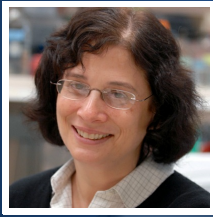


Using RNA Biology to Understand Autoimmune Diseases and Combat Retroviruses



Sandra Wolin
Professor, Cell Biology

CURRENT RESEARCH

Elucidating causes of autoimmune diseases and improving treatment for lupus and AIDS

"I locked myself away until I was confident and comfortable again," were the words of former Disney celebrity Selena Gomez who was diagnosed with lupus in 2013 at the age of 21 [1]. According to the Lupus Foundation of America, most individuals diagnosed with the disease are women between the ages of 15-44 [2]. Meanwhile, all-time tennis star Venus Williams announced that she was struggling with Sjögren's syndrome, a related autoimmune disease that attacks exocrine glands like tear ducts. Patients with lupus and Sjögren's syndrome are attacked by their own immune systems which produce antibodies against the patients' own cells, a problem for which there are treatments but no cure. Dr. Sandra Wolin, Professor of Cell Biology at Yale University, studies how cells recognize and remove unneeded RNA molecules and how failure to do so can affect cells and contribute to diseases like lupus and Sjögren's syndrome. An expert and pioneer in RNA biology, Dr. Wolin is making great strides in elucidating the mechanisms that lead to autoimmune disease and in identifying new targets to combat viruses like HIV.

Patients with autoimmune diseases such as lupus and Sjögren's syndrome make antibodies against specific cellular RNA-protein and DNA-protein complexes. These antibodies and the complexes they recognize cause many of the symptoms of these diseases. It is often not clear which antibody complex contributes most to disease, but some antibodies are specifically associated with certain symptoms of lupus, and these antibodies target a protein...

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AFFILIATION



Yale University

EDUCATION

- Ph.D. in Molecular Biophysics and Biochemistry 1985, Yale University
- M.D. in 1985, Yale University
- A.B. in Biochemical Sciences 1978, Princeton University

AWARDS

- Elected Fellow of the American Academy of Microbiology, 2014
- Elected Fellow of the American Association for the Advancement of Science, 2013
- Senior Scholar in Aging Award, Ellison Medical Foundation, 2006-2010
- Lucille P. Markey Scholar, 1988-1990
- Helen Hay Whitney Postdoctoral Fellowship, 1986-1988

RESEARCH AREAS

Life Science, Infectious, Genomics / Congenital, Immunology / Inflammatory

FUNDING REQUEST

Your contributions will support the continued research of Dr. Sandra Wolin of Yale University as she works to uncover the causes of lupus and Sjögren's syndrome and to improve treatments for AIDS. Donations will support the \$700K/year required to run the lab, supporting personnel, supplies, and basic research. Your generosity will fund research that could greatly impact the lives of patients struggling with these debilitating diseases.