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Press Release



Innovative Targeting Solutions Turns Antibody Therapeutics “Inside Out”: T-Mabs Allow for the Targeting of the Intracellular Proteome.

June 2nd, 2015: Innovative Targeting Solutions (ITS) has extended its platform to the targeting of the intracellular proteome via peptides displayed on the cell surface within the context of class I MHC. Several key technological advances allowed for the efficient generation of this ultra rare class of antibodies termed TCR-like Mabs or T-Mabs. The first was the ability to generate very large mammalian display libraries, the second was ensuring that displayed antibodies were expressed at high levels on the surface of the cell and the third was the application of Next Generation Sequencing (NGS) for the interrogation of binders to identify the T-Mabs with the desired specificities. ITS’ HuTARG™ technology utilizes V(D)J recombination to derive de novo repertoires by-passing the requirement for cloning or transforming large recombinant libraries; billions of cells are generated each with a unique antibody expressed at high levels on the cell surface. NGS allowed for the interrogation of large numbers of potential binders to identify only those cells expressing antibodies with the desired specificity; antibodies that bound to MHC alone or in the context of another peptide were eliminated. “ NGS has really opened the door for robust repertoire analysis which guided us to find these needle in a hay stack antibodies. We have successfully generated T-Mabs to two targets, HIV and the cancer antigen NY-ESO ” –Paul Kang, CSO. Antibodies have historically been limited to only targeting secreted and membrane expressed proteins, T-Mabs extend the targeting to cells based on their expression of intracellular proteins. Innovative Targeting Solutions Inc. believes that its HuTARG™ platform represents the most robust system for the generation of this new class of antibody therapeutic and that T-Mabs can be utilized for T-cell therapy, T-cell redirected killing as well as antibody drug conjugates applications.

About Innovative Targeting Solutions Inc.

Founded in 2008, Innovative Targeting Solutions Inc. is a privately-held company that has developed the HuTARG™ technology a next generation protein engineering platform for the generation and maturation of fully human protein based therapeutics. The HuTARG™ technology is a fully mammalian technology that generates antibody diversity in vitro via RAG1/RAG2 mediated V(D)J recombination. For more information please visit www.innovativetargeting.com

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