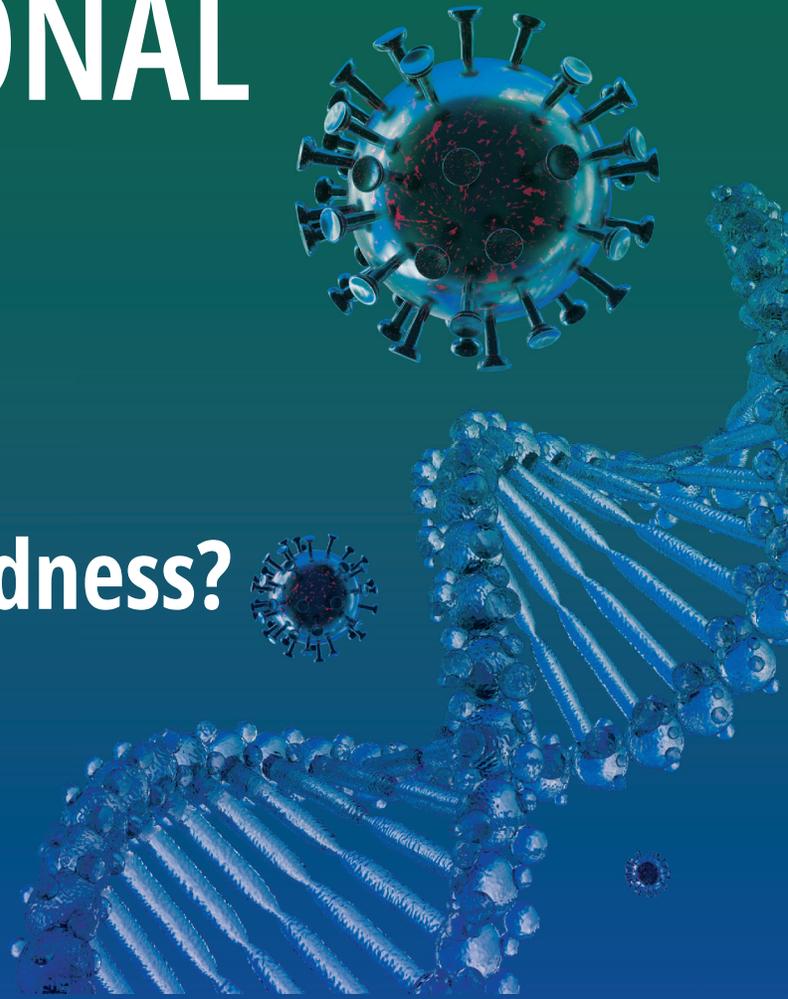


GLOBAL VIRUS NETWORK

2026 ANNUAL INTERNATIONAL SCIENTIFIC MEETING

Pandemic Preparedness?

TAMPA - FLORIDA - U.S.A.
4 - 6 MARCH 2026



GVN

GLOBAL VIRUS NETWORK

USF Health



CANCER INSTITUTE



Dear Colleagues and Friends,

On behalf of the Global Virus Network (GVN), it is our great pleasure to welcome you to the GVN Annual International Scientific Meeting. We are honored to convene this distinguished gathering of virologists and scientific leaders from around the world at a moment when the importance of our collective work has never been more evident.

The past several years have underscored both the extraordinary power of scientific collaboration and the persistent vulnerabilities in global preparedness for viral threats. The GVN was founded to address these challenges by bringing together leading human and animal virologists across continents to accelerate discovery, strengthen training, and ensure that scientific expertise informs public health response. This meeting reflects that mission in action.

Over the course of the program, you will engage in discussions spanning fundamental virology, emerging and re-emerging viral threats, pandemic preparedness, translational research, and the next generation of countermeasures. Equally important, this meeting provides an opportunity to strengthen the relationships and trust that are essential to effective global scientific cooperation.

We are especially pleased that this year's meeting coincides with an important milestone in the continued growth of the Global Virus Network, including the expansion of our international headquarters and our ongoing commitment to advancing virology as a cornerstone of global health and security.

We thank you for your dedication, your scientific leadership, and your commitment to mentoring the next generation of virologists. Your participation ensures that the GVN remains a vital force in advancing knowledge, preparedness, and global collaboration.

With our sincere appreciation and warmest welcome.

From the meeting committee organizers,



Robert C. Gallo, MD
GVN; USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.



Mathew Evins
GVN



Christian Bréchet, MD, PhD
GVN, USF Health Morsani College of Medicine and USF Microbiomes Institute; U.S.A.



Sten Vermund, MD, PhD
GVN; USF Health College of Public Health; U.S.A.

USF Health

Dear Distinguished Guests and Colleagues,

It is my great pleasure to welcome you to the University of South Florida and to the 2026 Global Virus Network (GVN) Annual International Scientific Meeting. We are honored to co-host this distinguished gathering of global scientific leaders whose work continues to transform our understanding of viral pathogenesis, strengthen pandemic preparedness and accelerate the translation of discovery into life-saving interventions.

At USF Health, our mission is grounded in advancing research, education and clinical care to improve health across our community and around the world. Over the past decade, our Morsani College of Medicine has risen to the top tier of U.S. research-intensive medical schools, driven in large part by strategic investments in translational science, interdisciplinary collaboration and high-impact discovery. Our partnership with GVN reflects a shared conviction: that rigorous science, global collaboration, and rapid knowledge dissemination are essential to confronting emerging and re-emerging infectious diseases.

The Global Virus Network represents one of the world's most important consortia of virologists and infectious disease experts, spanning leading centers of excellence across six continents. Its mission — to advance research, enhance outbreak response, and train the next generation of virology leaders — has never been more vital. We are especially proud that USF Health is home to GVN's International Headquarters. Its relocation to Tampa Bay, alongside the GVN Center of Excellence at USF, reflects the strength of our research enterprise and our deep commitment to global health security. Together, we are building a hub for virology innovation that integrates basic science, clinical research and public health to address the full spectrum of viral disease challenges.

The presence of so many internationally respected scientists, clinicians, and public health leaders here in Tampa Bay underscores the global significance of this meeting. The exchange of ideas, data and perspectives over the coming days will not only advance the field of virology but also help shape policies and strategies that protect populations worldwide.

We hope your time in Tampa is both intellectually stimulating and personally rewarding. Beyond the scientific program, we encourage you to enjoy the vibrant culture and natural beauty of our region as you engage with colleagues from around the globe.

Thank you for your leadership, your collaboration and commitment to advancing global health.

Sincerely,



Charles J. Lockwood, MD, MHCM

Executive Vice President,
USF Health Dean, Morsani College of Medicine
University of South Florida; GVN; U.S.A.

Sponsors

USF Health

USF Health is the partnership of the University of South Florida Morsani College of Medicine, the College of Nursing, the College of Public Health, the Taneja College of Pharmacy, the School of Biomedical Sciences, the School of Physical Therapy and Rehabilitation Sciences, and USF Health's multispecialty physicians group. USF Health is an integral part of the University of South Florida, a high-impact, global research university dedicated to student success.

Gold We are an enterprise for change in the way we understand health and how it transforms our quality of life. USF Health's mission is to envision and implement the future of health. Our commitment is to improve the full spectrum of health, from the environment, to the community, to the individual. Together through talent and innovation, USF Health is integrating patient care, education and research to reach our shared value: MAKING LIFE BETTER.



Silver Gilead Sciences is a global biopharmaceutical company with long-standing leadership in virology. For more than three decades, it has pioneered transformative therapies for HIV and viral hepatitis and responded to emerging threats such as COVID-19. Its antiviral portfolio advances treatment, prevention, and long-acting options aimed at controlling and ultimately eliminating serious viral diseases worldwide through innovative scientific research globally.



Bronze USF College of Public Health prepares public health leaders through innovative education, research, and community engagement. Based in Tampa, Florida, the college advances population health in areas such as epidemiology, global health, environmental health, and health policy, translating science into practice to improve health outcomes locally and globally.



Lunch Sponsor Altesa BioSciences is a clinical-stage biopharmaceutical company developing novel antiviral therapies for respiratory infections, including adenovirus. Focused on vulnerable populations such as immunocompromised patients and children, it advances innovative, rigorously developed treatments through strategic partnerships to reduce disease burden and improve global patient outcomes.

DAY ONE: March 4, 2026

8:30 AM - 8:50 AM - Welcoming & Opening



Charles Lockwood - USF Health Morsani College of Medicine, University of South Florida, GVN; U.S.A.



Sten Vermund - GVN; USF Health College of Public Health; U.S.A.



Mathew Evins - GVN

8:50 AM - 9:00 AM - Keynote Comments



Robert Gallo - *"Some General Comments on Pandemics and New Information on How HIV Causes AIDS and Their Implications for Co-Morbidities"* - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.

9:00 AM - 10:40 AM - Panel Discussion Regarding Pandemics: Lessons Still Not Learned



Moderator: Andrew Jack - GVN; *Financial Times*; UK



3- Peter Palese - *"Respiratory Virus Pandemics: Can We Prepare for Them?"* - GVN, Mt. Sinai; U.S.A.



1- Brett Giroir - *"My Pandemic Year in the White House"* - Altesa BioSciences; U.S.A.



4- Sharon Lewin - *"Leveraging Lessons From COVID-19 In Australia To Transform Pandemic Preparedness"* - GVN; University of Melbourne; Australia



2- Alash'le Abimiku - *"Network Of Functioning Molecular Laboratories Must Be Part Of Pandemic Preparedness In LMICs"* - GVN; Institute of Human Virology; Nigeria

10:40 AM - 11:00 AM - Coffee Break

11:00 AM - 11:30 AM - Special Lecture: Leveraging AI For Epidemic Preparedness



Chair: Lawrence Hall, University of South Florida; U.S.A.



Marco Salemi - GVN; University of Florida; U.S.A.

11:30 AM - 12:10 PM - Mpox: A Virus Of Global Importance



Chair:
Quarraisha Abdool Karim - GVN; CAPRISA; University of KwaZulu-Natal/ UNAIDS; South Africa



2- Nadia Sam - *“Mpox And Viral Co-Infections In Children: What Do We Know And What Do We Do?”* - GVN; Institute of Human Virology; Nigeria



1- Salim Abdool Karim - *“MPOX: Challenges In The 2024/5 Epidemic In Africa”* - GVN, CAPRISA; Columbia University Irving Medical Center; South Africa

12:10 PM - 1:20 PM - Lunch Hosted by the Silver Sponsor 

1:20 PM - 2:20 PM - Panel Discussion: Innovation in Disease Surveillance

Case Study: GVN Virus Outbreak Threat Surveillance System (VOTSS)



Chair:
Salim Abdool Karim - GVN, CAPRISA; Columbia University Irving Medical Center; South Africa



Peter Chang - USF Health; Tampa General Hospital; U.S.A.



Sten Vermund - GVN; USF Health College of Public Health; U.S.A.



Marco Salemi - GVN; University of Florida; U.S.A.



Elizabeth Traverse - GVN



Al Ozonoff - GVN; Harvard; Boston Children’s Hospital; U.S.A.



Matthew Anderson - GVN; USF Health Morsani College of Medicine; TGH Cancer Institute; U.S.A.

2:20 PM - 3:20 PM - Post-Acute Infectious Syndromes



Chair:
Anders Vahlne - GVN; Karolinska Institutet; Sweden



2- Tiffany Butterfield - *“Chronic Viral Infection as a Model for Immunometabolic Dysregulation Relevant to PAIS”* - GVN; The University of the West Indies Mona Campus; Jamaica



1- Igor J. Koralnik - *“The Role Of Viruses In Parkinson’s Disease”* - Northwestern University; U.S.A.



3- Daniela Weiskopf - *“CD4+ T Cells Are Associated With Chronic Chikungunya Virus Disease”* - GVN; La Jolla Institute for Immunology; U.S.A.

3:20 PM - 3:40 PM- Coffee Break

3:40 PM - 4:20 PM - What's New With Measles



Chair:
Erling Norrby - Karolinska Institutet; Sweden



2- William Moss - *"Measles: What Goes Around, Comes Around"* - GVN; Johns Hopkins Bloomberg School of Public Health; U.S.A.



