4D Molecular Therapeutics Announces Collaboration on Leading Machine Learning Technology and Expertise from U.C. Berkeley to Expand Therapeutic Vector Evolution Platform

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EMERYVILLE, Calif., May 04, 2021 (GLOBE NEWSWIRE) -- 4D Molecular Therapeutics (Nasdaq: FDMT), a clinical-stage gene therapy company harnessing the power of directed evolution for targeted gene therapies, announced a new collaboration with investigators at the University of California, Berkeley focused on expanding the vector invention power of 4DMT's Therapeutic Vector Evolution platform by applying machine learning technology to the AAV vector capsid datasets generated from 4DMT's platform. This research will be conducted with Jennifer Listgarten, Ph.D., a global leader in machine learning and computational biology, and David Schaffer, Ph.D., a global leader in AAV directed evolution and gene therapy. Dr. Listgarten is a Professor in U.C. Berkeley's Center for Computational Biology, the Berkeley Artificial Intelligence Research Lab and the Chan Zuckerberg Biohub. Prior to her current positions, she held leadership roles in machine learning within Microsoft Research for approximately 10 years. Dr. Schaffer is Professor of Chemical and Biomolecular Engineering, Molecular and Cell Biology and the Helen Wills Neuroscience Institute at U.C. Berkeley. He is also Co-founder, Director and Chief Scientific Advisor at 4DMT.

"This cross-functional collaboration with world leaders in machine learning and AAV gene therapy technologies gives us the potential to dramatically expand the depth and breadth of targeted and evolved vectors invented through our Therapeutic Vector Evolution platform, significantly expanding our leading vector patent and product portfolios. 4DMT's industry-leading AAV capsid libraries encompass over one billion synthetic capsid sequences. To our knowledge, we have the largest capsid biodistribution datasets in the world as a result of the over 15 vector selection programs we have conducted in non-human primates," said David Kirn, M.D., Co-founder and Chief Executive Officer of 4DMT. "This partnership with Drs. Listgarten and Schaffer empowers 4DMT to dramatically expand our bioinformatics capabilities, enabling us to identify even more promising vectors both within, and even beyond, our existing libraries. This partnership reaffirms our commitment to relentless innovation in order to bring cures to patients."

Therapeutic Vector Evolution combines the power of directed evolution with approximately one billion synthetic capsid sequences to invent evolved vectors for use in targeted gene therapy products. Using its proprietary Therapeutic Vector Evolution platform, to date 4DMT has generated an industry-leading 40 distinct capsid libraries, conducted more than 15 vector selections in non-human primates, and has filed patent applications on over 300 novel AAV vectors. Three of these proprietary vectors were used in clinical and/or IND product candidates in ophthalmology (4D-150, 4D-125, 4D-110), cardiology (4D-310) and lung (4D-710). Through these 15 vector selections, 4DMT has generated numerous industry leading and expansive datasets relating to capsid biodistribution and delivery to targeted tissues through routine routes of administration, efficient transduction of target cells, and/or resistance to neutralizing antibodies. The application of machine learning to 4DMT's Therapeutic Vector Evolution and its datasets represents an opportunity to leverage an enabling technology to invent new vectors for use in targeted gene therapy products.

About 4DMT

4DMT is a clinical-stage company harnessing the power of directed evolution for targeted gene therapies. 4DMT seeks to unlock the full potential of gene therapy using its platform, Therapeutic Vector Evolution, which combines the power of directed evolution with approximately one billion synthetic capsid sequences to invent evolved vectors for use in targeted gene therapy products. The company is initially focused in three therapeutic areas: ophthalmology, cardiology, and pulmonology. The 4DMT targeted and evolved vectors are invented with the goal of being delivered through clinically routine, well-tolerated and minimally invasive routes of administration, transducing diseased cells in target tissues efficiently, having reduced immunogenicity and, where relevant, having resistance to pre-existing antibodies. 4DMT is currently conducting three clinical trials: 4D-125 is in a Phase 1/2 clinical trial for XLRP patients, 4D-110 is in a Phase 1 clinical trial for choroideremia patients and 4D-310 is in a Phase 1/2 clinical trial for Fabry disease patients.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding plans and timelines for the clinical development of 4D-310, 4D-125, 4D-110, 4D-150 and 4D-710, including the therapeutic potential and clinical benefits thereof; 4DMT's potential to dramatically expand the depth and breadth of the proprietary optimized vectors invented through its Therapeutic Vector Evolution platform and its ability to expand its vector patent portfolio; whether 4DMT's machine learning collaboration with U.C. Berkeley will expand its bioinformatics capabilities and whether 4DMT will be able to identify additional promising synthetic capsid sequences within its existing libraries; whether 4DMT's machine learning collaboration with U.C. Berkeley could drive additional value and result in the discovery of novel new capsids; and 4DMT's strategy, business plans and focus. The words "may," "might," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: the impact of COVID-19 on countries or regions in which 4DMT has operations or does business, as well as on the timing and anticipated results of its clinical trials, strategy and future operations; the delay of any current or planned clinical trials for the development of 4DMT's drug candidates, the risk that the results of its clinical trials may not be predictive of future results in connection with future clinical trials; 4DMT's ability to successfully demonstrate the safety and efficacy of its drug candidates; the timing and outcome of our planned interactions with regulatory authorities; and obtaining, maintaining and protecting our intellectual property. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in 4DMT's most recent Annual Report on Form 10-K that was filed on March 25, 2021, as well as any subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent 4DMT's' views only as of today and should not be relied upon as representing its views as of any subsequent date. 4DMT explicitly disclaims any obligation to update any forward-looking statements. No

representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

4D-310, 4D-125 and 4D-110 are 4DMT's product candidates in clinical trials and have not yet been approved for marketing by the US FDA or any other regulatory authority. No representation is made as to the safety or effectiveness of 4D-310, 4D-125, or 4D-110 for the therapeutic use for which they are being studied.

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