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## New \$17 million grant establishes LJI as global hub for immunology data curation and analysis

NIAID support opens gateway to new research into human immune responses to viruses, the development of autoimmune diseases and more

LA JOLLA, CA—A new grant of over \$17 million from the National Institute of Allergy and Infectious Diseases (NIAID) has established La Jolla Institute for Immunology (LJI) as the leading institute for human immunology data curation, analysis, and dissemination. With this funding, LJI has taken the helm of the Human Immunology Project Consortium Data Coordinating Center, a critical tool in the effort to fuel scientific collaboration in immunoprofiling and highlight findings from the overall Human Immunology Project Consortium (HIPC).

"We are leading the biggest human immunoprofiling effort in the world," says LJI Professor and HIPC Data Coordinating Center leader <u>Bjoern Peters, Ph.D.</u> "The HIPC Data Coordinating Center integrates data from the many HIPC centers at places such as Yale, MIT, and Harvard. These data are accessible through the updated website."

Peters joins his co-leader, Professor <u>Steven Kleinstein,Ph.D.</u>, at Yale School of Medicine, in leading and expanding the existing HIPC Data Coordinating Center website, called <u>ImmuneSpace</u>. They are building both a hub for HIPC information and a powerful analysis engine for scientists world wide. Scientists visiting the site can explore data from over 11,000 participants in 143 studies to generate new biological insights.

The HIPC program was established by NIAID in 2010. Today, eight <u>HIPC centers</u> are spread across the nation and include the laboratory of LJI Professor <u>Alessandro Sette</u>, <u>Dr.Biol.Sci</u>. HIPC researchers are focused on unraveling how the many immune cells and signaling molecules of the human immune system work together in response to autoimmune diseases, pathogens like SARS-CoV-2 and influenza, vaccinations, and life events such as pregnancy. HIPC projects have shed light on the immunoprofile or "signature" of steady-state versus active immune responses.

## **Current HIPC centers:**

- Benaroya Research Institute
- Columbia University

- Icahn School of Medicine at Mount Sinai
- La Jolla Institute for Immunology
- Massachusetts Institute of Technology
- Seattle Children's Research Institute
- Stanford University
- Yale School of Medicine

LJI's leadership of the HIPC Data Coordinating Center comes after the Institute's success in launching and maintaining the Immune Epitope Database and Analysis Resource (<u>IEDB</u>) and the <u>DICE</u> (Database of Immune Cell Expression, Expression quantitative trait loci [eQTLs] and Epigenomics) project.

"Through the IEDB and DICE and now CEDAR, LJI has established itself as an institute with massive web traffic, bringing in people who need immune system information. We're building on that experience to make the HIPC data more accessible to the broader scientific community," says Peters.

With LJI's experience in database management expanding, Peters envisions eventually establishing a repository at the Institute for overall immunology data. "All of these fields are ultimately inter-related," he says. "We need to work against the 'silo' concept, where lots of people are working side-by-side and don't realize the connection between their work and what other people are studying."

The new center is funded through NIAID grant number: <u>1U01AI167892</u>.

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