As filed with the Securities and Exchange Commission on April 29, 2024

Registration No. 333-278844

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

AMENDMENT NO. 2 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

INHIBIKASE THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**2836**	**26-3407249**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

3350 Riverwood Parkway SE, Suite 1900
Atlanta, GA 30339
(678) 392-3419
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Milton H. Werner, Ph.D.
President and Chief Executive Officer
Inhibikase Therapeutics, Inc.
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(678) 392-3419
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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act 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, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

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

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

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The information in this preliminary prospectus is not complete and may be changed. The 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 is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION** **DATED APRIL 29, 2024.**

INHIBIKASE THERAPEUTICS, INC.

Up to 6,951,872 Shares of Common Stock and Accompanying Common Warrants to Purchase up to 6,951,872 Shares of Common Stock
Up to 6,951,872 Pre-Funded Warrants to Purchase up to 6,951,872 Shares of Common Stock and Accompanying Common Warrants to Purchase up to 6,951,872 Shares of Common Stock
Placement Agent Warrants to Purchase up to 278,075 Shares of Common Stock
Shares of Common Stock Underlying the Common Warrants, Pre-Funded Warrants and Placement Agent Warrants

We are offering in a best-efforts offering up to 6,951,872 shares of our common stock together with common warrants to purchase up to 6,951,872 shares of our common stock (the "Common Warrants") at an assumed combined public offering price of $1.87 per share and Common Warrant, which is equal to the last reported sale price per share of our common stock on The Nasdaq Capital Market on April 24, 2024 (and the shares of common stock that are issuable from time to time upon exercise of the Common Warrants), pursuant to this prospectus. The shares of common stock and Common Warrants will be issued separately but must be purchased together and the Common Warrants will be issued to purchasers in the ratio of one to one per share of common stock. The Common Warrants will be exercisable beginning on the date of issuance (the "Initial Exercise Date"), at an exercise price of $1.87 per share and will expire on the five-year anniversary of the Initial Exercise Date.

We are also offering to those purchasers, if any, whose purchase of our common stock in this offering would otherwise result in such purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or at the election of such purchasers, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity, in lieu of purchasing common stock, to purchase pre-funded warrants to purchase shares of our common stock, or pre-funded warrants. Each pre-funded warrant will be exercisable for one share of our common stock (subject to adjustment as provided for therein) at any time at the option of the holder until such pre-funded warrant is exercised in full, provided that the holder will be prohibited from exercising pre-funded warrants for shares of our common stock if, as a result of such exercise, the holder, together with its affiliates and certain related parties, would own more than 4.99% (or at the election of such purchasers, 9.99%) of the total number of shares of our common stock then issued and outstanding. However, any holder may increase such percentage to any other percentage not in excess of 9.99%, provided that any increase in such percentage shall not be effective until 61 days after notice to us. The purchase price of each pre-funded warrant will equal the price per share at which shares of our common stock and accompanying warrants to purchase common stock are being sold to the public in this offering, minus $0.0001, and the exercise price of each pre-funded warrant will equal $0.0001 per share of common stock. For each pre-funded warrant purchased in this offering in lieu of common stock, we will reduce the number of shares of common stock we are offering by one. Pursuant to this prospectus, we are also offering the shares of common stock issuable upon the exercise of the Common Warrants, pre-funded warrants and placement agent warrants offered hereby.

Our common stock is listed on The Nasdaq Capital Market under the symbol "IKT." On April 24, 2024, the last reported sale price of our common stock on The Nasdaq Capital Market was $1.87 per share.

We have engaged Maxim Group LLC, (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 of securities or dollar amount. 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 minimum number of shares of common stock or pre-funded warrants or minimum aggregate amount of proceeds that is a condition of the closing of this offering. We will bear all costs associated with the offering. See "Plan of Distribution" on page 33 of this prospectus for more information regarding these arrangements.

The public offering price per share of common stock, together with the Common Warrant that accompanies common stock, will be determined between us, the Placement Agent and the investors in this offering at the time of pricing, and may be at a discount to the current market price. Therefore, the recent market price of $1.87 per share of common stock used throughout this prospectus may not be indicative of the actual public offering price for our common stock and the Common Warrants. There is no established public trading market for the Common Warrant or the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for the listing of the Common Warrants or the pre-funded warrants on any national securities exchange. Without an active trading market, the liquidity of the Common Warrants and the pre-funded warrants will be limited.

This offering will terminate on June 17, 2024, 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 of common stock (or pre-funded warrant) and accompanying warrant will be fixed for the duration of this offering.

We may sell fewer than all of the shares of common stock and Common Warrants offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund if we do not sell all of the securities offered hereby. We have not established an escrow account in conjunction with this offering. Because there is no escrow account and no minimum number of securities or amount of proceeds, investors could be in a position where they have invested in us, but we have not raised sufficient proceeds in this offering to adequately fund the intended uses of the proceeds as described in this prospectus.

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933, as amended, and, as such, have elected to comply with certain reduced disclosure and regulatory requirements.

Our business and investing in our securities involve a high degree of risk. See "*Risk Factors*" beginning on page 14 of this prospectus and elsewhere in this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

	Per Share and Common Warrant[1]	Per Pre-Funded Warrant and Common Warrant	Total
Public offering price	$	$	$
Placement agent fees[2]	$	$	$
Proceeds to us (before expenses)[3]	$	$	$

(1) The final public offering price per share of common stock or pre-funded warrant, together with the Common Warrant that accompanies common stock or a pre-funded warrant, as the case may be, will be determined by the Company, the Placement Agent and the investors in this offering and may be a discount to the current market price of the Company's common stock.

(2) We have also agreed to reimburse the Placement Agent for certain of its offering-related expenses, including a reimbursement for legal fees and expenses in the amount of up to $100,000. For a description of the compensation to be received by the Placement Agent, see "Plan of Distribution" for more information.

(3) 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*."

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense. The securities are not being offered in any jurisdiction where the offer is not permitted.

Delivery of the common stock, pre-funded warrants and Common Warrants is expected on or about , 2024, subject to satisfaction of customary closing conditions.

Maxim Group LLC

The date of this Prospectus is , 2024.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information other than the information that we have provided or incorporated by reference in this prospectus and your reliance on any unauthorized information or representation is at your own risk. This prospectus may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that the information contained in this prospectus is accurate only as of the date of this prospectus, and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or of any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus contains market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included in this prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "*Risk Factors*" contained in this prospectus. Accordingly, investors should not place undue reliance on this information.

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

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

Neither we nor the Placement Agent have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons who come into possession of this prospectus and any free writing prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus and any free writing prospectus applicable to that jurisdiction.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under "*Where You Can Find More Information.*"

We own or have rights to trademarks and trade names that we use in connection with the operation of our business. In addition, our name, logos and website name and address are our trademarks. Solely for convenience, in some cases, the trademarks and trade names referred to in this prospectus are listed without the applicable ® and ™ symbols, but we will assert, to the fullest extent under applicable law, our rights to these trademarks and trade names. Other trademarks and trade names appearing in this prospectus are the property of their respective owners.

Unless the context indicates otherwise, references in this prospectus to the "*Company*," "*Inhibikase*," "*IkT,*" "*we*," "*us*," "*our*," and similar terms refer to Inhibikase Therapeutics, Inc. and its consolidated subsidiaries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes statements that express our opinions, expectations, beliefs, plans, objectives, assumptions, or projections regarding future events or future results and therefore are, or may be deemed to be, "*forward-looking statements*." These forward-looking statements can generally be identified by the use of forward-looking terminology, including the terms "*believes*," "*estimates*," "*anticipates*," "*expects*," "*seeks*," "*projects*," "*intends*," "*plans*," "*may*," "*will*," or "*should*" or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this prospectus and include statements regarding our intentions, beliefs or current expectations concerning, among other things, results of operations, financial condition, liquidity, prospects, growth, strategies and the markets in which we operate. Such forward-looking statements are based on available current market material and management's expectations, beliefs and forecasts concerning future events impacting our company. You should read statements that contain these words carefully because they:

- discuss our future expectations;
- contain projections of our clinical trials, future results of operations or of our financial condition; and
- state other "forward-looking" information.

We believe it is important to communicate our expectations. However, forward-looking statements are based on our current expectations, assumptions, estimates, approximations and projections about our business and our industry and management's beliefs, all of which are subject to change. Forward-looking statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties and other factors. Accordingly, our actual results and the timing of certain events may differ materially and adversely from those expressed or implied in such forward-looking statements due to a variety of factors and risks, including, but not limited to, those set forth in our other filings with the SEC, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 and the following factors and risks:

- We are a clinical-stage drug development company with limited resources, a limited operating history and have no products approved for commercial sale, which may make it difficult to evaluate our current business and predict our future success and viability;
- If we are unable to successfully raise additional capital, our future clinical trials and product development could be limited and our long-term viability may be threatened;
- There is substantial doubt regarding our ability to continue as a going concern and our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. We will need to raise additional funding, which may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our clinical trials or other operations;
- While the U.S. Food and Drug Administration, or FDA, lifted the clinical holds with respect to the Risvodetinib(IkT-148009) programs relating to Parkinson's disease and multiple system atrophy, or MSA, we may be subject to further clinical holds by the FDA in the future;
- Drug development is a highly uncertain undertaking and involves a substantial degree of risk. We have never generated any revenue from product sales, we may never generate any revenue from product sales, and we may fail to generate further revenue from grants or contracts or to be profitable;
- The wars between Russia and Ukraine and Israel and Hamas could materially adversely affect our business, results of operations, and financial condition;
- Our results of operations have been adversely affected and, in the future, could be materially adversely impacted by theCOVID-19 virus;

- Adverse developments affecting financial institutions, companies in the financial services industry or the financial services industry generally, including those we do business with, could adversely affect our operations and liquidity;
- We have incurred significant net losses since our inception and anticipate that we will continue to incur net losses for the foreseeable future;
- Due to the significant resources required for the development of our programs, and depending on our ability to access capital, we must prioritize development of certain product candidates;
- Our business is highly dependent on the success of our initial product candidates targeting neurodegenerative diseases;
- We currently contract with various research institutions to perform the research and development activities needed to develop our products, and if we ever choose to or need to find alternative research institutions, we may not be able to do so at all or, if we are able to do so, it may be costly and may cause significant delays in the development and commercialization of our products;
- Positive results from early preclinical or clinical studies of our product candidates are not necessarily predictive of the results of later preclinical studies and any current and future clinical trials of our product candidates;
- We have no history of completing clinical trials for novel drug substances or commercializing pharmaceutical products, which may make it difficult to evaluate the prospects for our future viability;
- Our clinical trials may reveal significant adverse events, toxicities or other side effects not seen in our preclinical studies and may result in a safety profile that could inhibit regulatory approval or market acceptance of any of our product candidates;
- We have concentrated much of our research and development efforts on the treatment of neurodegenerative diseases, a field that has seen limited success in drug development;
- We may encounter substantial delays in our current and planned clinical trials, or may not be able to conduct or complete our clinical trials on the timelines we expect, if at all;
- Our current and planned clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates, which would prevent, delay or limit the scope of regulatory approval and commercialization;
- Clinical development is a lengthy and expensive process with an uncertain outcome, and failure can occur at any stage of clinical development;
- The manufacture of our product candidates is complex and difficulties may be encountered in production;
- If, in the future, we are unable to establish sales and marketing capabilities or enter into agreements with third parties to sell and market any product candidates we may develop, we may not be successful in commercializing those product candidates if and when they are approved;
- Even if any product candidates we develop receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors, and others in the medical community necessary for commercial success.
- Even if we are able to commercialize any product candidates, such products may become subject to unfavorable pricing regulations, third-party reimbursement practices, or healthcare reform initiatives, which would harm our business.
- The regulatory approval processes of the FDA, European Medicines Agency and comparable foreign regulatory authorities are lengthy, time consuming, and inherently unpredictable. Regulatory authorities have substantial discretion in the approval process and may refuse to accept an application,

may disagree with our regulatory strategy or proposed pathway for approval or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies;

- We expect to depend in whole or in part on collaborations with third parties for the research, development and commercialization of any product candidates we may develop;
- We contract with third parties for the manufacture of materials for our research programs, preclinical studies and current clinical trials and expect to continue to do so for any future clinical trials and for commercialization of any product candidates that we may develop;
- We depend on a small number of third-party suppliers for key raw materials used in the manufacturing processes for our product candidates, and the loss of these third-party suppliers or their inability to supply us with adequate raw materials could harm our business; and
- If we are unable to obtain and maintain patent protection for any product candidates we develop, our competitors could develop and commercialize products or technology similar or identical to ours, and our ability to successfully commercialize any product candidates we may develop, and our technology may be adversely affected.

