



# THE REPORTER

[www.mc.vanderbilt.edu/reporter](http://www.mc.vanderbilt.edu/reporter)

Vanderbilt Medical Center

[Current Issue](#) [Back Issues](#) [Search Reporter](#)

Quick Search:

Go

[Return to Issue](#)

## Grant paves way for 'next step' in genomics research

**August 8, 2008**



Dana Crawford, Ph.D.

*by Leigh MacMillan*

A team of Vanderbilt Medical Center investigators has been awarded a four-year, \$7 million grant to "take the next step" in genomics research.

The group is one of four in the country that will use existing epidemiology studies to gain a better understanding of how specific genetic variants influence a person's risk for common diseases like diabetes, heart disease and cancer. The National Human Genome Research Institute is supporting the effort.

"There has been an explosion in gene discovery for common diseases," said Dana Crawford, Ph.D., an investigator in the Center for Human Genetics Research and principal investigator for the new program. "We're going to take the genetic variations that have been discovered and characterize them in our population-based samples."

The Vanderbilt team will study a cohort of patients collected as part of the

National Health and Nutrition Examination Survey (NHANES) by the Centers for Disease Control and Prevention. NHANES is an ongoing effort designed to capture a "snapshot of American health at the time the CDC collects the information," Crawford said.

NHANES participants provide detailed demographic, health status, lifestyle and environmental exposure information, have a physical examination and laboratory tests conducted at a CDC facility, and provide blood samples for DNA collection. The first NHANES collection of DNA samples — from the early 1990s — includes 7,000 individuals from diverse racial backgrounds. The next collection, which was made available last month, includes 8,000 more individuals surveyed between 1999 and 2002.

"It's hard to find cohorts that include a diverse population and are linked to detailed health information and environmental exposures, so we're thrilled to have access to the NHANES data," Crawford said.

The Vanderbilt team will characterize genetic variants that have already been linked to diseases in other populations in the racially diverse NHANES cohort. The investigators will examine how specific variants relate to a person's biological characteristics such as weight, cholesterol levels, blood pressure and bone density.

The team also will search for environmental exposures and other genes that interact with the genetic variants and have an impact on disease.

"Does smoking status have an impact on the association, for example," Crawford explained. "What about physical activity, diet, exposure to certain medications ... these are the kinds of variables we will study."

Other leaders of the new effort include Gerardo Heiss, M.D., Ph.D., University of North Carolina-Chapel Hill, Loic Le Marchand, M.D., Ph.D., University of Hawaii Cancer Research Center, and Charles Kooperberg, Ph.D., Fred Hutchinson Cancer Research Center in Seattle. The four groups will collaborate to determine which genetic variants to study, and in which populations.

"Dana did an outstanding job of pulling together this extremely important effort," said Jonathan Haines, Ph.D., director of the Center for Human Genetics Research and a participant in the new program. "This is the next step in understanding how variation in the human genome affects human health."

[Return to Issue](#)

---

E-mail this Story to a Colleague

**Also in this issue:**

- [Class of 2012 embarks on medical education journey](#)
- [All the buzz](#)
- [Calendar of Events - Aug. 8-19, 2008](#)
- [Children's Hospital's Veggie Project serves sizzling second season](#)
- [Faculty giving campaign raises nearly \\$2 million](#)
- [Laser's role growing in cornea transplants](#)
- [Parking at VMC a complex, often misunderstood issue](#)
- [Pinning ceremony honors School of Nursing students](#)
- [Science high](#)
- [Study to track impact of moral distress on medical students](#)
- [Support bolsters research in fight against blinding diseases](#)
- [Vanderbilt trainees pursue careers in science policy](#)

---

[ [VUMC Home](#) | [About Us](#) | [Key Sites](#) | [Finders](#) | [Intranet](#) | [Search](#) | [Help](#) | [Eskind Library](#) | [Eskind Digital Library](#) | [VU](#) ]

Copyright © 2009, Vanderbilt University Medical Center  
For More Information: <[reporter@www.mc.Vanderbilt.Edu](mailto:reporter@www.mc.Vanderbilt.Edu)>  
Editorial tool created by the Eskind Biomedical Library Web Team  
Last modified: Monday, 31 March 2008 <[webmaster@www.mc.Vanderbilt.Edu](mailto:webmaster@www.mc.Vanderbilt.Edu)>