

Fast ForwardSM

General Fund

This project is funded by Fast Forward, LLC, a nonprofit organization established by the National Multiple Sclerosis Society in order to accelerate the development of treatments for MS. Fast Forward connects university-based MS research with private-sector drug development and funds small biotechnology/pharmaceutical companies to develop innovative new MS therapies and repurpose FDA-approved drugs as new treatments for MS.

<i>Primary Investigator</i>	<i>Project Title</i>	<i>Amount to be Committed</i>
Gary Olson, PhD Provid Pharmaceuticals Monmouth Junction, NJ	PV-267: A Novel Drug Candidate for Multiple Sclerosis	\$50,000 in Year 1 \$260,000 in Year 2

About the Investigator

Provid Pharmaceuticals Inc. is a drug discovery company that has expertise in the design and optimization of drug candidates for biological targets, using concepts of structure-aided design, medicinal chemistry, and peptide mimetics technology. The company has applied this capability to internal programs in autoimmune disease and oncology. In addition, Provid supplies expert medicinal chemistry services to the biotech and pharmaceutical industries to translate early biological discoveries into commercial opportunities.

Project Background & Goals

Current MS research suggests that the immune response against brain and spinal cord tissues is initiated when autoreactive immune T cells target myelin for destruction. Myelin is the insulating sheath that provides protection and sustenance to the wire-like nerve fibers and speeds nerve conduction. A set of proteins called major histocompatibility complex class II, or MHC class II, are expressed on the surface of antigen (foreign substance) presenting cells and are responsible for regulating the body's immune T cell response to antigens and infections. In a majority of MS patients, one MHC class II molecule, HLA-DR2, is responsible for presenting myelin proteins to autoreactive T cells, and is believed to play a role in the development of MS.



FastForwardSM

General Fund

Provid Pharmaceuticals has developed a compound, PV-267, which inhibits the ability of the disease-associated MHC class II molecule HLA-DR2 to bind myelin antigens and thus blocks T cell activation. They have shown this compound to be effective in inhibiting EAE in DR2 mice, an MS-like disease model, and now are pursuing further preclinical studies to help select an appropriate dosing and treatment regimen for future clinical trials in people with MS.

These studies may bring a new strategy to the clinic for stopping the MS immune attack in its tracks.