	Form of Representative Warrant (incorporated by reference to Exhibit 4.3 of the Company’s Form S-1 (File No. 333-255205), filed with the SEC on April 13, 2021, as amended).
4.4	Form of Warrants issued in private placement (incorporated by reference to Exhibit 10.3 of the Company’s Current Report on Form 8-K filed with the SEC on November 29, 2021).
4.5	Form of Warrants Issued in acquisition of AlloMek Therapeutics, LLC (incorporated by reference to Exhibit 4.3 of the Company’s Form S-3 (File No. 333-271896) filed with the SEC on May 12, 2023).
4.6	Form of Warrant Issued in acquisition of Alpha-5 integrin, LLC (incorporated by reference to Exhibit 4.4 of the Company’s Form S-3 (File No. 333-271896) filed with the SEC on May 12, 2023).
4.7	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 of the Company’s Current Report on Form 8-K filed with the SEC on September 30, 2024).

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4.8	Form of Warrant (incorporated by reference to Exhibit 4.2 of the Company’s Current Report on Form 8-K filed with the SEC on September 30, 2024).
4.9	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 of the Company’s Current Report on Form 8-K filed with the SEC on September 30, 2024).
4.10	Description of Securities (incorporated by reference to Exhibit 4.7 of the Company’s Annual Report on Form 10-K filed with the Commission on March 29, 2024).

4.11	Form of Pre-Funded Warrant issued in this Offering.**
4.12	Form of Common Warrant issued in this Offering.**
4.13	Form of Placement Agent Warrant issued in this Offering. **
5.1	Opinion of Lowenstein Sandler LLP.**
10.1	2021 Incentive Plan (incorporated by reference to Exhibit 10.7 of the Company's Form S-1 (File No. 333-255205), filed with the SEC on April 13, 2021, as amended).
10.2	Form of Indemnification Agreement for Officers and Directors (incorporated by reference to Exhibit 10.8 of the Company's Form S-1 (File No. 333-255205), filed with the SEC on April 13, 2021, as amended). †
10.3	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.2 of the Company's Form 8-K, filed with the SEC on November 29, 2021).
10.4	Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.4 of the Company's Form 8-K, filed with the SEC on November 29, 2021).
10.5	Executive Employment Agreement, dated as of January 1, 2022, between Pasithea Therapeutics Corp. and Dr. Tiago Reis Marques (incorporated by reference to Exhibit 10.15 of the Company's Form 10-K/A, filed with the SEC on May 12, 2022). †
10.6	Stock Option Agreement, dated December 20, 2021, between Pasithea Therapeutics Corp. and Dr. Tiago Reis Marques (incorporated by reference to Exhibit 10.16 of the Company's Form 10-K/A, filed with the SEC on May 12, 2022). †
10.7	Employment Agreement with Daniel Schneiderman (incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q, filed with the SEC on November 14, 2022). †
10.8	Settlement and Cooperation Agreement dated December 9, 2022, by and between Pasithea Therapeutics Corp. and Camac Fund, LP and its affiliates (incorporated by reference to Exhibit 10.1 of the Company's Form 8-K, filed with the SEC on December 14, 2022).
10.9	Pasithea Therapeutics Corp. 2023 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed with the SEC on December 19, 2023). †
10.10	Consulting Agreement between Pasithea Therapeutics Corp. and Dr. Lawrence Steinman, dated November 13, 2023 (incorporated by reference to Exhibit 10.20 of the Company's Form 10-K filed with the SEC on March 29, 2024). †
10.11	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed with the SEC on September 30, 2024).

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10.12	Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed with the SEC on September 30, 2024).
10.13	ATM Agreement, dated November 26, 2024, by and between Pasithea Therapeutics Corp. and H.C. Wainwright & Co., LLC (incorporated by reference to Exhibit 1.1 of the Company's Current Report on Form 8-K filed with the SEC on November 26, 2024).
10.14	Form of Securities Purchase Agreement to be entered into in this Offering. **
21.1	Subsidiaries of the Registrant (incorporated by reference to Exhibit 21.1 of the Company's Annual Report on Form 10-K filed with the Commission on March 24, 2025).
23.1	Consent of Independent Registered Public Accounting Firm (Marcum LLP).*
23.2	Consent of Lowenstein Sandler LLP (included as part of Exhibit 5.1).**
24.1	Power of Attorney (included in the signature page to this registration statement).*
107	Filing Fee Table. **

* Filed herewith.

** To be filed by amendment.

† Indicates a management contract or compensation plan, contract or arrangement.

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Item 17. Undertakings.

The undersigned registrant hereby undertakes

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of 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 SEC 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; and

(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;

(b) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) 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.

(d) 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.

(e) that, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant hereby 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 (§ 230.424 of this chapter);

(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 its 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.

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(f) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(g) That:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Miami Beach, State of Florida, on , 2025.

PASITHEA THERAPEUTICS CORP.

By: _____

Dr. Tiago Reis Marques
Chief Executive Officer and Director
(Principal Executive Officer)

By: _____

Daniel Schneiderman
Chief Financial Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

We, the undersigned officers and directors of Pasithea Therapeutics Corp., hereby severally constitute and appoint Dr. Tiago Reis Marques and Daniel Schneiderman, and each of them singly (with full power to each of them to act alone), to sign any and all amendments (including post-effective amendments) to this registration statement (or any other

registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his 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 on , 2025 in the capacities indicated.

Signature	Title	Date
<div>Dr. Tiago Reis Marques</div>	Chief Executive Officer and Director (Principal Executive Officer)	
<div>Daniel Schneiderman</div>	Chief Financial Officer (Principal Financial and Accounting Officer)	
<div>Prof. Lawrence Steinman</div>	Director	
<div>Simon Dumesnil</div>	Director	
<div>Dr. Emer Leahy</div>	Director	
<div>Alfred Novak</div>	Director	