The forward-looking statements contained in this prospectus are based on our current expectations and beliefs concerning future developments and their potential effects on our company. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described under the heading "*Risk Factors*" in this prospectus. Should one or more of these risks or uncertainties materialize, or should any of the assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. We will not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

PROSPECTUS SUMMARY

The following summary highlights certain information described in greater detail elsewhere in this prospectus. This summary is not complete and does not contain all of the information you should consider or that may be important to you in making an investment decision. You should carefully read the entire prospectus, including the information under "Risk Factors," beginning on page 13, before making an investment in our securities. You should carefully read this entire prospectus.

The Company

We are a clinical-stage pharmaceutical company developing protein kinase inhibitor therapeutics to modify the course of Parkinson's disease ("PD"), Parkinson's-related disorders and other diseases of the Abelson Tyrosine Kinases. The Company's multi-therapeutic pipeline has a primary focus on neurodegeneration and its lead program utilizing Risvodetinib (also known as IkT-148009), a selective inhibitor of the non-receptor Abelson Tyrosine Kinases, targets the treatment of Parkinson's disease inside and outside the brain as well as other diseases that arise from Abelson Tyrosine Kinases. In 2021, we commenced clinical development of Risvodetinib (IkT-148009), which we believe can modify the course of Parkinson's disease including its manifestation in the gastrointestinal, or GI, tract. In January, 2023, the Company initiated its Phase 2 program, termed 'the 201 trial' (www.the201trial.com), for Risvodetinib (IkT-148009) as a treatment for Parkinson's disease and began the process of opening up to 34 sites in the U.S. As of April 23, 2024, 32 sites are open and actively evaluating prospective trial participants. As of April 23, 2024, 92 participants have been enrolled, 10 prospective participants are in medical screening and 57 potential participants are being evaluated for suitability to initiate medical screening. 44 participants have completed the 12-week dosing period. As of April 23, 2024, 17 participants gave rise to 23 mild and 2 moderate possibly treatment-related adverse events have been reported across all enrolled patients taking Risvodetinib (IkT-148009). Depending on the timing of the last enrolled patient, results from this trial may be reported in the second half of 2024. Monthly site enrollments have increased month-over-month since our patient outreach program was initiated. As such, we believe a more rapid path to enrollment is emerging through the public outreach/awareness campaign led by the 'the201trial.com' website. The emerging path to complete enrollment has prompted us to take further advantage of this multi-dose study by planning to extend the 201 trial by up to 12 months, subject to additional resources. In addition, emerging biomarker data from the 201 trial evaluating pathological alpha-synuclein in multiple tissues and fluids supported our recent grant submissions to the National Institute of Neurological Disease and Stroke. One of these grants, if approved, will introduce our novel monoclonal antibody to track phospho-Tyr^{39}-alpha-synuclein in the clinical trial setting, which we believe in turn will enhance the meaning of biomarker measurements. We believe the utilization of this antibody in tissue biopsy and fluid analysis will enable us to confirm target engagement and evaluate the effect of Risvodetinib (IkT-148009) on the underlying pathology responsible for disease.

The twelve-week 201 trial is evaluating three doses in participants who have untreated Parkinson's disease on a staggered schedule and is placebo controlled with 1:1:1:1 randomization. The primary endpoints of this trial are safety and tolerability and a hierarchy of 15 secondary endpoints will evaluate treatment benefit in the brain and GI tract. The recent analysis of 11 patients who participated in the 201 trial prior to the temporary clinical hold issued by the U.S. Food and Drug Administration ("FDA") in November, 2022, which was lifted in January, 2023, suggested that Risvodetinib (IkT-148009) may have some effect on disease. These participants were withdrawn from the trial following the FDA's temporary clinical hold. As detailed at the Movement Disorder Society Congress held August 2023, the primary secondary endpoint is a functional assessment comprised of the sum of Parts 2 and 3 of the Movement Disorder Society Universal Parkinson's Disease Rating Scale (MDS-UPDRS Parts II+III). This sum showed an average -8.7 point improvement in the three participants on the 200 mg dose relative to baseline, while three placebo participants increased by +1.7 points; this represents an average spread of -10.4 points. A lower (or negative) change relative to placebo of greater than -3 to -6 points might be considered a measure of improvement. Given the small sample size on this dose, we believe it is

premature to conclude a clinical benefit, but this observation reinforces our desire to extend the trial for an additional 12 months to potentially obtain a clear picture of clinical benefit over a total measurement of 15 months.

In March 2023, we opened our Investigational New Drug Application, or IND, for Risvodetinib(IkT-148009) as a treatment for the Parkinson's-related orphan disease Multiple System Atrophy, or MSA. Our evaluation of Risvodetinib(IkT-148009) in MSA was benefited by a grant received from the National Institute of Neurological Diseases and Stroke, an Institute of the National Institutes of Health, for $0.39 million to fund animal model studies of Risvodetinib (IkT-148009) as a therapy for MSA. Two different animal studies were undertaken to evaluate whether Risvodetinib (IkT-148009) could have an impact on disease in the animal. One model evaluated the ability of Risvodetinib(IkT-148009) to modify disease early in its progression, while the second model is evaluating whether Risvodetinib (IkT-148009) can correct functional loss much later in the disease course. The early progression model study has now been shown to preserve nearly normal functional activity following 20 weeks of once daily dosing relative to untreated controls. Preservation of function in this model occurred with substantial reduction of the underlying alpha-synuclein protein pathology. The second model evaluating Risvodetinib (IkT-148009) late in the disease course is ongoing. In addition, Risvodetinib (IkT-148009) was recently given Orphan Drug Designation by the FDA for the treatment of MSA. We plan to initiate a Phase 2 study in MSA patients in up to nineteen sites in the EU, and up to six sites in the U.S. involving at least 120 patients, and we are presently seeking non-dilutive resources to initiate and execute this trial in its entirety. The proposed Phase 2 study will have primary endpoints in safety, tolerability and efficacy following once daily dosing at two dose levels for 12-months. We plan to submit complementary regulatory documents for Risvodetinib(IkT-148009) to European Union authorities in 2024.

We are also developing platform technologies to improve delivery of protein kinase inhibitors in patients. One example of our potential ability to improve drug delivery is IkT-001Pro, a prodrug of the anticancer agent imatinib mesylate, which is intended to treat Stable Phase Chronic Myelogenous Leukemia, or SP-CML. IkT-001Pro has completed a three-part dose finding/dose equivalence study in 66 healthy volunteers (known as 'the 501 trial'). The study was designed to evaluate the 96-hour pharmacokinetics of imatinib delivered as IkT-001Pro and determine the dose of IkT-001Pro that can deliver the equivalent of either 400 mg or 600 mg imatinib mesylate. As of the date of this offering, bioequivalence to 400 mg imatinib mesylate has been established to our satisfaction for a 600 mg dose of IkT-001Pro. We further evaluated 600 mg imatinib mesylate and believe that a 900 mg dose of IkT-001Pro is the preferred dose of IkT-001Pro to deliver a dose of imatinib equivalent to 600 mg imatinib mesylate. We studied 800 mg IkT-001Pro and found it to be nearly equivalent to 600 mg imatinib mesylate. We intend to study higher doses of IkT-001Pro to cover the full range of doses approved for imatinib mesylate to treat up to 11 adult and pediatric blood cancers.

On January 19, 2024, members of the Company along with its medical oncology consultants met with the FDA Review Team (the "Review Team") from the Division of Hematologic Malignancies in a Pre-New Drug Application, or NDA, meeting to discuss our bioequivalence studies of IkT-001Pro and its path to approval. All questions were addressed and summarized in official meeting minutes issued by the FDA on February 12, 2024. During the meeting we inquired whether additional clinical studies may be needed to seek approval and discussed manufacturing and quality control requirements for approval. The Review Team acknowledged that the 505(b)(2) pathway appears to be the appropriate pathway for approval of IkT-001Pro and indicated that, pending formal review of our clinical data, clinical studies completed to date indicate that 600 mg and 800 mg IkT-001Pro provides similar exposures to 400 mg and 600 mg imatinib mesylate, respectively, subject to review of the NDA upon filing. In addition, given that imatinib mesylate is approved for use between 300 mg and 800 mg once daily for a variety of blood and gastrointestinal cancers, the Review Team stated that if we intend to seek approval across all currently approved indications, we should evaluate additional dose(s) as needed to measure the safety, tolerability and bioequivalent dose of IkT-001Pro that would deliver up to 800 mg, the highest approved dose of imatinib mesylate. The Review Team also discussed the possible difference between

IkT-001Pro and imatinib mesylate absorption in the gut and recommended that we evaluate whetherIkT-001Pro and imatinib mesylate behave differently with respect to certain gut transporters that regulate absorption. We are in alignment with the FDA and are initiating the necessary pre-clinical test to evaluate this further to ensure that delivery of imatinib byIkT-001Pro mimics imatinib mesylate in all respects. Finally, a number of recommendations were discussed to prevent the potential mix-up between 001Pro and imatinib mesylate either at the pharmacy or by patients for two drugs delivering the same active ingredient. We discussed alternate dosage forms for IkT-001Pro relative to imatinib mesylate as the primary mitigation strategy and will provide a justification of the dosage forms chosen and why they are unlikely to cause medication errors. To ensure that we meet the manufacturing requirements for approval, we will request milestone-based meetings with the Review Team as we complete the required manufacturing and quality control processes.

We are also evaluating the application of IkT-001Pro to pulmonary arterial hypertension (PAH). PAH is a rare disease of the pulmonary microvasculature with about 30,000 cases in the U.S., mostly in women between the ages of 30 and 60. The global PAH market size was valued at $7.66 billion in 2023 and is estimated to grow at a compound annual growth rate of 5.4% between 2024 to 2030. Most treatments for PAH attempt to address symptoms of this progressive disorder, but in the early 2010s, imatinib delivered by imatinib mesylate was shown to be a disease-modifying therapy for PAH. Co-administration of medications with harmful drug-drug interactions precluded the approval of imatinib asadd-on therapy in PAH. Today, on the other hand, changes to standard-of-care for these patients has reduced the possible risk of imatinib treatment in PAH in our view. As such, on April 5, 2024, members of the Company met with the FDA Division of Cardiology and Nephrology in a pre-IND meeting to discuss the Company's plan to utilize IkT-001Pro at 300 mg or 450 mg in a Phase 2/3 efficacy, safety and tolerability trial in World Health Organization Functional Class I patients. At the meeting, exclusivity of IkT-001Pro as a novel chemical entity was discussed along with the possible approval path for IkT-001Pro under the 505(b)(2) statute. The possibility of IkT-001Pro being granted Breakthrough Designation, a proposed late-stage trial design and any additional requirements needed for opening the IND were discussed. Final meeting minutes governing what was agreed to at the meeting should be available in April 2024. The Company has also applied for Orphan Drug Designation for delivery of imatinib by IkT-001Pro for PAH.