1- Sten Vermund - *"Measles Prediction is Not So Simple"* - GVN; USF Health College of Public Health; U.S.A.

4:20 PM - 4:50 PM- Special Lecture: Vaccine Hesitancy



Heidi Larson - GVN; London School of Hygiene & Tropical Medicine; UK

4:50 PM - 6:00 PM - Panel Discussion: Oncogenesis and Retroviruses



Chair:
Eduardo Sotomayor - GVN; Tampa General Hospital Cancer Institute; U.S.A.



Yutaka Tagaya - GVN; USF Health Institute of Translational Virology & Innovation; U.S.A.



Robert Gallo - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.



Masao Matsuoka - Kumamoto University; Japan



Eduardo Gotuzzo - GVN, Universidad Peruana Cayetano Heredia; Peru

6:15 PM - 7:00 PM - Cocktail Reception *

7:00 PM - 8:30 PM - Welcome Dinner *

8:30 PM - 9:30 PM - Award Ceremony *

*open to registrants
Tampa Bay History Center
801 Water St, Tampa, FL 33602

DAY TWO: March 5, 2026

8:30 AM - 8:35 AM - Welcoming & Opening



Christian Bréchet, GVN, USF Health Morsani College of Medicine and USF Microbiomes Institute; U.S.A.

8:35 AM - 9:20 AM - Keynote Speaker

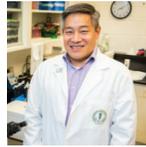


Quarraisha Abdool Karim - *"Ensuring Treatment Sustainability in a Pandemic: Lessons from Resource Constrained Settings"* - GVN, CAPRISA; University of KwaZulu-Natal/ UNAIDS; South Africa

9:20 AM - 10:20 AM - Influenza & RSV: Obvious Hazards For The Future



Chair:
Gene Morse, GVN; University at Buffalo; U.S.A.



2- Michael Teng - *"RSV New Insights"*- GVN; USF Health Institute for Translational Virology & Innovation; U.S.A.



1- Peter Palese - *"A universal influenza virus vaccine based on chimeric hemagglutinins"* - GVN, Mt. Sinai; U.S.A.



3- Hideki Hasegawa - *"Influenza Surveillance and Vaccine"* - GVN; National Institute of Infectious Diseases, Japan Institute for Health Security; Japan

10:20 AM - 10:40 AM - Coffee Break

10:40 AM -11:25 AM - Special Lecture: Next-Generation Inhibitors of SARS-CoV-2 Mpro - Overcome the Deficiencies of Paxlovid, and Beyond



Chair:
Robert Gallo - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.



Wuyuan Lu - GVN; Fudan University Shanghai Medical College; China

11:25 AM - 12:30 PM - Advances in Diagnostics



Chair:
Mario Stevenson, GVN; University of Miami; U.S.A.



2- Michael Berg - *"Phylogenetics-Guided Design Of Infectious Disease Diagnostics"* - GVN; Abbott; U.S.A.



1- Elyse Stachler - *"Using Machine Learning To Advance The Molecular Tool-Kit"* - GVN; Broad Institute ; U.S.A.



3- Brett Giroir - *"Targeting Rhinovirus to Prevent COPD Exacerbations"* - Altesa BioSciences; U.S.A.

12:30 PM - 1:30 PM - Lunch Sponsored by Altesa[™] BioSciences

1:30 PM - 2:30 PM - Arboviral Threats



Chair:
Kristi Miley - GVN; USF Health; U.S.A.



2- Scott Weaver - *"Eastern Equine Encephalitis And Related Alphaviruses In The Americas"* - GVN, University of Texas Medical Branch; U.S.A.

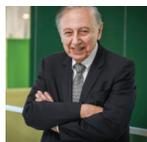


1- Lisa Ng - *"Frontiers In Cellular Mechanisms And Therapeutic Interventions Of Arboviral Infections"* - GVN; A*STAR; Singapore



3- Jean Paul Carrera - *"Emergence and spread of Oropouche virus in the Darién Gap, Panama"* - GVN; Gorgas Memorial Institute for Health Studies; Panama

2:30 PM - 3:00 PM - Special Lecture: Trained Immunity: Role of Anti-Viral Host Defense



Chair:
Robert Gallo - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.



Mihai Netea - GVN; Radboud University Nijmegen, Netherlands

3:00 PM - 3:20 PM - Special Lecture: Lifelong Delivery of Anti-HIV Monoclonal Antibodies from a Single Day of Vector Administration



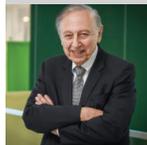
Ron Desrosiers, GVN; University of Miami, Miller School of Medicine; U.S.A.

3:20 PM - 3:35 PM - Government Pandemic Playbook



Anders Vahlne, GVN; Karolinska Institutet; Sweden

3:35 PM - 3:50 PM - In Recognition of Pioneers



Host: Robert Gallo - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.

3:50 PM - 4:15 PM - Young Investigators Presentations



Chair:
Gene Morse, GVN; University at Buffalo; U.S.A.

- **Mariano Molina Beitia** - *"Longitudinal Microbiome Profiling Identifies Early Microbial Signatures Associated With High-Risk HPV Infection Outcomes In A Screening Population"*; Karolinska Institute; Sweden
- **Carla Freitas** - *"Spatiotemporal Influenza A/B Wastewater Surveillance Provides Early Warning and Reveals an Unequal Severe Disease Burden in São Paulo"* - Institut Pasteur of Sao Paulo; Brazil
- **Kyle McMahon** - *"Strengthening Pathogen Surveillance in West Africa: Development of PCR and CRISPR-Based Diagnostics Under the Sentinel Program"* - Broad Institute; U.S.A.
- **Janine Michel**, *"First case of Mpox Clade Ib In Germany In 2024: Results Of In-Hospital Air And Surface Sampling"* - Robert Koch Institute; Germany

4:15 PM - 5:15 PM - Transportation Provided to the GVN Global Headquarters

5:30 PM - Cocktail Reception and **GVN International Headquarters Offices Ribbon Cutting**

7:00 PM - Transportation Provided to the Hyatt Place/Hyatt House Tampa Downtown

DAY THREE: March 6, 2026

8:30 AM - 8:35 AM - Welcoming & Opening



Mark Moseley - USF Health; U.S.A.

8:35 AM -10:00 AM -Viral Variants in Coronaviruses



Chair:

4- Robert Garry - *"New Data on COVID-19 Origins?"* GVN; Tulane University; U.S.A.



2- Joaquim Segales - *"Animal Models: From Acute COVID-19 To The Post-COVID Condition"* - GVN; IRTA-CReSA; Spain



1- Linfa Wang - *"What Can We Expect From Bats?"* - GVN; Duke-NUS; Singapore



3- Susan Weiss, *"Coronavirus Activation Of Interferon Signaling Pathways Is Temperature Dependent And Required For Clearance From The Nasal Epithelium"* - GVN; University of Pennsylvania; U.S.A.

10:00 AM -10:20 AM - Coffee Break

10:20 AM -10:50 AM - Special Lecture: Antiviral Nucleoside Analogs for Advancing Pandemic Preparedness



Tomas Cihlar - GVN; Gilead Sciences, U.S.A.

10:50 AM - 12:00 PM - Panel Discussion: Hospital Pandemic Playbook



Moderator:

John Sinnott - GVN; USF Health; U.S.A.



Sten Vermund - GVN; USF Health College of Public Health; U.S.A.



1- Asa Oxner - *"Lessons From COVID-19 Tracking For Pandemic Preparedness: The USF Experience"* - USF Health, Tampa General Hospital; U.S.A.



2- Haru Okuda - *"Training in Uncertainty: Adaptive Simulation During the COVID-19 Pandemic"* - USF Health, CAMLS; U.S.A.



Chantal Vogels, GVN; Yale School of Public Health; U.S.A.

12:00 PM -12:15 PM - GVN Hospital Virology Center of Excellence Designation



Presenting Designation:

Sten Vermund - GVN; USF Health College of Public Health; U.S.A.



John Couris - Tampa General Hospital; U.S.A.

12:15 PM - 12:30 PM - Closing Remarks and Announcement of 2027 Annual Meeting



Andrew Jack - *"Closing Reflections"*, GVN;
Financial Times; UK



Robert Gallo - GVN, USF Health Institute for
Translational Virology & Innovation; TGH Cancer
Institute; U.S.A.



Mathew Evins - GVN



Speakers and Participants Bios

Alash'le Abimiku - GVN; Institute of Human Virology; Nigeria

Alash'le Abimiku is a co-founder of the Institute of Human Virology Nigeria (IHVN), a GVN Center of Excellence, where she serves as Center Director. She is also Executive Director of the International Research Center of Excellence at IHVN and a Professor of Medicine at the University of Maryland School of Medicine. Her work has strengthened laboratory medicine and infectious disease research capacity across Nigeria and throughout Africa. She was the first to document HIV subtype G as the predominant subtype in Nigeria and established a leading HIV research laboratory in Central Nigeria, supporting studies on HIV pathogenesis, birth cohorts, and co infections including tuberculosis (TB). Dr. Abimiku serves on several boards and committees, including CEPI, PVAC, Africa CDC, GVN Scientific Leadership, and WHO RESNET. She is also an academic editor for PLOS and a member of the JAIDS editorial board.

Matthew Anderson - GVN; USF Health Morsani College of Medicine; TGH Cancer Institute; U.S.A.

Matthew L. Anderson, MD, PhD, is a gynecologic oncologist and translational cancer researcher specializing in the surgical and medical management of premalignant and malignant diseases of the female reproductive tract. He uses minimally invasive and robotic surgical techniques to optimize patient outcomes and provides personalized treatment informed by cancer biology and genetics, including care for patients with inherited risk for ovarian and uterine cancers. His clinical expertise also includes the management of complex gynecologic conditions such as large pelvic masses, fistulas, endometriosis, and uterine leiomyomas. Dr. Anderson completed fellowship training in Gynecologic Oncology at The University of Texas MD Anderson Cancer Center and residency and internship training in Obstetrics and Gynecology at Yale New Haven Hospital. He earned his medical degree and PhD in physiology from Yale University School of Medicine and his undergraduate degree in cellular biology from the University of Miami. He is board certified in Obstetrics and Gynecology and Gynecologic Oncology.

Michael Berg - GVN; Abbott; U.S.A.

Michael G. Berg, PhD, is an Associate Research Fellow of the Volwiler Society in Infectious Disease Research at Abbott Diagnostics, a Corporate Partner of the GVN. He leads Abbott's Virus Discovery program, integrating next generation sequencing and advanced analytics into pathogen surveillance, and directs the development of new molecular and serologic assays. His work supports prototype design and sequencing driven surveillance that are central to the Abbott Pandemic Defense Coalition (APDC), an industry led network focused on detecting and responding to emerging disease threats. Dr. Berg earned his doctorate in Molecular Microbiology and Immunology from the Johns Hopkins Bloomberg School of Public Health and completed postdoctoral training as a Howard Hughes Medical Institute fellow at the University of Pennsylvania. He joined Abbott in 2013 and leads a multidisciplinary team advancing scalable tools for outbreak detection and public health preparedness.

Christian Bréchet - GVN, USF Health Morsani College of Medicine and USF Microbiomes Institute; U.S.A.

Christian Bréchet, MD, PhD, is a physician scientist whose career spans academic medicine, public health leadership, and biotechnology. Trained at the Pasteur Institute, he became Professor of Cell Biology and Hepatology at Paris Descartes University and led liver disease programs at Necker Enfants Malades Hospital. He served as Director General of the Institut national de la santé et de la recherche médicale (Inserm), France's National Institute of Health and Medical Research, and later held senior leadership roles at Institut Mérieux and as President of the Institut Pasteur. Since 2018, he has been a full professor at the University of South Florida, serving as Senior Associate Dean for Research and Associate Vice President for International Partnerships. Dr. Bréchet also served as a former President of the GVN and is currently Vice Chair of the GVN Board of Directors. His research focuses on viral hepatitis, acute liver failure and hepatocellular carcinoma, resistance to insulin and its neurologic complications (Alzheimer), and microbiome health interactions.

