Filed Pursuant to Rule 433
Issuer Free Writing Prospectus dated May 6, 2024
Relating to Preliminary Prospectus dated May 6, 2024
Registration No. 333-278866

T2 Biosystems Announces Letter of Intent to Enter Strategic Partnership for Lyme Disease

Advances plan to launch T2Lyme Panel for detection of early Lyme disease

LEXINGTON, Mass., May 7, 2024 (GLOBE NEWSWIRE)—T2 Biosystems, Inc. (NASDAQ:TTOO), a leader in the rapid detection of sepsis-causing pathogens and antibiotic resistance genes, today announced that it has signed a non-binding letter of intent ("LOI") to enter into a strategic partnership with ECO Laboratory, a Massachusetts-based clinical laboratory certified under the Clinical Laboratory Improvement Amendments (CLIA).

ECO Laboratory was founded by Karen Weeks, who has been at the forefront of Lyme disease research and testing for decades. She is co-author of extensive publications pertaining to tick-borne diseases, including The New England Journal of Medicine and The Journal of Infectious Diseases. While supervising the Virology Department at the Massachusetts Department of Public Health, and working directly with Allen Steere, MD at Tufts University Medical Center, Ms. Weeks developed the Lyme Antibody Capture Immunoassay, which remains one of the most sensitive serology tests available for Lyme disease. In 1990, Ms. Weeks co-founded IMUGEN, Inc., the premier laboratory for the diagnosis of Lyme disease and many other tick-borne diseases, which was acquired by Oxford Immunotec in 2016.

"We look forward to entering into a strategic partnership with ECO Laboratory and its founder Karen Weeks, who has significant experience and expertise in the Lyme diagnostic market," stated John Sperzel, Chairman and CEO of T2 Biosystems. "Together, we plan to launch the T2Lyme Panel as a Laboratory Developed Test (LDT), for the detection or early Lyme disease, and build the premier Lyme testing laboratory in the United States."

The T2Lyme Panel is a direct-from-blood molecular diagnostic test designed for the early detection of *Borrelia burgdorferi*, the bacterium that causes Lyme disease in the United States. Lyme disease is the leading vector-borne disease in America, with an estimated 3.4 million tests performed each year.

The current diagnostic process is a two-tiered antibody test algorithm that relies on the presence of antibodies and can only be used accurately four to eight weeks after infection. If left untreated, the bacteria may spread throughout the body and become much harder to eradicate and treat effectively. Although early symptoms of Lyme disease are similar to the flu, *Borrelia burgdorferi* infections can lead to chronic, debilitating disease. To address this critical unmet need, we have developed a highly sensitive diagnostic test for the detection of early Lyme disease, with an analytical sensitivity that is in line with our FDA-cleared sepsis tests. We believe our test will detect Lyme disease within the first 30 days after infection, compared to antibody tests that can take 30-60 days after infection. We are finalizing internal validation and verification, and we expect to be in position for a product launch during the third quarter of 2024.

The Company expects to announce details regarding the strategic partnership with ECO Laboratory when the definitive agreement has been executed.

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About T2 Biosystems

T2 Biosystems, a leader in the rapid detection of sepsis-causing pathogens and antibiotic resistance genes, is dedicated to improving patient care and reducing the cost of care by helping clinicians effectively treat patients faster than ever before. T2 Biosystems' products include the T2Dx® Instrument, the T2Bacteria® Panel, the T2Candida® Panel, the T2Resistance® Panel, and the T2Biothreat™ Panel, and are powered by the proprietary T2 Magnetic Resonance (T2MR®) technology. T2 Biosystems has an active pipeline of future products, including the U.S. T2Resistance Panel, the Candida auris test, and the T2Lyme™ Panel.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including, without limitation, statements about the Company's ability to regain compliance with the listing requirements of the Nasdaq Capital market, as well as statements that include the words "expect," "may," "should," "anticipate," and similar statements of a future or forward-looking nature. These forward-looking statements are based on management's current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, (i) any inability to (a) realize anticipated benefits from commitments, contracts or products; (b) successfully execute strategic priorities; (c) bring products to market; (d) expand product usage or adoption; (e) obtain customer testimonials; (f) accurately predict growth assumptions; (g) realize anticipated revenues; (h) incur expected levels of operating expenses; or (i) increase the number of high-risk patients at customer facilities; (ii) failure of early data to predict eventual outcomes; (iii) failure to make or obtain anticipated FDA filings or clearances within expected time frames or at all; or (iv) the factors discussed under Item 1A. "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2023, filed with the U.S. Securities and Exchange Commission, or SEC, on April 1, 2024, and other filings the Company makes with the SEC from time to time, including our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. These and other important factors could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management's estimates as of the date of this press release. While the Company may elect to update such forward-looking statements at some point in the future, unless required by law, it disclaims any obligation to do so, even if subsequent events cause its views to change. Thus, no one should assume that the Company's silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this press release.

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T2 Biosystems, Inc. has filed a registration statement for a Form S-1 (including a preliminary prospectus) with the Securities and Exchange Commission, or the SEC, for the public offering. Before you invest, you should read the Preliminary Prospectus and the other documents T2 Biosystems, Inc. has filed with the SEC for more complete information about T2 Biosystems, Inc. and the public offering. You may get these documents for free by visiting EDGAR on the SEC web site at www.sec.gov. Alternatively, T2 BioSystems, Inc., A.G.P. or any dealer participating in the public offering will arrange to send you the Preliminary Prospectus if you request it by contacting A.G.P./Alliance Global Partners, 590 Madison Avenue, 28th Floor, New York, NY 10022, or by telephone at (212) 624-2060.