

Moore's UCSD Cancer Center Receives \$6 Million NIH Contract to Identify Vaccine-Enhancing Substances

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Researchers at the Moore's UCSD Cancer Center have received \$6 million from the National Institutes of Health to spend the next five years looking for, testing and developing chemicals called "adjuvants" that they hope will make current vaccines more effective.

The National Institute of Allergy and Infectious Diseases (NIAID), part of the NIH, has awarded approximately \$60 million over five years to six institutions in the United States, with the goal of identifying and characterizing novel adjuvants - substances that can be added to vaccines to enhance the protective immune response they induce. These compounds will be tested in animal models and human cells to determine how well they stimulate immune responses.

According to Moore's Cancer Center director Dennis Carson, MD, who leads the Cancer Center team, it's only recently that scientists have begun to understand how adjuvants work through specific protein receptors.

"Our aim is to find chemicals that can activate newly discovered receptors in order to stimulate immunity and act as adjuvants," said Carson. The work will involve using sophisticated "high-throughput" chemical screening techniques, resulting in the selection of drug candidates for continued testing. "It's a drug discovery project."

"We'd like to be able to manipulate and train the immune system and at the same time find and better understand its receptors and targets," Carson added. "Our job is drug development that will intersect with the basic biology and clinical testing done by others."

One goal for the overall study is to make stronger, more specific adjuvants for current vaccines. Carson envisions the day when a flu vaccine, for example, could require only one one-hundredth of the current dose, meaning vaccine stocks could last longer. At the same time, better adjuvants could enhance the immune reactions of immune-challenged individuals such as the elderly.

In addition to biologists and chemists at the Cancer Center, the Moore's Cancer Center team is collaborating with colleagues at the University of California, San Francisco and Life Technologies, a San Diego-based company.

Other institutions receiving contracts for 2009 include the University of Michigan, Ann Arbor, the University of Kansas, Lawrence, the University of Washington School of Medicine, Seattle, Corixa Corporation (now part of GlaxoSmithKline Biologicals), Hamilton, Mont., and Mount Sinai School of Medicine, New York City.

The Moore's UCSD Cancer Center is one of the nation's 40 National Cancer Institute-designated Comprehensive Cancer Centers, combining research, clinical care and community outreach to advance the prevention, treatment and cure of cancer. For more information, visit <http://health.ucsd.edu/cancer>

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