



Voyager Therapeutics and MassBiologics Announce Strategic Collaboration for Viral Vector Manufacturing

Cambridge, Mass., December 11, 2014 – <u>Voyager Therapeutics</u>, a gene therapy company developing life-changing treatments for fatal and debilitating diseases of the central nervous system (CNS), today announced it has entered into a strategic collaboration with MassBiologics of the University of Massachusetts Medical School (UMMS). Through the collaboration, MassBiologics and Voyager Therapeutics will establish scalable processes for manufacturing recombinant adeno-associated viral (rAAV) vector products using current good manufacturing practices (cGMP).

The collaboration will combine Voyager's rAAV production technology platform with the manufacturing expertise and infrastructure of MassBiologics. Scientists from Voyager and MassBiologics will work together to establish Voyager's proprietary third generation baculovirus/Sf9 process for the production of rAAV vectors. The process, invented by Robert Kotin, Ph.D., Voyager's Vice President of Production, has been shown to produce high quality rAAV vector at commercial scale with high efficiency.

The collaboration activities will take place in the new MassBiologics SouthCoast Vector Manufacturing Center located in Fall River, Mass.

"We look forward to collaborating with MassBiologics at its new Vector Manufacturing Center in Fall River, a facility that aims to manufacture a new generation of medicines," said Steven Paul, M.D., CEO of Voyager Therapeutics. "High quality, scalable production is vital for the long-term success of Voyager's rAAV therapeutic programs for patients, and it is a privilege to work with the leading biologics experts at MassBiologics."

Leading rAAV production and regulatory experts from Voyager participating in the collaboration include:

- Robert Kotin, Ph.D., Vice President of Production
- Robert Pietrusko, Pharm.D., Senior Vice President of Regulatory Affairs
- David Dismuke, Ph.D., Director of Vector Production
- Maria Scheel, Associate Director of Production
- Sylvain Cecchini, Ph.D., Process Development
- Tamas Virag, Ph.D., Process Development

"This unique collaboration enables Voyager to work closely with MassBiologics personnel, reducing the time required to transfer methods, set-up manufacturing, and release product for clinical use," said Dr. Kotin.

"MassBiologics' clear commitment to viral vector manufacturing and their new state-of-the-art facility make it a natural partner for Voyager as we scale up our baculovirus/ Sf9 – based rAAV

vector manufacturing platform for clinical use," said James McLaughlin, Head of Operations at Voyager Therapeutics. "The new collaboration builds upon an existing long-term strategic partnership between UMMS's Gene Therapy Center and Voyager around rAAV research and development."

"Viral vectors like rAAV offer us a new way to think about delivering life-saving and lifechanging medicines to people," said Mark S. Klempner, M.D., Executive Vice Chancellor for MassBiologics. "We can deliver a gene that goes into the body so that an individual's own cells produce the medicine. MassBiologics is proud to have the only contract manufacturing facility in Massachusetts with the capacity to manufacture at scale viral vectors to the quality standards required for human use."

About MassBiologics

MassBiologics of the University of Massachusetts Medical School is the only publicly owned, non-profit FDA-licensed manufacturer of vaccines and other biologic products in the United States. The laboratory was established in 1894 by the state Board of Health to develop therapeutics to improve public health through applied research, development and the production of biologic products. In 1997, the Commonwealth of Massachusetts transferred stewardship of MassBiologics from the Department of Public Health to University of Massachusetts Medical School to "maintain their public purpose, preserving their ability to compete in an increasingly competitive marketplace and to maximize their value to the commonwealth." MassBiologics develops and manufactures biological therapeutics as part of its public health mission and as a contract manufacturing organization at its 300,000 sq.ft. Mattapan facility and at its newly opened 30,000 sq. ft. SouthCoast Vector Manufacturing Center.

About Voyager Therapeutics

Voyager Therapeutics is a gene therapy company developing life-changing treatments for fatal and debilitating diseases of the central nervous system (CNS). Voyager is committed to advancing the field of AAV (adeno-associated virus) gene therapy through innovation and investment in vector optimization and engineering, dosing and delivery techniques, as well as process development and production. The company's initial pipeline is focused on CNS diseases in dire need of effective new therapies, including Parkinson's disease, amyotrophic lateral sclerosis (ALS), and Friedreich's ataxia. Founded by scientific and clinical leaders in the fields of AAV gene therapy, expressed RNA interference and neuroscience, Voyager Therapeutics was launched in 2014 with funding from leading life sciences investor Third Rock Ventures and is headquartered in Cambridge, Mass. For more information, please visit www.voyagertherapeutics.com. Follow Voyager on LinkedIn.

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