POINTS OF PRIDE
The University of Florida College of Medicine has been the premier public medical school in the State of Florida for nearly six decades, committed to a mission of excellence in medical education, scientific research and patient care. We are proud of our leadership, regionally and nationally, in programs aimed at solving some of today’s most challenging health care problems. Our intensive focus on the translation of cutting-edge research from laboratory bench to patient bedside has resulted in medical discoveries that are changing the delivery of health care across the state, the nation and the world. We are proud of our work across the vast spectrum of medicine and offer these “Points of Pride” as a guide to the most innovative areas within our institution.
Physicians and researchers affiliated with the UF Genetics Institute are world leaders in the safe transfer of corrective genes as a therapy for genetic diseases. It was UF geneticists who discovered the unique lifecycle of the harmless virus called AAV and advanced its use as a carrier for therapeutic genes in the treatment of diseases such as cystic fibrosis, congenital Leber’s amaurosis, an incurable form of blindness, and Pompe disease, a genetic disease characterized by heart failure and muscular dystrophy. Among the most dramatic discoveries related to AAV are:


William Hauswirth, Ph.D., a professor in the department of ophthalmology, was the first to restore sight in animals born blind through his use of gene therapy. He and colleagues from UF and the University of Pennsylvania first used the gene transfer technique in humans in 2008, not only proving it was safe, but also restoring some vision in patients with a rare, incurable form of blindness.

**Alpha-1 Research Program** ([http://www.alphaone.ufl.edu/genetherapy.html](http://www.alphaone.ufl.edu/genetherapy.html))

Mark Brantly, M.D., a 1979 graduate of the College of Medicine and director of the college’s Alpha-1 Research Program, has been working for more than a decade to help people suffering from alpha-1 antitrypsin deficiency (AAT), an inherited disorder that can cause lung and liver disease. Use of the AAV appears to be effective when injected directly into the muscle, and previous studies in animals have been encouraging.


Barry Byrne, M.D., Ph.D., a professor of molecular genetics and director of the Powell Gene Therapy Center, has been at the forefront of new therapies to treat Pompe disease, a heartbreaking muscular disorder that strikes young children. In fact, his role in helping bring an experimental drug forward was highlighted in the feature film “Extraordinary Measures.”
Physicians and scientists with the UF McKnight Brain Institute are dedicated to understanding and restoring brain function. Their goal is to find strategies for healing a damaged brain – whether it be from Parkinson’s disease, Alzheimer’s disease, dystonia, addiction or trauma. Understanding the mind, brain and behavior is an inherently multidisciplinary endeavor, and UF has developed a **Neuromedicine Program** that capitalizes upon the collaborations between medical divisions to deliver care and investigate diseases and neurological conditions that affect millions of people. Neuromedicine programs include:

**UF Radiosurgery System** ([http://www.neurosurgery.ufl.edu/clinical-specialties/radiosurgery.shtml](http://www.neurosurgery.ufl.edu/clinical-specialties/radiosurgery.shtml))

Frank Bova, Ph.D., and William Friedman, M.D., developed the UF Radiosurgery System, also known as the LINAC Scalpel. The system combines computer software with a linear accelerator – a device to position the patient – to produce a tenfold improvement in the accuracy of high-dose radiation delivered to brain tumors.

**UF Memory Disorders Clinic** ([http://www.neurology.ufl.edu/memory](http://www.neurology.ufl.edu/memory))

The clinic is part of a statewide program that addresses the concerns of people in Florida who are dealing with memory loss and cognitive disorders, including Alzheimer’s disease and other dementias. The clinic is dedicated to providing quality diagnostic evaluation and treatment recommendations as well as innovative research initiatives that can lead to promising new therapies for memory and cognitive disorders.