Tiffany Butterfield - GVN; The University of the West Indies Mona Campus; Jamaica

Tiffany Butterfield is a Lecturer in Microbiology at The University of the West Indies, a GVN Affiliate. Her research focuses on immune dysregulation and immunometabolic changes during chronic viral infections. She has examined monocyte and T cell metabolic profiles associated with cardiometabolic risk in people living with human immunodeficiency virus (HIV), linking persistent inflammation and altered cellular metabolism to subclinical disease. Building on this work, she is investigating how inflammatory and immunometabolic signatures differ in HIV mono infection compared with HIV and human T cell leukemia virus type 1 (HTLV 1) co infection, an understudied area in regions with overlapping viral endemics such as the Caribbean. Her goal is to advance mechanistic virology research, strengthen scientific capacity in Jamaica, and contribute insights relevant to persistent immune dysfunction following viral illness.

Jean Paul Carrera - GVN; Gorgas Memorial Institute for Health Studies; Panama

Jean Paul Carrera, DPhil, is a scientist specializing in infectious disease ecology, epidemiology, and One Health research. He is the Founder and Director of the Carson Centre for Research in Health and Ecosystems, a nonprofit research institution based in Darién, Panama, dedicated to the study of emerging and neglected infectious diseases at the human–animal–environment interface. Dr. Carrera also serves as a Senior Investigator at the Regional Centre for Vaccines and Biopharmaceuticals in Panama (CRIVB-AIP) and as General Research Director at Columbus University in Panama City. Dr. Carrera received his DPhil from the University of Oxford, where his research focused on the ecological and population-level determinants of infectious disease dynamics. His work integrates field-based epidemiological surveillance, ecological and environmental data, and genetic analyses to better understand pathogen emergence and transmission in complex ecosystems. He has led and contributed to multidisciplinary research projects funded by international and national agencies, including CEPI, the NIH, and the U.S. Department of Defense, and collaborates with academic and public health institutions across Latin America and internationally. His research interests include zoonotic disease surveillance, outbreak preparedness, viral evolution, and strengthening local research capacity in regions at high risk for emerging infectious diseases.

Peter Chang - USF Health; Tampa General Hospital; U.S.A.

Peter Chang, MD, is Senior Vice President and Chief Transformation Officer at Tampa General Hospital. He leads the development of healthcare strategies to improve clinical quality, operational efficiency, and care coordination while reducing the total cost of care. As part of this work, Dr. Chang led the design and implementation of the TGH's Hospital at Home program. He also created and directed the Tampa General Hospital Clinical Command Center, known as the Care Coordination Center, which focuses on systemwide efficiency and quality improvement. Dr. Chang previously served as an assistant professor of medicine in the Department of Hospital Medicine. He currently serves on the boards of MORE Health Inc. and Tampa General Medical Group, has received industry recognition for contributions to healthcare innovation, and frequently presents on healthcare strategy and technology.

Tomas Cihlar - GVN; Gilead Sciences, U.S.A.

Tomas Cihlar, PhD, is Senior Vice President of Research at Gilead Sciences, a Corporate Partner of the GVN, where he oversees virology drug discovery and preclinical research. After obtaining his PhD in biochemistry from the Institute of Organic Chemistry and Biochemistry in Prague, Czech Republic, he joined Gilead and has contributed to the discovery, development, and regulatory approval of multiple antiviral therapies, including major advances in HIV treatment. He helped establish programs in long-acting antivirals for HIV treatment and prevention, approaches toward HIV cure research, and therapies for viral hepatitis and emerging respiratory infections. Dr. Cihlar played key roles in the development of lenacapavir, a long-acting HIV capsid inhibitor, and remdesivir, an antiviral authorized for COVID-19. He is a Board of Directors member of the GVN, the INTREPID Alliance for Pandemic Preparedness, and Assembly Bio, Inc.

John Couris - Tampa General Hospital; U.S.A.

John Couris is President and CEO of the Florida Health Sciences Center | Tampa General Hospital (TGH). Under his leadership, TGH and USF Health have grown into one of the nation's leading integrated academic health systems. Recently named one of Modern Healthcare's 2025 "100 Most Influential People in Healthcare," Couris has driven statewide growth and has elevated quality and safety performance to the top 20% of U.S. academic medical centers (Vizient). He has built a nationally recognized workforce culture; in 2025, the organization achieved a 92nd-percentile engagement score, placing it in the top 8% of academic health systems nationwide. Couris has advanced AI-enabled care coordination in partnership with Palantir, helped establish TGH Ventures to support early-stage health innovation, and is spearheading the development of the Tampa Medical & Research District. He serves on the U.S. Department of Health and Human Services' Advisory Council on Alzheimer's Research, Care, and Services.

Ron Desrosiers, GVN; University of Miami, Miller School of Medicine; U.S.A.

Ronald Desrosiers, PhD, is Professor of Pathology at the University of Miami Miller School of Medicine, where he also serves as Vice Chair of Basic Research. Prior to joining the University of Miami, he was a tenured Professor of Microbiology at Harvard Medical School and Director of Harvard's Primate Research Center. Dr. Desrosiers is internationally recognized for discovery of simian immunodeficiency virus (SIV), the close primate relative of the human AIDS virus, and for identifying a monkey virus related to human Kaposi sarcoma herpesvirus. His research has contributed significantly to understanding viral pathogenesis and to vaccine development efforts. His current research interests are focused mainly on long-term delivery of potent, broadly-neutralizing, anti-HIV antibodies for both prevention and treatment purposes. He has authored more than 340 peer reviewed publications. Dr. Desrosiers earned his PhD in biochemistry from Michigan State University and his BA in chemistry from Boston University and has received distinguished alumni awards from both institutions.

Mathew Evins - GVN

Mathew L. Evins is a founding board member of the GVN as well as its Emeritus Executive Chairman, and currently serves as the organization's Treasurer and Chief Executive Officer/Managing Executive. Since its inception, he has played a central role in GVN's development, helping guide its mission to prepare for, defend against, and provide an integrated first research response to existing, emerging, and unidentified viruses that pose a clear and present threat to public health. In addition to his contribution to the leadership of the GVN, Mr. Evins is Chairman of EVINS Communications, an award-winning brand marketing and public relations firm he founded in 1988. Previously, Mr. Evins served as Chief Executive Officer of Pain Therapeutics Corporation, President of Cardiff Consultants, and Vice President of Vector Petroleum Corporation. Earlier in his career, Mr. Evins co-created and managed The Talisman Report, a renowned investment advisory newsletter, and served as a research associate on the staff of Cornell Medical Center in New York City for ten years. His work bridges brand and business development, organizational leadership and entrepreneurial expertise in consumer products, corporate finance, healthcare and hospitality.

Robert Gallo - GVN, USF Health Institute for Translational Virology & Innovation; TGH Cancer Institute; U.S.A.

Robert C. Gallo, MD, is the James P. Cullison Professor of Medicine in the Division of Infectious Disease at the University of South Florida Morsani College of Medicine, Founding Director of the USF Health Institute for Translational Virology & Innovation, a GVN Center of Excellence where he serves as Center Director, Director of the Microbial Oncology Program at the Tampa General Hospital Cancer Institute, and Co-Founder and Chairman of the Scientific Leadership Committee of the Global Virus Network. He is internationally recognized for co-discovering that HIV is the cause of AIDS and for development of the HIV blood test. Earlier discoveries include the first and second human retroviruses, HTLV-1 and HTLV-2, and interleukin-2, which enabled the culture of human T cells and advances in immunotherapy. He also identified human herpesvirus 6 and discovered chemokines that block HIV infection. Dr. Gallo has authored more than 1,300 scientific publications and received numerous honors, including two Albert Lasker Awards. He is a member of the National Academy of Sciences and the National Academy of Medicine.

Robert Garry - GVN; Tulane University; U.S.A.

Robert F. Garry, PhD, is Professor of Microbiology and Immunology and Associate Dean for Biomedical Sciences at Tulane Medical School in New Orleans. He is also Director of the Tulane Center of Excellence under the Global Viral Network and a Co-founder of Zalgen Labs. Dr. Garry and his colleagues are developing diagnostics, vaccines, and drugs for emerging viruses. His team performed the first in-depth clinical study of Ebola virus disease in West Africa. Other work includes the development of human monoclonal antibodies that can cure monkeys challenged with Lassa virus even when treatment is delayed for more than a week. The Garry Laboratory is supporting IAVI (formerly: the International AIDS Vaccine Initiative) in developing vaccines against Lassa, Marburg, and Sudan viruses. Dr. Garry is co-author of a widely cited analysis indicating that SARS-CoV-2 has a natural origin rather than having been engineered in a laboratory.

Brett Giroir - Altesa BioSciences; U.S.A.

Brett P. Giroir, MD, is Chief Executive Officer at Altesa BioSciences and a physician-scientist with extensive public health leadership experience. He previously served as U.S. Assistant Secretary for Health at the Department of Health and Human Services, Acting Commissioner of the Food and Drug Administration, and an Admiral in the U.S. Public Health Service Commissioned Corps. During the COVID-19 pandemic, he served on the White House Coronavirus Task Force and led national testing and diagnostics efforts. He also represented the United States on the Executive Board of the World Health Organization. Dr. Giroir has held senior roles across government, academia, and industry, including leadership positions at the Defense Advanced Research Projects Agency and the Department of Veterans Affairs. He earned his medical degree from the University of Texas Southwestern and completed training in pediatrics and critical care.

Eduardo Gotuzzo - GVN, Universidad Peruana Cayetano Heredia; Peru

Eduardo Gotuzzo, MD, is Emeritus Professor at Universidad Peruana Cayetano Heredia, a GVN Center of Excellence where he also serves as Center Director, and former Director of the Instituto de Medicina Tropical Alexander von Humboldt. He also served as Director of the Gorgas International Course of Clinical Tropical Medicine. Dr. Gotuzzo is an infectious diseases specialist whose research spans human T cell leukemia virus type 1, tuberculosis, human immunodeficiency virus, acute respiratory infections, brucellosis, and vector borne diseases. His work includes epidemiological research, clinical investigation, leadership of large international projects, and training of health professionals worldwide. He has held leadership roles including Past President of the International Society for Infectious Diseases and the Asociación Panamericana de Infectología and has contributed to organizations such as the International Retrovirology Association. Dr. Gotuzzo has authored more than 500 scientific articles, book chapters, manuals, and books, and has served as a visiting professor internationally, contributing to global education in tropical and infectious diseases.

Lawrence Hall - University of South Florida; U.S.A.

Lawrence Hall, PhD, is a Distinguished University Professor and Associate Dean of Research and Innovation in the Bellini College of Artificial Intelligence, Cybersecurity and Computing at the University of South Florida. Research is on machine learning, data mining, pattern recognition, and artificial intelligence in medical image analysis, and scalable learning methods. Recent work has been with VLM's stability and predictive power. He has an H-index of 70. His work has been supported by the National Institutes of Health, National Science Foundation, NASA, Department of Energy, and DARPA. Dr. Hall earned his PhD in Computer Science from Florida State University and his bachelor's degree in applied mathematics from the Florida Institute of Technology. He is a Fellow of IEEE, AAAS, AIMBE, and the International Association for Pattern Recognition and has received multiple international awards for his contributions to artificial intelligence and computational science.

Hideki Hasegawa - GVN; National Institute of Infectious Diseases, Japan Institute for Health Security; Japan
Hideki Hasegawa, MD, PhD, is a virologist and pathologist specializing in emerging infectious diseases and respiratory virus vaccinology. He is Center Director at the Japan Institute for Health Security, National Institute of Infectious Diseases. He received his medical and doctoral degrees from Hokkaido University and completed postdoctoral training at Rockefeller University and University College Dublin before joining Japan's National Institute of Infectious Diseases in Tokyo. Since 2019, he has directed the World Health Organization Collaborating Centre for Reference and Research on Influenza at NIID. His research focuses on mucosal immunity, viral pathogenesis, and vaccine development, including intranasal inactivated influenza vaccines and recombinant protein vaccines for COVID-19. Dr. Hasegawa has published widely and contributed to research on influenza, human T cell leukemia virus type 1, and severe fever with thrombocytopenia syndrome. He supports global influenza surveillance, vaccine evaluation, and pandemic preparedness and serves on the GVN Board of Directors.

