Modalis Therapeutics to Present Data Supporting of Development of Transformative Epigenetic Modulating Medicines for the Treatment of a Type of Muscular Dystrophy and the Other Genetic Disorders at the ASGCT Annual Meeting

April 20, 2022 at 5:00 PM JST

MDL-101 preclinical data support durability and efficacy of a differentiated precision medicine approach for Congenital Muscular Dystrophy type 1a

Preclinical data demonstrating our proprietary CRISPR based epigenetic modulating technology regulates target gene expression, demonstrating its potential as a therapeutic approach for serious genetic disorders.

20-Apr-2022 TOKYO & Waltham, Mass – Modalis Therapeutics Corporation (Tokyo Stock Exchange: 4883), a pioneering company developing innovative products for the treatment of rare genetic diseases utilizing its proprietary CRISPR-GNDM® epigenetic modulating technology, today announced that six scientific abstracts have been accepted for presentation at the 25th Annual Meeting of the The American Society of Gene & Cell Therapy (ASGCT), being held in Washington D.C. and virtually, May 16-19, 2022. The abstracts present preclinical data from the Company's Congenital Muscular Dystrophy type 1a (CMD1A) and the other rare disease programs in cardiovascular and neuroscience indications, as well as validation of our technology.

Modalis presentations at ASGCT will include preclinical data demonstrating that:

- Our single AAV vector system coding dCas9-trans activating domain fusion protein and gRNA targeting LAMA-1 gene (AAV9-CRISPR-GNDM®-LAMA1) upregulate LAMA-1 protein to compensate LAMA-2 function in LAMA-2 knock out mice that improved survival, supporting continued development of MDL-101 for the treatment of CMD1A; and

- Next generation sequence based AAV genome integrity data that supports validation of a process for manufacture of AAV particles containing a full-length gene of interest.
- Sustained long term expression of Cas9 protein in rodent and non-human primates.

“At ASGCT, we will present preclinical data on MDL-101 that have validate our differentiated therapeutic strategy leveraging our CRISPR-GNDM® (guide nucleotide directed modulation) technology for CMD1A which has been an undruggable target. We believe that MDL-101 has the potential to be a life changing gene modulation therapy for CMD1A, and Modalis remains on track to file an IND by end 2023,” said Tetsuya Yamagata, M.D. Ph.D., Chief Scientific Officer, Modalis Therapeutics. “We will also share exciting preclinical data showcasing use of our proprietary epigenetic technology to modulate genes to restore expression levels of disease-causing genes. These data reinforce our view that we have a unique epigenetic modulating approach with the potential to treat a wide range of serious genetic disorders that have been unapproachable with other platforms.”

The complete list of Modalis Therapeutic presentations is below. Abstracts can be accessed on the ASGCT website and the presentations will be posted on the Modalis website during the conference.

Oral Presentations:

Title: NGS based evaluation of AAV genome integrity for improved production and function
Date and Time: 5/16/2022 11:45AM
Session Name: Vector Manufacturing and Engineering 1

Title: Novel single AAV vector treatment for Congenital Muscular Dystrophy type 1A (MDC1A) using CRISPR-GNDM®technology
Date and Time: 5/18/2022 10:30AM
Session Name: Musculo-skeletal Diseases

Poster Presentations:

Title: Robust suppression of Tau by CRISPR-GNDM® system for treatment of Tauopathies
Date and Time: 5/16/2022 5:30 PM
Session Name and poster board#: Neurologic Diseases I /M-141

Title: Utilizing CRISPR-GNDM® mediated gene activation of the extra-large gene titin for the treatment of dilated cardiomyopathy and other titinopathies
Date and Time: 5/17/2022 5:30 PM
Session Name and poster board#: Cardiovascular and Pulmonary Diseases/Tu-124

Title: Blocking SNHG14/UBE3A-ATS lncRNA Transcription with Dead Cas9 (CRISPR- GNDM®) Can Un-Silence Paternal UBE3A in an Angelman Syndrome Mouse Model
Date and Time: 5/18/2022 5:30 PM
Session Name and poster board#: Neurologic Diseases III/W-153

Title: Evaluation of Cas9 mediated immune response effect on long term transgene expression in WT mice and NHPs without immune suppression
Date and Time: 5/18/2022 5:30 PM
Session Name and poster board#: Immunological Aspect of Gene Therapy and Vaccine II /W-252

About MDL-101
MDL-101 is an experimental, epigenetic modulation therapy under investigation for the treatment of Congenital Muscular Dystrophy type 1A (CMD1A). MDL-101. MDL-101 is comprised of guide nucleotide targeting LAMA-1 gene, a highly homologous sister gene of the disease-causing gene LAMA-2, enzyme-null Cas9 (dCas9) fused with trans-activating domain driven by a muscle specific promoter and coded in an AAV vector. MDL-101 upregulates LAMA-1 gene products in patient's muscle tissue to compensate loss of function caused by mutation of LAMA-2, and therefore has the potential to provide a one-time, durable treatment benefit for people living with CMD1A.

About Modalis:

Modalis Therapeutics develops precision genetic medicines using epigenetic gene modulation. Modalis is pursuing therapies for orphan genetic diseases using its proprietary CRISPR-GNDM® technology which enables the locus specific modulation of gene expression or epigenetic editing without the need for double-stranded DNA cleavage, gene editing or base editing. Modalis is initially focusing on genetic disorders caused by loss of gene regulation – resulting in excess or insufficient protein production – by targeting more than 660 genes that are thought to cause human disease as a result of haploinsufficiency. Headquartered in Tokyo with laboratories and facilities in Waltham Massachusetts, the company is listed on Tokyo Stock Exchange's Growth market. For additional information, visit www.modalistx.com.

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