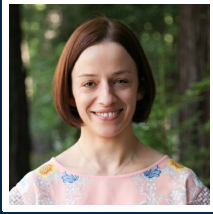


Diagnosis and Treatment Solutions for Lupus and Rheumatoid Arthritis



Susan Carpenter

Assistant Professor, Molecular Cell and Developmental Biology

CURRENT RESEARCH

Bridging immunology and RNA biology to identify biomarkers and therapeutic targets for chronic inflammatory diseases

Designed to protect our body against infection, when perturbed, our immune system can turn against itself and attack healthy tissue it confuses as harmful bacteria or viruses, leading to debilitating consequences like chronic inflammation. Examples of chronic inflammation include systemic lupus erythematosus (SLE, or lupus) and rheumatoid arthritis (RA), from which about 1.5 million [1] and 1.3 million Americans suffer, respectively [2]. While RA increases the risk of heart diseases by 60 percent, such inflammatory diseases are difficult to diagnose or treat because they mimic symptoms of other diseases; their symptoms are inconsistent; and there are no causes or cures known. Dr. Susan Carpenter, Assistant Professor of Molecular Cell and Developmental Biology at the University of California, Santa Cruz, studies the early immune responses to identify novel regulators of inflammation that will advance the breakthroughs in diagnosis and treatment solutions for chronic inflammation. By understanding in more detail exactly what goes wrong in the signaling pathways particularly in lupus and RA, Dr. Carpenter hopes to identify novel biomarkers and targets for therapeutic intervention. Collaborating with the Rheumatologists at UCSF, UCSD and UMASS Medical School for clinical samples, Dr. Carpenter brings together clinical and basic science investigators to address significant questions promising a clinical impact.

Because the initial driver of this inflammation remains unknown, Dr. Carpenter hopes to elucidate...

[Read More at benefunder.com/](#)

AFFILIATION



University of California, Santa Cruz

EDUCATION

- Ph.D. in Biochemistry and Immunology from the School of Biochemistry 2009, Trinity College Dublin, Ireland
- B.A. Moderatorship in Biochemistry and Immunology 2004, Trinity College Dublin, Ireland

AWARDS

- Invited speaker at the Annual meeting of the American College of Rheumatology, 2015
- Invited speaker at the Mid Winter Conference for Immunologists, 2015
- Named the Sontag Foundation Fellow, 2014
- Winner of the Centro Stefano Franscini award for best presentation by a young scientist, 2012
- Recipient of the 'Roche Researcher of the Year Award', 2009

RESEARCH AREAS

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

FUNDING REQUEST

Your contributions will help support Dr. Susan Carpenter at University of California, Santa Cruz as she continues to study regulations of lupus and rheumatoid arthritis. Donations will help fund the \$250K/year required to support personnel and conduct large scale deep sequencing of human genomes in addition to animal studies. With your generosity, Dr. Carpenter will be able to identify novel biomarkers to aid in early diagnosis as well as novel targets for therapeutic intervention in lupus and RA.