Andrew Jack - GVN; *Financial Times*; UK

Andrew Jack is Global Education Editor at the Financial Times, where he writes on education issues worldwide and serves as editorial lead for the FT free schools programme. He also oversees the FT Schools Digest and Business School Insider newsletters. Previously, he held several senior editorial roles at the Financial Times, including Head of Curated Content, Deputy Editor of the Big Read section, Pharmaceuticals Correspondent, and Foreign Correspondent in France and Russia. Mr. Jack is the author of *Inside Putin's Russia* and *The French Exception*. He also serves on the GVN Board of Directors.

Quarraisha Abdool Karim - GVN, CAPRISA; University of KwaZulu-Natal/ UNAIDS; South Africa

Quarraisha Abdool Karim, PhD, FRS, is a South African infectious diseases epidemiologist known for landmark contributions to HIV prevention and women's sexual and reproductive health. She is Co-Founder and John C. Martin Chair in Global Health at the Centre for the AIDS Programme of Research in South Africa (CAPRISA), a GVN Center of Excellence. She is also Professor of Clinical Epidemiology at Columbia University and Pro Vice-Chancellor for Health Sciences at the University of KwaZulu-Natal. Her research has informed HIV and tuberculosis clinical management and responses to COVID-19. She has published extensively and trained hundreds of scientists through the National Institutes of Health Fogarty AIDS International Research and Training Program. She currently serves as President of The World Academy of Sciences and as Joint United Nations Programme on HIV/AIDS Special Ambassador for Adolescents and HIV. Her work emphasizes equity and strengthening science capacity in the Global South. Dr. Karim is also on the GVN Board of Directors.

Salim Abdool Karim - GVN, CAPRISA; Columbia University Irving Medical Center; South Africa

Salim S. Abdool Karim, PhD, FRS, is a South African clinical infectious diseases epidemiologist recognized for scientific leadership in HIV and COVID-19. He is Director of the Centre for the AIDS Programme of Research in South Africa (CAPRISA) in Durban, a GVN Center of Excellence where he serves as Center Director, and Professor of Global Health at Columbia University. He serves as Special Adviser on pandemics to the World Health Organization Director-General and has held senior academic roles at the University of KwaZulu-Natal, Harvard University, and Weill Cornell Medicine. He previously served as President of the South African Medical Research Council and is a member of the WHO Science Council. He also chairs the Emergency Committee advising the Africa Centres for Disease Control and Prevention Director-General on declaring continental public health emergencies. He is a member of the U.S. National Academy of Medicine.

Igor J. Koralnik - Northwestern University; U.S.A.

Igor J. Koralnik, MD, is the Archibald Church Professor of Neurology at Northwestern University and Chief of the Division of Neuroinfectious Diseases and Global Neurology at Northwestern Memorial Hospital. He is also Co-Director of the Northwestern Medicine Comprehensive COVID-19 Center. Dr. Koralnik's laboratory studies how viruses affect the nervous system, including HIV, JC polyomavirus, the cause of progressive multifocal leukoencephalopathy, and SARS-CoV-2. In 2020, he established one of the first Neuro COVID-19 clinics in the United States to investigate, diagnose, and manage the neurological manifestations of Long COVID. His team conducts clinical, translational, and basic research on Long COVID, and he also studies the role of the virome in neurodegenerative disease, including research on human pegivirus in Parkinson's disease.

Heidi Larson - GVN; London School of Hygiene & Tropical Medicine; UK

Heidi J. Larson, PhD, is Professor of Anthropology, Risk and Decision Science at the London School of Hygiene and Tropical Medicine and Founding Director of the Vaccine Confidence Project. Her research focuses on public trust and social and behavioral factors influencing immunization programs worldwide. Prof. Larson previously served as Senior Advisor for Global Immunization at the United Nations Children's Fund (UNICEF) and held advisory roles in communicable diseases at the World Health Organization (WHO). She has led international initiatives to address misinformation and strengthen vaccination programs, including projects supported by the European Union in Africa. Prof. Larson earned her doctoral degree in anthropology from the University of California, Berkeley, and holds academic appointments at the University of Washington, USA, and University of Antwerp, Belgium. She was recognized by British Broadcasting Corporation as one of the 100 most influential Women in 2021. She serves on the GVN Board of Directors.

Sharon Lewin - GVN; University of Melbourne; Australia

Sharon R. Lewin, MD, PhD, is an infectious diseases physician-scientist and a global leader in HIV cure research. She is the inaugural Director of the Peter Doherty Institute for Infection and Immunity, a GVN Center of Excellence where she serves as Center Director, and a Melbourne Laureate Professor at the University of Melbourne. She also leads the Cumming Global Centre for Pandemic Therapeutics in Melbourne. Dr. Lewin trained in medicine and virology at Monash University and completed postdoctoral research at Rockefeller University. Her research focuses on why HIV persists despite antiretroviral therapy and on designing clinical trials aimed at durable remission and cure. She has received major national honors, including Officer of the Order of Australia, and is the immediate past President of the International AIDS Society. Dr. Lewin is also on the GVN Board of Directors.

Charles Lockwood - USF Health Morsani College of Medicine, University of South Florida; GVN; U.S.A.

Charles J. Lockwood, MD, MHCM, is Executive Vice President of University of South Florida Health and Dean of the Morsani College of Medicine. He oversees the colleges of medicine, nursing, public health, and pharmacy, along with multiple health professions programs and a large multispecialty faculty practice. He also serves as Executive Vice President and Chief Academic Officer at Tampa General Hospital. An internationally recognized physician scientist in obstetrics and gynecology, Dr. Lockwood is known for research on preterm birth and reproductive biology, including discovery of fetal fibronectin as a biochemical predictor of prematurity. His laboratory has received long standing support from the National Institutes of Health and other foundations. Dr. Lockwood earned his medical degree from the University of Pennsylvania, a Master of Science in Healthcare Management from the Harvard School of Public Health and completed residency and fellowship training at Pennsylvania Hospital and Yale New Haven Hospital. He is a member of the National Academy of Medicine and serves on the GVN Board of Directors.

Wuyuan Lu - GVN; Fudan University Shanghai Medical College; China

Wuyuan Lu, PhD, is a professor and biomedical scientist whose research focuses on antimicrobial peptides, host immunity, and anti-infective drug discovery. He earned his doctorate at Purdue University and completed postdoctoral training at The Scripps Research Institute. After an early research faculty role at the University of Chicago, he joined the University of Maryland School of Medicine, where he rose to full professor with tenure in the Department of Biochemistry and Molecular Biology. He previously served as Assistant Director of the Institute of Human Virology and Co-Director of its Basic Science Division. In 2020, Dr. Lu moved to Fudan University Shanghai Medical College, which will be part of the GVN China Consortia. He has authored or coauthored over 200 peer reviewed publications and is widely cited for contributions to defensin biology and translational approaches to cancer and infectious disease. His work bridges fundamental mechanisms of innate defense with discovery of new therapeutic strategies against bacterial and viral threats.

Masao Matsuoka - Kumamoto University; Japan

Masao Matsuoka, MD, PhD, is the Director of Kumamoto Rosai Hospital, a Visiting Professor at Kumamoto University, and Professor Emeritus of Kyoto University. His research focuses on the pathogenesis of human T-cell leukemia virus type 1 (HTLV-1). He is widely recognized for discovering the critical roles of the HTLV-1 bZIP factor (HBZ) in viral persistence and oncogenesis. His work demonstrated that HBZ promotes the proliferation of adult T-cell leukemia (ATL) cells and inhibits apoptosis while simultaneously enabling them to evade host immunity. Dr. Matsuoka was mentored by Professor Kiyoshi Takatsuki, who first identified ATL in Japan. He earned his MD from Kumamoto University in 1982 and his PhD in 1988. In 1999, he was appointed Professor at the Institute for Virus Research, Kyoto University, where he also served as Director from 2010 to 2014. In 2016, he returned to Kumamoto University as Professor of Hematology and served as Deputy Director of Kumamoto University Hospital. He assumed his current role as Director of Kumamoto Rosai Hospital in 2023.

Kristi Milley - GVN; USF Health; U.S.A.

Kristi Miley, MSPH, PhD, is a Research Associate, Adjunct Professor, and Interim Director of the BSL3/ABSL3 Facility at the University of South Florida College of Public Health Center for Global Health Infectious Disease Research. Her research spans medical entomology, parasitology, and global communicable diseases, with an emphasis on zoonotic and vector-borne infections. Dr. Miley's primary work focuses on *Onchocerca volvulus*, the parasite that causes river blindness, including evaluation of diagnostic tools, development of novel testing methods, and laboratory training to support surveillance programs in Africa and Latin America. Her current BSL3/ABSL3 research focuses on Avian Influenza. Furthermore, she contributes to mosquito borne disease research in Florida, particularly Eastern Equine Encephalitis, West Nile, and Dengue viruses to support public health surveillance and risk modeling efforts. Dr. Miley earned her PhD and MSPH in Global Communicable Diseases and her BS in Biomedical Sciences from the University of South Florida. She is committed to education and mentorship through graduate training in parasitology and vector biology.

Gene Morse - GVN; University at Buffalo; U.S.A.

Gene D. Morse, PharmD, FCCP, BCPS, is a SUNY Distinguished Professor at the University at Buffalo School of Pharmacy and Pharmaceutical Sciences and Director of the Center for Integrated Global Biomedical Sciences. He also serves as Co-Director of the SUNY Global Health Institute. The University at Buffalo is a GVN Center of Excellence where Dr. Morse serves as Center Director. Dr. Morse has been involved in HIV clinical pharmacology research since the introduction of antiretroviral therapy in 1986, with additional focus on hepatitis C virus infection and drug development. He directs multiple programs supported by the National Institutes of Health including a National Institute of Allergy and Infectious Diseases supported program, the HIV Clinical Pharmacology Quality Assurance Program, and leads the HIV Research and Training Program with the University of Zimbabwe and the Global Infectious Diseases Research and Training Program with the University of the West Indies in Jamaica through the National Institutes of Health Fogarty International Center. His laboratory is internationally recognized for pharmacokinetics, pharmacogenomics, and bioanalysis supporting infectious diseases research and therapeutics development.

Mark Moseley - USF Health; U.S.A.

Mark G. Moseley, MD, MHA, is President of USF Tampa General Physicians, Executive Vice-President at Tampa General Hospital, and Professor and Chair of the Department of Internal Medicine at the University of South Florida Health Morsani College of Medicine. He has helped to lead the integration of the Tampa General Hospital and University of South Florida physician practice infrastructure, supporting approximately 1,200 physicians/providers and 1,700 team members. Dr. Moseley joined USF Health in 2017 and has held multiple leadership roles at USF Health, including Chief Medical Officer, Chief Clinical Officer, Associate Vice President, and Vice Dean for Clinical Affairs. He is a member of the medical staff at Tampa General Hospital and holds a courtesy appointment at the College of Public Health, where he teaches topics related to healthcare leadership and systems. Prior to coming to USF Health, Dr. Moseley was the Assistant Chief Operating Officer at the Ohio State University Wexner Medical Center in Columbus, Ohio. Dr. Moseley earned his Doctor of Medicine and Master of Health Administration degrees from The Ohio State University and completed residency training in Emergency Medicine at Christiana Care in Wilmington, Delaware, where he served as chief resident. He is board certified in both Emergency Medicine and Health Administration, Leadership, and Management (HALM).

William Moss - GVN; Johns Hopkins Bloomberg School of Public Health; U.S.A.

William J. Moss, MD, MPH, is Professor of Epidemiology, International Health, and Molecular Microbiology and Immunology at the Johns Hopkins Bloomberg School of Public Health, a GVN Center of Excellence. He is Executive Director of the International Vaccine Access Center and Deputy Director of the Johns Hopkins Malaria Research Institute. A pediatrician with subspecialty training in infectious diseases, Dr. Moss has worked in multiple countries across Africa and Asia on the epidemiology and control of childhood infections in low- and middle-income settings. His research includes serologic surveys to guide immunization programs, measles control and elimination in the context of the HIV epidemic, malaria epidemiology in southern Africa, and care models for children living with HIV. He served for seven years on the World Health Organization Strategic Advisory Group of Experts Working Group on Measles and Rubella. His work links field epidemiology with practical vaccination policy and program design.

