

December 12, 2018 | By Scott LaFee

UC San Diego to Partner with New Allen Institute for Immunology

Collaboration will focus on rheumatoid arthritis, looking at how the immune system of people at high risk changes before, during and after disease development

The Seattle-based Allen Institute today announced the launch of the Allen Institute for Immunology, a new division of the institute dedicated to studying the human immune system. The new institute will work directly with University of California San Diego School of Medicine and other leading research organizations to understand the dynamic balancing act of the human immune system, how it senses friend from foe and what goes wrong when we're ill.



Altman Clinical and Translational Research Institute at UC San Diego School of Medicine.

The Allen Institute for Immunology's goal is to improve human immune health and lay the groundwork for better ways to diagnose, treat and prevent immune-related diseases. In its initial phase, the institute will focus on studies of two cancers (multiple myeloma and melanoma) and three autoimmune disorders — rheumatoid arthritis and inflammatory bowel disease, specifically ulcerative colitis and Crohn's disease.

Researchers will also take a deep dive into the immune systems of healthy volunteers with the goal of understanding what makes a "normal" immune baseline and how to help patients return to that healthy state.

"By unraveling the mysteries of the dynamic immune system in healthy individuals and focusing the same cutting-edge tools on patients in various disease states, we believe we will find new ways to diagnose and ultimately treat disease," said Thomas F. Bumol, PhD, executive director

of the Allen Institute for Immunology. “We are looking at problems that have large unmet needs. Patients are not only suffering from these immune-based illnesses, patients are dying from some of these disorders, and we would like to change that.”

Rheumatoid arthritis (RA) is a progressive autoimmune disease in which the immune system mistakenly attacks joints, resulting in inflammation and permanent damage that cannot currently be reversed. An estimated 1.5 million people in the U.S. have the condition. It is nearly three times more common in women than men, most often occurring later in life. The cause of RA is not yet fully understood.

Researchers at UC San Diego School of Medicine, in collaboration with colleagues at University of Colorado Anschutz Medical Campus, will seek to better understand changes in the immune system as the body progresses from a pre-disease state to disease, with the goal of developing treatments that target rheumatoid arthritis earlier, or perhaps prevent the disease altogether.

“Large scale collaborative efforts are required for projects of this magnitude,” said principal investigator Gary Firestein, MD, director of the Altman Clinical and Translational Research Institute and dean and associate vice chancellor for clinical and translational research at UC San Diego School of Medicine.

“With the resources of the Allen Institute, we will be able to map how and why people develop rheumatoid arthritis, compare their immune systems to normal individuals, and, ultimately, develop ways to prevent the disease.”

The Allen Institute for Immunology will build off of the model of large-scale team science established by the Allen Institute’s other research divisions and will work directly with samples and data from patients and healthy volunteers, thanks to a unique partnership with established research organizations. UC San Diego and the University of Colorado join Benaroya Research Institute at Virginia Mason University, Fred Hutchinson Cancer Research Center and the University of Pennsylvania in partnering with the Allen Institute for Immunology.

The new institute will be funded by a \$125 million commitment from the Allen Institute founder Paul G. Allen.

“Paul Allen always challenged us to go after the really hard problems, to do work that would have a significant impact in our scientific fields,” said Allan Jones, PhD, president and Chief Executive Officer of the Allen Institute. “Understanding the human immune system in detail and

figuring out what goes wrong in disease is an incredibly complex but solvable problem. I'm thrilled to see us launch into this new area of complexity in biology with a real opportunity to directly impact human health."

About UC San Diego Health

UC San Diego Health, comprising a comprehensive health system throughout San Diego County, UC San Diego School of Medicine and Skaggs School of Pharmacy and Pharmaceutical Sciences, is one of five academic medical systems within the University of California system. We are committed to improving patient care while also researching new treatments and training tomorrow's doctors and pharmacists. For more than 50 years, our renowned clinicians and scientists have made advances in numerous fields, including minimally invasive surgeries, personalized cancer therapy, cardiovascular treatment and surgery, transplantation and the early detection of autism. Our specialty patient care is consistently ranked among the nation's best by *U.S. News & World Report*.

About the Allen Institute for Immunology

The Allen Institute for Immunology is a division of the Allen Institute, an independent, 501(c)(3) nonprofit medical research organization, and is dedicated to understanding the dynamic balancing act of the human immune system in health and disease. The Allen Institute for Immunology will advance our fundamental understanding of the human immune system and will identify new therapeutic avenues for disease by employing a multi-disciplinary team approach in collaboration with leading research organizations, generating novel insights about cellular and molecular drivers of immune health and immune-related diseases. The Allen Institute for Immunology will be launched in 2018 with a contribution from founder and philanthropist, the late Paul G. Allen. The data and tools generated by the Allen Institute for Immunology will be publicly available online.

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