Genisphere Begins Collaborative and Sponsored Research Program with the University of Maryland

HATFIELD, Pa - April 26, 2017 - Genisphere LLC, provider of the 3DNA® drug delivery platform, has signed a collaborative and sponsored research agreement with the University of Maryland, through Dr. Silvia Muro. The overall goal of the partnership is to study the pharmacokinetics and pharmacodynamics of various 3DNA designs and formulations after in vivo administration. Additional aims involve targeting diseases of the vasculature as well as inflammatory responses, demonstrating various methods of endocytosis via appropriate targeting moieties, and studying the mode and mechanism of 3DNA crossing the blood-brain barrier.

Dr. Muro is a recognized expert on cellular and subcellular interactions and transport, as well as in vivo targeting, pharmacokinetics, biodistribution, and effects of drugs and drug delivery vehicles. She has also developed proprietary technologies and methods in these fields. Dr. Muro was first to show Genisphere’s DNA-based nanodevices could be modified to induce specific uptake mechanisms for intracellular delivery of diverse compounds. A follow-up publication in 2014 validated her prior demonstration of 3DNA as a drug delivery nanocarrier.

Dr. Muro explained, "We have previous evidence of active targeting of 3DNA after intravenous injection. The goal now is to expand our in vivo studies to additional animal models, evaluate different sized 3DNA molecules, study the impact of targeting, and compare routes of administration. We are looking forward to learning more about these nanoreagents and how they interact with cells as they deliver their cargo. Our early focus on pharmacokinetics and biodistribution will drive how the unique properties of this DNA nanoscaffold may be utilized to effectively reach diseased cells and cross the blood-brain barrier. My lab has developed several tools to study nanoparticles and their interaction with biological membranes and barriers."

Bob Getts, Genisphere’s Chief Science Officer, said “This collaboration, a decade in the making, is key for Genisphere. We want to build on the foundation of knowledge we have accumulated over the last few years integrating Dr. Muro’s experience with 3DNA
nanocarriers as well as her broad expertise in the targeted delivery and nanotechnology fields. The publications we expect from this partnership will be fundamental, and will also provide specific guidance for future applications as we build our drug pipeline in cardiovascular disease, oncology and neurotherapeutics."

**About Genisphere**

Genisphere LLC is the provider of the 3DNA® platform for targeted drug delivery. 3DNA® is a nanoscale, multivalent scaffold made from proprietary, synthetic DNA formed in a flexible, branched structure. 3DNA® nanocarriers are engineered and cross-linked to form a stable architecture while maintaining the biocompatibility of the nucleic-acid building blocks, and demonstrate efficacy and safety with a variety of drug cargos across multiple indications. Genisphere’s technology is IP-protected and fully customizable to deliver small molecules, biologics, and nucleic acids with precise specificity enabled by multivalent targeting via antibodies, peptides and other molecular entities. Genisphere leverages a collaborative model to advance its 3DNA® drug delivery platform, and seeks additional partnerships with biotechnology and pharmaceutical companies to improve efficacy and reduce toxicity. Genisphere is also advancing its own lead compounds based on 3DNA® nanotechnology. For more information, please visit [http://genisphere.com](http://genisphere.com)

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