

## **Cancer Disparities Are Target of \$15 Million Grant to UC San Diego, San Diego State University**

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San Diego State University (SDSU) and the Moores Cancer Center at the University of California, San Diego (UC San Diego) are joining forces to help explain and eliminate cancer disparities. The five-year combined \$15 million grant from the National Cancer Institute (NCI) of the National Institutes of Health will fund research, education and community outreach programs in the San Diego region with the goal of reducing differences in cancer incidence and deaths in the population.

The Comprehensive SDSU-UC San Diego Cancer Center Partnership, the only such program in California, will support programs ranging from studies of the potential differences in basic biology of cancers in certain populations, including specific ethnic and minority groups, to outreach, training, education and prevention. The partnership brings together the UC San Diego's Moores Cancer Center, the region's only NCI-designated Comprehensive Cancer Center and academic medical center, with SDSU, a university with strong ties to a broad segment of the region, taking advantage of the strengths of both.

"Because we have such diversity here in San Diego, the issue of cancer disparity is acute," said Partnership co-principal investigator Stanley Maloy, Ph.D., dean of SDSU's College of Sciences. "This new collaboration between SDSU and UC San Diego is a true partnership that will make inroads in this important area of cancer research and directly benefit the health of San Diegans."

"The NCI wants to develop a stronger national cancer program aimed at understanding the reasons behind the significant cancer disparities and the impact on minority populations," said Partnership co-principal investigator John Carethers, M.D., professor of medicine and chief of the division of gastroenterology at the UC San Diego Medical Center and Moores UCSD Cancer Center. Carethers' research focuses on the higher rates of colorectal cancer in African Americans. "This award helps address sometimes neglected cancer research that is specific to minority populations, particularly here in the San Diego area."

### **Disparities in Cancer Rates, Outcomes**

According to the NCI, differences in the incidence, prevalence, and death rates of diseases, including cancer, exist among specific population groups in the United States. For example, more American Caucasian women develop breast cancer, but African American women are 15 percent more likely to die from the disease. African Americans have the highest rates for colorectal cancer of any racial group in the U.S. and have higher rates of prostate cancer and present at younger ages than other groups. While breast cancer is diagnosed about 40 percent less often in Hispanic women than in non-Hispanic women, it is more frequently diagnosed at a later stage in Hispanics. Cancer treatment for minority populations, particularly those in socioeconomically disadvantaged areas, generally lags behind non-minority groups.

"The NCI is trying to eliminate cancer, but that won't be achieved unless we close the gap that still exists among different populations," said Moores UCSD Cancer Center co-principal investigator Ana Navarro, Ph.D.,

associate professor of family and preventive medicine at UC San Diego. "In order to eliminate cancer in our communities, we need to ramp up efforts in underserved communities."

"We want to understand why these disparities exist and work to improve or eliminate them altogether," said co-principal investigator Elizabeth Klonoff, Ph.D., professor of psychology at SDSU and adjunct professor of psychiatry at UC San Diego, whose research looks at the role ethnicity and gender play in health, with emphasis on cancer-related diseases.

**Finding Answers Through Research** The Partnership will initially support three research projects, a training program and a Cancer Disparities Community Partners and Research Resource. The first research projects are:

A team led by UC San Diego's Carethers and Kathleen McGuire, Ph.D., professor of biology at SDSU will investigate why African Americans have the highest incidence and death rates for colorectal cancer among racial groups in the United States. The researchers will examine more than 1,500 colorectal tumors to determine possible biological differences in tumors among African Americans and Caucasians. They will also try to determine why a certain tumor type - more common in Caucasians - is less likely to spread to other areas in the body.

Scientists led by SDSU organic chemistry professor Douglas Grotjahn, Ph.D., and Moores UCSD Cancer Center research scientist Boris Minev, M.D., will study the development of a nanotechnology-based vaccine against prostate cancer, which is a particular problem in the African American population.

Stephen Howell, M.D., Moores Cancer Center member and professor of medicine at UC San Diego, and Shelli McAlpine, Ph.D., associate professor of chemistry at SDSU, will lead a project aimed at exploring the development of a novel chemotherapy drug against colon and pancreatic cancers.

Both institutions' deep roots in community-based research are crucial to the success of the initiative's wide-ranging projects.

Noting that cancer prevention and care will continue to be emphasized in diverse, underserved communities, Navarro said, "This grant enables the programs already in place to expand, and will help expose a new generation of basic scientists, biologists and social scientists to a different environment."

For example, Navarro and her colleagues recently partnered with local community organizations and health programs on a health fair held in National City focusing on women in the Latino community. As part of this program, approximately 100 women received mammography screening and clinical breast exams in a program conducted in conjunction with a community organization, MANA de San Diego.

**Training Future Leaders in Disparities Research** The cancer disparities partnership will also seek to enhance cancer research and training at SDSU and increase the effectiveness of the Moores UCSD Cancer Center in research, training and career development related to minorities. More specifically, the grant is aimed at educating and training promising minority scientists in cancer research and increasing the number of faculty, scientists and students engaged in culturally relevant cancer research, community outreach and education.

"The real beauty of the partnership is that community and academic partners are essential contributors and also stand to benefit from the partnership work," Navarro said. "We will support projects that are meaningful to underserved communities and at the same time provide opportunities for scientists to become involved in research to eliminate cancer disparities."

Carethers said the partnership will provide exciting new possibilities in rapidly advancing fields of medical research.

"I think we will come to a day where we will analyze a tumor sample and blood and give diagnoses based on genetic makeup," said Carethers. "Researchers are just beginning to do molecular profiling of cancers and it will make a difference in treatment decisions."

The Comprehensive SDSU-UCSD Cancer Center Partnership is the only NCI-funded comprehensive partnership in California, and the Moores UCSD Cancer Center is one of only three cancer centers (along with the University of Texas' M.D. Anderson Cancer Center in Houston and Memorial Sloan-Kettering Cancer Center in New York) in the nation that received funding for this type of partnership this year.

San Diego State University is the oldest and largest higher education institution in the San Diego region. Since it was founded in 1897, the university has grown to offer bachelor's degrees in 81 areas, master's degrees in 74 areas and doctorates in 16 areas. SDSU's more than 34,000 students participate in an academic curriculum distinguished by direct contact with faculty and an increasing international emphasis that prepares them for a global future. For more information, visit [www.sdsu.edu](http://www.sdsu.edu).

The Moores UCSD Cancer Center, part of the UC San Diego Medical Center, is one of the nation's 41 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 [www.cancer.ucsd.edu](http://www.cancer.ucsd.edu).

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