



James G. Yarger, Ph.D.  
Chief Executive Officer  
ENDECE Neural

## Message from ENDECE Neural

Dear Friends,

I am excited to share recent progress updates from ENDECE Neural as we continue to move our lead candidate, NDC-1308, forward in its preclinical development for inducing remyelination in patients with MS. We hope to see you at our upcoming data presentations, which will take place at the following medical conferences:

- Annual Meeting of the American Society for Neurochemistry (ASN), Long Beach, CA, March 8-12, 2014
- 2014 Joint ACTRIMS-ECTRIMS Meeting, Boston, MA, September 10-13, 2014
- 2014 Annual Meeting of the Society for Neuroscience (SFN), Washington, DC, November 15-19, 2014

## Thank You, NMSS!

ENDECE Neural thanks the National Multiple Sclerosis Society's (NMSS) Fast Forward initiative for providing a grant to advance the preclinical development of NDC-1308. The funds helped finance a validation study of NDC-1308, which seeks to determine how robustly the compound can stimulate remyelination of MS-damaged axons in different regions of the mouse brain. Early results from the ongoing study are positive and support previous findings suggesting that NDC-1308 can induce remyelination in an animal model of demyelination.

*"The first results from the pre-clinical validation study show great promise. The team looks forward to presenting the full results at upcoming medical meetings and discussing the important implications as we devise our clinical trial strategy in our quest to develop new therapies for inducing remyelination in MS," said James Yarger, Ph.D., chief executive officer at ENDECE Neural.*

## Dr. Jeffrey Cohen Joins ENDECE Neural Scientific Advisory Board

In anticipation of preparing clinical trials of NDC-1308, ENDECE Neural is expanding the company's Scientific Advisory Board. We are therefore pleased to welcome Jeffrey Cohen, MD, director of the Experimental Therapeutics Program and the Clinical Neuroimmunology Fellowship at the Mellen Center for Multiple Sclerosis Treatment and Research at the Cleveland Clinic, to the Scientific Advisory Board.

A world-renowned expert on MS, Dr. Cohen has been involved in a large number of clinical trials investigating potential new therapies for MS, and has served on many grant review committees, advisory groups, and national and international task forces.

# Progress with NDC-1308 for Inducing Remyelination: Recent Data Presentations and Other News



In 2013 we made notable progress with the NDC-1308 preclinical development program, with data presentations at two major meetings. At the CNS Diseases World Summit 2013 in Boston, ENDECE Neural CEO and Co-founder James G. Yarger, Ph.D., presented data demonstrating that NDC-1308 can induce remyelination in an animal model of demyelination, in which the neurotoxicant cuprizone was used to remove the myelin sheath from the axons of mice. As described in Dr. Yarger's poster, NDC-1308 stimulates differentiation of oligodendrocyte progenitor cells (OPCs) into mature oligodendrocytes (cells that synthesize and maintain the myelin sheath that covers nerves in the brain and spinal cord), thereby addressing one of the root causes of MS.

In an oral presentation at the 29th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) in Copenhagen, Denmark, Steven Nye, Ph.D., vice president of Discovery at ENDECE Neural, further discussed how NDC-1308 can induce remyelination in the mouse model of demyelination. In addition, Dr. Nye addressed the proposed mechanism of action for NDC-1308, by which the drug causes a dramatic upregulation of genes in signaling pathways involved in myelin sheath production. ENDECE Neural has identified NDC-1308 as the most potent of several proprietary drugs having the ability to directly and significantly induce differentiation of OPCs into mature oligodendrocytes.

Additionally, ENDECE Neural's approach to drug discovery and the NDC-1308 development program are profiled in a recent issue of *Nature's BioPharma Dealmakers*. [View the article](#)

**As we continue to make progress with NDC-1308, we look forward to achieving the following milestones over the next several months:**

- Completion of a repeat validation study of NDC-1308, to demonstrate how robustly NDC-1308 stimulates remyelination of MS-damaged axons in different regions of the mouse brain and to determine optimal drug concentrations and dosing schedules for inducing remyelination
- Initiation of Investigational New Drug (IND)-enabling studies, to provide safety and toxicity data required by the FDA
- Initiation of human Phase 1 clinical studies in early 2015