We have also improved drug delivery of Risvodetinib (IkT-148009) through development of a tablet formulation, which we measured to nearly double the concentration of Risvodetinib (IkT-148009) delivered relative to the same dose previously administered as a gelatin capsule. This provides the opportunity to lower the effective oral dose, which could lead to further safety and tolerability improvements for Risvodetinib (IkT-148009). The Company plans to introduce the tablet formulation into the 12-month extension study, once implemented, as well as in all future clinical trials.

Finally, we are evaluating a number of research phase molecules (IkT-148x and BIP 4-7) for a variety of neurodegenerative disease indications across our pre-clinical development pipeline.

In our opinion, the multi-decade failures in the treatment of neurodegenerative diseases such as PD result from a lack of understanding of the biochemistry of the disease processes involved. Neurodegeneration is marked by a progressive degeneration and loss of function of neurons which send and receive signals to and from the brain. Historically, the cause of a neurodegenerative disease was thought to be a "plaque" made up of a misfolded and/or aggregated protein(s). Therapeutic approaches, therefore, sought to remove "plaque" from the brain. A "plaque"-focused treatment strategy has failed to alter the course of Parkinson's disease in two Phase 2 trials that reported results in 2020 and 2021. We believe we are different. We identified the proteins that become dysfunctional in a disease pathway and sought to understand how a dysfunctional protein causes disease and published those results in several high-profile peer reviewed publications. We believe our approach to PD and other neurological diseases has identified the underlying cause of disease and led to an understanding of how individual proteins are linked together to define the disease process. We believe our approach to

neurodegenerative disease is validated by our 2022 and 2023 publications and oral presentations at the major academic and industry conferences in Parkinson's and Alzheimer's diseases.

To increase the probability of success, we are making parallel investments in several product candidates andback-up candidates, and plan to advance only those candidates to the later stages of clinical development that show strong preclinical and early clinical data. By developing a portfolio of product candidates across therapeutic indications, we can continuously apply learnings and tools across programs and leverage economies of scale in our research and development organization. Our target indications include diseases with large patient populations, such as PD, as well as orphan indications, such as, Multiple System Atrophy and Chronic Myelogenous Leukemia.

We currently have commercialization rights to all of our development programs and patent protection in the United States until 2033 for IkT-001Pro and 2036 for Risvodetinib (IkT-148009). Additional patent filings could extend this period of exclusivity.

As of April 10, 2024, our patent portfolio included: (i) nine issued patents and four pending patent applications in the United States and (ii) eleven issued foreign patents and four pending foreign patent applications. The patents in this portfolio, and patents that may issue from the applications in this portfolio, will expire between 2033 and 2037, not taking into account any potential patent-term adjustments or extensions that may be available in the future.

Two families contain patents and applications covering (a) certain compositions of matter comprisingIkT-001Pro; and (b) methods of treating certain diseases using IkT-001Pro. These families include two issued U.S. patents and one pending U.S. patent application. The patents will expire in 2033, not taking into account any potential patent-term adjustments or extensions that may be available in the future. The pending application is a U.S. provisional patent application that was filed in 2024. Future patent applications that are entitled to claim priority to this provisional application may issue as patents that would expire in 2044 or 2045, not taking into account any potential patent-term adjustments or extensions that may be available in the future.

Three families contain patents and applications covering (a) certain compositions of matter comprisingIkT-148009 or IkT-01427; and (b) methods of treating certain diseases using IkT-148009 or IkT-01427. These families include seven issued U.S. patents and three pending U.S. patent applications. The patents within these families, and patents that may issue from the applications in these families, will expire between 2036 and 2037, not taking into account any potential patent-term adjustments or extensions that may be available in the future. One of the pending applications is a U.S. provisional patent application that was filed in 2024. Future patent applications that are entitled to claim priority to this provisional application may issue as patents that would expire in 2044 or 2045, not taking into account any potential patent-term adjustments or extensions that may be available in the future.

ATM Offering

On February 1, 2024, the Company entered into an At the Market Offering Agreement (the "Wainwright Agreement") with H.C. Wainwright & Co., LLC, as sales agent (the "Agent"), pursuant to which the Company may, from time to time, issue and sell through the Agent shares of the Company's common stock at an aggregate offering price of up to approximately $5.7 million (the "ATM Shares"). Under the terms of the Wainwright Agreement, the Agent may sell the ATM Shares at market prices by any method that is deemed to be an "ATM" as defined in Rule 415 under the Securities Act, as amended.

Subject to the terms and conditions of the Wainwright Agreement, the Agent will use its commercially reasonable efforts to sell the ATM Shares from time to time, based upon the Company's instructions. The

Company has no obligation to sell any of the ATM Shares, and may at any time suspend sales under the Wainwright Agreement or terminate the Wainwright Agreement in accordance with its terms. The Company has provided the Agent with customary indemnification rights, and the Agent will be entitled to a fixed commission of 3.0% of the aggregate gross proceeds from the ATM Shares sold. The Wainwright Agreement contains customary representations and warranties, and the Company is required to deliver customary closing documents and certificates in connection with sales of the ATM Shares. As of the date of this offering, 290,564 ATM Shares have been sold under the Wainwright Agreement with net proceeds from the Agent to the Company of $777,910.

Recent Developments

On April 26, 2024, we received a notice of a demand for arbitration with the American Arbitration Association from Pivot Holding LLC ("Pivot"), that alleges to be a successor in interest to Sphaera Pharma Pte. Ltd. ("Sphaera"), in connection with the Collaborative Research and Development Agreement dated February 29, 2012, as amended, between us and Sphaera. Pivot alleges breach of contract by us for failure to pay milestone payments and seeks damages of $1.625 million in milestone payments plus interest. We believe that Pivot's claims are without merit and that we haven't owed and don't owe any milestone payments to Pivot. We intend to vigorously dispute Pivot's claims and assert counterclaims against Pivot.

Corporate Information

We were incorporated in Delaware in 2010 as a successor to a Georgia limited liability company and commenced operations in September 2008. Our principal executive offices are located at 3350 Riverwood Parkway SE, Suite 1900, Atlanta, Georgia, 30339. We also maintain offices at 1 Cranberry Hill, Ste 200, Lexington, MA, 02421. Our telephone numbers are (678) 392-3419 and (617) 936-0184. Our website address is www.inhibikase.com. Information contained on our website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

Implications of Being an Emerging Growth Company

As a company with less than $1.235 billion in revenues during our last completed fiscal year, we qualify as an "*emerging growth company*" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting requirements that are otherwise applicable generally to public companies. These reduced reporting requirements include:

- an exemption from compliance with the auditor attestation requirement on the effectiveness of our internal control over financial reporting;
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure about our executive compensation arrangements; and
- an exemption from the requirements to obtain anon-binding advisory vote on executive compensation or a stockholder approval of any golden parachute arrangements.

We have elected to take advantage of some, but not all, of the available benefits under the JOBS Act. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. Further, pursuant to Section 107 of the JOBS Act, as an emerging growth company, we have elected to use the extended transition period for complying with new or revised accounting standards until those standards would otherwise apply to private companies. As a result, our consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common stock less attractive to investors.

We will remain an emerging growth company until the earliest to occur of: (i) the end of the first fiscal year in which our annual gross revenues are $1.235 billion or more; the end of the first fiscal year in which we are deemed to be a "*large accelerated filer*," as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act; the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt securities; and (iv) December 31, 2025.

THE OFFERING

The following summary contains basic information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus.

Common Stock We Are Offering:	Up to 6,951,872 shares of common stock together with Common Warrants to purchase up to 6,951,872 shares of common stock at an assumed combined public offering price of $1.87 per share and Common Warrant, which is equal to the last reported sale price per share of our common stock on the Nasdaq Capital Market on April 24, 2024 (and the shares of common stock that are issuable from time to time upon exercise of the Common Warrants) pursuant to this prospectus.
Common Warrants We Are Offering:	Each 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 $1.87 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 be immediately exercisable and will expire on the fifth anniversary of the original issuance date. The shares of common stock 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.
Pre-funded Warrants We Are Offering	We are also offering to those purchasers, if any, whose purchase of our common stock in this offering would otherwise result in such purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or at the election of such purchasers, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity, in lieu of purchasing common stock, to purchase pre-funded warrants to purchase shares of our common stock, or pre-funded warrants. Each pre-funded warrant will be exercisable for one share of our common stock (subject to adjustment as provided for therein) at any time at the option of the holder until such pre-funded warrant is exercised in full, provided that the holder will be prohibited from exercising pre-funded warrants for shares of our common stock if, as a result of such exercise, the holder, together with its affiliates and certain related parties, would own more than 4.99% of the total number of shares of our common stock then issued and outstanding. However, any holder may increase such percentage to any other percentage not in excess of 9.99%, provided that any increase in such percentage shall not be effective until 61 days after notice to us. The purchase price of each pre-funded warrant will equal the price per share at which shares of our common stock and accompanying warrants to purchase common stock are being sold to the public in this offering, minus $0.0001, and

	the exercise price of each pre-funded warrant will equal $0.0001 per share of common stock. For each pre-funded warrant purchased in this offering in lieu of common stock, we will reduce the number of shares of common stock we are offering by one.
Placement Agent Warrants We Are Offering	Pursuant to this prospectus, we will issue to the Placement Agent (or its designees) warrants to purchase up to 278,075 shares of common stock as part of the compensation payable to the Placement Agent in connection with this offering (the "Placement Agent Warrants"). See "*Plan of Distribution*". This prospectus supplement also relates to the offering of the shares of common stock issuable upon exercise of the Placement Agent Warrants.
Common Stock Outstanding Prior to This Offering:	6,476,844 shares of common stock.
Common Stock to be Outstanding Immediately After this Offering:	13,428,716 shares of common stock assuming we sell all of the shares of common stock and none of the pre-funded warrants offered pursuant to this prospectus and assuming none of the Common Warrants issued in this offering are exercised.
Use of Proceeds:	We currently intend to use the net proceeds from this offering to extend the 201 trial for Risvodetinib (IkT-148009) up to an additional 12 months, support expansion of our biomarker program and ancillary studies required for Phase 3 entry and other general corporate purposes. See "*Use of Proceeds*" in this prospectus.
Trading Symbols:	Our common stock is listed on The Nasdaq Capital Market under the symbol "*IKT*". There is no established public trading market for the Common Warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the Common Warrants on any national securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Common Warrants will be limited.
Risk Factors:	Investing in our securities involves a high degree of risk. See "*Risk Factors*" on page 13 of this prospectus and the other information included in this prospectus for a discussion of factors you should consider before investing in our securities.

Unless otherwise stated the number of shares of common stock outstanding after the offering is based on 6,476,844 shares of common stock outstanding as of April 24, 2024, the most recent date practicable, and excludes, as of that date, the following:

- 2,266,136 shares issuable upon the exercise of our outstanding warrants, with a weighted-average exercise price of $7.64, per share;
- 985,280 shares issuable upon exercise of stock options outstanding under our 2020 Equity Incentive Plan and our 2011 Equity Incentive Plan, with a weighted-average exercise price of $10.33, per share; and
- 988,792 shares reserved for future issuance under our 2020 Equity Incentive Plan.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options or warrants described above, no sale of any pre-funded warrants in this offering, and no exercise of the Placement Agent Warrants or the Common Warrants to be issued to purchasers of common stock or pre-funded warrants in this offering.

