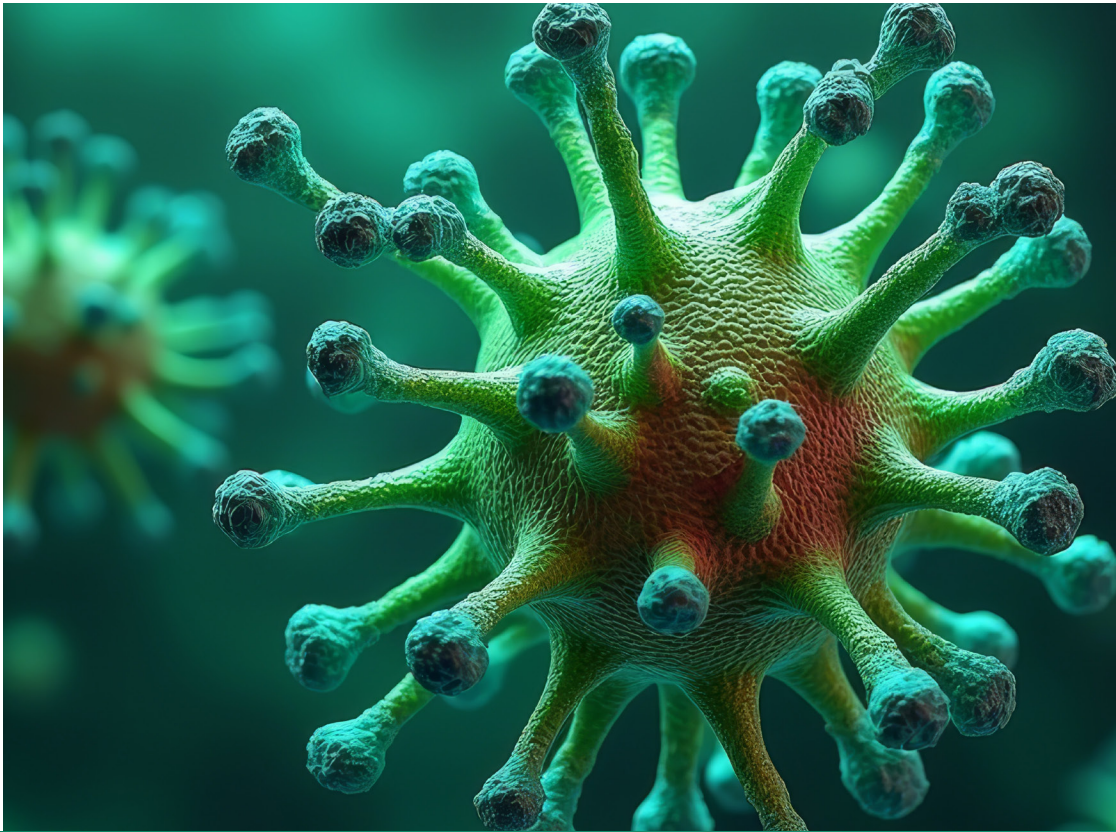


USFHealth



INSTITUTE FOR TRANSLATIONAL VIROLOGY & INNOVATION (ITVI)

A Global Virus Network Center of Excellence

ABOUT

Institute for Translational Virology & Innovation (ITVI)

Advancing Discovery into Solutions for Infectious Disease, Cancer, and Global Health

The **Institute for Translational Virology & Innovation (ITVI)** at **USF Health** advances scientific discovery into practical solutions for infectious disease, cancer, and global health threats.

Founded under the leadership of **Robert C. Gallo, MD**, one of the world's most influential virologists, ITVI was established to bridge foundational science, clinical medicine, public health, and innovation. The institute brings together world-class investigators, clinicians, and collaborators to address some of the most urgent biomedical challenges of our time, from persistent viral diseases and emerging pathogens to cancer linked to infectious agents.

ITVI's mission is to accelerate the translation of scientific discovery into diagnostics, therapeutics, prevention strategies, and scalable public health solutions that improve lives globally.