Mihai Netea - GVN; Radboud University Nijmegen, Netherlands

Mihai G. Netea, MD, PhD, is a physician scientist and Professor of Experimental Internal Medicine at Radboud University Medical Center in the Netherlands, a GVN Center of Excellence where he serves as Center Director. He specializes in infectious diseases and immunology, with research focused on the innate immune system, cytokine biology, and host responses to infection. Dr. Netea is known for pioneering work on trained immunity, the ability of the innate immune system to develop memory like responses after exposure to pathogens. His studies have examined immune responses to fungal pathogens such as *Candida albicans* and genetic factors that influence susceptibility to infection, with the goal of translating these findings into new diagnostic and therapeutic approaches. Dr. Netea has authored more than 900 scientific publications and has received major research awards, including the Spinoza Prize and European Research Council funding. He is a member of Academia Europaea and the Royal Netherlands Academy of Arts and Sciences.

Lisa Ng - GVN; A*STAR; Singapore

Lisa F. P. Ng, PhD, is a viral immunologist and translational scientist known for discoveries that have informed diagnostics and therapeutic development for emerging viral infections, including SARS, influenza A (H5N1), Chikungunya virus, Zika virus, and COVID-19. She has authored more than 200 peer reviewed publications, with a substantial proportion among the most cited in her field. During the COVID-19 pandemic, her team developed tools to profile SARS-CoV 2 antibody responses and identify functional memory B cells associated with vaccine breakthrough infection, building on earlier work in arboviral immunity. Dr. Ng has been recognized as a Clarivate Highly Cited Researcher and has received major scientific honors, including Singapore's President's Science Award (2025). Her work bridges fundamental immunology with real world applications that strengthen outbreak readiness. Dr. Ng is part of the Agency for Science, Technology and Research (A*STAR) Infectious Diseases Labs (A*STAR IDL), which is part of the GVN Singapore Consortia.

Erling Norrby - Karolinska Institutet; Sweden

Erling Norrby, MD, PhD, is a physician and virologist who served as Professor and Chair of Virology at the Karolinska Institute (a GVN Center of Excellence) in Stockholm for 25 years. During this time, he also served as Dean of the Faculty of Medicine and was deeply involved in the selection process for the Nobel Prize in Physiology or Medicine for two decades. He later became Permanent Secretary of the Royal Swedish Academy of Sciences, where he held overarching responsibility for the Nobel Prizes in Physics and Chemistry and served on the Board of the Nobel Foundation. Dr. Norrby is currently affiliated with the Center for the History of Sciences at the Academy, where he studies Nobel archives and the history of scientific discovery. He has authored several books on Nobel Prize science and biomedical breakthroughs and serves as Vice Chairman of the Board of the J. Craig Venter Institute. He also holds an honorary role at the Royal Swedish Court.

Haru Okuda - USF Health, CAMLS; U.S.A.

Haru Okuda, MD, is Executive Director of the University of South Florida (USF) Health Center for Advanced Medical Learning and Simulation (CAMLS), a 90,000 square foot facility dedicated to advancing clinical skills and patient care through experiential learning. He is also Associate Vice President for Interprofessional Education and Practice at USF Health and serves as Professor of Emergency Medicine and Medical Education and Associate Dean of Emerging Healthcare and Educational Technologies at the USF Health Morsani College of Medicine. He previously served as National Medical Director for the Department of Veterans Affairs SimLEARN program, leading simulation strategies across more than 165 VA medical centers and directed simulation initiatives for NYC Health + Hospitals. A past president of the Society for Simulation in Healthcare, he co-created SimWars™, a widely adopted team based clinical competition, and lectures internationally on simulation and educational innovation.

Asa Oxner - USF Health, Tampa General Hospital; U.S.A.

Asa Oxner, MD, is Associate Professor of Internal Medicine at the University of South Florida Health Morsani College of Medicine, where she also serves as Vice Chair of the Department of Internal Medicine. She specializes in internal medicine, addiction medicine, and HIV care, with a focus on patient centered practice and care for underserved populations. Dr. Oxner has participated in global health initiatives, including training healthcare providers during the Ebola epidemic in Sierra Leone and contributing to disaster response efforts in Puerto Rico, and she volunteers locally with programs serving individuals experiencing homelessness. Her research focuses on implementation of quality improvement programs in the United States and Africa, including protocols addressing malaria, measles, HIV, tuberculosis, burns, and malnutrition, as well as training approaches to improve care for underserved patients. She earned her medical degree from the University of South Florida and completed residency training in internal medicine at Beth Israel Deaconess Medical Center.

Al Ozonoff - GVN; Harvard; Boston Children's Hospital; U.S.A.

Al Ozonoff, PhD, is Director of Pandemic Preparedness at the Broad Institute of MIT and Harvard (a GVN Center of Excellence), where he is Managing Director of the Sentinel program, a genomics-enabled outbreak detection and response initiative operating in West Africa. In this role, he works with partners across institutions and countries to strengthen locally led surveillance and epidemic response systems. He is Associate Professor of Pediatrics at Harvard Medical School and a faculty scientist in the Precision Vaccines Program at Boston Children's Hospital. Dr. Ozonoff's research focuses on developing and applying surveillance methods to reduce the risk of infectious disease and improve population health. Through Sentinel, he works to advance global preparedness by connecting genomics, frontline health data, and public health decision-making.

Peter Palese - GVN, Mt. Sinai; U.S.A.

Peter Palese, PhD, is a virologist internationally recognized for foundational contributions to influenza and other respiratory virus research and serves as Center Director for the GVN Center of Excellence, Mt Sinai. His laboratory pioneered reverse genetics systems for influenza and other negative strand ribonucleic acid viruses, transforming how researchers study viral replication, pathogenesis, and vaccine design. Dr. Palese's work has advanced understanding of viral genetics, host adaptation, and immune responses and has supported development and evaluation of novel influenza vaccines and antiviral strategies in animal models. More recently, his research has addressed emerging threats, including development of a mucosal, live attenuated SARS-CoV-2 vaccine designed to induce strong local immunity in the respiratory tract. Across decades of scientific leadership, Dr. Palese has helped shape modern respiratory virology and influenced translational strategies to prevent and control viral disease.

Marco Salemi - GVN; University of Florida; U.S.A.

Marco Salemi, PhD, is an expert in microbial evolution, genomic epidemiology, and phylodynamics with more than three decades of research experience. His work applies high resolution phylogenetic and population genetic methods to understand pathogen evolution, transmission dynamics, and host pathogen interactions across viruses and bacteria, including HIV, hepatitis C virus, and SARS-CoV-2. He has also studied pathogens such as MRSA and Vibrio cholerae. In recent years, Dr. Salemi has developed machine learning and artificial intelligence methods to forecast outbreaks, model pathogenesis, and predict immune responses. During the COVID-19 pandemic, he led a major genomic surveillance network that generated and analyzed viral sequences, including vaccine breakthrough cases, in collaboration with public health partners. He has authored more than 240 peer reviewed publications. Dr. Salemi serves as Center Director for the GVN Center of Excellence at the University of Florida.

Nadia Sam - GVN; Institute of Human Virology - Nigeria

Nadia Sam, MD, CTropMed is a clinician-scientist and Professor of Pediatrics in the Division of Infectious Diseases at the University of Minnesota Medical School, where she is also the Director of the Global Pediatrics Program. For over 15 years, Dr. Sam has also served as the Senior Technical Advisor for Pediatric and Adolescent HIV at the Institute of Human Virology Nigeria. She is a Senior Research Faculty at IHVN's International Research Center of Excellence. Her research focuses on the prevention and treatment of infectious diseases among African children. Most notably, Dr. Sam applies implementation science methods to address the delivery of evidence-based interventions for major infectious diseases such as HIV, mpox, and COVID-19. Her work has been funded by sponsors such as the NIH, European Commission, Wellcome Trust, and the WHO for projects in Nigeria, Ghana and other West and Central African Countries. She is a member of the Nigeria Implementation science Alliance (NISA) and leads the Central and West Africa Implementation Science Alliance.

Joaquim Segalés - GVN; IRTA-CReSA; Spain

Joaquim Segalés, DVM, PhD, is a veterinary scientist in the Department of Animal Health and Anatomy at the Universitat Autònoma de Barcelona and Principal Investigator of Endemic Swine Viruses at the Institute of Agrifood Research and Technology - Centre for Animal Health Research (IRTA-CReSA), a GVN Center of Excellence. His research focuses on infectious diseases affecting animal health, with major contributions to understanding porcine viral infections, including porcine circoviruses, as well as on zoonotic coronaviruses. Dr. Segalés has led and collaborated on international research initiatives spanning epidemiology, pathogenesis, diagnostics, and prevention strategies within a One Health framework. He earned his veterinary and doctoral degrees at the Universitat Autònoma de Barcelona. Dr. Segalés has produced an extensive body of peer reviewed research with more than 500 scientific outputs and is widely cited in the field. He is actively engaged in international collaborations and training programs that advance research capacity in animal health and emerging infectious diseases.

John Sinnott - GVN; USF Health; U.S.A.

John T. Sinnott, MD, is Professor of Internal Medicine at the University of South Florida Health Morsani College of Medicine and an infectious diseases specialist with extensive experience in clinical care, research, and academic leadership. He previously served as Director of the Division of Infectious Disease and International Medicine and as Chair of the Department of Internal Medicine. Dr. Sinnott's work has focused on infectious diseases, global health, and medical education, and he has contributed to research and publications addressing viral infections, immunology, and public health challenges. He earned his medical degree from the University of South Alabama and completed residency and fellowship training in internal medicine and infectious diseases at the University of South Florida. Dr. Sinnott has received multiple honors recognizing his leadership, mentorship, and contributions to global health and physician education.

Eduardo Sotomayor - GVN; Tampa General Hospital Cancer Institute; U.S.A.

Eduardo M. Sotomayor, MD, is Vice President and Executive Director of the Cancer Institute at Tampa General Hospital and a physician scientist specializing in hematology and oncology. He is internationally recognized for his work in cancer immunology and immunotherapy, with expertise in lymphomas and leukemias, including mantle cell lymphoma. Prior to joining Tampa General Hospital, Dr. Sotomayor served as Director of the George Washington University Cancer Center and Professor of Medicine in the Division of Hematology and Oncology at George Washington University School of Medicine and Health Sciences. His research focuses on developing immune based therapies for hematologic malignancies, and he has authored more than 140 scientific publications in leading journals. He earned his medical degree from Federico Villarreal National University. Dr. Sotomayor has received numerous honors, including the National Cancer Institute CURE Lifetime Achievement Award, and serves in leadership and advisory roles within national oncology organizations. He is also on the GVN Board of Directors.

Elyse Stachler - GVN; Broad Institute; U.S.A.

Elyse Stachler, PhD, is a Research Scientist in the Sabeti Lab at the Broad Institute of the Massachusetts Institute of Technology and Harvard University, a GVN Center of Excellence. She leads the Diagnostics Group, which focuses on rapid detection and response to emerging pathogens with pandemic potential using integrated bioinformatics and bench-top tools. Dr. Stachler has made efforts to design, validate, and deploy surveillance methods for wastewater-based epidemiology and clinical samples, and she has recently supported response activities related to H5N1 in dairy cattle. She earned her doctorate in Environmental Engineering from the University of Pittsburgh and completed postdoctoral training at Eawag, the Swiss Federal Institute of Aquatic Science and Technology, in Zurich. With more than a decade of experience in molecular diagnostics, she advances practical, deployable technologies that strengthen real-time surveillance and outbreak preparedness.

Mario Stevenson - GVN; University of Miami; U.S.A.