On June 30, 2023, we effected a reverse stock split at the ratio of one post-split share for every sixpre-split shares. All common stock, options and warrant amounts and references have been retroactively adjusted for all figures presented to reflect this split unless specifically stated otherwise.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the following risk factors, together with all of the other information included in this prospectus, before making an investment decision. The occurrence of one or more of the events or circumstances described in these risk factors, alone or in combination with other events or circumstances, may have an adverse effect on our business, cash flows, financial condition and results of operations. You should also carefully consider the following risk factors, together with those under the heading "Risk Factors" in our most recent Annual Report on Form 10-K, which is incorporated by reference into this prospectus, as those risk factors are amended or supplemented by our subsequent filings with the SEC, in addition to the other information included in this prospectus, including matters addressed in the section entitled "Cautionary Note Regarding Forward-Looking Statements." We may face additional risks and uncertainties that are not presently known to us or that we currently deem immaterial, which may also impair our business or financial condition.

Risks Related to Our Business, Financial Condition and Capital Requirements

We are a clinical-stage drug development company with limited resources, a limited operating history and have no products approved for commercial sale, which may make it difficult to evaluate our current business and predict our future success and viability.

We are a clinical stage drug development company that commenced operations in September 2008. We have limited facilities to conduct fundamental research and we have performed our research and development activities by collaboration with contract service providers, and contract manufacturers and by designing and developing research programs in collaboration with university-based experts who work with us to evaluate mechanism(s) of disease for which we have designed and developed product candidates. Our direct research capabilities are very limited. As of the date of this offering, we have not maintained a principal laboratory or primary research facility for the development of our product candidates. In addition, we have no products approved for commercial sale and therefore all of our revenue has been obtained solely through grants and contracts from private foundations and from state and federal grants from institutions such as the National Institutes of Health and the Department of Defense.

Drug development is a highly uncertain undertaking and involves a substantial degree of risk. As of the date of this offering, we have not completed clinical trials for any of our product candidates, obtained marketing approval for any product candidates, manufactured a commercial scale product, or arranged for a third-party to do so on our behalf, or conducted sales and marketing activities necessary for successful product commercialization. Given the highly uncertain nature of drug development, we may never initiate or complete clinical trials for any of our product candidates, obtain marketing approval for any product candidates, manufacture a commercial scale product or arrange for a third-party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization.

Our limited operating history as a company makes any assessment of our future success and viability subject to significant uncertainty. We will encounter risks and difficulties frequently experienced by early-stage pharmaceutical companies in rapidly evolving fields, and we have not yet demonstrated an ability to successfully overcome such risks and difficulties. If we do not address these risks and difficulties successfully, our business, operating results and financial condition will suffer.

There is substantial doubt regarding our ability to continue as a going concern and our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023. We will need to raise additional funding, which may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our clinical trials or other operations.

We have incurred net losses and used significant cash in operating activities since inception, and we expect to continue to generate operating losses for the foreseeable future. As of December 31, 2023, we had an accumulated deficit of $66,900,725. As of December 31, 2023, we had cash and cash equivalents of $9,165,179 and marketable securities of $4,086,873, which we believe that, together with the net proceeds of our At the Market Offering, should be sufficient to fund our operating expenses into the first quarter of 2025. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Pursuant to the requirements of Accounting Standards Codification (ASC) 205-40, Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern, and as a result of our financial condition and other factors described herein, there is substantial doubt about our ability to continue as a going concern. Our ability to continue as a going concern will depend on our ability to obtain additional funding, as to which no assurances can be given. Our future success depends on our ability to raise capital and/or execute our current operating plan. However, we cannot be certain that these initiatives or raising additional capital, will be available to us or, if available, will be on terms acceptable to us. If we issue additional securities to raise funds, these securities may have rights, preferences, or privileges senior to those of our common stock, and our current shareholders may experience dilution. If we are unable to obtain funds when needed or on acceptable terms, we may be required to curtail our current clinical trials, cut operating costs, forego future development and other opportunities or even terminate our operations, which may involve seeking bankruptcy protection. We have identified conditions and events that raise doubt about our ability to continue as a going concern and our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements for the years ended December 31, 2023 and 2022 included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

We will need additional capital. If we are unable to successfully raise additional capital, our future clinical trials could be limited, we may be forced to delay, reduce or eliminate product development programs, and our long-term viability may be threatened.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is expensive and we expect our capital expenditures to continue to be significant in the foreseeable future. We expect our research and development expenses to increase with our ongoing activities, particularly activities related to clinical trials and manufacturing activities for Risvodetinib (IkT-148009) and IkT-001Pro and product candidate development. We will need to raise substantial additional capital to complete the development and commercialization of Risvodetinib (IkT-148009), IkT-001Pro, or other product candidates, and depending on the availability of capital, may need to delay or cease development of some of our product candidates. Even if we raise additional capital, we may elect to focus our efforts on one or more development programs and delay or cease other development programs.

We experienced negative operating cash flows since our inception and funded our operations prior to our initial public offering primarily through private, state and federal contracts and grants. In December 2020, we completed an initial public offering of common stock, in June 2021 we completed a follow-on public offering, in January 2023 we completed afollow-on public offering and concurrent private placements (the "January 2023 Offering"), and in February 2024, we entered into an At The Market Offering Agreement with H.C. Wainwright & Co., LLC, as sales agent (the "Agent"), pursuant to which we may, from time to time, issue and sell shares of our common stock, in an aggregate offering price of up to $5,659,255 through the Agent (the "ATM"). We anticipate we will need to seek additional funds in the future through equity or debt financings, or strategic alliances with third parties, either alone or in combination with equity financings to complete our

product development initiatives, particularly with respect to our planned 201 trial 12 month extension study. These financings could result in substantial dilution to the holders of our common stock or require contractual or other restrictions on our operations or on alternatives that may be available to us. If we raise additional funds by issuing debt securities, these debt securities could impose significant restrictions on our operations. Any such required financing may not be available in amounts or on terms acceptable to us, and the failure to procure such required financing could have a material and adverse effect on our business, financial condition and results of operations, or threaten our ability to continue as a going concern.

Our present and future capital requirements will be significant and will depend on many factors, including:

- the progress and results of our development efforts for our product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments;
- market acceptance of our product candidates;
- the rate of progress in establishing coverage and reimbursement arrangements with domestic and international commercial third-party payors and government payors;
- the extent to which we acquire or in-license other products and technologies; and
- legal, accounting, insurance and other professional and business-related costs.

Until we can generate sufficient revenue from our product candidates, if ever, we expect to finance future cash needs through public or private equity offerings, debt financings, corporate collaborations and/or licensing arrangements and government and foundation grants. Additional funds may not be available when we need them on terms that are acceptable, or at all. We may not be able to acquire additional funds on acceptable terms, or at all. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets and we may be required to delay, reduce the scope of or eliminate some or all of our development programs.

If we do not have, or are not able to obtain, sufficient funds, we may be required to delay development or commercialization of our product candidates. We also may have to reduce the resources devoted to our product candidates or cease operations. Any of these factors could harm our operating results.

Risks Relating to This Offering

This is a best-efforts offering, 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 herein. 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, including for our planned 12 month Phase 2 extension study, and may need to raise additional funds to complete such short-term operations. Such additional fundraises may not be available or available on terms acceptable to us.

You may experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

The price per share of our common stock (orpre-funded warrant) and Common Warrant being offered may be higher than the net tangible book value per share of our common stock outstanding prior to your purchase and, in such case, you will suffer immediate dilution based on the difference between the price you pay per share of our common stock (or pre-funded warrant) and Common Warrant and our net tangible book value per share at the time of your purchase. As of December 31, 2023, our net tangible book value per share was approximately $1.66 per share (which has been retroactively adjusted to account for the shares of our common stock sold pursuant to our at-the-market program after December 31, 2023 and prior to this offering).

You may experience future dilution as a result of future equity offerings and future sales of substantial amounts of our common stock could adversely affect the market price of our common stock.

In order to raise additional capital, in the future we expect to offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. To the extent that outstanding options or warrants to purchase common stock are exercised, investors purchasing our common stock (or pre-funded warrants) in this offering may experience further dilution. Furthermore, if additional capital is raised through the sale of equity or convertible debt securities, or perceptions that those sales could occur, the issuance of these securities could result in downward pressure on the price of our common stock, and our ability to raise capital in the future through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock or the market perception that we are permitted to sell a significant number of our securities would have on the market price of our common stock.

We have broad discretion in the use of the net proceeds we receive from this offering and our management team may invest or spend such proceeds in ways with which you may not agree or in ways which may not yield a significant return.

Our management will have broad discretion in the application of the net proceeds we receive in this offering. We currently intend to use the net proceeds from this offering to extend the 201 trial for Risvodetinib (IkT-148009) up to an additional 12 months, support expansion of our biomarker program and ancillary studies required for Phase 3 entry and other general corporate purposes. The proceeds from this offering may not be sufficient to fully fund the extension of the 201 trial by 12 months, which may force us to delay the extension study or alter its design. See “Use of Proceeds.” You will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or enhance the value of our common stock. Because of the number and variability of factors that will determine our use of our net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. 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 and cause the price of our common stock to decline.

Holders of our Common Warrants and pre-funded warrants will have no rights as common stockholders until they acquire shares of our common stock.

Until you acquire shares of our common stock upon exercise of your Common Warrants orpre-funded warrants, you will have no rights with respect to shares of our common stock issuable upon exercise of your

Common Warrants or pre-funded warrants, including the right to receive dividend payments, vote or respond to tender offers. Upon exercise of your Common Warrants or pre-funded warrants, you 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 may not have any value.

Each Common Warrant will have an exercise price of not less than 100% of the last reported sale price of our common stock as of the close of the trading day immediately preceding the pricing of this offering and will expire on the fifth anniversary of the date they first become exercisable. In the event our common stock price does not exceed the exercise price of the Common Warrants during the period when the Common Warrants are exercisable, the Common Warrants may not have any value.

There is no public market for the Common Warrants or pre-funded warrants being offered in this offering.

There is no established public trading market for the Common Warrants orpre-funded warrants being offered in this offering, 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 any national securities exchange or other nationally recognized trading system, including The Nasdaq Capital Market. Without an active trading market, the liquidity of the warrants and pre-funded warrants will be limited.

Risks Related to Ownership of Our Common Stock

The market price of our common stock may be volatile.

Some of the factors that may cause the market price of our common stock to fluctuate include:

- results of our preclinical studies and clinical trials, or regulatory status of our product candidates.
- results of preclinical studies, clinical trials, or regulatory approvals of product candidates of our competitors, or announcements about new research programs or product candidates of our competitors;
- delays in filing our INDs, commencing trials, or objections by the FDA as to the content of our INDs;
- failure or discontinuation of any of our product development and research programs;
- any delay of the FDA in approving, or failure to approve, the design of our planned clinical trials for our current product candidates or for any future product candidates that we may develop;
- the results of our efforts to develop additional product candidates or products;
- commencement or termination of collaborations for our product development and research programs;
- the success of existing or new competitive products or technologies;
- the level of expenses related to any of our research programs, clinical development programs, or product candidates that we may develop;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents, or other proprietary rights;
- actual or anticipated changes in estimates as to financial results, development timelines, or recommendations by securities analysts;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders, or other stockholders;
- expiration of lock-up agreements;
- variations in our financial results or those of companies that are perceived to be similar to us;

- changes in estimates or recommendations by securities analysts, if any, that cover our stock;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical sector; and
- general economic, industry, and market conditions.

In recent years, the stock market in general, and the market for pharmaceutical companies in particular, has experienced significant price and volume fluctuations that have often been unrelated or disproportionate to changes in the operating performance of the companies whose stock is experiencing those price and volume fluctuations. Broad market and industry factors may seriously affect the market price of our common stock, regardless of our actual operating performance. Following periods of such volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. Because of the potential volatility of our stock price, we may become the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources from our business.