**The Preston A. Wells Jr. Center for Brain Tumor Therapy** ([http://www.neurosurgery.ufl.edu/research/preston-wells-center.shtml](http://www.neurosurgery.ufl.edu/research/preston-wells-center.shtml))

This Center is one of the nation’s leading comprehensive brain tumor centers, providing comprehensive surgical and medical oncological management for adult and pediatric tumors of the brain and spine. Co-directors Erin M. Dunbar, M.D., and William A. Friedman, M.D., lead 10 UF neurosurgeons and one neuro-oncologist.
The UF Center for Movement Disorders and Neurorestoration is a perfect representation of UF’s three-pronged mission, as it offers doctors who are experts in patient care, research and teaching. The center’s interdisciplinary team provides expert care for conditions such as Parkinson’s disease, Dystonia, and supranuclear palsy. Their pioneering use of Deep Brain Stimulation (DBS) surgery has literally changed the lives and futures of patients affected by a broad range of movement disorders. The UF MDC is considered a national leader in areas such as:

**Parkinson’s disease**

The National Parkinson Foundation has recognized the UF National Parkinson Disease Center of Excellence as one of its 43 leading medical centers worldwide. The UF NPDCOE offers a world-class, patient-centered interdisciplinary experience and unparalleled training physicians of all disciplines. The center houses more than 50 Parkinson’s-related research studies and many basic science laboratories, including stem cells, gene therapy, imaging, Deep Brain Stimulation and protein-processing science.

**Tyler’s Hope Center for Comprehensive Dystonia Care at UF**

The center was created to provide the highest levels of medical and surgical care to patients afflicted with Dystonia. Although no cure is currently available, our interdisciplinary team includes specialized neurologists, neurosurgeons, physician assistants, nurses, physical and speech therapists, psychologists and researchers working together to provide patients with the most advanced treatments while searching for a cure.
The UF Diabetes Center of Excellence ranks as one of the top three programs in the world in contributing to the understanding of diabetes prevention and cure. More than two decades of research have laid the groundwork to more accurately forecast who will contract Type-1 diabetes and a long list of research and clinical programs are helping UF diabetes experts pave the way for preventing or even curing this disease. The 2012-2013 U.S. News Best Children’s Hospitals ranking named the pediatric diabetes and endocrinology division as the highest ranked specialty at UF&Shands.

**Diabetes Test**

UF medical researchers discovered a way to test for insulin-dependent diabetes years before symptoms appear.

**Genetic Screening**

UF is home to a pioneering study – the Prospective Assessment in Newborns for Diabetes Autoimmunity (PANDA) program – designed to determine the genetic risk of a child to develop Type-1 diabetes and then provide antibody and immunological screening for those children who are identified as being at genetic risk.

**TrialNet**

UF is part of a consortium of 14 centers in the U.S. and five international centers funded jointly by the NIH and private diabetes foundations. Through the research network, scientists hope to improve the understanding of the natural history of type 1 diabetes, screen and identify persons at risk and conduct clinical trials to evaluate promising new therapies that prevent, slow or reverse the progression of the disease.

**Helmsley Type 1 Diabetes Research Consortium**

The UF Diabetes Center of Excellence was selected in 2009 to participate in a $21.8 million research initiative by the Leona M. and Harry B. Helmsley Charitable Trust with the goal of reversing type-1 diabetes. Mark Atkinson, Ph.D., the American Diabetes Association Eminent Scholar for Diabetes at UF, was chosen to lead the Helmsley Type 1 Diabetes Research Consortium.
The UF Shands Cancer Center uses a multi-disciplinary approach to cancer diagnosis and treatment, delivering a personalized cancer care plan based on patient needs. Comprised of expert UF physicians, nurses and other health care professionals, the cancer specialists at the UF Shands Cancer Center provide patients with the most comprehensive treatment available based on traditional treatments using the latest technology, and innovative research alternatives, such as:

**UF Proton Therapy Institute** ([http://www.floridaproton.org/](http://www.floridaproton.org/))
The UFPTI in Jacksonville is one of only 10 centers in the country and the only one in the Southeast using proton therapy to treat several kinds of cancer. Proton therapy is a precise radiation treatment that destroys cancer cells with minimal damage to surrounding tissue.

