NEWS RELEASE

Karuna Therapeutics Submits New Drug Application to U.S. Food and Drug Administration for KarXT for the Treatment of Schizophrenia

9/28/2023

KarXT, a dual M1/M4 muscarinic agonist, represents the first new mechanism of action to treat schizophrenia in several decades, if approved

Submission is supported by data from three positive registrational trials demonstrating consistent and robust reductions of schizophrenia symptoms

BOSTON--(BUSINESS WIRE)-- Karuna Therapeutics, Inc. (NASDAQ: KRTX), a biopharmaceutical company driven to discover, develop, and deliver transformative medicines for people living with psychiatric and neurological conditions, today announced the submission of a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for KarXT (xanomeline-trospium) for the treatment of schizophrenia.

"Schizophrenia is a serious mental illness that affects how one thinks, feels, and behaves, with symptoms often appearing in patients in early adulthood, during the prime years of their lives," said Bill Meury, president and chief executive officer of Karuna Therapeutics. "While current therapies have made a difference for many patients, they are not without limitations due to lack of full symptom relief or side effects that may lead to treatment discontinuation. KarXT, if approved, will represent the first novel pharmacological approach to treating schizophrenia in several decades and provide a new treatment option for patients and their physicians."

"The NDA submission represents an important step toward helping patients in need. It is also a defining moment for Karuna Therapeutics. It represents the culmination of years of pre-clinical and clinical development, and a great deal of skill and hard work by our R&D organization. Our priorities over the next year are the regulatory review

process, our ongoing development efforts, and building the platform to introduce KarXT to the medical community. I believe we are uniquely positioned to make a positive impact on how neuropsychiatric conditions are treated," Meury added.

The NDA submission is supported by efficacy and long-term safety data from the EMERGENT program, the clinical program evaluating KarXT as a treatment for schizophrenia. The EMERGENT program includes the three completed positive EMERGENT-1, EMERGENT-2, and EMERGENT-3 trials evaluating the efficacy and safety of KarXT compared to placebo, and the ongoing EMERGENT-4 and EMERGENT-5 trials evaluating the long-term safety of KarXT. In all three placebo-controlled trials, KarXT met its primary endpoint, demonstrating a statistically significant and clinically meaningful reduction in Positive and Negative Syndrome Scale (PANSS) total score compared to placebo. KarXT also demonstrated reductions in both positive and negative symptoms of schizophrenia as measured by PANSS positive, PANSS negative, and PANSS negative Marder factor subscales, which were secondary endpoints in the trials.

KarXT was found to be generally well-tolerated, with the most common adverse events being cholinergic in nature and rated mild to moderate in severity. Discontinuation rates due to treatment emergent adverse events were low and similar between KarXT and placebo across all trials. Notably, KarXT was not associated with common side effects of currently available antipsychotics, including changes in metabolic function, weight gain, somnolence, and extrapyramidal symptoms.

About KarXT

KarXT (xanomeline-trospium) is an investigational muscarinic antipsychotic in development for the treatment of schizophrenia and psychosis related to Alzheimer's disease. Through its novel mechanism of action, KarXT acts as a dual M1/M4 muscarinic acetylcholine receptor agonist in the central nervous system, which is thought to mediate positive, negative, and cognitive symptoms of schizophrenia. Unlike existing treatments, KarXT does not directly block dopamine receptors, representing a potential new approach to treating schizophrenia.

About Schizophrenia

Schizophrenia is a persistent and often disabling mental illness impacting how a person thinks, feels, and behaves, and affects nearly 24 million people worldwide, including 2.8 million people in the U.S. It is characterized by three symptom domains: positive symptoms (hallucinations and delusions), negative symptoms (difficulty enjoying life and withdrawal from others), and cognitive impairment (deficits in memory, concentration, and decision-making). In part due to limitations with current treatments, people living with schizophrenia often struggle to maintain employment, live independently, and manage relationships. While current treatments can be effective in managing select symptoms, approximately 30% of people to do not respond to therapy, with an additional 50% experiencing

only a partial improvement in symptoms or unacceptable side effects.

About Karuna

Karuna Therapeutics is a biopharmaceutical company driven to discover, develop, and deliver transformative medicines for people living with psychiatric and neurological conditions. At Karuna, we understand there is a need for differentiated and more effective treatments that can help patients navigate the challenges presented by serious mental illness. Utilizing our extensive knowledge of neuroscience, we are harnessing the untapped potential of the brain in pursuit of novel pathways to develop medicines that make meaningful differences in peoples' lives. For more information, please visit www.karunatx.com.

Forward Looking Statements

This press release contains forward looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our goals to develop and commercialize our product candidates, and other statements identified by words such as "could," "expects," "intends," "may," "plans," "potential," "should," "will," "would," or similar expressions and the negatives of those terms. Forward looking statements are not promises or guarantees of future performance, and are subject to a variety of risks and uncertainties, many of which are beyond our control, and which could cause actual results to differ materially from those contemplated in such forward-looking statements. These factors include risks related to our limited operating history, our ability to obtain necessary funding, our ability to generate positive clinical trial results for our product candidates and other risks inherent in clinical development, the timing and scope of regulatory approvals, changes in laws and regulations to which we are subject, competitive pressures, our ability to identify additional product candidates, risks relating to business interruptions, and other risks set forth under the heading "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2022 and in our subsequent filings with the Securities and Exchange Commission. Our actual results could differ materially from the results described in or implied by such forward looking statements. Forward-looking statements speak only as of the date hereof, and, except as required by law, we undertake no obligation to update or revise these forward-looking statements.

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Source: Karuna Therapeutics, Inc.