

UCF Infectious Disease and Travel Health Initiative

Griff Parks, PhD
College of Medicine
Burnett School



Tico Croes, PhD
Rosen College



Ken Alexander, MD-PhD
College of Medicine
Nemours Children's Hospital



Eric Schrimshaw, PhD
College of Medicine
Population Health

Sudipta Seal, PhD
CECS, Nanoscience



Taj Azarian, PhD
Burnett School - COM

Travel is a Lifeblood of Florida



<https://www.travelingmom.com>



<https://www.pinterest.com>

- Travel includes tourism, hospitality, entertainment and transport.
 - Multiple other sectors – e.g., agriculture, manufacturing, military and government.
- Travel represents 10% of Florida's gross state product.
- In Orlando, it supports 41% of workforce (463,004 jobs).
- Orlando area has 72 million visitors per year
- Tourism makes up 18.9 percent of the Orlando's total GDP.

Economic Impact of COVID-19 to Tourism in CF



<https://nanoporetech.com>

- Visitor spending declined 52% (2020)
- Direct spending was cut by \$23.1 billion; steeper than during the 2009 crisis. The pandemic wiped out more than a decade of spending growth.
- Travel visitation was cut more than half - 40 million visitors.
- 1 in 4 hospitality industry work force lost their jobs compared to pre-pandemic situation (2019).
- Nearly 70K workers directly in the industry lost their job, while the total impact of job loss was 128K workers.
- The Orlando metro area lost over \$40 billion in tourism economic impact due the pandemic in 2020.

We Are All OK Now.....Right?

A

1984



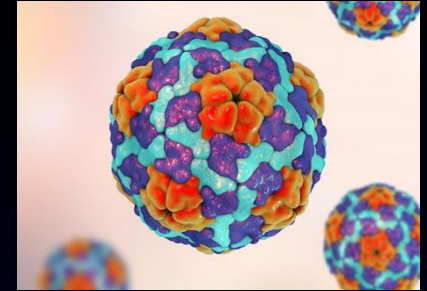
● Newly emerging ● Re-emerging/resurging ● "Deliberately emerging"

<https://www.eurekalert.org/news-releases/696259>

NIH: 123 Viruses with Pandemic Potential

Current and Ongoing Infectious Disease Challenges to Tourism in CF

- Hepatitis A virus
- Influenza virus
- Norovirus
- Pathogenic Vibrio Cholera
-and more.



<https://CDC.gov>



<https://inyourpocket.com>



<https://CBSnews.com>

The Problem to Address

The question is “What role can UCF play to mitigate the effects of ongoing Infectious Disease Challenges to Tourism in the future”?

The pandemic uncovered public safety and worker safety as cornerstones of our destination image and attraction of tourists.

The premise is that the safety and health of tourists and workers who serve them is a primary determinant of our region's economic health and in the growth and sustainability of our tourism industry.

Infectious Disease and Travel Health Initiative

The UCF Initiative will focus improving our **resilience**, through:

preparations for, prevention of, and responses to
Infectious Disease health and safety threats
to Central Florida tourism
and tourism workers

Long Term Goal

Establish a National Center for ID and TH

Infectious Disease and Travel Health Initiative

Population Health

- Effectiveness, Messaging
- Health Disparities
- Social determinants of Health
- Global ID Initiatives

Basic and Applied Research

- Emerging and Current Pathogens
- Vaccines
- Modeling and Simulation
- AI and ML Applications
- Nanotech and Materials
- Genomics and Bioinformatics

COM

Rosen

CECS

Industry Relationships

- Monitoring and Prediction of Ongoing ID Potential
- Worker Health Care
Community Services

Community Outreach

- Vaccination Programs
- ID Information Resource
- Hotel and Rest. Safety
- Surveillance

Coastal
Cluster

CON

AHSC

CHPS

Genomics
Cluster



Missions of the Initiative

Working with industry and government partners, the missions will be to:

- 1) **Improve** the health and safety of Central Florida tourists and tourism workers through surveillance and data-supported programs.
- 2) **Create** nationally recognized research programs to discover solutions to problems in microbial diseases.
- 3) **Guide** tourism-related businesses to prevent and respond to health and safety threats.
- 4) **Provide** local and state governments information to guide policy development and the effective ways improve tourist and tourism worker health and safety.
- 5) **Develop** student and community education programs to improve the health of tourists and tourism workers.

