Discovery Themes at Ohio State

Emerging and Re-emerging Infectious Disease Detection, Treatment and Prevention

DISCOVERY THEMES

The Ohio State University has launched a significant investment in three thematic areas in which the university will make a global impact:

**Energy and Environment**
Developing scientific and policy responses to the global need for energy and associated environmental effects.

**Food Production and Security**
Enhance the quality of food and animal feed and ensure an adequate, affordable and safe food supply for the global population.

**Health and Wellness**
Seven health sciences colleges and an academic medical center collaborating with partners throughout the university creates critical mass to address disease prevention and response, community health, and health systems.

Translational Data Analytics
Translational Data Analytics (TDA@OhioState) brings the scale of Ohio State’s resources together to create and apply data-based solutions to global challenges — integrated, accessible and co-developed with the external community. As the nation’s most comprehensive university, Ohio State’s global solutions have many dimensions — technology, logistics, ethics, policy and more. They require sophistication in focus and a collaborative approach to producing translatable results, while generating knowledge and educating the problem-solvers of tomorrow.

INFECTIOUS DISEASE FOCUS AREA

**Our Vision**
Become a world-class leader in key areas that are essential to the detection, treatment and prevention of emerging and re-emerging infectious diseases:

- Antibiotic discovery and optimization
- Treatment and prevention of emerging viruses
- Immunity to intracellular pathogens and local microbial communities
- Pathogen emergence

**Impact**
Together, researchers will work to understand the interactions among hosts, pathogens and the environment that result in disease, including drivers of pathogen evolution and antimicrobial resistance, animal reservoirs, host range and immunity, as well as the impacts of infectious diseases on natural and agroecosystems and a sustainable food, fiber and biofuel supply. Drawing on the successes of Ohio State’s existing Public Health Preparedness for Infectious Disease program (phpid.osu.edu) and support from other Ohio State groups, centers and industry partners, this program will continue to transform Ohio State into a world leader in infectious disease research, leading to new discoveries and real-world solutions that will improve the health of people and ecosystems across the globe.

**Opportunities for Faculty**
- Lead transdisciplinary research teams which position OSU competitively for extramural funding
- Form collaborations with OSU colleagues across disciplines and colleges
- Engage in outreach with external research partners, including industry, institutes and other universities
- Teach and mentor students and post-doctoral scholars
- Lead and participate in workshops, seminars and conferences
- Participate in committees and initiatives that further the vision of Discovery Themes in Ohio and regional, national and international communities
- Participate in commercialization activities relevant to intellectual property generated in your research program