

Puerto Rican Government Offers Support for Country's Cancer Center

Greatly expanding its commitment to cancer research and treatment, the government of Puerto Rico recently earmarked \$40 million over the next 5 years for its cancer research infrastructure and another \$75 million to build a new cancer research hospital. The Commonwealth of Puerto Rico is in the process of approving the funding for what will be the Caribbean's first comprehensive cancer center, to be part of the University of Puerto Rico in San Juan.

"The new center will have a major impact in the care of cancer patients in the Caribbean basin and Central and South America," said Reynold Lopez-Enriquez, M.D., a surgical oncologist at the University of Puerto Rico.

Cancer care at the Caribbean island's academic medical centers and public and private hospitals is neither centralized nor coordinated, and few clinical trials are available to patients, said Emma Fernandez-Repollet, M.D., interim vice president of research and technology at the University of Puerto Rico.

In addition, although there are a handful of medical schools on the island of about 4.1 million people, educating physicians in clinical research has not been strong historically, Fernandez-Repollet said. One consequence is that about 60% of the island's medical students who wish to pursue

clinical research leave the island and stay overseas, said Edna Mora, M.D., director of the Cancer Biology Laboratory at the University of Puerto Rico.

The goal of the University of Puerto Rico Comprehensive Cancer Center is to address these weaknesses. The center will develop programs in basic, clinical,



Dr. Reynold Lopez-Enriquez

preventive, and epidemiologic research; recruit new faculty to Puerto Rico; and build a new biomedical research building and hospital in San Juan over the next few years. In the long term, it is hoped that the new cancer center will regain National Cancer Institute-designated comprehensive cancer center status for the university, which it had held at its inception in the 1970s but lost in the 1980s.

"The government of Puerto Rico is now in the process of passing a law that will allocate necessary funds for the initiative's first 5 years, regardless of what future political change may take place," said Michael Caligiuri, M.D., director of the Ohio State University

Comprehensive Cancer Center in Columbus, and a consultant to the new cancer center. "The strategy, now in the planning stages, aims to be inclusive of all factions, which is rather extraordinary, considering the traditionally complex politics of the island," he added.

The next immediate steps will be to recruit a half-dozen investigators from the United States and to build the first bioscience research facility. Recently, the effort received a \$4 million grant from the National Institutes of Health for construction of a molecular science complex, which was matched by \$4 million from the university. Lopez-Enriquez expects that, by the end of the first decade, about 12 basic scientists will be on site. In the meantime, the university is planning to create a biotechnology and bioprocess pilot plant, establish research chairmanships to recruit top-notch scientists, and establish an office of technology transfer at the university.

Synergistic to the cancer center's development is a separate, multi-million dollar research and teaching partnership with the University of Texas M. D. Anderson Cancer Center, Houston, which began last year. The collaboration between M. D. Anderson and the University of Puerto Rico "is strengthening efforts to develop the new cancer center by helping it develop a cancer

research infrastructure, identifying and training independent investigators on the island, and conducting research related to minority health,” said the University of Puerto Rico’s Mora.

The partnership between the two institutions received an \$18 million, 5-year grant in 2002 from NCI’s Minority Institution/Cancer Center Partnership and Partners in Excellence. Its initial five research projects should enable Puerto Rico to



Dr. Michael Caligiuri

contribute to understanding the rising burden of cancer in Hispanics worldwide by comparing rates and molecular epidemiology in Puerto Ricans with those in other Hispanics.

“Puerto Rico is home to a unique Hispanic population of composite European and African descent, which offers researchers an unparalleled opportunity to study cancer epidemiology and control and to isolate potential disease markers,” Caligiuri said.

The program’s five initial projects will examine the molecular epidemiology and clinical determinants of head and neck cancer progression in Puerto Ricans, the molecular mechanisms of the growth of bone metastases in breast cancer patients, the epidemiology of acute promyelocytic leukemia in Puerto Ricans and the Hispanic population of Spain and Peru, the molecular mechanisms involved in the growth and survival of metastatic breast carcinoma cells, and the expression of the epidermal growth factor receptor (EGFR) in Hispanic women diagnosed with breast cancer in the Houston area and in Puerto Rico.

The partnership will have an educational component as well. Medical students with oncology specialties will train as fellows in clinical oncology research at M. D. Anderson, with the goal of returning to the island to practice. Similarly, students from the

University of Texas Medical Center will train at the University of Puerto Rico and gain in-depth experience dealing with minority health issues. Gabriel Lopez-Berestein, M.D., professor of immunology at M. D. Anderson, who was born in Cuba and raised in Puerto Rico, is serving as liaison between the two medical centers. He added that researchers from M. D. Anderson will come to Puerto Rico to give seminars in epidemiology, grant writing, and statistics to help prepare Puerto Rican faculty to better compete for research grants.

In contrast to the M. D. Anderson Cancer Center, which is a freestanding facility, the University of Puerto Rico Comprehensive Cancer Center will develop on a “matrix” model within the confines of a very large, diverse university, similar to Ohio State’s,

Caligiuri explained. He is working with a number of the departments at the University of Puerto Rico to determine where the academic emphasis will be placed and to coordinate the recruitment efforts.

The collaboration and development of the University of Puerto Rico Comprehensive Cancer Center comes at a time when the Puerto Rican government has made a commitment to become a center of biotechnology and cutting-edge medicine—a commitment that includes plans for an upgraded primate research center and a drug delivery systems center. The government is offering pharmaceutical and biotechnology companies financial incentives to attract further biotechnology drug development and production to the island.

—Vicki Brower