Steps in the IDTH Initiative

- **Establish** a UCF genomics laboratory for rapid and flexible responses to needs in surveillance of emerging pathogens.
- **Invest in** cutting-edge research equipment for high containment studies.
- **Recruit** outstanding research-intensive faculty with potential for strong NIH funding.

Burnett School Biomed – 3 TT in Immunology and Microbiology

Pop Health – 2 TT in Social Networks and Climate Change

Rosen – 2 TT in Behavior Economics and Community Sociology

CECS – 2 TT in AI-ML and in Nanoscience

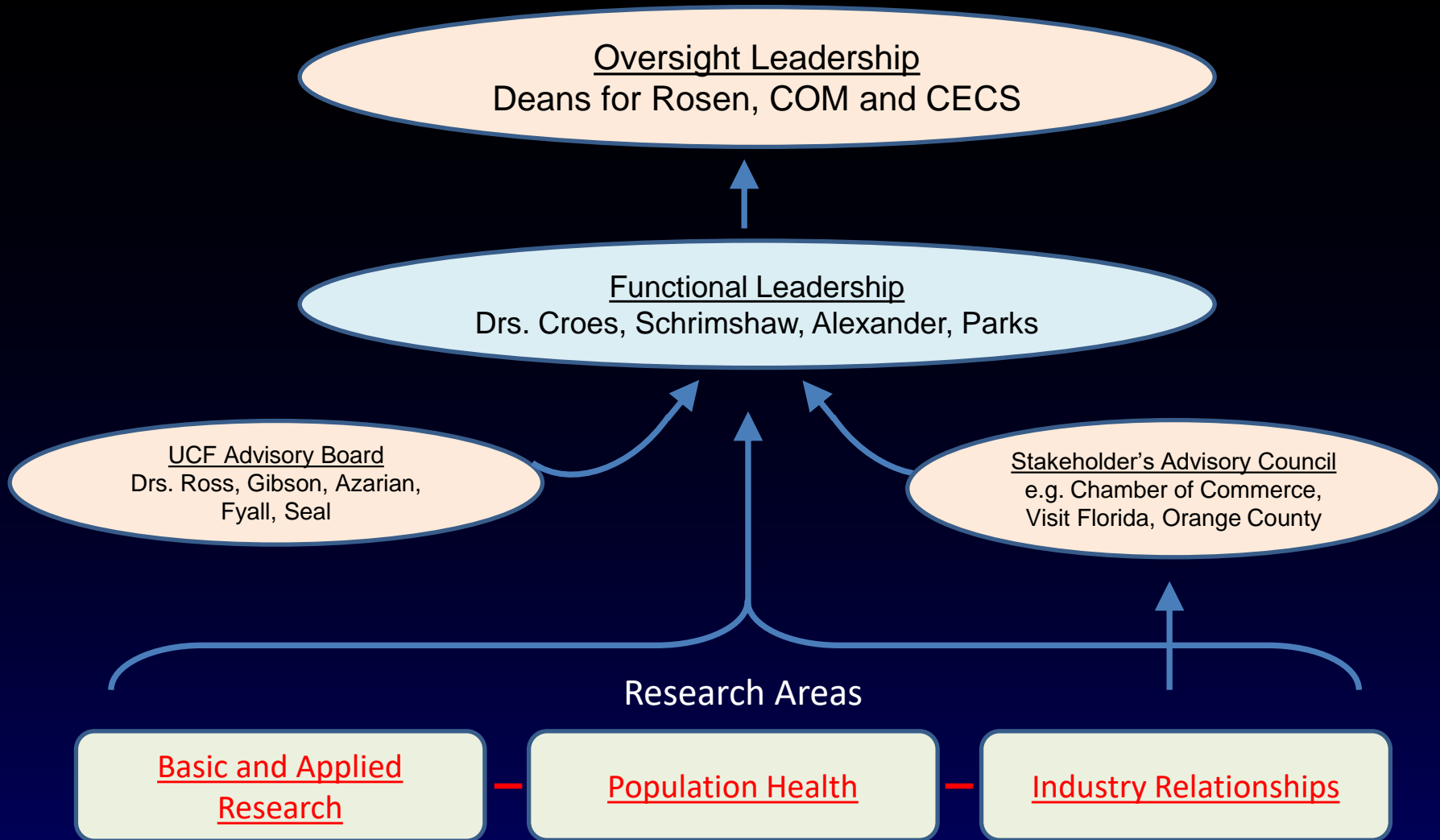
First Steps in Initiative (cont.)