We will require additional capital in the future and raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We will require additional capital in the future and we may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and alliances and licensing arrangements. We, and indirectly, our stockholders, will bear the cost of issuing and servicing such securities. Because our decision to issue debt or equity securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future offerings. To the extent that we raise additional capital through the sale of equity or debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. The incurrence of indebtedness would result in increased fixed payment obligations and could involve restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Additionally, any future collaborations we enter into with third parties may provide capital in the near term but limit our potential cash flow and revenue in the future. If we raise additional funds through strategic partnerships and alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms unfavorable to us.

Insiders control a significant number of shares of our common stock, which could limit your ability to affect the outcome of key transactions, including a change of control.

Our directors, executive officers, holders of more than 5% of our outstanding stock and their respective affiliates beneficially own shares representing approximately 15.9% of our outstanding common stock. As a result, these stockholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. As of April 24, 2024, Dr. Werner alone beneficially owned shares representing approximately 14.6% of our outstanding common stock. This concentration of ownership may have the effect of delaying or preventing a change in control of our company and might affect the market price of our common stock.

We are an "emerging growth company" and a "smaller reporting company" and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted and plan to rely on exemptions from certain disclosure requirements that are

applicable to other public companies that are not emerging growth companies. These exemptions include, but are not limited to: (i) exemption from compliance with the auditor attestation requirements pursuant to the Sarbanes-Oxley Act of 2002, or SOX; (ii) exemption from compliance with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements; (iii) reduced disclosure about our executive compensation arrangements; and (iv) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We will continue to remain an emerging growth company until the earliest of the following: (i) the last day of the fiscal year following the fifth anniversary of the date of the completion of our initial public offering; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than $1.235 billion; (iii) the date on which we have issued more than $1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

In addition, we are currently a "smaller reporting company," as defined in the Securities Exchange Act of 1934, as amended, or Exchange Act, and have elected to take advantage of certain of the scaled disclosures available to smaller reporting companies. To the extent that we continue to qualify as a "smaller reporting company" as such term is defined in Rule 12b-2 under the Exchange Act, after we cease to qualify as an emerging growth company, certain of the exemptions available to us as an "emerging growth company" may continue to be available to us as a "smaller reporting company," including exemption from compliance with the auditor attestation requirements pursuant to SOX and reduced disclosure about our executive compensation arrangements. We will continue to be a "smaller reporting company" until we have $250 million or more in public float (based on our common stock) measured as of the last business day of our most recently completed second fiscal quarter or, in the event we have no public float (based on our common stock) or a public float (based on our common stock) that is less than $700 million, annual revenues of $100 million or more during the most recently completed fiscal year.

As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have opted to take advantage of this extended transition period for the adoption of certain accounting standards.

Delaware law and provisions in our amended and restated certificate of incorporation and bylaws might discourage, delay, or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage, delay, or prevent a merger, acquisition, or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our charter documents:

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered three-year terms;

- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- provide that our directors may only be removed for cause;
- eliminate cumulative voting;
- authorize our board of directors to issue shares of preferred stock and determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval;
- provide our board of directors with the exclusive right to elect a director to fill a vacancy or newly created directorship;
- permit stockholders to only take actions at a duly called annual or special meeting and not by written consent;
- prohibit stockholders from calling a special meeting of stockholders;
- require that stockholders give advance notice to nominate directors or submit proposals for consideration at stockholder meetings;
- authorize our board of directors, by a majority vote, to amend the bylaws; and
- require the affirmative vote of at least 66 2/3% or more of the outstanding shares of common stock to amend many of the provisions described above.

In addition, Section 203 of the General Corporation Law of the State of Delaware, or DGCL, prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws, or Delaware law that has the effect of delaying or preventing a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business. We currently are being covered by a very limited number of financial analysts. If no additional analysts commence coverage of us or existing analysts cease coverage, the trading price of our stock could decrease. Even if we do obtain additional analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

We do not anticipate paying dividends on our common stock in the foreseeable future.

We currently plan to invest all available funds, including the proceeds from this offering and future earnings, if any, in the development and growth of our business. We currently do not anticipate paying any cash dividends on our common stock in the foreseeable future. As a result, a rise in the market price of our common stock, which is uncertain and unpredictable, will be your sole source of potential gain in the foreseeable future, and you should not rely on an investment in our common stock for dividend income.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the securities offered under this prospectus, after deducting fees and estimated offering expenses payable by us, will be approximately $11.6 million, or $11,604,050 (based on an assumed public offering price per share of common stock of $1.87, which was the last reported sales price of our common stock on The Nasdaq Capital Market on April 24, 2024). Each $0.25 increase (decrease) in the assumed combined public offering price of $1.87 per share and accompanying Common Warrant would increase (decrease) the net proceeds to us from this offering by approximately $1.6 million, assuming the number of shares and Common Warrants offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting the placement agent fees and estimated offering expenses payable by us. We may also increase or decrease the number of shares of our common stock and Common Warrants we are offering. Each 1.0 million share increase (decrease) in the number of shares of common stock sold in this offering would increase (decrease) the expected net proceeds of the offering to us by approximately $1.7 million, assuming that the assumed combined public offering price per share of common stock and accompanying Common Warrant remains the same.

We currently intend to use the net proceeds from this offering to extend the 201 trial for Risvodetinib (IkT-148009) up to an additional 12 months, support expansion of our biomarker program and ancillary studies required for Phase 3 entry and other general corporate purposes. The proceeds from this offering may not be sufficient to fully fund the extension of the 201 trial by 12 months, which may force us to delay the extension study or alter its design.

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 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.

This expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The use of proceeds will depend on the actual amount of the net proceeds we will receive from the offering. We cannot currently allocate specific percentages of the net proceeds to us from this offering that we may use for the purposes specified above. Our management will have broad discretion in the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not result in our being profitable or increase our market value.

The amounts and timing of our actual expenditures will depend upon numerous factors, including our clinical development efforts, our operating costs and the other factors described under "*Risk Factors*" in this prospectus. Accordingly, our management will have flexibility in applying the net proceeds from this offering. An investor will not have the opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use the proceeds.

DILUTION

If you invest in our securities, your ownership interest will be diluted to the extent of the difference between the combined public offering price per share of our common stock (or pre-funded warrant) and accompanying Common Warrant and the as adjusted net tangible book value per share of our common stock immediately after giving effect to this offering.

Our net tangible book value as of December 31, 2023 was approximately $10.76 million, or approximately $1.66 per share of common stock (which has been retroactively adjusted to account for the shares of our common stock sold pursuant to our at-the-market program after December 31, 2023 and prior to this offering). Our net tangible book deficit is the amount of our total tangible assets less our liabilities. Net tangible book value per share is our net tangible book value divided by the number of shares of common stock outstanding as of December 31, 2023.

After giving effect to the assumed sale of 6,951,872 shares of common stock and accompanying Common Warrants in this offering at an assumed public offering price of $1.87 per share (the last reported sale price of our common stock Nasdaq on April, 2024) and accompanying Common Warrant, and after deducting estimated Placement Agent fees and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2023 would have been approximately $22.4 million, or approximately $1.67 per share of common stock. This amount represents an immediate increase in as adjusted net tangible book value of $0.01 per share to our existing stockholders and an immediate dilution of $0.20 per share to investors participating in this offering. We determine dilution per share to investors participating in this offering by subtracting as adjusted net tangible book value per share after giving effect to this offering from the assumed public offering price per share paid by investors participating in this offering.

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

Assumed combined public offering price per share and accompanying Common Warrant		$1.87
Net tangible book value per share as of December 31, 2023	$1.66*	
Increase in net tangible book value per share attributable to this offering	0.01	
As adjusted net tangible book value per share after giving effect to this offering		1.67
Dilution per share to new investors in this offering		$0.20

* This number has been retroactively adjusted to account for the shares of our common stock sold pursuant to our at-the-market program after December 31, 2023 and prior to this offering.

A $0.25 increase in the assumed combined public offering price per share and accompanying Common Warrant would increase the as adjusted net tangible book value by $0.12 per share and result in dilution to investors participating in this offering of $0.33 per share, and a $0.25 decrease in the assumed combined public offering price per share and accompanying common warrant would decrease the as adjusted net tangible book value by $0.12 per share and result in dilution to investors participating in this offering of $0.08 per share, in each case assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and assuming no pre-funded warrants are sold in this offering, no exercise of the Common Warrants being offered in this offering, that no value is attributed to such Common Warrants and that such Common Warrants are classified as and accounted for as equity, and after deducting Placement Agent fees and estimated expenses payable by us.

An increase of 1,000,000 shares in the number of shares offered by us in this offering would increase our as adjusted net tangible book value per share by approximately $0.01 and our as adjusted net tangible book value

per share would be $1.67, representing a decrease in as adjusted net tangible book value per share to new investors in this offering of $0.01. A decrease of 1,000,000 shares in the number of shares offered by us in this offering would decrease our as adjusted net tangible book value per share by approximately $0.01 resulting in an as adjusted net tangible book value per share of $1.66 and a decrease in as adjusted net tangible book value per share to new investors participating in this offering of $0.01 per share. The foregoing calculations assume that the combined public offering price remains the same, and are after deducting Placement Agent fees and estimated expenses payable by us.

Unless otherwise stated the number of shares of common stock outstanding after the offering is based on 6,476,844 shares of common stock outstanding as of April 24, 2024, and excludes, as of that date, the following:

- 2,266,136 shares issuable upon the exercise of the outstanding warrants, with a weighted-average exercise price of $7.64, per share;
- 985,280 shares issuable upon exercise of stock options outstanding under our 2020 Equity Incentive Plan and our 2011 Equity Incentive Plan, with a weighted-average exercise price of $10.33, per share; and
- 988,792 shares reserved for future issuance under our 2020 Equity Incentive Plan.

The information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of this offering determined at pricing.

DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws. Copies of these documents are filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part.

Our authorized capital stock consists of 110,000,000 shares of capital stock, par value $0.001 per share, of which:

- 100,000,000 shares are designated as common stock; and
- 10,000,000 shares are designated as preferred stock.

As of April 24, 2024, there were 6,476,844 shares of our common stock outstanding held by 14 stockholders of record.

Authorized Capitalization

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our amended and restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Except as otherwise required by law, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote in any election of directors. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented by proxy, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

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

Fully Paid and Non-assessable

All of our outstanding shares of our common stock are, and the shares of our common stock to be issued in this offering, upon payment and delivery in accordance with the Placement Agent agreement, will be fully paid and non-assessable.

Preferred Stock

Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, redemption rights, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. No shares of preferred stock are outstanding, and we have no present plan to issue any shares of preferred stock.

Options

As of April 24, 2024, options to purchase 985,280 shares of our common stock with a weighted-average exercise price of $10.33 per share were outstanding.

Anti-Takeover Effects of Certain Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated Bylaws

Certain provisions of Delaware law and certain provisions that are included in our amended and restated certificate of incorporation and amended and restated bylaws summarized below may be deemed to have an anti- takeover effect and may delay, deter, or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders. Certain provisions of the charter require the affirmative approval of two-thirds vote of the outstanding stock of the Company.

Preferred Stock

Our amended and restated certificate of incorporation contains provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series, and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series. The issuance of preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing change in our control or other corporate action.

Classified board of directors

Our amended and restated certificate of incorporation provides that our board of directors is divided into three classes, designated Class I, Class II, and Class III. Each class has an equal number of directors, as nearly as possible, consisting of one-third of the total number of directors constituting our entire board of directors. The term of the initial Class I director shall terminate on the date of the 2024 annual meeting, the term of the initial Class II directors shall terminate on the date of the 2025 annual meeting, and the term of the initial Class III directors shall terminate on the date of the 2026 annual meeting. At each annual meeting of stockholders, successors to the class of directors whose term expires at that annual meeting will be elected for a three-year term.

