

SPEAKERS AT THE 7TH SHORT COURSE IN BASIC & TRANSLATIONAL VIROLOGY

Monday, July 17



Prof. Robert Gallo is the Founder and Director of the Institute of Human Virology (IHV) at the University of Maryland. Prior to this role, he spent 30 years at the National Institutes of Health's National Cancer Institute, where he was head of its Laboratory of Tumor Cell Biology. Dr. Gallo is renowned for his research on HIV, most notably his co-discovery in 1984 that HIV is the cause of AIDS. His research has been instrumental in the development of HIV blood tests and HIV therapies. In 1996, his discovery that a natural compound known as chemokines can block HIV and halt the progression of AIDS was hailed by science magazine as one of that year's most important scientific breakthroughs. Dr. Gallo's current work at the IHV combines the disciplines of research, patient care, and prevention programs in a concerted effort to speed the pace of medical breakthroughs. Dr. Gallo has authored more than 1,200 scientific publications, as well as the book "Virus Hunting: AIDS, Cancer & the Human Retrovirus: A Story of Scientific Discovery." Dr. Gallo has been awarded 35 honorary doctorates and was twice a recipient of the Albert Lasker Clinical Medical Research Award (1982 and 1986). He is a member of the National Academy of Sciences and the Institute of Medicine.



Dr. Yatuka Tagaya is Head, T-cell Biology Lab, Division of Basic Sciences and Vaccine Research, Institute of Human Virology, at the University of Maryland School of Medicine. Dr. Tagaya received his M.D. and Ph.D. degrees from Kyoto University Medical School and completed postdoctoral studies at the National Cancer Institute. While at the NCI, Dr. Tagaya made seminal discoveries in the field of cytokine biology. He has been recognized as one of the international leaders in this field. He has discovered a unique way IL-15 functions in vivo (trans-presentation paradigm) and generated animal models to study the biology of cytokines and, through his work, has demonstrated a direct correlation between cytokines and some illnesses such as leukemia and autoimmune diseases. Currently, Dr. Tagaya's group at the IHV studies the molecular mechanism of CD8 T cell differentiation in special connection to a transcription factor IRF-8. Dr. Tagaya's group is also developing novel anti-cytokine drugs that may be used to treat autoimmune and inflammatory diseases using the animal models his group has generated in the past. His group also studies the leukemic mechanism associated with HTLV-1. His bibliography contains more than 60 publications in reputed journals in the field of cytokine biology, molecular and cellular immunology.



Dr. Alfredo Garzino-Demo is an Associate Professor at the Institute of Human Virology, and the Department of Microbiology and Immunology, at the University of Maryland School of Medicine; and at the University of Padova. His research program is focused on the pathogenesis of HIV infection, and on novel therapeutic approaches to treatment and cure of infection. His work has contributed to identifying populations of cells that are highly permissive to HIV infection and has uncovered means to protect such cell populations. He also serves as Scientific Program Director at Global Virus Network.



Dr. Robert F. Garry is Professor of Microbiology and Immunology and Associate Dean for the Graduate Program in Biomedical Sciences at Tulane Medical School. He is currently managing a consortium of scientists who are developing countermeasures against Lassa virus, Ebola and Marburg viruses, and other high consequence pathogens (vhfc.org). Our team has been investigating the natural history of Lassa fever and Ebola, performing genomic analyses of Lassa and Ebola viruses, and developing human monoclonal antibody therapies. We also continue structural and molecular investigations to deepen understanding of pathogenesis of viral hemorrhagic fevers while providing training for West African scientists while further

developing research and clinical trial infrastructure in Sierra Leone and Nigeria. The VHFC team produced commercial LASV point-of-care and confirmatory diagnostics based on recombinant proteins that have high sensitivity for detecting infection with LASV. These advances were leveraged to develop immunoassays with high sensitivity and specificity for Ebola virus and other filoviruses. A combination of human monoclonal antibodies was able to cure macaques challenged with two diverse strains of Lassa virus even when treatment was delayed for more than a week. The VHFC team is also developing novel Lassa and Ebola vaccines.