Robert C. Gallo, MD

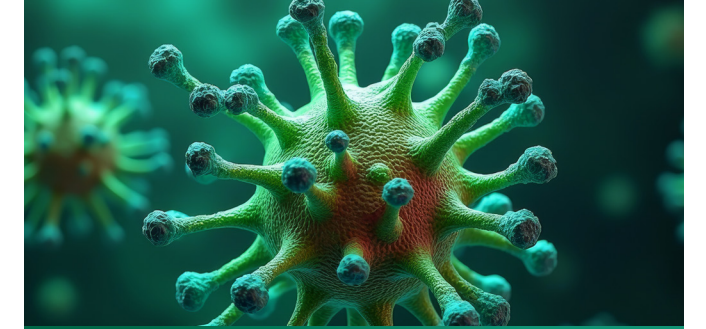
James P. Cullison Professor of Medicine,
Division of Infectious Disease,
Department of Internal Medicine
Founding Director,
USF Health Institute for Translational Virology
and Innovation
Director, Microbial Oncology Program,
Tampa General Hospital Cancer Institute
Chairman, Scientific Leadership Board
Co-Founder, Global Virus Network

WHY ITVI

Today's health challenges require institutions that can move seamlessly from discovery to application. Emerging pathogens, persistent viral diseases, cancer linked to infectious agents, and chronic immune dysfunction demand integrated scientific and translational responses.

What distinguishes ITVI is its integration of virology, immunology, oncology, academic medicine, and global scientific collaboration within a translational framework designed to accelerate impact.

ITVI comprises a growing multidisciplinary faculty of more than a dozen investigators and their laboratory teams, with strategic expansion planned toward approximately thirty faculty members across priority areas in virology, immunology, oncology, neuroscience, and translational medicine.



The institute's scientific and translational ecosystem is strengthened by:

- ▶ World-renowned scientific leadership
- ▶ Integration with USF Health's academic medicine and biomedical research enterprise
- ▶ Strategic collaboration with Tampa General Hospital (TGH) and the TGH Cancer Institute
- ▶ Strategic alignment with the Global Virus Network (GVN), whose international headquarters are hosted by USF and co-located with ITVI, creating a unique platform for global scientific collaboration, pandemic preparedness, and rapid mobilization of virology expertise
- ▶ A growing network of academic, clinical, public health, and industry collaborators

SCIENTIFIC PROGRAMS AND LEADERSHIP

ITVI's growing scientific enterprise is organized around active research programs and expanding translational initiatives addressing infectious disease, viral oncology, immune dysfunction, and emerging health threats.

DIRECTOR'S LABORATORY: VIRAL PATHOGENESIS, IMMUNE DYSFUNCTION, AND TRANSLATIONAL DISCOVERY

LEAD Robert C. Gallo, MD (James P. Cullison Professor of Medicine; Director of ITVI and Chair of the Recruitment Committee at ITVI; Director of the Microbial Oncology Program, Tampa General Hospital Cancer Institute)

FOCUS Advancing novel approaches to halt HIV-associated comorbidities and chronic immune dysfunction through translational research in collaboration with Zachary Porterfield, MD, PhD and Yutaka Tagaya, MD, PhD, while also supporting collaborative investigations with Davide Zella, PhD and Francesca Benedetti, MS, PhD, MBA, involving bacterial proteins, inflammation, and cancer-associated disease processes.

ANTIVIRAL DEVELOPMENT & THERAPY

LEAD Shyam Mohapatra, PhD, MBA (Distinguished Health Professor and Program Director, Antiviral Development & Therapy at ITVI)

FOCUS Discovery and development of broad-spectrum antiviral and anti-inflammatory nanomedicines (BAANs) and investigating the integrated microbiome and multiomic mechanisms and clinical translation.

BACTERIAL PROTEINS DRIVING ONCOGENESIS, INFLAMMATION, AND REPRODUCTIVE DYSFUNCTION

LEADS Davide Zella, PhD (Associate Professor and Director of the Bacterial Oncogenesis Unit and member, Recruitment Committee at ITVI), Francesca Benedetti, MS, PhD, MBA (Assistant Professor and Associate Director of the Bacterial Oncogenesis Unit at ITVI)

FOCUS Investigating how specific bacteria promote cancer and reproductive dysfunction through inflammation, immune modulation, and altered cellular signaling.