The Intrabeam system was recently brought to UF&Shands. The intraoperative radiation technology is available at fewer than 20 treatment centers nationwide and UF&Shands has the only Intrabeam system in the state of Florida. Intrabeam reduces or even eliminates the need for weeks of external radiation treatment following treatment for early stage breast cancers.

Performed by UF’s chief of general surgery, Steven J. Hughes, M.D., at the UF Shands Cancer Center, the Whipple is a minimally invasive procedure used for certain pancreatic and biliary tract cancers and offered by only four surgeons nationwide.

**Oncofertility Consortium** ([https://ufandshands.org/oncofertility-consortium](https://ufandshands.org/oncofertility-consortium))
The UF College of Medicine’s division of reproductive endocrinology & infertility is part of the Oncofertility Consortium, a national, interdisciplinary fertility preservation program. The NIH funded consortium provides new fertility preservation options to patients who have been diagnosed with cancer.
Congenital diaphragmatic hernias

CDH is a life-threatening birth defect in which the diaphragm does not completely form, allowing some of the contents of the baby’s abdomen to move into the chest and hinder the normal growth of lung tissue. Children born with CDH have a 92 percent chance of survival when they are born at UF&Shands, while the national survival rate for these babies is between 50 and 65 percent. David Kays, M.D., chief of pediatric surgery, and his colleagues at UF have perfected a gentle ventilation technique to treat these newborns, resulting in extraordinary outcomes for these babies.

Pediatric Diabetes and Endocrinology

This clinical program is ranked first in the state by the 2011-12 U.S. News and World Report Best Children’s Hospital ranking. The physicians and researchers from the UF Diabetes Center of Excellence offer exceptional and effective care for the treatment of both Type 1 and Type 2 diabetes. Beginning with their discovery of a way to test for insulin-dependent diabetes years before symptoms appear to their involvement today with just about every major diabetes research consortium, UF’s contributions to the treatment and potential cure of diabetes is recognized throughout the world.

Glycogen storage disease

One of the most mysterious and devastating pediatric conditions, a child born with glycogen storage disease (GSD) cannot process glucose in normal fashion. David Weinstein, M.D., director of the UF Glycogen Storage Disease Program, treats and tracks the largest group of GSD patients in the world. His work includes breakthrough research on GSD treatments that can prolong good health and ultimately one day result in a cure.
Addiction is now recognized as a disease similar to any other chronic life-threatening illness, such as diabetes, cancer or hypertension. The Department of Psychiatry at the UF College of Medicine has been at the forefront of new therapeutic development and evidence-based treatments, such as:

**Addiction recovery**
The Florida Recovery Center in Gainesville is the heart of the addiction recovery program at the Department of Psychiatry at UF. The new facility, which opened in July 2012, is home to the largest group of faculty in the U.S. specializing in addiction medicine and addiction psychiatry. Applying groundbreaking clinical and basic science research from UF’s McKnight Brain Institute, a team of expertly trained physicians work with allied health care professionals, showing amazing results in their treatment of patients with addictive illness.

**Eating Disorders**
Kevin Wandler, M.D., formerly the director of the nation’s premier treatment facility for anorexia, bulimia nervosa and eating disorders, is chief of the Eating Disorders Program. He is focused on developing new treatment programs as well as clinical and treatment outcome research, ensuring that UF will become a leader in addressing this very important health problem.

**Psychiatric problems**
Martha E. Brown, M.D., one of the newest faculty members in the division of addiction medicine, is a national expert in helping physicians, health professionals and professional athletes cope with psychiatric problems.
For more information, please contact the College of Medicine Office of Development and Alumni Affairs at 352-273-7986 or email kmurray@ufl.edu.