

UF Health Cancer Center

Activities and programs at the UF Health Cancer Center are acutely focused on the development of early-stage “translational” research aimed at the rapid advancement of scientific discoveries to clinical trials and resulting in improved patient care. Our goal is to generate tomorrow’s answers for today’s patients.

Our research activity occurs primarily on the University of Florida’s Gainesville campus. UF is one of just three institutions in the country that has a one-campus Health Science Center consisting of colleges devoted to medicine, nursing, dentistry, veterinary medicine, pharmacy, and public health and health professions. This unique environment provides an ideal opportunity to bring diverse individuals together to conduct cancer research and develop future treatment and preventive options for cancer patients.

Exciting collaborations with the College of Engineering are enabling scientists to use UF’s “supercomputer,” nanotechnology, and other technological advancements to develop new therapies and techniques. Additional collaborations occur within dozens of UF multidisciplinary centers and institutes, including the McKnight Brain Institute, Proton Therapy Institute – one of only seven such facilities in the nation – Genetics Institute, Clinical and Translational Science Institute, Institute on Aging, and Emerging Pathogens Institute.

Drug Discovery

The main goal of the Drug Discovery Program is to facilitate the development of novel therapeutic agents to treat and prevent cancer. Program members benefit from services to assist drug discovery and development at UF. For small molecule drug discovery: screening compound libraries for lead identification, lead optimization, protein and small molecule X-ray crystallography. The Drug Discovery Program has members interested in collaborating on new cancer drug projects using peptide and peptide-analog based therapies. The Drug Discovery Program will assist members with experiments requiring peptide synthesis and libraries for screening.

Experimental Therapeutics

The central goal of the Experimental Therapeutics Program is to promote the collaborative scientific interactions between basic scientists and clinicians involved in cancer research. The program seeks to bring together investigators with appropriate clinical, basic science, or technological expertise for the investigation of novel cellular, molecular, histopathologic and imaging endpoints in order to foster scientific research initiatives at the laboratory/clinic interface. The ultimate aim is to integrate the expertise of the bench researcher with the front-line clinician to foster clinical trial development.

Immunology

The goal of the Immunology Program is to foster interactive research to uncover the complex nature of the host-cancer relationship to establish host immune defense as part of combination cancer treatment. It is essential to have an in-depth understanding of the immune system against cancer cells at the levels of innate and adaptive immunity before immunotherapy becomes routine in clinical care.

Molecular Oncology

The scientific goals in this program are to understand the molecular basis of oncogenesis with the ultimate purpose of developing new and more effective cancer therapies. The program promotes research related to these scientific goals by facilitating interactions among investigators within the program and throughout the Cancer Center.

Population Science

The goal of the Population Science Program is to employ the methods and concepts of multiple disciplines in the basic and applied sciences to lower the psychological, social, physical, and economic burden of cancer at the population level. Towards this goal, we work to: identify multi-level risk factors for cancer etiology; develop and evaluate strategies for cancer prevention and early detection; and investigate patients' perceptions, decisions, and responses to the treatment process. Special consideration is given to members of vulnerable populations who may have complex combinations of risk factors and unique access to care barriers.