BASIC VIRAL IMMUNOLOGY

LEAD Noah Sather, PhD (Professor, Head of Basic Viral Immunology and member, Recruitment Committee at ITVI)

FOCUS Making fundamental breakthroughs about the mechanisms of immune protection from viral infection and aiming to leverage these foundational discoveries to guide the development of novel vaccines or treatment approaches.

CLINICAL VIROLOGY, LIVER DISEASES, AND TRANSLATIONAL THERAPEUTICS

LEAD Shyam Kottilil, MD, PhD (Professor and Vice Dean for Clinical Research, and Director, Center of Liver Diseases at ITVI)

FOCUS Advancing translational and clinical research across viral diseases, with particular emphasis on HIV, hepatitis B virus (HBV), hepatitis C virus (HCV), liver disease, viral-associated cancers, and emerging infectious diseases. The program integrates clinical investigation, therapeutic development, and clinical trials to accelerate the translation of scientific discoveries into improved patient care. Research spans the prevention, diagnosis, and treatment of chronic viral infections and their complications, including liver inflammation, fibrosis, cirrhosis, hepatocellular carcinoma, and other virus-associated malignancies, while fostering collaborative clinical research across ITVI, USF Health, and Tampa General Hospital Cancer Institute.

HIV CLINICAL PATHOGENESIS AND TRIALS

LEAD Zachary Porterfield, MD, PhD (Associate Professor)

FOCUS Understanding HIV's contribution to chronic inflammation, immune dysfunction, and cancer risk; Integrating clinical and molecular research; Supporting clinical trials for viral infections

HIV MOLECULAR VIROLOGY AND PATHOGENESIS

LEAD Hongshuo Song, MD, PhD (Associate Professor and Head of the Seminar and Journal Club Committee at ITVI)

FOCUS Focusing on the fundamental aspects of HIV-1 transmissibility, immunopathogenesis, and persistence, with a long-term goal to translate knowledge into approaches toward effective HIV prevention and functional cure.

HOST-VIRUS INTERACTIONS IN RESPIRATORY SYNCYTIAL VIRUS INFECTION

LEAD Michael Teng, PhD (Associate Professor; Assistant Director of ITVI; Director of Virology Education at ITVI; member, Recruitment Committee at ITVI)

FOCUS Studying host-virus interactions in viral pathogenesis, particularly in how viral proteins affect host signal transduction pathways to enhance viral replication. Focusing on the role of the nonstructural proteins of respiratory syncytial virus and their effect on host innate antiviral responses.

HTLV-1 MOLECULAR VIROLOGY AND ONCOGENESIS

LEAD Yutaka Tagaya, MD, PhD (Assistant Professor and Director of Laboratory Operations at ITVI)

FOCUS Exploring HTLV-1 mechanisms of infection and its role in adult T-cell leukemia/lymphoma (ATLL) + T cell immunity in graft-versus-host disease.

ROLE OF VIRAL INFECTIONS IN NEURODEGENERATIVE DISEASES

LEAD Eleni Markoutsas, PhD (Assistant Professor)

FOCUS Focusing on the role of viral infections in the development and progression of Alzheimer's disease, with findings suggesting that SARS-CoV-2 infection increases the senescent cell burden and heightens the risk of developing Alzheimer's disease. Aiming to elucidate the mechanisms by which viral infections trigger cellular senescence and develop extracellular vesicle-based interventions to mitigate the effects of the senescence-associated secretory phenotype on the aging brain.



STRATEGIC RECRUITMENT

Priorities include:

- Epstein-Barr virus / virus-associated malignancies
- Pandemic preparedness
- Respiratory virology, particularly influenza
- Bioinformatics and artificial intelligence
- Emerging pathogen threats, especially arboviruses
- Global health virology
- Rural Florida epidemiology in viruses causing cancer, including HTLV-1 analysis
- Expanding human papillomavirus (HPV) research

PARTNERSHIP OPPORTUNITIES

As ITVI continues to grow, the institute is actively seeking strategic collaborations that accelerate discovery, expand translational capabilities, and extend real-world impact.

ITVI was built for collaboration.

We seek strategic partners committed to advancing high-impact science and translational innovation across infectious disease, cancer, and global health.

