



ROBERT WOOD JOHNSON
MEDICAL SCHOOL

University of Medicine & Dentistry of New Jersey



Contact: Michele Fisher
Media Relations Specialist
732/235-9872
fisherm2@umdnj.edu

Research Team at The Cancer Institute of New Jersey Unlocks New Door to Mysteries of Infertility

Cancer Suppressing P53 Gene Shows Reproductive Benefits in Mice

New Brunswick, N.J., December 5, 2007 – A research team at The Cancer Institute of New Jersey (CINJ), a center of excellence of UMDNJ-Robert Wood Johnson Medical School, has found that the cancer-suppressing p53 gene plays a vital role in the reproduction of mice, a finding, which may encourage new exploration in the role it may have in the fertility of human females.

The research, published this week in the journal *Nature*, shows that p53 turns on a gene responsible for making a cell protein (cytokine) that is vital to reproduction. That cytokine, leukemia inhibitory factor (LIF), allows for embryo implantation in the walls of the uterus. In mice without the p53 gene, females produced lower-than-average litters, but once injected with LIF, those numbers increased to normal levels.

Arnold J. Levine, Ph.D., member, CINJ and professor of pediatrics and biochemistry at UMDNJ-Robert Wood Johnson Medical School, is the lead researcher for the team. He notes it was a surprising, but welcome discovery, “The p53 gene is best known for its protections against tumor growth, but knowing it is responsible for other functions vital to normal development opens new doors for researchers.”

Levine says the implications of p53 on human infertility is not clear at this time – and that more study is needed – but adds the latest findings could play a significant role in conquering barriers with human reproduction.

Levine’s team at CINJ is comprised of: Zhaohui Feng, Ph.D. and Wenwei Hu, who are both members at CINJ and research teaching specialists in the Department of Pediatrics at the Robert Wood Johnson Medical School; and Angelika K. Teresky, manager of research studies at CINJ.

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 Hospitals: Robert Wood Johnson University Hospital, Atlantic Health (Morristown Memorial Hospital and Overlook Hospital). Affiliate Hospitals: Bayshore Community Hospital, CentraState Healthcare System, Cooper

- more -

University Hospital*, Jersey Shore University Medical Center, JFK Medical Center, 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

###