Using Mono-allelic Mass Spectrometry Data to Improve Epitope Prediction Algorithms Published in Immunity

Cambridge, Mass. – February 21, 2017 – Neon Therapeutics, an immuno-oncology company developing neoantigen-based therapeutic vaccines and T cell therapies to treat cancer, today announced the publication of an article in *Immunity*. The article presents a mass spectrometry-based approach to generate large mono-allelic HLA ligand data sets. Further, it shows how deep informatics analyses of these data can double the accuracy of epitope prediction algorithms used in personalized cancer vaccines.

Senior author is Catherine Wu, MD, Associate Professor at the Dana-Farber Cancer Institute and Neon Therapeutics founder, working closely with Steven Carr, PhD, a leader in mass spectrometry at the Broad Institute of MIT and Harvard, and Nir Hacohen, PhD, Institute Member at the Broad Institute, Director of Cancer Immunology at Massachusetts General Hospital and Neon Therapeutics founder. Lead co-author is Jennifer Abelin, PhD, previously of the Broad Institute and now laboratory head of proteomics at Neon Therapeutics. Michael Rooney, PhD, previously of the Broad Institute, is a corresponding author and is now laboratory head of bioinformatics science at Neon Therapeutics.

"While great advances have been made in the bioinformatics of epitope prediction, we still have a lot to learn to further improve this process," said Richard Gaynor, MD, president of research and development at Neon Therapeutics. "Using traditional mass spectrometry techniques resulted in ambiguity regarding which peptides are associated to which HLA alleles. This pioneering manuscript, from Neon founders Drs. Wu and Hacohen, and Neon employees Drs. Abelin and Rooney, describes a novel technique resulting in a large unbiased HLA-peptidome data set which Neon Therapeutics is implementing in our RECON™ bioinformatics engine. These novel algorithms will ensure Neon Therapeutics will generate the highest quality personalized peptide vaccine therapeutics for cancer patients."

About Neon Therapeutics

Neon Therapeutics is an immuno-oncology company focused on developing novel therapeutics leveraging neoantigen biology to treat cancer. A neoantigen-based product engine allows Neon to develop multiple treatment modalities, including next-generation vaccines and T cell therapies targeting both personalized and shared neoantigens. Neon's lead program is a personalized neoantigen vaccine that builds upon years of research and development at the Broad Institute of MIT and Harvard and Dana-Farber Cancer

Institute, and is already in multiple clinical trials. For more information, please visit www.neontherapeutics.com.

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