Removal of Directors

Our amended and restated certificate of incorporation provides that stockholders may only remove a director for cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote.

Director Vacancies

Our amended and restated certificate of incorporation authorizes only our board of directors to fill vacant directorships.

No Cumulative Voting

Our amended and restated certificate of incorporation provides that stockholders do not have the right to cumulate votes in the election of directors.

Special Meetings of Stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws provide that, except as otherwise required by law, special meetings of the stockholders may be called only by an officer at the request of a majority of our board of directors, by the chairperson or president of our board of directors, or by our Chief Executive Officer.

Advance Notice Procedures for Director Nominations

Our amended and restated bylaws provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders must provide timely notice thereof in writing. To be timely, a stockholder's notice generally will have to be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the amended and restated bylaws do not give our board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the company.

Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws provide that any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent.

Amending our Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation may be amended or altered in any manner provided by the DGCL. Certain provisions of our amended and restated certificate of incorporation may only be amended or altered in any manner by the affirmative vote of 66 2/3% of the then-outstanding shares of our common stock. Our amended and restated bylaws may not be amended by stockholders. Additionally, our amended and restated certificate of incorporation provides that our bylaws may be amended, altered, or repealed by our board of directors.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuances without stockholder approval, except as required by the listing standards of Nasdaq, and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved shares of our common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum

Our amended and restated certificate of incorporation provides that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim arising pursuant to the DGCL, any action regarding our amended and restated certificate of incorporation or our amended and restated bylaws or any action asserting a claim against us that is governed by the internal affairs doctrine. Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. The choice of the Court of Chancery of the State of Delaware as the sole and exclusive forum for any derivative action or proceeding brought on our behalf does not apply to suits seeking to enforce a duty or liability created by the Securities Act or Exchange Act.

Business Combinations with Interested Stockholders

Subject to certain exceptions, Section 203 of the DGCL prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an "interested stockholder" (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (i) prior to such time the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (A) by persons who are directors and also officers of such corporation and (B) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or (iii) at or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are expressly authorized to carry, and we do carry, directors' and officers' insurance providing coverage for our directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive directors.

The limitation on liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering up to 6,951,872 shares of our common stock orpre-funded warrants together with Common Warrants to purchase up to 6,951,872 shares of our common stock at an assumed combined public offering price of $1.87 (the last reported sale price of our common stock on Nasdaq on April 24, 2024) per share of common stock or pre-funded warrant together with an accompanying Common Warrant.

Common Stock

The material terms and provisions of our common stock are described under the caption "*Description of Capital Stock*" in this prospectus and are incorporated herein by reference.

Common Warrants

The following summary of certain terms and provisions of the Common Warrants 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 has been filed as an exhibit to the registration statement of which this prospectus is 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

The Common Warrants have an exercise price of $1.87 per share. The Common Warrants are immediately exercisable upon issuance and are exercisable until the fifth year anniversary of the original issuance date. The exercise price and number of shares of common stock issuable upon exercise are subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our shares of common stock. The Common Warrants will be issued in certificated form only.

Exercisability

The Common Warrants are 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 within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period, as defined in the Common Warrant, (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 warrants to the extent that the holder would own more than 4.99% (or, at the election of the purchaser, up to 9.99%) of our 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 ownership of outstanding shares of our common stock after exercising the holder's Common Warrants up to 9.99% of the number of 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 Common Warrants.

Cashless Exercise

If at the time of exercise of the Common Warrant there is no effective registration statement registering, or the prospectus contained therein is not available for the resale of the shares of common stock issuable upon exercise of the Common Warrant, then the Common Warrants will only be exercisable on a "cashless exercise" basis under which the holder will receive upon such exercise a net number of shares of common stock determined according to a formula set forth in the Common Warrants.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Common Warrants and generally including any merger with or into another entity, sale of all or substantially all of our or any subsidiary's assets, tender

offer or exchange offer, or reclassification of our shares of 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 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 common stock for which the Common Warrant is exercisable immediately prior to such event. In certain circumstances, the holder will have the right to receive the Black Scholes Value (as defined in the Common Warrant) of the warrant calculated pursuant to a formula set forth in the Common Warrants, payable either in cash or in the same type or form of consideration that was offered and paid to the holders of our common stock as described in the Common Warrants.

Transferability

In accordance with its terms and 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 and payment of funds sufficient to pay any transfer taxes (if applicable).

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 a market to develop. We do not intend to apply for a listing for the Common Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Common Warrant will be limited.

Rights as a Stockholder

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

Pre-Funded Warrants

The following summary of certain terms and provisions of thepre-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. 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.

The term "pre-funded" refers to the fact that the purchase price of eachpre-funded warrant, at closing, will equal the price per share at which shares of our common stock and accompanying warrants to purchase common stock are being sold to the public in this offering, minus $0.0001, and the exercise price of each pre-funded warrant will equal $0.0001 per share of common stock. The purpose of thepre-funded warrants is to enable investors that may have restrictions on their ability to beneficially own more than 4.99% (or, upon election of the holder, up to 9.99%) of our outstanding common stock following the consummation of this offering the opportunity to invest capital into us without triggering their ownership restrictions, by receiving pre-funded warrants in lieu of our common stock to the extent it would result in such ownership of more than 4.99% (or up to 9.99%), and receive the ability to purchase the shares underlying the pre-funded warrants at such nominal price at a later date.

Duration and Exercise Price

The pre-funded warrants offered hereby will entitle the holders thereof to purchase shares of our common stock at a nominal exercise price of $0.0001 per share, commencing immediately on the date of issuance. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders. The pre-funded warrants do not expire.

Exercisability

A holder will not have the right to exercise any portion of the pre-funded warrant if the holder (together with its affiliates and certain related parties) would beneficially own in excess of 4.99% (or, upon election of the holder, 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 pre-funded warrants. However, any holder may increase or decrease such percentage, provided that any increase will not be effective until the 61st day after notice of such election is provided to us.

Fundamental Transactions

If a fundamental transaction occurs, then the successor entity will succeed to, and be substituted for us, and may exercise every right and power that we may exercise and will assume all of our obligations under the pre-funded warrants with the same effect as if such successor entity had been named in the pre-funded warrant itself. If holders of our common stock are given a choice as to the securities, cash or property to be received in a fundamental transaction, then the holder shall be given the same choice as to the consideration it receives upon any exercise of the pre-funded warrant following such fundamental transaction.

Rights as a Stockholder

Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of shares of our common stock, the holder of a pre-funded warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the pre-funded warrant.

Placement Agent Warrants

We have agreed to issue to the Placement Agent, or its designees, warrants to purchase up to 278,075 shares of common stock (which represents 4.0% of the aggregate number of shares of common stock and/or pre-funded warrants issued in this offering) with an exercise price of $2.10 per share (representing 112.5% of the combined public offering price per share of common stock (or pre-funded warrant) and accompanying Common Warrant in this offering). The Placement Agent Warrants will be non-exercisable for six (6) months after the effective date of this registration statement and will expire five (5) years after such date. Pursuant to FINRA Rule 5110(e), the Placement Agent Warrants and any shares issued upon exercise of the Placement Agent Warrants shall not be sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days from the date of commencement of sales in this offering, except for the transfer of any security as permitted by FINRA Rule 5110(e)(2). The Placement Agent Warrants will provide for cashless exercise and will provide for anti-dilution protection as permitted by FINRA Rule 5110(g). The form of the Placement Agent Warrants has been included as an exhibit to this registration statement of which this prospectus is a part.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth the beneficial ownership of our common stock as of April 24, 2024 by:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of the named executive officers and current executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC, and thus it represents sole or shared voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Exchange Act.

We have based our calculation of the percentage of beneficial ownership on 6,476,844 shares of our common stock outstanding on April 24, 2024. We have deemed shares of our common stock subject to stock options that are currently exercisable or exercisable within 60 days of April 24, 2024, to be outstanding and to be beneficially owned by the person holding the stock option for the purpose of computing the percentage ownership of that person. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Inhibikase Therapeutics, Inc., 3350 Riverwood Parkway SE, Suite 1900, Atlanta, GA 30339. The information in the table below is based solely on a review of Schedules 13D and 13G as well as the Company's knowledge of holdings with respect to its employees and directors.

	Shares Beneficially Owned	
Name of Beneficial Owner	**Shares**	**Percentage**
Named Executive Officers, Executive Officers and Directors		
Milton H. Werner, Ph.D.(1)	954,796	14.6%
Garth Lees-Rolfe, C.P.A.(2)	1,945	*
Joseph Frattaroli, C.P.A.(3)	66,682	1.0%
Dennis Berman(4)	33,439	*
Roy Freeman, M.D.(5)	33,439	*
Paul Grint, M.D.(6)	33,439	*
Gisele Dion (7)	5,000	*
All executive officers and directors as a group (six persons)	1,062,058	16.0%
5% Stockholders	—	—

* Represents beneficial ownership of less than one percent.

(1) Consists of (a) 889,242 shares held of record by Milton H. Werner, Ph.D. and (b) 65,554 shares underlying options exercisable within 60 days of April 24, 2024.

(2) Consists of 1,945 shares underlying options exercisable within 60 days of April 24, 2024. Mr. Lees-Rolfe was appointed Chief Financial Officer effective April 1, 2024.

(3) Consists of (a) 7,357 shares held of record by Flagship Consulting, Inc., an entity controlled by Mr. Frattaroli, (b) 658 shares held directly and (c) 58,667 underlying options exercisable within 60 days of April 24, 2024. Mr. Frattaroli retired from his position as our Chief Financial Officer effective March 31, 2024.

(4) Consists of 33,439 shares underlying options exercisable within 60 days of April 24, 2024.

(5) Consists of 33,439 shares underlying options exercisable within 60 days of April 24, 2024.

(6) Consists of 33,439 shares underlying options exercisable within 60 days of April 24, 2024.

(7) Consists of 5,000 shares underlying options exercisable within 60 days of April 24, 2024.

PLAN OF DISTRIBUTION

Pursuant to an engagement agreement, dated as of April 10, 2024, we have engaged Maxim Group LLC, or the Placement Agent, to act as our exclusive placement agent to solicit offers to purchase the shares of our common stock (or pre-funded warrants) and accompanying Common Warrants offered by this prospectus on a reasonable best efforts basis. The engagement agreement does not give rise to any commitment by the Placement Agent to purchase any of our securities, and the Placement Agent will have no authority to bind us by virtue of the engagement agreement. The Placement Agent is not purchasing or selling any such securities, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of such securities, other than to use its "reasonable best efforts" to arrange for the sale of such securities by us. Therefore, we may not sell all of the shares of common stock (or pre-funded warrants) and accompanying Common Warrants being offered. The terms of this offering were subject to market conditions and negotiations between us, the Placement Agent and prospective investors. This is a best efforts offering and there is no minimum number of shares of common stock or pre-funded warrants or minimum aggregate amount of proceeds that is a condition to the closing of this offering. The Placement Agent may retain sub-agents and selected dealers in connection with this offering. This offering will terminate on June 17, 2024, 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 of common stock (or pre-funded warrant) and accompanying Common Warrant will be fixed for the duration of this offering.

We will enter into a securities purchase agreement directly with certain institutional investors, at such investor's option, which purchase our securities in this offering. Investors that do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in this offering. 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.

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

- standard issuer representations and warranties on matters such as organization, qualification, authorization, no conflict, no governmental filings required, current in SEC filings, no 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 warrant shares, no integration with other offerings, filing of an8-K to disclose entering into these securities purchase agreements, no stockholder rights plans, no material nonpublic information, use of proceeds, indemnification of purchasers, reservation and listing of common stock, and no subsequent equity sales for six months.

