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LJI home to new "Center of Excellence"

LJI's Flow Cytometry Core brings cutting-edge technology to immune system researchers

LA JOLLA, CA—Researchers at La Jolla Institute for Immunology (LJI) are about to get an even closer look at disease-fighting immune cells.

The Institute's <u>Flow Cytometry Core</u>, which provides cutting-edge research services, has been named a BD Biosciences "Center of Excellence." Along with this distinction, the LJI Flow Core has brought in a sophisticated instrument for immune cell research: the <u>BD FACSDiscover™ S8 Cell</u> <u>Sorter</u>.

This novel technology adds to the already impressive collection of machines run by Flow Core Senior Director Cheryl Kim and her team. "This is an exciting opportunity," says Kim. "We've got LJI scientists who are interested in using this cell sorter right away."

Leaders in their field

The Flow Core harnesses instruments called flow cytometers and cell sorters to detect different kinds of immune cells within different types of samples (including blood and tissue biopsies). These instruments rely on colorful fluorescent antibodies, which bind to different cellular proteins or targets on or within the cell, to separate immune cells by type.

LJI researchers work with the Flow Core team to uncover exactly which types of immune cells play key roles in fighting viruses or cancers—or in triggering damaging inflammation, allergies, and autoimmune diseases. In recent years, the Flow Core has helped shed light on how immune cells operate during asthma attacks, SARS-CoV-2 infections, cardiovascular disease and more.

"LJI's Flow Cytometry Core is an amazing resource for LJI scientists—and for our scientific collaborators around the globe," says LJI Chief Scientific Officer Shane Crotty, Ph.D.

Fueling new discoveries

Thanks to support from generous donors, including The Conrad Prebys Foundation, the LJI Flow Core houses four cell sorters that can detect over 28 different colors of fluorescent antibodies. Scientists can tag specific proteins with this wide array of colors to find rare types of immune cells. The BD FACSDiscover[™] S8 Cell Sorter was designed to detect even more colors, says Kim. The sorter also provides a new feature: image analysis. "With this new cell sorter, you can see how different immune cells are interacting and get visual confirmation to improve the quality of the data, which is something that we haven't been able to do before," says Kim.

The Flow Core's new "Center of Excellence" distinction also reflects LJI's contributions to advancing cell sorter technology. BD Biosciences is loaning the BD FACSDiscover™ S8 Cell Sorter to the LJI Flow Core—at no cost—for up to nine months. In return, the Flow Core team will put the cell sorter through its paces and share feedback with BD Biosciences.

Kim is eager to see how the instrument performs, and she's curious whether the loan will spark interest in bringing the BD FACSDiscover[™] S8 Cell Sorter to LJI to stay. "This is revolutionary technology," Kim says.

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