PROSPECTUS SUPPLEMENT No. 1 (To the Prospectus dated February 11, 2022 and the Prospectus Supplement, dated February 1, 2024)

INHIBIKASE THERAPEUTICS, INC.



Up to \$50,000

Common Stock

We have entered into an At the Market Offering Agreement, or the Sales Agreement, with H.C. Wainwright & Co., LLC, or Wainwright, relating to shares of our common stock offered by this prospectus supplement and the accompanying prospectus supplement dated February 1, 2024 (the "February 1, 2024 supplement") and prospectus dated February 11, 2022 (the "February 11, 2022 prospectus"). In accordance with the terms of the Sales Agreement, we may offer and sell shares of our common stock, \$0.001 par value per share, from time to time through Wainwright acting as our agent (the "ATM Offering").

Our common stock is listed on The Nasdaq Capital Market under the symbol "IKT." On May 17, 2024, the last reported sale price of our common stock on The Nasdaq Capital Market was \$1.73 per share.

We are filing this prospectus supplement to supplement and amend, as of May 20, 2024, the accompanying February 1, 2024 supplement and February 11, 2022 prospectus to reduce the maximum aggregate gross sales price of our common stock that may be offered, issued and sold under the Sales Agreement from and after the date hereof to \$50,000 (the "ATM Offering Size Reduction"), not including the shares of common stock previously sold. Under the February 1, 2024 supplement, we initially registered up to \$5,659,255 of our common stock for offer and sale pursuant to the Sales Agreement. As of the date of the filing of this prospectus supplement, we have sold 315,338 shares of our common stock that are covered by the February 1, 2024 supplement pursuant to the Sales Agreement for an aggregate gross sales price of \$849,187.85.

The purpose of this prospectus supplement is to update the accompanying February 1, 2024 supplement to reflect the ATM Offering Size Reduction. Except as modified by this prospectus supplement, the terms of the ATM Offering remain unchanged, and the Sales Agreement remains in full force and effect.

Pursuant to General Instruction I.B.6 of FormS-3, in no event will we sell our common stock in a public primary offering with a value exceeding more than one-third of the aggregate market value of our voting and non-voting common equity held by non-affiliates in any 12-month period as long as the aggregate market value of our outstanding voting and non-voting common equity held by non-affiliates is less than \$75,000,000.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption "<u>Risk Factors</u>" beginning on pages S-8 and 6 of the February 1, 2024 supplement and February 11, 2022 prospectus, respectively, and in the documents incorporated by reference into the February 1, 2024 supplement and February 11, 2022 prospectus, as well as the risks and uncertainties described in other documents we file with the Securities and Exchange Commission, or SEC.

Neither the SEC nor any state securities commission has approved of anyone's investment in these securities or determined if this prospectus supplement, the February 1, 2024 supplement or the February 11, 2022 prospectus are truthful or complete. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co.

The date of this prospectus supplement is May 20, 2024.