Delivery of the securities offered hereby is expected to occur on or about , 2024, subject to satisfaction of certain customary closing conditions.

We have agreed to pay the Placement Agent an aggregate fee equal to 7.0% of the gross proceeds received in the offering and will issue to the Placement Agent (or its designees) Placement Agent Warrants to purchase up to 278,075 shares of common stock on substantially the same terms as the Common Warrants except with an exercise price of $2.10 and the expiration date of , 2029. In addition, we have agreed to reimburse the Placement Agent for its legal fees, costs and expenses in connection with this offering in an amount up to $100,000.

We estimate the total expenses of this offering paid or payable by us, exclusive of the Placement Agent's cash fee of 7.0% of the gross proceeds and expenses, will be approximately $0.486 million. After deducting the fees due to the Placement Agent and our estimated expenses in connection with this offering, we expect the net

proceeds from this offering will be approximately $11.6 million (based on an assumed public offering price per share of $1.87, which was the last reported sales price of our common stock on The Nasdaq Capital Market on April 24, 2024.

The following table shows the per share and total cash fees we will pay to the Placement Agent in connection with the sale of the common stock pursuant to this prospectus.

	Total
Public offering price	$
Placement agent fees(1)	$
Proceeds to us (before expenses)	$

(1) Cash fee of 7.0% of the aggregate gross proceeds raised from the sale of the securities in this offering.

Indemnification

We have agreed to indemnify the Placement Agent against certain liabilities, including liabilities 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 the Placement Agent may be required to make in respect of such liabilities.

Determination of Offering Price and Warrant Exercise Price

Our common stock is currently traded on The Nasdaq Capital Market under the symbol "IKT." On April 24, 2024, the closing price of our common stock was $1.87 per share.

The actual combined public offering price of the shares of our common stock and Common Warrants, and pre-funded warrants and Common Warrants, we are offering, and the exercise price of the Common Warrants that we are offering, will be negotiated between us, the Placement Agent and the investors in this offering. We believe that the market price of our common stock at the date of this prospectus is not the appropriate public offering price for the shares of our common stock because the market price is affected by a number of factors. The principal factors considered by us and the Placement Agent in determining the final combined public offering price of the shares of common stock and Common Warrants, and pre-funded warrants and Common Warrants, we are offering, as well as the exercise price of the Common Warrants that we are offering, included:

- the recent trading history of our common stock on The Nasdaq Capital Market, including market prices and trading volume of our common stock;
- the current market price of our common stock on The Nasdaq Capital Market;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies;
- the information set forth or incorporated by reference in this prospectus and otherwise available to the Placement Agent;
- our past and present financial performance and an assessment of our management;
- our prospects for future earnings and the present state of our products;
- the current status of competitive products and product developments by our competitors;
- our history and prospects, and the history and prospects of the industry in which we compete;
- the general condition of the securities markets at the time of this offering; and
- other factors deemed relevant by the Placement Agent and us, including a to be negotiated discount to the trading price.

Company Standstill and Lock-up Agreements

We and each of our officers and directors, as of the date of effectiveness of this registration statement, have agreed with the Placement Agent to be subject to a lock-up period of six months following the date of closing of the offering pursuant to this prospectus. This means that, during the applicable lock-up period, we and such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any of our shares of common stock or any securities convertible into, or exercisable or exchangeable for, shares of common stock, subject to customary exceptions. The Placement Agent may waive the terms of these lock-up agreements in its sole discretion and without notice.

In addition, we have agreed that, subject to certain exceptions, we will not enter into a variable rate transaction (as defined in the purchase agreement) for a period of six months following the closing of this offering, provided, however, that, after three months following the closing, the issuance of shares of common stock in an "at-the-market" facility shall not be deemed a variable rate transaction.

Placement Agent Warrants

We have agreed to issue to the Placement Agent, or its designees, warrants to purchase up to 278,075 shares of common stock (which represents 4.0% of the aggregate number of shares of common stock and/or pre-funded warrants issued in this offering) with an exercise price of $2.10 per share (representing 112.5% of the combined public offering price per share of common stock (or pre-funded warrant) and accompanying Common Warrant in this offering). The Placement Agent Warrants will be non-exercisable for six (6) months after the effective date of this registration statement and will expire five (5) years after such date. Pursuant to FINRA Rule 5110(e), the Placement Agent Warrants and any shares issued upon exercise of the Placement Agent Warrants shall not be sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days from the date of commencement of sales in this offering, except for the transfer of any security as permitted by FINRA Rule 5110(e)(2). The Placement Agent Warrants will provide for cashless exercise and will provide for anti-dilution protection as permitted by FINRA Rule 5110(g).

Right of First Refusal

Pursuant to the terms of the placement agency agreement, subject to the closing of this offering, for a period of nine (9) months after the commencement of sales of securities in this offering, Maxim shall have a right of first refusal to act as lead managing underwriter and sole book runner, sole placement agent, or sole sales agent for any and all future public or private equity, equity-linked or debt (excluding commercial bank debt) offerings for which we retain the service of an underwriter, agent, advisor, finder or other person or entity in connection with such offering during such nine (9) month period for us, or any successor to us or any of our subsidiaries. We shall not offer to retain any entity or person in connection with any such offering on terms more favorable than terms on which we offer to retain Maxim. Such offer shall be made in writing in order to be effective. Maxim shall notify us within five (5) business days of its receipt of the written offer contemplated above as to whether or not it agrees to accept such retention. If Maxim should decline such retention, we shall have no further obligations to Maxim with respect to the offering for which we have offered to retain Maxim, except as otherwise provided for in the placement agency agreement. The right of first refusal shall not apply to transactions sought or entered into by the Company with federal or state government agencies, private foundations or strategic partners.

Other Compensation

We have also agreed to pay the Placement Agent a tail fee equal to 7.0% of the gross proceeds and a warrant fee of 4.0% of the securities sold in any equity, equity-linked or debt or other capital raising activity, if any

investor, who was introduced by telephone call, in person meeting or video call by the Placement Agent during the term of its engagement, provides us with capital in such a financing during the nine-month period following expiration or termination of our engagement with the Placement Agent.

Other Relationships

From time to time, the Placement Agent may provide in the future various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. However, except as disclosed in this prospectus, we have no present arrangements with the Placement Agent for any further services.

Regulation M Compliance

The Placement Agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the sale of our securities offered hereby 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 they have completed their participation in the distribution.

Electronic Distribution

This prospectus in electronic format may be made available on websites or through other online services maintained by the Placement Agent, or by its affiliates. Other than this prospectus in electronic format, the information on the Placement Agent's website and any information contained in any other website maintained by the Placement Agent 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 in its capacity as a placement agent, and should not be relied upon by investors.

Listing

Our common stock is traded on the Nasdaq Capital Market under the symbol "IKT."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC. The transfer agent and registrar's address is 48 Wall Street, Floor 23, New York, NY 10005.

Selling Restrictions

Canada. The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a

misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the placement agents are not required to comply with the disclosure requirements of NI 33-105 regarding placement agents conflicts of interest in connection with this offering.

European Economic Area. In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any securities may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by us or any placement agents of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any securities to be offered so as to enable an investor to decide to purchase any securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Israel. This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the shares is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, placement agents, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals", each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

United Kingdom. Each placement agent has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the FSMA) received by it in connection with the issue or sale of the securities in circumstances in which Section 21(1) of the FSMA does not apply to us; and

- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

Switzerland. The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). Accordingly, no public distribution, offering or advertising, as defined in CISA, its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA, its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of securities.

Australia. No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the Corporations Act) and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the securities may only be made to persons (the Exempt Investors) who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the securities without disclosure to investors under Chapter 6D of the Corporations Act.

The securities applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring securities must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in the Cayman Islands. No invitation, whether directly or indirectly, may be made to the public in the Cayman Islands to subscribe for our securities.

Taiwan. The securities have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan

through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the securities in Taiwan.

Notice to Prospective Investors in Hong Kong. The contents of this prospectus have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this prospectus, you should obtain independent professional advice. Please note that (i) our shares may not be offered or sold in Hong Kong, by means of this prospectus or any document other than to "professional investors" within the meaning of Part I of Schedule 1 of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) (SFO) and any rules made thereunder, or in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong) (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO, and (ii) no advertisement, invitation or document relating to our shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere) which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the SFO and any rules made thereunder.

Notice to Prospective Investors in the People's Republic of China This prospectus may not be circulated or distributed in the PRC and the shares may not be offered or sold, and will not offer or sell to any person for re-offering or resale directly or indirectly to any resident of the PRC except pursuant to applicable laws, rules and regulations of the PRC. For the purpose of this paragraph only, the PRC does not include Taiwan and the special administrative regions of Hong Kong and Macau.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by McDermott Will & Emery LLP, New York, New York. The Placement Agent is being represented by Thompson Hine LLP, New York, New York, in connection with this offering.

EXPERTS

The consolidated financial statements of Inhibikase Therapeutics, Inc. and Subsidiary for the years ended December 31, 2023 and 2022 have been audited by CohnReznick LLP, independent registered public accounting firm, as set forth in their report thereon appearing in Inhibikase Therapeutics, Inc. and Subsidiary's Annual Report on Form 10-K for the year ended December 31, 2023, and incorporated by reference herein. Such consolidated financial statements are incorporated by reference herein in reliance upon such report, which includes an explanatory paragraph on Inhibikase Therapeutics, Inc. and Subsidiary's ability to continue as a going concern, given on the authority of such firm as experts in accounting and auditing.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" information into this document, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information.

We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act made subsequent to the date of this prospectus until the termination of the offering of the securities described in this prospectus (other than information in such filings that was "furnished," under applicable SEC rules, rather than "filed"). 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 fiscal year ended December 31, 2023 filed with the SEC on March 27, 2024; and
- Our Current Reports on Form 8-K filed with the SEC on January 16, 2024, as amended by the Form 8-K/A filed with the SEC on April 2, 2024, February 1, 2024 and February 7, 2024.

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:

Inhibikase Therapeutics, Inc.
3350 Riverwood Parkway SE, Suite 1900
Atlanta, GA 30339
(678) 392-3419

You may also access these filings on our website at www. https://www.inhibikase.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

We have filed a registration statement on Form S-1, including exhibits, under the Securities Act of 1933, as amended, with respect to the securities offered by this prospectus. This prospectus does not contain all of the information included in the registration statement. For further information pertaining to us and our securities, you should refer to the registration statement and our exhibits.

In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public on a website maintained by the SEC located at www.sec.gov. We also maintain a website at www. https://www.inhibikase.com. Through our website, we make available, free of charge, annual, quarterly and current reports, proxy statements and other information as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on, or that may be accessed through, our website is not part of, and is not incorporated into, this prospectus.

Inhibikase Therapeutics, Inc.

Up to 6,951,872 Shares of Common Stock and Accompanying Common Warrants to Purchase up to 6,951,872 Shares of Common Stock
Up to 6,951,872 Pre-Funded Warrants to Purchase up to 6,951,872 Shares of Common Stock and Accompanying Common Warrants to Purchase up to 6,951,872 Shares of Common Stock
Placement Agent Warrants to Purchase up to 278,075 Shares of Common Stock
Shares of Common Stock Underlying the Common Warrants, Pre-Funded Warrants and Placement Agent Warrants

PROSPECTUS

Maxim Group LLC

, 2024

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. *Other Expenses of Issuance and Distribution*

The following table sets forth the expenses to be incurred in connection with the offering described in this Registration Statement. All amounts are estimates except the SEC's registration fee.

