Nature publishes paper on Parvus Therapeutics' nanotechnology-based treatment for autoimmune diseases including type 1 diabetes - February 22, 2016

Nature recently published results from a JDRF-funded, preclinical, proof-of-concept trial of Parvus Therapeutics' nanotechnology-based treatment for autoimmune diseases, including type 1 diabetes. The immunomodulatory "Navacims" technology involves nanoparticles (NPs) coated with disease-specific peptide-major histocompatibility complexes (pMHCs) that bind and reprogram T cells to a regulatory T cell (Treg)-like state. The study found that the Navacims increased the number of cells with that Treg-like phenotype and restored normoglycemia in non-obese mice with new-onset diabetes. As background, Tregs can promote immune tolerance by "re-educating" the immune system to mitigate beta cell destruction while preserving disease-fighting immune capabilities. Tregs have previously shown promise as a target for type 1 diabetes immunotherapy with Dr. Jeffrey Bluestone's (UCSF, San Francisco, CA) technique for ex-vivo Treg expansion and re-infusion. Type 1 diabetes is Parvus Therapeutics' most advanced program for its Navacim technology, though it remains at a very early (pre-IND) stage. The company is also investigating the concept for multiple sclerosis and liver autoimmune disease.

-- by Helen Gao, Emily Regier, Sarah Odeh, and Kelly Close