

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>	<i>Project Title</i>	<i>Amount to be Committed</i>
Chiara Liberati, PhD Axxam SpA Milan, Italy	Chloride Channel Blockers' Discovery Program for Inflammatory Microglia Suppression	\$402,000 Term – 12 months

About the Company

Axxam is a privately owned contract research and discovery company located at the Open Zone in Bresso, Milan, Italy. The company has developed a proven track record as a third party research and discovery services provider for the life science industry. In addition, Axxam conducts several discovery programs for selected targets which are carried out in partnership with other companies or non-profit organizations.



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Project Background & Goals

MS damages the myelin that surrounds and protects nerve fibers in the brain and spinal cord. When nerve fibers lose their protective myelin sheath, they fail to conduct nerve signals properly and that causes the symptoms of MS. Microglia normally help rid the nervous system of harmful invaders. But in MS, microglia participate in the immune response that leads to the destruction of nerve-insulating myelin. Recent research indicates that microglia may even contribute to the destruction of nerve fibers and cells, which is a major factor in the development of disability in people with MS.

Early studies show that blocking CLIC1 – a small protein that is active in microglia cells -- reduces the effects of microglia on the immune response and may even protect nerve cells from damage. In this project, Axxam SPA is developing a cell-based assay for detecting CLIC1 suitable for High-Throughput Screening (HTS, a technology which allows the identification of thousands of active compounds simultaneously) and then will conduct the screening to identify candidates which can block this protein. The team will then narrow these candidates based on chemical, biological and pharmacological parameters, and then will conduct laboratory studies to validate their blocking activity in isolated microglia. The goal is to obtain compounds that can be tested in animal models of MS, and eventually, in people with the disease.

This work could lay the groundwork for new ways to deliver therapies to areas of damage and protect against nervous system damage in MS.