Academic Health Center Discoveries and Developments

Media Contact
To arrange interviews or learn more about Academic Health Center discoveries and developments, please contact UC Academic Health Center Public Relations at 513-558-4553 or uchealthnews@uc.edu.

Key Leadership
William S. Ball, MD
Senior Vice President for Health Affairs and Dean, College of Medicine

First Live, Attenuated Polio Vaccine
The UC Academic Health Center is probably best known for the development of the first live, attenuated polio vaccine. Albert Sabin, MD, worked on the project both at UC and the affiliated Cincinnati Children’s Hospital Medical Center. Approved for use in the United States in the late 1960s, the vaccine has saved untold millions around the world from paralytic polio and death.

First Heart-Lung Machine
In 1951, cardiologist Samuel Kaplan, MD, chemist Leland Clark, PhD, and surgery professor James Helmsworth, MD, developed the world’s first functional heart-lung machine, located at Cincinnati Children’s Hospital Medical Center.

UC Stroke Team Pioneers Treatment
The UC Stroke Team is among the nation’s pioneers in rtPA studies and established a protocol for quick diagnosis and treatment. UC scientists also contributed to the development of NovoSeven, a recombinant clotting factor for the treatment of brain hemorrhage caused by stroke.

Health Effects of Lead in Children
UC was the first university-based environmental research facility to become nationally known for its studies of the health effects of lead in children, and UC’s department of environmental health was one of the first to test a chelation drug that effectively removed high lead levels from the bloodstream.

Study of Birth Defects Pioneered
The late pediatrics professor Josef Warkany, MD, is regarded as the “father of teratology” (the biological study of birth defects), and his book “Congenital Malformations” (1981) is considered a medical classic, as it was the first to associate causes, not mere chance, with birth defects.

Heart Failure Gene Identified
A UC team received international attention in 2002 when it identified two genes that convey a risk of heart failure 10 times greater than that faced by people who do not carry the gene, and that by far the greater risk was in African-Americans.

Development of Benadryl
The popular antihistamine marketed as Benadryl was developed at UC by the late professor George Rieveschl, PhD.

Sniffing Out Disease
UC researchers Robert Frank, PhD, and Robert Gesteland, PhD, invented a test to measure how well a person can detect an odor, which in turn can flag brain damage early in the progression of Alzheimer’s and Parkinson’s diseases.

First Residency Programs in the Country
UC had the first emergency medicine and physical medicine and rehabilitation residency programs in the United States. UC also was one of the first in the United States to introduce a family practice residency program, thus pioneering the return of the “family doctor” to U.S. health care delivery.
Developing Guidelines for Treating Heart Failure
In 1994 and 1995, Michael Bottorf, PharmD, of UC’s James L. Winkle College of Pharmacy, helped develop national and state guidelines for the treatment of heart failure.

First Medical Laser Lab
The late dermatology professor Leon Goldman, MD, considered the “father of laser medicine,” opened the country’s first medical laser laboratory at UC in 1961.

First YAG Laser Used
In 1984, neurosurgery professor John Tew, MD, was the country’s first surgeon to receive FDA approval to use the YAG laser to vaporize previously inoperable brain tumors.

Organ Transplant Discovery
In 1989, UC researchers discovered that the drug ketoconazole made cyclosporin work more effectively, lowering the amount needed to prevent rejection of a transplanted organ.

Pioneering Gene Therapy
In 1990, under the direction of neurosurgeon Ronald Warnick, MD, UC became one of the first four centers in the country to use gene therapy for the treatment of recurring brain tumors.

Leaders in Environmental Genetics
UC has the nation’s first federally funded Center for Environmental Genetics. The National Institute of Environmental Health Sciences supports the center’s research into how genes respond to the environment. Center founder Daniel Nebert, MD, identified a pair of genes on a specific human chromosome that are key to lung cancer development.

Cancer Gene Discoveries
In 1995, UC researchers isolated a gene that leads to an increased risk of colon cancer, which may lead to understanding how people inherit a predisposition to the disease.

First Nursing Baccalaureate Program
UC College of Nursing offered the first baccalaureate degree program in nursing in 1916.

Saving Preemies
UC pediatrics professor Jeffrey Whitsett, MD, identified a protein that was both vital for lungs to operate and lacking in babies born early, which led to a routine treatment for immature lungs and respiratory distress syndrome in premature infants. The groundbreaking treatment is saving babies worldwide.