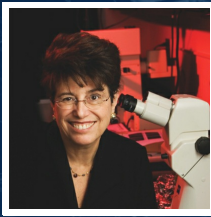


# Reversing Aging and Disease in the Brain



**Cheryl Dreyfus**  
Professor and Chair, Neuroscience and Cell Biology

## CURRENT RESEARCH

### Treating demyelinating diseases

Myelin is the body's insulator for neurons that allows messages in the body to be relayed quickly and effectively. Often, if myelin breaks down, for instance as we age or when disease occurs, cognitive functioning or physical functioning slows. Such is the case for patients with Multiple Sclerosis (MS) and Alzheimer's disease, who, as a result, lose their ability to walk or remember the past. Dr. Cheryl Dreyfus, Professor and Chair of Neuroscience and Cell Biology at Rutgers Robert Wood Johnson Medical School is searching for an approach that would reverse the devastation associated with MS and Alzheimer's disease. Having devoted her professional career to this cause, in recent years, Dr. Dreyfus has identified small molecules that have the ability to pass the blood-brain barrier and that may reverse some of the deficits associated with the diseases.

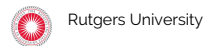
Dr. Dreyfus' lab was among the first, some years ago, to find that BDNF, a specific growth factor, can impact the ability of the cells that create myelin, and thus potentially reverse the lesions that cause disease. In fact, by increasing BDNF, Dr. Dreyfus found that cells could reverse aspects of a demyelinating lesion. Furthermore, recent results indicate that a specific neurotransmitter simulator may play a protective role in MS models of brain disease. Therefore, by understanding the mechanisms underlying disease, Dr. Dreyfus and her team hope to find a treatment that can reverse the effects of MS and Alzheimer's disease.

Current research includes:

- **Repairing Myelin Damage:** Current work is focused on understanding how to increase the release of BDNF from cells in the brain to the spinal cord in order to repair myelin damage...

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## AFFILIATION



## EDUCATION

- B.S., 1967, University of Vermont
- M.S., 1969, Cornell University
- Ph.D., 1976, Cornell University Graduate School of

## AWARDS

- Andrew W. Mellon Teacher Scientist Award, 1983
- Excellence in Teaching Award from the UMDNJ Foundation, 1996
- Award of Excellence in Pharmacology-Morphology from the The Pharmaceutical Manufacturer's Association Foundation, 2001
- Member, NIH College of CSR Reviewers, 2010-2012
- R. Walter Schlesinger, MD Basic Science Mentoring Award, UMDNJ-Robert Wood Johnson Medical School, 2011
- and 1 more...

## RESEARCH AREAS

Health & Wellness, Longevity, Immortality Research

## FUNDING REQUEST

Your contributions will support the continued research of Dr. Cheryl Dreyfus, of Rutgers Robert Wood Johnson Medical School, as she studies how to repair the damaged brain. Donations will fund the necessary \$406K/year for personnel, supplies, publications, and travel required for tissue culture and in vivo approaches using two models of MS and a model of Alzheimer's disease. In choosing to donate, you will play a role in the next generation of treatment for demyelinating diseases.