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Striving for Personalized Medicine in the World of High Tech
*World-Renowned Leader in Biomedical Informatics Heads up new Program at
The Cancer Institute of New Jersey*

New Brunswick, N.J., March 26, 2008 – Why do some people at risk for cancer get it at an earlier age than others? Why is there a difference between men and women when it comes to survivorship and response to treatment in cancer? Why do some medicines have an adverse effect on one patient, but are helpful to others? It is these types of questions that researchers at The Cancer Institute of New Jersey (CINJ) aim to answer through the development of its new Biomedical Informatics Program, which was unveiled today during a special briefing at the New Brunswick facility. CINJ is a Center of Excellence of UMDNJ-Robert Wood Johnson Medical School.

Biomedical informatics is the intellectual marriage of math, science and computers, used in concert to understand what regulates the normal behavior of cells and how its breakdown gives rise to uncontrolled cell growth, i.e. cancer. The aim of researchers at CINJ is to use this knowledge and cutting-edge genomics technology to develop an individual genetic profile of a patient, with the goal of being able to identify specific treatment options and improve diagnosis for patients with cancer and other diseases.

In committing itself to becoming a world leader in biomedical informatics CINJ is announcing the arrival of Gunaretnam (Guna) Rajagopal, Ph.D., who will lead a team of experts from the academic, biotechnology and pharmaceutical fields in the development and deployment of this research enterprise. Dr. Rajagopal is a world-renowned expert in this area, having served as the founding executive director of the Bioinformatics Institute at the BIOPOLIS in Singapore, where he oversaw 140 research scientists and IT professionals.

Rajagopal, will head CINJ's new Cancer Informatics Core (CIC), which will be responsible for developing and overseeing the program's biomedical informatics initiatives, including an ambitious state-wide data-integration effort called POPWEB that is focused on linking genomic and clinical data to facilitate translational research. Once POPWEB is fully operational, one of the many benefits will be that it will facilitate collaboration between academia and industry throughout New Jersey and beyond.

“Genomic databases have been around in a very simplistic form since the first protein sequence became available in the mid-1950s,” notes Rajagopal. “But since the late 1980s, when mapping of the human genome began, there has been a concerted effort to develop the tools necessary to integrate and mine genomic and clinical data to further unlock these mysteries. I can safely say, what we'll be doing with CINJ's Biomedical Informatics Program will not be your father's genomics.”

Often times, information collected from clinical, genetic and laboratory tests reside in different locations and cannot be easily accessed via the “information superhighway.” This often slows the sharing of information and keeps barriers between researchers. By utilizing the latest technology to collect, correlate, analyze and assimilate a full range of biomedical data, Rajagopal notes researchers will be able to better

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understand the causes of cancer, “Our team of world-class scientists will be facilitating the discovery of the next generation of diagnostics and therapeutics in order to bring information from the laboratory bench to patient bedside to provide for the best clinical outcomes.”

Bioinformatics research already has led to personalized medicine, in particular, to the discovery of cancer drugs that are “targeted” for certain tumor sites. The technology also played a vital role in the creation of a test applied to biopsy specimens to determine whether a patient needs additional treatment to prevent the recurrence of breast cancer. It is these types of discoveries and applications that Rajagopal and his team hope to facilitate through the Biomedical Informatics Program at the new CIC. “We are in a wonderful period of scientific discovery where we can take advantage of tremendous advances in technology, our deeper intellectual understanding of biology and our inclusive partnership between academia and industry, to effectively address the pain and suffering caused by cancer,” he notes.

About The Cancer Institute of New Jersey

The Cancer Institute of New Jersey is the state’s first and only National Cancer Institute-designated Comprehensive Cancer Center, and is dedicated to improving the prevention, detection, treatment and care of patients with cancer. CINJ’s physician-scientists engage in translational research, transforming their laboratory discoveries into clinical practice quite literally bringing research to life. The Cancer Institute of New Jersey is a center of excellence of UMDNJ-Robert Wood Johnson Medical School. To support CINJ, please call the Cancer Institute of New Jersey Foundation at 1-888-333-CINJ.

The Cancer Institute of New Jersey Network is comprised of hospitals throughout the state and provides a mechanism to rapidly disseminate important discoveries into the community. Partner Hospital: Robert Wood Johnson University Hospital. Affiliate Hospitals: Bayshore Community Hospital, CentraState Healthcare System, Cooper University Hospital*, Jersey Shore University Medical Center, JFK Medical Center, Morristown Memorial Hospital, Overlook Hospital, Raritan Bay Medical Center, Robert Wood Johnson University Hospital at Hamilton (CINJ-Hamilton), Saint Peter’s University Hospital, Somerset Medical Center, Southern Ocean County Hospital, The University Hospital/UMDNJ-New Jersey Medical School*, and University Medical Center at Princeton. *Academic Affiliate

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