

Fast ForwardSM

Accelerating Commercial Development Fund

This project is funded through a collaboration between Fast Forward, LLC, established by the National MS Society to speed potential therapies into drug development and clinical trials, and EMD Serono, Inc., an affiliate of Merck KGaA, Darmstadt, Germany. Fast Forward and EMD Serono committed \$3 million in 2009 to support innovative early-stage projects directed towards the development of therapies to prevent treat, or reverse nervous system damage in MS. This Request for Proposals (RFP) was issued under the auspices of a multi-year collaboration between Fast Forward and EMD Serono to accelerate innovation and commercial development of MS therapies. Merck KGaA, the parent corporation of EMD Serono, Inc., will provide up to \$19 million in total funding for the collaboration.

<i>Primary Investigator</i> Professor Mats Larhed Uppsala University, Sweden Professor Ulrike Steckelings Charité-Universitätsmedizin Berlin, Germany	<i>Project Title</i> Angiotensin type 2 receptor agonism	<i>Amount to be Committed</i> \$531,300 Term – 18 months
--	--	--

About the Company

Vicare Pharma is a drug-development company at the international cutting edge of research on the angiotensin type 2 receptor (AT2 receptor). The company's portfolio contains small molecules with potential indications including anti-inflammation, nerve generation and cardiovascular disease. The company will pioneer exploration of AT2 activation, and commercialize the clinical potential in the different fields where AT2 agonism addresses significant but yet unmet medical needs, such as the consequences of hypertension and neurological disorders.



FastForwardSM

Accelerating Commercial Development Fund

Project Background & Goals

Multiple sclerosis involves an immune system attack on the brain and spinal cord (central nervous system, or CNS). Research has shown that the angiotensin type 2 receptor (AT2 receptor), is a docking site for the angiotensin hormones, and I, has the ability to fight inflammation and protect nerve tissue from damage and accelerate nerve regeneration. Vicore Pharma has developed a specific and selective, orally active agonist for the AT2-receptor called “Compound 21” (C21).

Preliminary data already indicate that C21 prevents the development of EAE, an MS-like disease, in mice. The underlying mechanism of action seems to involve anti-inflammation, inhibiting pro-inflammatory brain cells called microglia, synthesis of neurotrophins (molecules that promote the survival and function of nerve cells) in the CNS and protection and regeneration of the myelin sheath. There are indications, however, that C21 does not pass easily through the blood-brain barrier and therefore doesn't reach therapeutically effective concentrations in the CNS.

Now Vicore is teaming up with Professors Mats Larhed, an award-winning expert in medicinal chemistry, and Prof. Ulrike Steckelings, a renowned expert on the AT2 receptor, to test compounds similar to C21 for improved ability to cross the blood-brain barrier. They will assess these capabilities in mice with EAE. This project also will test new AT2-agonists in EAE and compare its effectiveness to approved MS treatments.

Optimizing the capabilities of AT2-agonistic, drug-like molecules may yield a novel approach for stopping MS disease activity in its tracks.