Potential partnership opportunities include:

- Biopharma and biotechnology collaborations
- Therapeutic, diagnostic, and platform co-development
- Academic and multicenter scientific collaborations
- Clinical and translational research partnerships
- Public health preparedness and implementation science initiatives
- Joint grant and sponsored research opportunities
- Global scientific partnerships
- Philanthropic investment in transformative science and innovation

STRATEGIC ENVIRONMENT

ITVI operates within one of the nation's rapidly growing academic health ecosystems, enabling efficient collaboration across research, medicine, and translational application.

Its environment includes:

- USF Health's academic medicine and biomedical research infrastructure
- Tampa General Hospital, one of Florida's leading academic health systems
- Tampa General Hospital Cancer Institute
- The Global Virus Network's international headquarters
- A dynamic innovation ecosystem spanning biotechnology, digital health, and translational medicine

LEADERSHIP

ITVI is founded and directed by **Robert C. Gallo, MD**, whose landmark scientific contributions include:

- Discovery of the first human retroviruses (HTLV-1 and HTLV-2)
- Co-discovery of HIV as the cause of AIDS and development of the HIV blood test
- Discovery of interleukin-2 (IL-2), the first cytokine and T-cell growth factor, laying the foundation for modern cancer immunotherapy
- Discovery of Human Herpesvirus 6 (HHV-6), expanding understanding of viral disease in immunocompromised patients
- Foundational discoveries showing that beta-chemokines can block HIV infection, helping reveal key mechanisms of viral entry and resistance
- Pioneering contributions to human immunology, retrovirology, and translational infectious disease research

ITVI's scientific leadership includes distinguished investigators spanning retrovirology, immunology, oncology, neurovirology, emerging infectious diseases, and translational therapeutics.

AFFILIATED FACULTY

ITVI's scientific and translational mission is strengthened through collaborations with affiliated faculty across USF Health, Tampa General Hospital Cancer Institute, the Global Virus Network, and leading international institutions. Together, they contribute expertise spanning virology, immunology, oncology, public health, vaccinology, global health, and translational medicine.

- **Matthew L. Anderson, MD, PhD** – Professor, Obstetrics and Gynecology; Associate Director, Research Analytics and Shared Resources, Tampa General Hospital Cancer Institute
- **Christian Bréchet, MD, PhD** – Director, USF Microbiomes Institute; Professor, USF Health Morsani College of Medicine; Vice Chair, Board of Directors, Global Virus Network
- **Anna R. Giuliano, PhD** – Founding Director, Center for Immunization and Infection Research in Cancer; Senior Member, Moffitt Cancer Center; Professor, USF Health
- **Eduardo Gotuzzo, MD** – Professor of Medicine and Tropical Diseases, Universidad Peruana Cayetano Heredia; Director, Global Virus Network Center of Excellence, Peru
- **Mark Kindy, PhD, FAHA** – Professor, College of Medicine Molecular Pharmacology & Physiology, USF Health Taneja College of Pharmacy
- **Jack Pledger, PhD** – Associate Director, Basic Sciences, Tampa General Hospital Cancer Institute.
- **Polly Roy, PhD** – Emeritus Professor, University of Alabama at Birmingham
- **Marco Salemi, PhD** – Professor, Department of Pathology, Immunology and Laboratory Medicine and Director, Emerging Pathogens Institute, University of Florida College of Medicine
- **Eduardo Sotomayor, MD** – Executive Vice President and Director, Tampa General Hospital Cancer Institute; Professor, USF Health Morsani College of Medicine
- **Sten H. Vermund, MD, PhD, CPH** – Distinguished University Professor and Dean, USF College of Public Health; Chief Medical Officer, Global Virus Network

PARTNERING TO ADVANCE THE NEXT GENERATION OF TRANSLATIONAL SCIENCE

Scientific breakthroughs achieve their greatest impact through collaboration.

ITVI welcomes engagement with academic institutions, industry, health systems, public health organizations, philanthropic partners, and global collaborators seeking to accelerate discovery and improve health outcomes.

To explore partnership opportunities, collaborative initiatives, or strategic engagement, we welcome the conversation.



LEARN MORE

health.usf.edu/virology-institute

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