Mario Stevenson, PhD, is Professor of Medicine at the University of Miami, a GVN Center of Excellence, and Director of the Institute of AIDS and Emerging Infectious Diseases. He also serves as GVN Center Director and Co-Director of the Miami Center for AIDS Research (CFAR). His research focuses on the molecular mechanisms regulating HIV replication and disease pathogenesis, with the goal of identifying strategies to eliminate viral reservoirs and advance cure efforts. Dr. Stevenson has more than 25 years of experience studying the viral causes of AIDS and has published more than 100 peer reviewed papers that have provided foundational insights into virus host interactions. He earned his doctoral degree in biochemistry from the University of Strathclyde and previously held leadership roles at the University of Massachusetts Medical School. His research has been supported by the National Institute of Allergy and Infectious Diseases (NIAID), and he has received multiple honors recognizing his contributions to HIV research.

Yutaka Tagaya - GVN; USF Health Institute of Translational Virology & Innovation; U.S.A.

Yutaka Tagaya, MD, PhD, is faculty in Internal Medicine, Infectious Disease, and the Institute for Translational Virology and Innovation at the University of South Florida, a GVN Center of Excellence. His research focuses on cytokine biology, signal transduction, and viral immunology, with particular emphasis on interleukin 15 and its role in immune regulation. Dr. Tagaya identified a novel receptor class for IL 15 and helped establish the IL 15 trans presentation paradigm, demonstrating its importance in natural killer cell development, cancer immunity, and autoimmune disease. His work also examines interferon regulatory factors, HTLV I related diseases, and HIV pathogenesis. He earned his medical and doctoral degrees in molecular biochemistry from Kyoto University. Earlier in his career, he conducted research at the National Cancer Institute, where his group made key discoveries that advanced understanding of cytokine mediated immune responses.

Michael Teng - GVN; USF Health Institute for Translational Virology & Innovation; U.S.A.

Michael N. Teng, PhD, is Associate Professor in the Division of Allergy and Immunology within the Department of Internal Medicine at the University of South Florida Morsani College of Medicine and Associate Dean for PhD and Postdoctoral Programs. His research focuses on host virus interactions in viral pathogenesis, with particular emphasis on how respiratory syncytial virus alters host signal transduction pathways to enhance viral replication. Dr. Teng uses biochemical, molecular, cell biological, and virological approaches to investigate mechanisms of infection and immune response. He earned his doctoral degree in immunology from the University of Chicago and his bachelor's degree in life sciences from the Massachusetts Institute of Technology. Dr. Teng is a member of the American Society for Virology, the American Society for Microbiology, and the American Association for the Advancement of Science.

Elizabeth Traverse - GVN

Elizabeth M. Traverse, PhD, is an epidemiologist and molecular biologist specializing in viral immunopathology and the public health impact of emerging infectious diseases. Her work bridges laboratory virology and epidemiologic modeling, with focus areas including arboviruses, cardiotropic viruses, and neglected tropical diseases. She studies immune responses and organ-specific disease mechanisms, including viral-induced cardiomyopathy in human stem cell derived models. Her research experience includes antiviral evaluation and mechanistic studies in multidisciplinary settings, and her recent work integrates statistical modeling in R and Python to inform risk mitigation and public health decision making. Dr. Traverse is committed to translating scientific evidence into practical strategies that strengthen diagnostics, surveillance, and epidemic preparedness.

Anders Vahlne - GVN; Karolinska Institutet; Sweden

Anders Vahlne, MD, PhD, is a Swedish clinical virologist and Professor Emeritus at Karolinska Institutet, a GVN Center of Excellence where he serves as Center Director. He earned his medical and doctoral degrees at the University of Gothenburg and conducted early research on herpes simplex virus neurobiology before focusing on human retroviruses, particularly HIV, and virus diagnostics. Over his career, Dr. Vahlne chaired the Division of Clinical Virology at Karolinska Institutet and served as Chief Physician of the Clinical Virology Laboratory at Karolinska University Hospital. His research has addressed herpes simplex virus axonal transport, latency and glial cell infection and type specific receptors, and for HIV its capsid assembly, retroviral epitopes, and diagnostic and therapeutic mechanisms relevant to antiviral development. He also serves as a Center Director and board member of the GVN and currently co-chairs the GVN Task Force on Long COVID-19. Dr. Vahlne remains active in scientific communication and international collaboration on viral diagnostics and emerging threats and is also on the GVN Board of Directors.

Sten Vermund - GVN; USF Health College of Public Health; U.S.A.

Sten H. Vermund, MD, PhD, is a pediatrician and infectious disease epidemiologist whose career has focused on global health in low- and middle-income countries. He currently serves as Chief Medical Officer of the GVN and Dean of the USF College of Public Health. His research on HIV and HPV interactions helped drive changes to the 1993 Centers for Disease Control and Prevention AIDS surveillance definition and informed cervical cancer screening programs integrated into HIV care globally. His work spans healthcare access, adolescent sexual and reproductive health, and prevention of HIV transmission, including mother to child transmission. He is also engaged in health policy related to sustainability of HIV programs, expansion to noncommunicable diseases, pandemic response, and public health workforce development. His recent projects include capacity building in Chad, HIV molecular epidemiology in Kazakhstan, and COVID-19 vaccine studies in the Dominican Republic and the United States. A member of the National Academy of Medicine, he received a lifetime achievement award from the U.S. Japan Cooperative Medical Sciences Program in 2025.

Chantal Vogels - GVN; Yale School of Public Health; U.S.A.

Chantal Vogels, PhD, is Assistant Professor in the Department of Epidemiology of Microbial Diseases at the Yale School of Public Health, a GVN Center of Excellence where she serves as Center Director, and Affiliate Faculty at the Yale Institute for Global Health. Her research integrates medical entomology, virology, and genomics to study the ecology, evolution, and epidemiology of arthropod-borne (arbo)viruses. During her doctoral training at Wageningen University and Research, she investigated mosquito transmission of West Nile virus in Europe. She later applied genomic approaches to study Zika virus emergence and joined forces with colleagues at Yale to respond to the COVID-19 pandemic by developing diagnostics and establishing a genomic surveillance initiative. Her work also includes development of sequencing approaches for emerging viruses such as mpox, dengue, and Powassan virus. Dr. Vogels leads a research program focused on understanding drivers of arbovirus transmission to improve prevention and control strategies.

Linfa Wang - GVN; Duke-NUS; Singapore

Linfa Wang, PhD, is Center Director for the GVN Center of Excellence at Duke NUS Medical School and Director of the GVN Singapore Consortia. He is also Professor in the Programme in Emerging Infectious Diseases at Duke NUS Medical School and the inaugural Executive Director of the Programme for Research in Epidemic Preparedness and Response (PREPARE) in Singapore. He is an internationally recognized expert in zoonotic diseases, bat immunology, and pathogen discovery. During his tenure at the Commonwealth Scientific and Industrial Research Organization Australian Animal Health Laboratory, he played a leading role in identifying bats as the natural host of the SARS virus and advanced understanding of virus bat interactions and immune tolerance. His recent work includes development of antibody based serological tests for SARS-CoV 2, early viral culture from patient samples, and research on vaccine strategies and coronavirus origins. Dr. Wang has published more than 500 scientific papers, serves on multiple World Health Organization committees, is an elected fellow of the Australian Academy of Technological Sciences and Engineering and the American Academy of Microbiology, and received the Singapore President's Science Award in 2021.

Scott Weaver - GVN, University of Texas Medical Branch; U.S.A.

Scott C. Weaver, PhD, is the John Sealy Distinguished Chair in Human Infections and Immunity at the University of Texas Medical Branch (UTMB), a GVN Center of Excellence where he serves as Center Director. He is Director of the Institute for Human Infections and Immunity and Scientific Director of the Galveston National Laboratory. Dr. Weaver is a virologist and mosquito biologist with extensive research on emerging viruses, mosquito vectors, and vaccine development. He has authored more than 475 peer reviewed publications and holds multiple patents related to vaccines and diagnostics. His career honors include the Walter Reed Medal from the American Society of Tropical Medicine and Hygiene and the Robert Gallo Award for Scientific Excellence from GVN. He is a Fellow of the American Academy of Inventors, the American Academy of Microbiology, and the American Society of Tropical Medicine and Hygiene. His work advances the science and practice of preventing and controlling vector borne and emerging viral diseases.

Daniela Weiskopf - GVN; La Jolla Institute for Immunology; U.S.A.

Daniela Weiskopf, PhD, is an immunologist whose research focuses on T cell responses to viral pathogens and how adaptive immunity shapes disease outcomes and vaccine performance. She earned her doctorate in immunology at Innsbruck Medical University, studying how post translational modifications of viral epitopes and immune aging influence T cell recognition. She completed postdoctoral training at the La Jolla Institute for Immunology (a GVN Center of Excellence), where she characterized human dengue virus specific CD4+ and CD8+ T cell responses in endemic settings and following dengue vaccination. In 2020, Dr. Weiskopf established her own laboratory at the La Jolla Institute for Immunology Center for Vaccine Innovation. Her team has investigated T cell immunity to severe acute respiratory syndrome coronavirus 2 during COVID-19 and expanded studies to Zika virus and chikungunya virus. Her work supports development of vaccines and immune markers that improve preparedness for future outbreaks.

Susan Weiss - GVN; University of Pennsylvania; U.S.A.

Susan R. Weiss, PhD, is Professor of Microbiology and Vice Chair of the Department of Microbiology at the University of Pennsylvania, a GVN Center of Excellence and Director of the Penn Center for Research on Emerging Viruses. Her research has focused on coronavirus pathogenesis for more than four decades, most recently on human coronaviruses. These include the pathogenic MERS-CoV and SARS-CoV-2 as well as the common cold coronaviruses. Her laboratory uses reverse genetics systems and primary human upper and lower airway derived primary cell cultures to probe the mechanisms of viral interaction with host innate immune pathways. Additionally, her lab focuses on the differences among the different clades of MERS-CoVs and how this informs us about spillover into humans. Dr. Weiss earned her BA in Biology from Brandeis University and her PhD in Microbiology and Molecular Genetics from Harvard University. She is an elected member of the National Academy of Sciences and the American Academy of Arts and Sciences. She has made significant contributions to understanding coronavirus biology and host antiviral responses.



Abstracts

Phylodynamics-guided design of infectious disease diagnostics Michael G. Berg GVN; Abbott; U.S.A.

Background: The Abbott Pandemic Defense Coalition is a global, multisector scientific and public health partnership whose primary objectives are early detection and mitigation of infectious diseases with pandemic potential. Its central research activity involves the recruitment of patients with clinically defined diseases of unknown origin, their evaluation by metagenomic NGS, and an assessment of which pathogens warrant further assay development.

Key Objectives: This presentation will describe the detection of Oropouche, Yellow Fever, and Mayaro viruses at fever clinics in South America, and the identification of Echovirus 7 and anthrax cases in Uganda through mortuary surveillance. Next, we'll discuss the pressures shaping the spread of insect-vectored diseases such as Dengue and SFTSV across Asia, as revealed by phylodynamic analysis. The talk will conclude with examples from the development of qPCR assays for astroviruses and parainfluenza viruses, explaining how taxonomic classification, host-jump events, positive selection, co-evolution, and temporal analyses all guide the selection of strains and the regions to target.

Significance for Pandemic Preparedness: Though the urgency of COVID has dissipated and public resources are constrained, the need for vigilance, capacity building, and reliable diagnostics remains. Abbott's expertise and infrastructure for the development and rapid deployment of scalable, high-quality tests, combined with its network and global reach, play an important role in sustaining preparedness for new and existing threats.

