

Introduction

UF (<http://www.ufl.edu>) is a public land-grant, sea-grant, and space-grant research university, encompassing virtually all academic and professional disciplines, with an enrollment of more than 50,000 students. With its sixteen colleges and more than a 100 research, service and education centers, bureaus and institutes, UF has a strong track record of biomedical research as well as public health research and outreach activities. UF has a long history of established programs in international education, research, and service, with many of those programs focused on Africa. The university has a highly recognized Center for African Studies, which is funded in part by a U.S. Department of Education Title VI National Resource Center Grant, making it the only National Resource Center for Africa located in the southeastern US, and the only one in a sub-tropical zone (<http://web.africa.ufl.edu/>). Critical links between agriculture and health are addressed through interdisciplinary research jointly led by the university's Institute of Food and Agricultural Sciences and the newly formed Emerging Pathogens Institute.

The Institute of Food and Agricultural Sciences (IFAS): UF's Institute of Food and Agricultural Sciences (<http://ifas.ufl.edu>) is a federal-state-county partnership dedicated to developing knowledge in agriculture, the life sciences, and human and natural resources, and to enhancing and sustaining the quality of human life by making that knowledge accessible. While extending into every community of the state, UF/IFAS has developed an international reputation for its accomplishments in teaching, research and extension. Because of this mission and the diversity of Florida's climate and agricultural commodities, UF/IFAS has facilities located throughout the state. UF/IFAS is the research and development center for Florida's agricultural and natural resources industries that contribute \$100 billion annually to the economy.

UF/IFAS includes the College of Agricultural and Life Sciences (<http://cals.ufl.edu>), the Florida Agricultural Experiment Station (<http://research.ifas.ufl.edu>), the Florida Cooperative Extension Service (<http://extension.ifas.ufl.edu>), and the College of Veterinary Medicine (<http://vetmed.ufl.edu>). It encompasses 16 academic departments, the School of Forest Resources and Conservation, the School of Natural Resources and Environment, 17 recognized Centers of Excellence (including the Center for Tropical Agriculture), 13 research and education centers located throughout the state, and Cooperative Extension units in each of Florida's 67 counties and the Seminole Tribe. With about 1000 faculty, UF/IFAS offers an extraordinary breadth of science for agriculture, natural resources, and human systems.

UF/IFAS has nearly seven decades of experience with global programs. Through multi-institutional linkages and significant research, education, and outreach, its international efforts have had a global impact on sustainable agriculture and natural resource management, community development, agricultural education, human nutrition, family and youth programs, aquatic sciences, conservation, and food science. The global work of UF/IFAS scientists is supported by advanced laboratories, specialized research and education centers statewide, market information resources, formal and non-formal educational expertise, and a network of professional colleagues throughout the world. This rich experience, human capacity, and modern support base makes UF/IFAS an effective international partner in multiple dimensions, reflective of the diversity of IFAS programs and priorities. The international strengths of UF/IFAS are vital to addressing emerging areas of global science and technology as well as the world's development needs. Particular efforts are devoted to:

- Improved agricultural and food systems production, technology and marketing (plants, animals, aquatics, bioenergy and agribusiness);
- Environmental sustainability through natural resource management, environmental restoration, and conservation (forests, soil, air, land, water, and wildlife);
- Management of pests (insects, diseases and weeds) and emerging pathogens affecting plants, animals, humans, aquatics, and natural areas;
- Improved human health, nutrition, safety, and wellbeing;
- Social, policy, legal, tenure, and planning issues which affect the use of resources;
- Human capacity development (education, Extension, leadership, and communication skills);
- Application of advanced information technology.

IFAS International presently has 2 USAID-funded projects for training MS students from Africa, in various disciplines. There are actually many funded research and education projects ongoing in Africa.

Health Sciences: Colleges of Medicine, Veterinary Medicine, Public Health, Dentistry, Pharmacy, and Nursing; and the Emerging Pathogens Institute (EPI): The University of Florida is nationally and internationally recognized for biomedical research, teaching, and clinical care, with strong Colleges of Medicine, Veterinary Medicine, Public Health and Health Professions, Dentistry, Pharmacy, and Nursing on the Gainesville campus. While each College has outstanding research programs in its own specialty areas, the University has placed a strong emphasis on development of interdisciplinary research platforms, working through five major free-standing research Institutes dedicated to Genetics, the Brain, Cancer, Gerontology, and, most recently, Emerging Pathogens.

EPI (<http://epi.ufl.edu>) was created in 2006 with a \$60 million appropriation from the Florida state legislature. EPI serves as a platform to study factors that drive emergence and spread of pathogenic microorganisms in human medicine, veterinary medicine, and agriculture. Faculty within the Institute have expertise that ranges from very basic molecular genetics and evolutionary biology through epidemiology, mathematical modeling, and vaccine development, and are drawn from eight University of Florida Colleges, including Medicine, Public Health, and the other biomedical colleges; Engineering; Liberal Arts and Sciences; and Agriculture. In the summer of 2009, EPI will move into a new 7500 square meter research building, which includes biosafety level 2 (BSL2) and biosafety level 3 (BSL3) laboratories, and three BSL3 greenhouses for work with plant pathogens, as well as a floor and a half dedicated to computational biology and modeling. With its strong connections to the Colleges of Medicine and Public Health; its link with climatologists in the College of Liberal Arts and Sciences; and its association with IFAS, EPI serves as an ideal forum to explore interactions among public health, climate, and agriculture. More recently under EPI's leadership, the campus came together to create an transdisciplinary group **Changing Environment and Emerging Infectious Diseases (CEED)** to tackle issues that include agriculture health and climate change.

CEED is a virtual campus wide transdisciplinary group promoting research and teaching in the areas of climate change, human impacts on the environment, and the effects of these on disease emergence and spread. The group seeks to look at emerging pathogens in the context of globalization, population movement, environmental degradation and climate change using a system's approach. Its 40 members include sociologists, infectious disease specialists, ecologists, entomologists, geographers, demographers, public health specialists, mathematical modelers and public policy professionals from the various colleges and centers at UF and USDA that all working together to help establish predictive disease models, early warning systems, risk assessments and monitoring tools. The group has submitted a NASA education grant that looks at climate change and health and is in the process of submitting further grants to CDC to look at the link between climate agriculture and health. Members of the group also have Gates foundation funding to study malaria and diarrheal diseases in Africa.