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## San Diego Center for AIDS Research Launches Molecular and Cellular Immunology Core

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August 1, 2023; La Jolla, CA: The San Diego Center for AIDS Research (SD CFAR) is pleased to announce the launch of the Molecular and Cellular Immunology Core (MCI) as an expansion of its robust laboratory, clinical, biostatistical, and sociobehavioral science cores. SD CFAR was established in 1994 through a grant from the National Institute of Allergy and Infectious Diseases (NIAID) and has been a regional resource serving laboratory and sociobehavioral scientists, clinicians, and the public for nearly three decades. The Center promotes scientific and clinical studies in HIV and fosters researchers using innovative strategies to advance their research priorities of preventing new HIV infections, optimizing HIV care, and developing a cure for those living with HIV while promoting health equity for all. In April 2023, NIAID renewed their support for SD CFAR with a five-year, \$15.45 million grant.

The launch of the Molecular and Cellular Immunology (MCI) Core follows an 18-month strategic planning process with the goal of improving access, gaining efficiency, and offering services that analyze different aspects of cellular and host responses at a single-cell level within one comprehensive Core. This new Core combines resources and key services offered by the former SD CFAR Flow Cytometry and Genomics and Sequencing Cores with added capabilities from infrastructure at Scripps Research allowing the Center to streamline services and offer upgraded equipment and functionality to users. “We are excited to leverage the expertise of the Burton and Briney labs at Scripps Research to expand our Center’s services and further support single-cell -omics research,” notes Dr. Davey Smith, Co-Director of the SD CFAR, Co-Director of the Altman Clinical & Translational Research Institute, and Chief of the Division of Infectious Diseases and Global Public Health. “The integration of a laboratory-based Core at Scripps Research strengthens our regional research partnerships and extends our ability to serve our scientific community.”

The MCI Core is co-directed by Drs. Dennis Burton (Scripps Research) and David Looney (UC San Diego) with Dr. Celsa Spina (UC San Diego) as Emeritus Co-Director. Dr. Nadejda Beliakova-Bethell (UC San Diego) and Dr. Bryan Briney (Scripps Research) are Associate Directors, and Dr. Jennifer Dan (La Jolla Institute for Immunology and UC San Diego) serves as the Leadership Trainee.

The MCI Core is organized into three units: Flow Cytometry, Genomics, and Single-Cell -Omics. Each unit is led by accomplished experts who have well-established track records and are highly experienced in experimental design, data collation, formatting and pre-processing, and quality assurance. The Flow Cytometry Unit is led by Dr. Beliakova-Bethell, Genomics by Dr. Looney, and Single-Cell -Omics by Dr. Briney.

Flow Cytometry services include cell phenotyping, cell sorting, and single cell deposition. The Genomics Unit services include targeted gene expression quantification and sample and library preparation for scRNA-Seq and ATAC-Seq. New single-cell -omics services include single cell functional profiling and transcriptomics, proteomics via feature barcoding, and adaptive immune receptor repertoires.

The MCI Core has laboratory locations at UC San Diego (Stein), the VA San Diego Healthcare System, and Scripps Research. The Core is located in a biological safety level (BSL) 2+ facility, allowing processing of biohazardous HIV-infected samples in sorting and live cell preparation for the -omics studies. Furthermore, the MCI Core provides computational expertise with data processing for generated data, quality assurance and training of emerging HIV investigators.

For more information about the SD CFAR or the MCI Core, please visit <https://cfar.ucsd.edu>.

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**About the San Diego Center for AIDS Research:** The San Diego Center for AIDS Research (SD CFAR) is one of 19 NIH-funded academic centers providing administrative and shared research support to synergistically enhance and coordinate high-quality HIV/AIDS research projects at academic institutions across the U.S. The SD CFAR supports multidisciplinary research to end the HIV epidemic and is recognized as a Tier 3 Center at the highest quality of research and funding. For more information, please visit <https://cfar.ucsd.edu>.