Chronic Viral Infection as a Model for Immunometabolic Dysregulation Relevant to PAIS Tiffany Butterfield

GVN; The University of the West Indies Mona Campus; Jamaica

Chronic viral infections offer a valuable biological model for understanding how persistent immune activation and metabolic reprogramming contribute to long-term, multisystem dysfunction. In people living with HIV, sustained inflammation and altered immune cell bioenergetics persist despite viral suppression and are increasingly associated with cardiometabolic and inflammatory comorbidities. Prior work examining monocyte and T-cell immunometabolic profiles has demonstrated links between disrupted cellular metabolism, inflammatory signalling, and cardiometabolic risk, providing insight into mechanisms of chronic immune dysregulation. The objective of this presentation is to synthesize evidence from chronic viral immunometabolism and highlight how these mechanistic frameworks can inform broader thinking about post-acute infectious syndromes (PAIS). Ongoing and planned studies evaluating inflammatory and immunometabolic signatures in HIV with and without HTLV-1 coinfection will be discussed to illustrate how cumulative viral exposures shape immune dysfunction and metabolic stress within key immune cell populations. This talk positions chronic viral infection as a reference model for understanding persistent immune perturbations that may be relevant across infectious contexts. These conceptual parallels are intended to support hypothesis generation and biomarker discovery efforts in PAIS research. In the context of pandemic preparedness, recent global experience has underscored that while surveillance is essential, understanding, treating, and managing post-acute sequelae of infection is equally critical for reducing long-term population-level health impacts.

Antiviral Nucleoside Analogs for Advancing Pandemic Preparedness Tomas Cihlar - GVN; Gilead Sciences, U.S.A. Comprehensive assessment of the global preclinical and clinical antiviral landscape such as the initiative conducted by the INTREPID Alliance (<https://www.intrepidalliance.org/antiviral-pipeline/>) have revealed substantial gaps in pandemic preparedness, with four of thirteen priority viral families lacking any antiviral candidates in clinical development. These deficits highlight the challenges of the need for a significant number of highly optimized antiviral therapeutics to address all major diverse pandemic threats. Nucleoside analogs represent a versatile and validated antiviral class with established efficacy across multiple virus families, including approved therapies for the treatment and prevention of HIV, viral hepatitis, and COVID-19. Their favorable antiviral properties and broad applicability make them a strong foundation for strengthening the antiviral pandemic preparedness portfolio. The COVID-19 pandemic expanded the global interest in this class, leading to the rapid regulatory approval of remdesivir and molnupiravir exhibiting broadspectrum antiviral activity. Recent progress in the field includes 1' and 4'substituted nucleosides and their prodrugs such as obeldesivir (GS5245), mindeudesivir (VW116), 1'cyanocytidine, 4'fluorouridine (EIDD2749), and the 4'cyano analog GS7682, all of which show activity against several priority RNA virus families. Sustained R&D investment in advancing nucleoside analogs will be essential for building and expanding a comprehensive and resilient antiviral portfolio for future pandemic threats.

New data on COVID-19 Origins Robert F. Garry GVN; Tulane University; U.S.A.

Evolution of SARS-CoV-2 from bat sarbecoviruses involved multiple Spike protein adaptations beyond acquisition of the furin cleavage site (FCS). Analysis of the related BANAL-20-52 Spike identifies key changes that occurred prior to human spillover. Bat sarbecoviruses primarily infect the gastrointestinal tract and transmit enterically; accordingly, their Spikes favor compact, locked conformations that are stable at low pH. Early evolutionary substitutions expanded host range and enabled circulation in non-bat mammals, accompanied by remodeling of the amino-terminal domain (NTD). During this phase, respiratory adaptation emerged, increasing the propensity of Spike to adopt open, less stable conformations. Substitutions at Spike trimer interfaces facilitated this opening but also increased sensitivity to low pH, rendering them incompatible with bat hosts. Following spillover into humans, the dominant SARS-CoV-2 lineage acquired the D614G substitution, further weakening inter-monomer interactions and promoting Spike opening. Subsequent SARS-CoV-2 variants exhibited additional host-range expansion and NTD remodeling. While early variants generally favored more open Spike conformations, later variants reversed this trend. Spike proteins of Omicron variants and subsequent omicron-related variants display a higher proportion of closed (RBD-down) conformations, reflecting adaptation for immune evasion through masking of key epitopes. As population immunity increased, immune evasion became a stronger selective pressure than transmissibility in SARS-CoV-2 evolution.

Ensuring Treatment Sustainability in a Pandemic: Lessons from Resource-Constrained Settings Quarraisha Abdool Karim GVN, CAPRISA; University of KwaZulu-Natal/ UNAIDS; South Africa

Outbreaks, epidemics and pandemics place additional demands on health care delivery systems in already stressed public health care facilities in resource constrained settings that continue to bear a disproportionate burden of infectious diseases. Interruptions to immunisation programmes, maternal and child health services; tuberculosis treatment and AIDS and other chronic conditions can rapidly reverse health gains in these settings and/or facilitate the emergence of resistant strains of causative organisms thereby compromising available diagnostic or treatment modalities. Ongoing investments in strong surveillance and health information systems; research infrastructure with diagnostics, prevention and treatment capacity; informed health care providers, citizens and policy-makers are key for management of ongoing health care priorities and rapid pivoting to address new challenges. Adaptive service delivery models, decentralisation of care, and continuity of supply systems enable programmes to maintain priority health care access during periods of disruption and simultaneously cope with new challenges. This presentation will draw on concrete examples in responding to Covid-19 in the midst of major TB and HIV pandemics in sub-Saharan Africa including the importance of science communication and building confidence in science with policy-makers and civil society.

The role of viruses in Parkinson's Disease Igor J. Koralnik Northwestern University; U.S.A.

Background: Parkinson's disease (PD) is a neurodegenerative disorder with both genetic and environmental factors contributing to pathogenesis. Viral infections are potential environmental triggers that influence PD pathology. Key objectives: To review viruses and previous epidemics associated with parkinsonism, and the particular role of the Human Pegivirus, recently found in 50% of post-mortem PD brain samples and none of age-matched controls. HPgV-brain positive patients with PD showed increased neuropathology by Braak stage and Complexin-2 levels, while those positive in the blood had higher IGF-1 and lower pS65-ubiquitin, supporting disruption in metabolism or mitophagy in response to HPgV. RNA-Seq revealed altered immune signaling in HPgV-infected PD samples, including consistent suppression of IL-4 signaling in both the brain and blood. Longitudinal analysis of blood samples showed a genotype-dependent viral response, with HPgV titers correlating directly with IL-4 signaling in a LRRK2 genotype-dependent manner. These results suggest a role for HPgV in shaping PD pathology and highlight the complex interplay between viral infection, immunity, and neuropathogenesis. We will discuss potential therapeutic interventions since the Human Pegivirus is closely related to Hepatitis C virus, for which treatments are readily available. This topic is significant to the 2026 theme, "Pandemic Preparedness" as new viruses or viral variants may be associated with the pathogenesis of other neurodegenerative diseases.

Leveraging lessons from COVID-19 in Australia to transform pandemic preparedness Sharon Lewin GVN; University of Melbourne; Australia

Prior to the widespread roll out of COVID-19 vaccines, there was wide diversity in the early response to COVID-19 across the world. This resulted in vastly different hospitalisation and death rates through to the end of 2021. While some of these differences were a consequence of investment of pandemic preparedness, most of the differences were related to leadership, trust in government and partnerships between politicians, community and scientists. In contrast, the ability to rapidly generate evidence as well as develop diagnostics, therapeutics and vaccines was dependent on outstanding infrastructure, a skilled workforce and industry partnerships. To meet the ambitions of the G7 to have diagnostics, therapeutics and vaccines available for a future pandemic in 100 days, substantial investments are needed to transform discovery science, manufacturing and clinical trial capacity as well as agreements in relation to access for low and middle income countries. In Australia, the Australian Centres for Disease Control opened on January 1st 2026 with the main goal of evidence synthesis and rapid data integration. In addition, there has been significant investment in mRNA capabilities across Australia with governments funding and promoting investigator-led fundamental research in mRNA and investing in enhanced manufacturing capacity with Moderna and BioNTech now based in Melbourne. The Cumming Global Centre for Pandemic Therapeutics was established to develop platform technologies that can deliver therapeutics at speed for pathogens of pandemic potential and is focused on the role of antibodies, host targets and nucleic acid targeting. The Centre is now funding over 150 researchers across 11 different countries. Other pandemic preparedness initiatives include the establishment of the Australian Institute in Infectious Diseases and Doherty Clinical Trials Ltd which will focus on human infection challenge phase 1 clinical trials. While significant country led investments are applauded, Australia must have an active role in the Asia Pacific region through collaboration and capacity building and global co-ordination is needed across all domains of preparedness.

Next-Generation Inhibitors of SARS-CoV-2 Mpro Overcome the Deficiencies of Paxlovid, and Beyond Wuyuan

Lu GVN; University at Shanghai; China

It remains elusive to design peptidomimetic inhibitors of SARS-CoV-2 main protease (Mpro) refractory to multiple deficiencies of Paxlovid (ritonavir-boosted nirmatrelvir), pertaining mainly to E166X mutations-conferred drug resistance and inherent pharmacokinetic limitations to nirmatrelvir. We identified via virtual screening an iso-quinoline P1 moiety in place of the traditional γ -lactam and designed iso-quinoline-containing inhibitors with high affinity for Mpro and its nirmatrelvir-resistant E166X mutants. Further optimization at P4 cultivated distinctive peptidomimetic inhibitors with drastically improved pharmacokinetic properties and significantly enhanced antiviral efficacy independent of ritonavir. Two such inhibitors, FD3-32 and FD3-36, also potent against SARS-CoV-1 and MERS-CoV Mpro, were more effective as a monotherapy regimen than Paxlovid in reducing viral loads in vivo and protecting infected mice from acute lung injury. These next-generation SARS-CoV-2 main protease inhibitors overcome the deficiencies of Paxlovid, promising highly efficacious antivirals critical for mitigating the current and future pandemics of coronaviruses. In addition, we will also share in this presentation our latest findings on the development of the θ -defensin RC-101, an antimicrobial peptide with antiviral, antibacterial, antifungal and anti-inflammatory activities, as a broad-spectrum anti-infective stockpile that can be swiftly deployed to contain future pandemics instigated by deadly respiratory viruses irrespective of virus type or mutation status.

Measles: What Goes Around, Comes Around William Moss GVN; Johns Hopkins Bloomberg School of Public Health; U.S.A.

Measles cases are surging worldwide, with large and disruptive outbreaks occurring across all World Health Organization Regions. The Region of the Americas lost its measles elimination status again in 2025, and the United States reported more measles cases in 2025 since measles was declared eliminated in 2000, in fact, more than at any time since 1991. Hundreds of cases have already been reported in the United States in 2026. The objectives of this presentation are to summarize the current epidemiology of measles, globally and in the United States, and review threats to measles control and elimination as well as strategies to mitigate these threats. Measles outbreaks highlight weaknesses in immunization and public health programs and thus serve as a warning: measles as the canary in the coal mine. Pandemic preparedness should heed and learn from these warnings to better plan for outbreaks of other highly contagious respiratory pathogens

Frontiers in cellular mechanisms and therapeutic interventions of arboviral infections Lisa Ng GVN; A*STAR; Singapore

Arboviruses are a diverse group of viruses transmitted primarily by blood-feeding arthropods, most commonly mosquitoes endemic to Singapore and the Asia-Pacific region. In recent decades, factors such as climate change, rapid urbanisation, and increased global travel have amplified the threat posed by these infections. Indeed, the 21st century has witnessed the resurgence of several medically significant arboviruses, including chikungunya virus (CHIKV), Zika virus (ZIKV), and dengue virus (DENV). To address these threats, my work at the A*IDL focuses on cutting-edge science to uncover virus-host interactions enabling pathogen transmission. We develop new experimental models to understand the disease and immunopathology of vector-borne infections, alongside bringing effective diagnostics, vaccines and therapeutics for vector-borne infections to market. The work will transform clinical management for vector-borne diseases in close collaboration with public and private sector partners across local, regional, and international ecosystems.

Respiratory Virus Pandemics: Can We Prepare For Them? Peter Palese GVN, Mt. Sinai; U.S.A.

