

## THE HERBERT WERTHEIM UF SCRIPPS INSTITUTE FOR BIOMEDICAL INNOVATION & TECHNOLOGY

#### Facts at-a-glance:

**Principal Investigators** 

Staff scientists, postdoctoral scientists and research technicians

# departments

- Chemistry
- Immunology and Microbiology
- Molecular Medicine
- Neuroscience
- Structural and **Computational Biology**



The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology advances human health through biomedical research, drug discovery and clinical studies, while providing outstanding educational opportunities to inspire and train the next generation of scientists.

The scale of unmet medical needs is vast. Viral variants, brain disorders, hereditary diseases, aggressive cancer — they challenge society, and push scientists to work faster than ever before. On the beautiful campus of The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology, top scientists have the tools and resources to succeed at unprecedented speed. This is the place where great scientists, great ideas and great scientific advances are born.

At The Wertheim UF Scripps Institute, scientists push the boundaries of scientific knowledge so that after receiving a tough diagnosis, more patients will hear, "We have good treatment options for you."

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#### Facts at-a-glance:

12 Core scientific services

# 4 centers and special programs

- High-throughput robotic drug screening
- Natural Products
  Discovery Center
- Cryo-electron microscope
- Center for Inflammation Science and Systems Medicine

#### **Historical highlights**

- The Jupiter, Florida campus was founded by Scripps Research, one of the world's most innovative nonprofit biomedical research institutions, in 2004.
- In 2022, it joined the University of Florida, a top-5 public university with \$1 billion in annual research expenditures. Integrating with UF has brought an influx of resources, including 24-7 access to HiPerGator, one of the world's fastest supercomputers, plus valuable clinical relationships.
- On Oct. 12, 2022, visionary philanthropist Dr. Herbert Wertheim announced the largest individual gift in the University of Florida's history, \$100 million for scientific research and education at the institute.
- Today, 500 people work and study at The Wertheim UF Scripps campus in Palm Beach County, Florida. Joining UF Health has invigorated the commitment to the original vision of the institute's founders, Florida Gov. Jeb Bush and Scripps Research President Richard Lerner, M.D.

"Let's think of Jupiter as a launch pad, the way we think of Cape Canaveral. This is going to be a launch pad for science."

 Dr. Herbert Wertheim, OD, DSc, MD, (hc) honorary chairman of the institute



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#### We probe questions of basic human biology, while seeking to address the burden of unmet medical needs across many areas:

- Degenerative diseases and aging-related ailments, including ALS, Alzheimer's and other dementias, Parkinson's, vision loss, osteoporosis and more
- Childhood and inherited conditions such as muscular dystrophy, Fragile X and autism
- Autoimmune and inflammatory diseases, including lupus, multiple sclerosis and lung diseases
- Infectious diseases, including COVID-19, HIV, tuberculosis and drug-resistant microbial diseases
- Cancers, including glioblastoma, breast, pancreatic and prostate cancers
- Safer pain relief options for chronic and acute conditions, including stroke, trauma and cancer pain
- Innovations to address psychiatric disorders, including substance use, depression, stress and anxiety, bipolar disorder and others

#### A sampling of scientific advances born at the institute since its founding in 2004:

- Genes involved in active forgetting
- Mechanisms of memory storage
- Technologies for editing RNA
- Cause of brain cell death in Parkinson's
- New genetic cause of depression
- Mechanism of anesthesia effectiveness
- Mechanisms of pain relief and side effects
- Gene for opioid tolerance
- Genetic cause of sensory disorders and intellectual disability
- Mechanism of birth defects in new Zika virus infections
- Role of free radicals in cysteine biochemistry and immune signaling
- Factors involved in quality control of cellular protein assembly
- Mechanisms of immune cell differentiation and activation
- Methods for designing antiinflammatory drugs with more specific actions and better safety profiles
- Development of novel insulin sensitizers for diabetes

#### Facts at-a-glance:

## 130+

Active NIH awards, plus grants from National Science Foundation, U.S. Department of Defense and foundations.

### \$60 million annual operating budget

from government grants, contracts, licensing income, philanthropic gifts and university support



#### **Educational** offerings:

**Skaggs Graduate School** of Chemical and Biological **Sciences** 

#### Postbaccalaureate year

Undergraduate internships

**Kenan Fellows high** school internships



#### **Clinical advances, collaborations and** projects in the pipeline

- Antibody-drug conjugates against cancer
- Multiple sclerosis and Crohn's treatment
- Recovery medication for methamphetamine and other drugs of abuse
- RNA-targeting therapeutics against ALS, muscular dystrophy, Parkinson's, cancer, Fragile-X syndrome and COVID-19
- Block-and-lock strategy to silence HIV
- Drug combo for clearing senescent cells to slow effects of aging
- Treatment for a genetic cause of autism
- Nanoparticle vaccine technology against COVID-19
- Treatment for Prader-Willi syndrome
- Treatment for Dravet syndrome, a cause of childhood epilepsy
- Novel treatment for glioblastoma multiforme, an aggressive brain cancer



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#### S C R I P P S . U F L . E D U

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