	Amount to be Paid
SEC registration fee	$ 3,972
FINRA filing fee	$ 4,537
Printing expenses	$ 40,000
Legal fees and expenses	$ 350,000
Accounting fees and expenses	$ 60,000
Transfer agent and registrar fees	$ 10,000
Miscellaneous expenses	$ 17,441
Total	$ 485,950

Item 14. *Indemnification of Directors and Officers*

Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify its directors and officers and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers, provided that the person acted in good faith and in a manner the person reasonably believed to be in our best interests, and, with respect to any criminal action, had no reasonable cause to believe the person's actions were unlawful. The Delaware General Corporation Law further provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The amended and restated certificate of incorporation of the registrant provides for the indemnification of the registrant's directors and officers to the fullest extent permitted under the Delaware General Corporation Law. In addition, the amended and restated bylaws of the registrant require the registrant to fully indemnify any person who was or is a party 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 such person is or was a director or officer of the registrant, or is or was a director or officer of the registrant serving at the registrant's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, to the fullest extent permitted by applicable law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) for payments of unlawful dividends or unlawful stock repurchases or redemptions; or (iv) for any transaction from which the director derived an improper personal benefit. The registrant's amended and restated certificate of incorporation provides that the registrant's directors shall not be personally liable to it or its stockholders for monetary damages for breach of fiduciary duty as a director and that if the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the registrant's directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

As permitted by the Delaware General Corporation Law, the registrant intends to enter into separate indemnification agreements with each of the registrant's directors and certain of the registrant's officers which require the registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status as directors, officers or certain other employees.

The registrant has obtained and maintains insurance policies under which its directors and officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities which might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not the registrant would have the power to indemnify such person against such liability under the provisions of the Delaware General Corporation Law.

These indemnification provisions and the indemnification agreements the registrant has entered into between the registrant and the registrant's officers and directors may be sufficiently broad to permit indemnification of the registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act of 1933, as amended.

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

In both September 2023 and December 2023, the Company issued 12,000 shares of its common stock to an accredited investor in exchange for digital media consulting services. The fair value of the stock was $17,280 and $14,280, respectively, based upon the closing price of the shares on the date of the respective transaction. Issuance costs were not material. No additional rights or options were granted to the accredited investor in connection with these issuances. These issuances were exempt from registration pursuant to Section 4(a)(2) of the Securities Act as transactions by an issuer not involving any public offering.

In February 2022, a corporate accredited investor subscribed for, and the Company issued, 8,334 shares of its common stock in exchange for consulting services. The fair value of the common stock was $67,000 based upon the closing price of the shares on the date of the transaction. Issuance costs were not material. No additional rights or options were granted to the accredited investor in connection with this issuance. This issuance was exempt from registration pursuant to Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving any public offering.

In January 2022, the Company issued 3,643 shares of its common stock to an accredited investor in connection with the exercise of non-qualified stock options with a strike price of $12.12 per share. Issuance costs were not material. No additional rights or options were granted to this accredited investor in connection with this issuance. This issuance was exempt from registration pursuant to Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving any public offering.

In August 2021, the Company issued 3,634 shares of its common stock in connection with the exercise of non-qualified stock options with a strike price of $12.12 per share.

In May 2021, the Company issued 12,250 shares of its common stock in connection with the exercise of 15,070 non-qualified stock options with a strike price of $2.28 per share. The Company withheld 2,820 shares of its common stock for taxes.

In March 2021, an accredited investor subscribed for, and the Company issued, 9,000 shares of its common stock in exchange for consulting services. The fair value of the common stock was $60,391 based upon the closing price of the shares on the date of the transaction. Issuance costs were not material. No additional rights or options were granted to the accredited investor in connection with this issuance. This issuance was exempt from registration pursuant to Section 4(a)(2) of the Securities Act as a transaction by an issuer not involving any public offering.

Securities Act Exemptions

The Company deemed the offers, sales and issuances of the securities described above to be exempt from registration under the Securities Act, in reliance on Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated thereunder, relative to transactions by an issuer not involving a public offering, as applicable.

All certificates representing the securities issued in the transactions described above included appropriate legends setting forth that the securities had not been offered or sold pursuant to a registration statement and describing the applicable restrictions on transfer of the securities.

Item 16. ***Exhibit and Financial Statement Schedules***

(a) Exhibits.

The exhibit index attached hereto is incorporated herein by reference.

(b) Financial Statement Schedules.

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

Item 17. ***Undertakings***

The undersigned registrant hereby undertakes:

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

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933; (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the U.S. Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% 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; provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be

deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or 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.

(6) 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 any charter provision, by law or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(7) The undersigned registrant hereby undertakes that:

(i) 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; and (ii) 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.

EXHIBIT INDEX

Exhibit Number	Description*	Form	File Number	Where Located Exhibit Number	Filing Date	Filed Herewith
1.1**	Form of Placement Agency Agreement.					
3.1	Amended and Restated Certificate of Incorporation of Inhibikase Therapeutics, Inc.	8-K	001-39676	3.1	12/29/2020	
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Inhibikase Therapeutics, Inc.	8-K	001-39676	3.1	6/29/2023	
3.3	Amended and Restated Bylaws of Inhibikase Therapeutics, Inc.	8-K	001-39676	3.2	12/29/2020	
4.1	Specimen common stock Certificate of the Registrant.	S-1	333-240036	4.1	07/23/2020	
4.2	Form of Warrant to purchase common stock of the Registrant, issued to each of the members of the Scientific Advisory Board and the investor named in Schedule A thereto.	S-1	333-240036	4.2	07/23/2020	
4.3	Warrant, issued by Inhibikase Therapeutics, Inc. to Kubera North America, Inc., dated October 5, 2018.	S-1	333-240036	4.3	07/23/2020	
4.4	Warrant, issued by Inhibikase Therapeutics, Inc. to Francis E. McDaniel, dated January 1, 2019.	S-1A	333-240036	4.4	09/15/2020	
4.5	Warrant, issued by Inhibikase Therapeutics, Inc. to Francis E. McDaniel, dated March 31, 2020.	S-1	333-240036	4.5	07/23/2020	
4.6	Form of Representative's Warrant.	S-1	333-240036	4.6	07/23/2020	
4.7	Form of Late IPO Warrant.	S-1	333-240036	4.7	07/23/2020	
4.8	Form of Private Common Warrant (January 2023).	8-K	001-39676	4.2	01/26/2023	
4.9	Form of PIPE Common Warrant (January 2023).	8-K	001-39676	4.4	01/26/2023	
4.10	Form of Placement Agent Warrant (January 2023).	8-K	001-39676	4.5	01/26/2023	
4.11**	Form of Common Warrant.					
4.12**	Form of Pre-Funded Warrant.					
4.13**	Form of Placement Agent Warrant.					
5.1**	Opinion of McDermott Will & Emery LLP.					

10.1	Collaborative Research and Development Agreement, by and between Inhibikase Therapeutics, Inc. and Sphaera Pharma Pte. Ltd., dated February 29, 2012.	S-1	333-240036	10.2	07/23/2020
10.2	First Amendment to Collaborative Research and Development Agreement, by and between Inhibikase Therapeutics Inc. and Sphaera Pharma Pte. Ltd., dated October 5, 2012.	S-1	333-240036	10.3	07/23/2020
10.3#	2011 Equity Incentive Plan and forms of agreements thereunder.	S-1	333-240036	10.4	07/23/2020
10.4#	2020 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	333-240036	10.5	12/04/2020
10.5#	Employment Agreement, by and between Inhibikase Therapeutics, Inc. and Milton H. Werner Ph.D., effective upon the completion of the Company's Initial Public Offering.	S-1	333-240036	10.7	07/23/2020
10.6	Form of Inhibikase Therapeutics, Inc. Directors and Officers Indemnification Agreement.	S-1	333-240036	10.9	07/23/2020
10.7	Side Letter to Subscription Agreement of Joseph Ventures Allium, LLC, dated July 19, 2018.	S-1	333-240036	10.11	07/23/2020
10.8	Side Letter to Subscription Agreement of Joseph Ventures Allium, LLC, dated August 31, 2018.	S-1	333-240036	10.12	07/23/2020
10.9	Side Letter to Subscription Agreement of Joseph Ventures Allium, LLC, dated June 15, 2018.	S-1	333-240036	10.13	07/23/2020
10.10	Form of Representative's Warrant Agreement.	8-K	001-39676	4.1	06/16/2021
10.11#	Amendment dated March 3, 2022 to the Employment Agreement, by and between Inhibikase Therapeutics, Inc. and Milton H. Werner, Ph.D., dated December 28, 2020.	8-K	001-39676	10.1	03/08/2022
10.12	Form of Stock Option Grant Notice and Award Agreement.	8-K	001-39676	10.3	03/08/2022
10.13#	Form of Director Offer Letter.	8-K	001-39676	10.1	09/01/2022
10.14	Securities Purchase Agreement, dated as of January 25, 2023 (Registered Direct).	8-K	001-39676	10.1	01/26/2023
10.15	Securities Purchase Agreement, dated as of January 25, 2023 (PIPE).	8-K	001-39676	10.2	01/26/2023

10.16	Registration Rights Agreement, dated as of January 25, 2023 (PIPE).	8-K	001-39676	10.3	01/26/2023	
10.17	At The Market Offering Agreement, dated February 1, 2024, by and between Inhibikase Therapeutics, Inc. and H.C. Wainwright & Co., LLC.	8-K	001-39676	10.1	02/01/2024	
10.18**	Employment Agreement between Inhibikase Therapeutics, Inc. and Garth Lees-Rolfe, dated as of April 1, 2024.					
10.19**	Form of Securities Purchase Agreement.					
21.1	Subsidiaries of the Registrant.	10-K	001-39676	21.1	03/31/2023	
23.1	Consent of Independent Registered Public Accounting Firm.					X
23.2**	Consent of McDermott Will and Emery LLP (included in Exhibit 5.1).					
24.1**	Power of Attorney (included on signature page).					
107**	Filing Fee Table.					

(#) A contract, compensatory plan or arrangement to which a director or executive officer is a party or in which one or more directors or executive officers are eligible to participate.

(*) Certain of the agreements filed as exhibits contain representations and warranties made by the parties thereto. The assertions embodied in such representations and warranties are not necessarily assertions of fact, but a mechanism for the parties to allocate risk. Accordingly, investors should not rely on the representations and warranties as characterizations of the actual state of facts or for any other purpose at the time they were made or otherwise.

(**) Previously filed.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Atlanta, State of Georgia, on the 29th day of April, 2024.

INHIBIKASE THERAPEUTICS, INC.

By: /s/ Milton H. Werner
Milton H. Werner, Ph.D.
President and Chief Executive Officer

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

Signature	Title	Date
/s/ Milton H. Werner Milton H. Werner, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	April 29, 2024
/s/ Garth Lees-Rolfe Garth Lees-Rolfe, CPA	Chief Financial Officer (Principal Financial Officer)	April 29, 2024
* Dennis Berman	Director	April 29, 2024
* Roy Freeman	Director	April 29, 2024
* Paul Grint	Director	April 29, 2024
* Gisele Dion	Director	April 29, 2024

*By: /s/ Milton H. Werner
Milton H. Werner, Ph.D.
Attorney-In-Fact

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on this amendment No. 2 to Form S-1/A (File No. 333-278844) and related Prospectus, of our report dated March 27, 2024, with respect to the consolidated financial statements of Inhibikase Therapeutics, Inc. and Subsidiary as of December 31, 2023 and 2022, and for the years then ended which report is included in the Annual Report on Form 10-K of Inhibikase Therapeutics, Inc. and Subsidiary for the year ended December 31, 2023, filed with the Securities and Exchange Commission. Our audit report includes an explanatory paragraph relating to Inhibikase Therapeutics, Inc. and Subsidiary's ability to continue as a going concern.

We also consent to the reference to our firm under the caption "Experts."

/s/ CohnReznick LLP

Holmdel, New Jersey
April 29, 2024