- **Create** mechanisms to unite UCF faculty, students and staff interested in ID and TH (~50 faculty already identified).
- **Secure** philanthropic funding and build a foundation of solid relationships with potential donors.
- **Establish** an advisory board of external industry partners to inform the Initiative of needs and perspectives, and the measures of “Success”

Long Term Goal:

Hire a Center Director and Establish a National Center for Infectious Disease and Travel Health

Committee Oversight - Infectious Disease and Travel Health Initiative



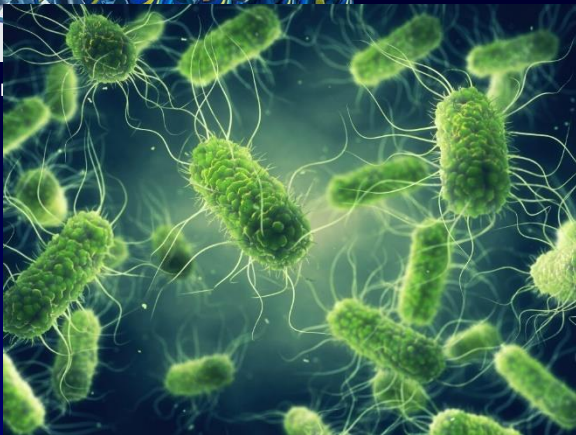
Faculty, Students and Staff

UCF Infectious Disease and Travel Health Initiative

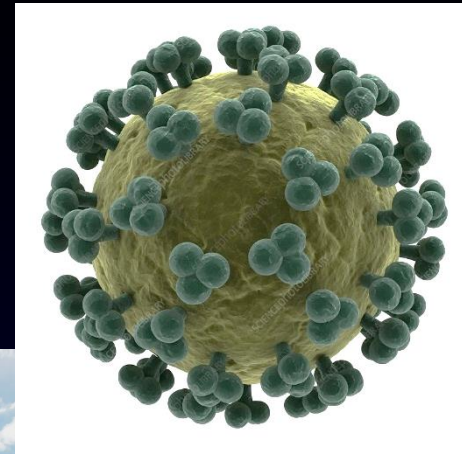
Questions?



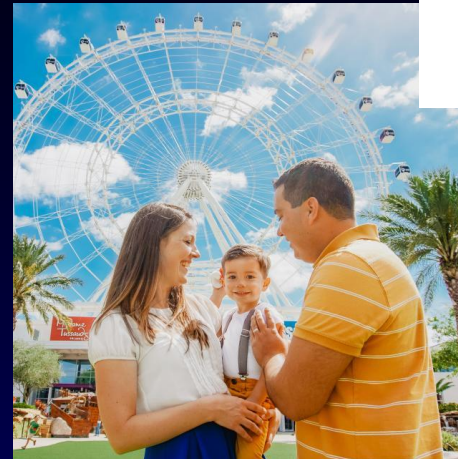
<https://www.visitorlando.com>



<https://www.nanotec.or.th>



<https://www.sciencephoto.com>



<https://www.visitorlando.com>