Only in the last century did we become aware that some of the worst diseases are caused by viruses. Specifically, smallpox has been estimated to have killed approximately 300 million people in the beginning of the 20th century alone. Another major cause of a respiratory virus, the influenza virus, was thought to have been responsible for 50-100 million deaths in just a couple of years (1918/1919); more deaths than people lost during World War 1 as a result of military action. In the early 1930's the pathogen causing the human influenza has been identified and shortly afterwards the first vaccines were prepared. While not perfect, influenza vaccines are better than their reputation and excellent antivirals are available that reduce the severity of the disease. CD 388, a neuraminidase inhibitor – combined with an Fc fragment for stability – can provide protection for an entire season. Less successful is the antiviral approach against the most recent respiratory pandemic virus SARS-CoV-2. Antivirals and monoclonal antibodies against SARS-CoV-2 are, however, in development and should become available in the not so distant future. Although pandemics will emerge in the future, we do not know when and how severe these viruses will be. Fortunately, scientific progress has been extraordinary and our armamentarium of antivirals and vaccines will be able to effectively protect humans against these pandemic strains.

A Universal Influenza Virus Vaccine Based on Chimeric Hemagglutinins Peter Palese GVN, Mt. Sinai; U.S.A.

Vaccines against seasonal influenza viruses have been in use for more than half a century and several protective seasonal influenza vaccines have been licensed in the US. The major problem for seasonal as well as pandemic influenza virus vaccines is that the virus undergoes antigenic drift and antigenic shift. The former is caused by amino acid changes in the immunodominant tip of the major surface glycoprotein, the hemagglutinin. The virus changes rapidly so that the vaccine response induced by the vaccine loses its protective activity within one or a few years after vaccination. In addition, current seasonal vaccines belong to three lineages – two influenza A viruses (group 1 and group 2) and one influenza B component. These vaccine strengths have to be updated annually. If a new pandemic strain emerges, all three components may have to be changed. Work from many laboratories has shown that the stalk of the hemagglutinin is more conserved than the corresponding tip. We have made chimeric hemagglutinin constructs that direct the immune response of the host towards the conserved stalk epitopes of the hemagglutinin. By changing the tips of the hemagglutinin towards exotic hemagglutinin sequences, the tip epitopes are silenced and the immune response caused by the stalk domain show cross-protective immune responses against members of viruses within group 1 and group 2 hemagglutinins and members of diverse influenza B viruses. The universal influenza virus vaccine is thus a three-component vaccine, which should protect against seasonal as well pandemic influenza strains. Human trials will determine whether the cross-protective activity of the vaccine strains (administered as two doses with adjuvants) will be long lasting.

Leveraging AI for epidemic preparedness Marco Salemi GVN, University of Florida; U.S.A.

Background. Challenges in preparing and responding to pathogen emergence include the need for timely surveillance, “real time” data monitoring and acquisition, data integration and adaptability of forecasting models, and intervention effectiveness with respect to different subpopulations, especially vulnerable groups, while limiting unintended harmful consequences. Recent advances in Artificial Intelligence (AI) and machine learning (ML) have been dramatically improving the ability to integrate and analyze massive amounts of genomic information and forecast potential epidemic spread. Content. We will discuss the application of AI/ML methods to forecast the emergence of novel pathogens with increased fitness. Key objective of the lecture are the following: 1. Understanding the challenges of ‘big data’; 2. Learning how to apply machine learning to predict successful SARS-CoV-2 variants; 3. Discussing how to use large language models to simulate virus evolution. Relevance for epidemic preparedness. Development of data intelligence tools and pipelines merging AI/ML, molecular phylogenetic, and stochastic epidemic forecasting methods, offers opportunities for more accurate epidemic predictions, and the deployment of effective responses.

Mpox and viral co-infections in children: what do we know and what do we do? Nadia Sam GVN; Institute of Human Virology; Nigeria

Mpox has re-emerged as a significant global health concern, with increasing reporting of its impact on pediatric populations. Since it was first ever reported in the Democratic Republic of the Congo in 1971, children in African countries have borne a significant burden of mpox infection. Children present unique clinical and epidemiologic vulnerabilities, and recent outbreaks have highlighted the role of viral co-infections in shaping disease severity and outcomes. This presentation reviews the current available evidence on mpox in children, focusing on the prevalence and clinical implications of viral co-infections, including varicella-zoster virus, herpes simplex virus, and HIV. We will examine how co-infections can influence diagnostic accuracy, transmission dynamics, and therapeutic decision-making. Additionally, we will discuss gaps and limitations in surveillance and research in both endemic and non-endemic settings. Understanding mpox coinfection and the scope of available data is essential for improving pediatric outcomes and informing public health responses and future research.

Animal models: from acute COVID-19 to the post-COVID condition Joaquim Segalés GVN; IRTA-CReSA; Spain

Pandemic preparedness refers to the coordinated capacities and actions that allow societies to anticipate, detect, respond to, and recover from large-scale infectious disease outbreaks. It includes surveillance, laboratory and public health infrastructure, emergency governance, communication, supply chains, and research readiness, with the aim of limiting health, social, and economic impacts while enabling rapid control of emerging pathogens. A key element of preparedness is scientific readiness, particularly the ability to quickly develop and evaluate vaccines, therapeutics, and diagnostics. In this context, the availability of appropriate animal models is essential. Animal models provide a critical link between in vitro research and human clinical trials, allowing assessment of safety, efficacy, dosing, and potential adverse effects of medical countermeasures. They also enable detailed study of disease pathogenesis and host-pathogen interactions, which is fundamental for identifying therapeutic targets and relevant clinical endpoints. Importantly, animal models are indispensable when human trials are unethical or impractical, as is often the case for severe or poorly understood emerging diseases. Overall, having validated animal models in place strengthens research responsiveness, shortens development timelines, and increases the likelihood that effective medical countermeasures can be deployed rapidly during a pandemic. This presentation will address COVID-19 as an illustrative example and focus on a key consequence of acute infectious diseases: post-acute infection sequelae, referred to in this context as post-COVID condition or long COVID.

Using machine learning to advance the molecular tool-kit Elyse Stachler GVN; Broad Institute; U.S.A.

Accurate nucleic acid-based pathogen detection relies on high quality sequencing data and complex design tools to translate sequencing data into sensitive and specific assays. To address this, the Sabeti lab has developed machine learning and AI-based tools to optimize molecular assay design. One example of this is ADAPT, a machine learning tool that designs highly specific and active Cas13 guide RNAs to be used in CRISPR/Cas-based surveillance systems. Previously, we have developed CARMEN, a high-throughput detection assay that combines the sensitivity of PCR with the specificity of CRISPR/Cas detection. CARMEN can detect up to 22 pathogen targets across 180 patient samples in a single run. We used ADAPT to update a Blood-borne Pathogen targeting panel, increasing predicted coverage of currently circulating African pathogen strains from 71% to 93% and improved predicted coverage of currently circulating global pathogen strains from 74% to 93%. In addition to ADAPT, we have developed tools for improved PCR primer design and additional guide RNA design features. Development of these tools allows us to go from sequence to design and finally to assay with higher speed and accuracy than previous design tools have allowed, improving the molecular tool-kit of tomorrow.

RSV New Insights Michael Teng GVN; USF Health Institute for Translational Virology & Innovation; U.S.A.

Respiratory syncytial virus (RSV) is one of the major causes of pediatric morbidity and mortality worldwide. Severe RSV infection during infancy can lead to recurrent wheezing and asthma later in childhood. This early-life infection leads to long-term changes in lung function and structure. While prematurity and congenital disease are risk factors for severe RSV infection, predicting clinical outcomes in the general population remains elusive. Recent studies suggest that certain biomarkers can predict severity of infection. In addition, real-world evidence for the effectiveness of RSV prevention in infants and the elderly is now available with the recent rollout of new vaccines and immunoprophylaxis. Continued development of novel vaccines and antiviral therapies will allow for greater global access to decreasing the severity and transmission of RSV.

Eastern equine encephalitis and related alphaviruses in the Americas Scott C. Weaver GVN; University of Texas Medical Branch; U.S.A.

Eastern equine encephalitis virus (EEEV) is an alphavirus endemic/enzootic in eastern North America, where it circulates among avian hosts in swamp habitats. Although spillover human cases are rare and equine disease can be prevented through vaccination, EEEV infections are among the most lethal among all viruses, with case-fatality rates typically 30% or higher. Florida is one of the most affected states in the U.S., with human and/or equine cases almost annually and risk throughout the year. A close relative of EEEV, Madariaga virus (MADV), circulates in Central and South America where it has been recognized as an equine pathogen for decades. However, recent outbreaks have also involved human cases, some fatal, suggesting a recent increase in virulence. The pandemic potential of both EEEV and MADV remain poorly understood, but recent increases in incidence in North America, probably related to climate change, raise concerns. I will review current knowledge and critical gaps in our understanding of the ecology, epidemiology and pathogenesis of these viruses, as well as the development of vaccines and therapeutics for pandemic preparedness.

CD4+ T cells are associated with chronic chikungunya virus disease Daniela Weiskopf GVN; La Jolla Institute; U.S.A.

Chikungunya virus (CHIKV) is a mosquito-borne alphavirus that often transitions from an acute febrile illness into chronic chikungunya virus disease (CHIKVD), characterized by persistent and incapacitating arthralgia. Despite the global burden of these outbreaks, the specific breadth and targets of the cellular immune response have remained understudied. We comprehensively characterized the virus specific T cell response by analyzing peripheral blood mononuclear cells (PBMCs) against overlapping peptide pools spanning the entire CHIKV proteome. We identified a robust CHIKV-specific CD4+ T cell activity, whereas CD8+ T cell responses remain largely undetected. The characterization of these responses identifies three primary immunodominant regions and associated core motifs within the E1, nsP1, and CP proteins. Computational assessments of sequence conservation further demonstrated that several of these identified epitopes are highly conserved across both arthritogenic and encephalitic alphaviruses, suggesting broader implications for cross-reactive immunity. Critically, the research identifies a distinct immunological signature associated with clinical outcomes. Individuals with chronic arthralgia exhibit significantly higher CD4+ T cell responses to the nsP1, nsP2, and E2 proteins than those who have fully recovered. Furthermore, the chronic disease state is marked by a functional imbalance, characterized by a significantly lower Th1 CD4+ T cell population and a predominant production of the pro-inflammatory cytokine tumor necrosis factor alpha (TNF- α). By defining the specific viral targets and the inflammatory profile of CD4+ T cells, this work suggests a potential role of cellular immunity in CHIKVD pathogenesis. These insights provide a vital framework for the refinement of vaccine design and the development of therapeutic interventions. Significance in the context of Pandemic Preparedness
The study identified some antigenic regions that are conserved across other arthritogenic alphaviruses. By targeting these conserved regions, we can develop a "pan-alphavirus" vaccines. If a new, related virus emerges, a vaccine designed using these specific conserved regions, could provide immediate insights into vaccine design.

Coronavirus activation of interferon signaling pathways is temperature dependent and required for clearance from the nasal epithelium Susan Weiss GVN; University of Pennsylvania; U.S.A.

All respiratory viruses establish primary infections in the nasal epithelium, where efficient innate immune induction may prevent dissemination to the lower airway and thus minimize pathogenesis. Human coronaviruses (HCoVs) cause a range of pathologies in the upper and lower respiratory tracts, but the host and viral determinants of disease during common cold versus lethal HCoV infections are poorly understood. We model the initial site of infection using primary nasal epithelial cells cultured at air-liquid interface (ALI). HCoV-229E, HCoV-NL63 and human rhinovirus-16 are common cold viruses that exhibit unique features in this model: early induction of antiviral interferon (IFN) signaling, IFN-mediated viral clearance, and preferential replication at nasal airway temperature (33°C). In contrast, lethal SARS-CoV-2 and MERS-CoV encode proteins that antagonize IFN signaling responses, thereby preventing IFN-mediated clearance in nasal cultures and allowing replication at 37°C, the temperature of the lung. SARS-CoV-2 omicron variants have evolved to behave more like a common cold virus, that is to replicate more efficiently in the nasal epithelium, induce more IFN signaling and become more temperature sensitive. Our study helps us understand the evolution of a pandemic agent into a common cold like virus over time.



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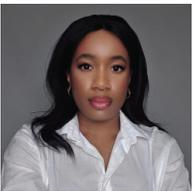
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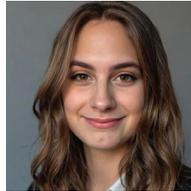
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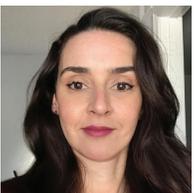
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