Dr. Matthew Frieman has an overall research goal to create therapeutic interventions for viruses of public health concern by developing a detailed understanding of how the viruses interact with the host. His research has focused on the recently emerged and highly pathogenic coronaviruses: Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2/COVID19), as well as Influenza virus. The coronaviruses cause severe lung disease, are highly lethal and yet there are no FDA approved therapeutics that target them. Important to understanding these diseases has been our development, characterization and utilization of mouse models of disease for SARS-CoV, MERS-CoV and SARS-CoV-2.

The rapid and successful development of these models has allowed us to unravel the cellular and physiological basis for disease of these viruses. In addition, the creation of these models has allowed for therapeutic development of vaccines, antibodies, small molecules, novel and repurposed drugs and other therapeutics. Critical to his research is the synergy of in vitro and in vivo models of disease that allow us deep understandings of how these viruses work. Work in the lab includes the identification of host factors that effect viral replication and the use of novel yeast screening techniques to identify small molecules that inhibit those proteins for use as therapeutics. In addition, we are identifying novel and repurposed drugs, antibodies and vaccines for Influenza virus, SARS-CoV, MERS-CoV and SARS-CoV-2 inhibition. Combining our in vitro and in vivo systems identifies key proteins and nodes of regulation for further therapeutic targeting.

Tuesday, July 18



Dr. Diane Griffin is University Distinguished Service Professor and former Chair of the W. Harry Feinstone Department of Molecular Microbiology and Immunology at Johns Hopkins Bloomberg School of Public Health. Dr. Griffin is a virologist recognized for her work on the pathogenesis of viral infections. She is known particularly for her studies on measles and alphavirus encephalomyelitis that have delineated the role of the immune response in virus clearance, vaccine-induced protection from infection, tissue damage and immune suppression. Dr. Griffin was born in Iowa City, Iowa, and grew up in Oklahoma City. She graduated from Augustana College, Rock Island, Illinois with a degree in biology and from Stanford University School of Medicine in 1968 with a Ph.D. in immunology and M.D.,

followed by a residency in internal medicine. She was a postdoctoral fellow in virology and infectious diseases at Johns Hopkins University School of Medicine and joined the faculty in 1974. She has been president of the American Society for Virology and of the American Society for Microbiology and is a member of both the National Academy of Sciences and the National Academy of Medicine.



Dr. Andrew Pekosz laboratory has been involved in work on SARS-CoV-2 since March 2020 and has i) isolated multiple virus strains, ii) established primary and transformed cell culture systems, iii) developed virus specific reagents to perform in vitro experiments iv) helped establish the golden Syrian hamster model for SARS-CoV-2 pathogenesis at Johns Hopkins University and v) established serological assays for measuring anti-SARS-CoV-2 antibody responses. We also study the strength and longevity of immunity induced by virus infection or vaccination. He is a member of the NIH SARS-CoV-2 Assessment of Viral Evolution (SAVE) group with roles in providing virus isolates and neutralizing antibody titers to variants of concern that complement his role working with Dr. Heba Mostafa, the head of Clinical Virology at Johns Hopkins Hospital (CDC 75D30121C11061). He leads or co-leads research projects in the Specialized Centers of Research Excellence in Sex Differences in Influenza Immunity (SCORE-SADII, U54 AG062333) and the Johns Hopkins Excellence in Pathogenesis and Immunity Center for SARS-CoV-2 (JH-EPICS, U54 CA260492).

His laboratory has been studying influenza A virus replication and influenza vaccines for a number of years and the mouse model has been an essential tool we have utilized. He is also the co-Director of the Johns Hopkins Center for Excellence in Influenza Research and Surveillance (JH-CEIRS; HHSN272201400007C) which is one of 5 NIAID-supported Centers tasked to perform basic and applied research on seasonal and pandemic influenza. With his co-Director Richard Rothman, MD, PhD, he helps organize the administrative structures of the Center, coordinate active and passive human influenza surveillance efforts at three medical institutions (Johns Hopkins Medical Institution in Baltimore, MD, Chang-Gung Memorial Hospital in Taipei, Taiwan and Macha Mission Hospital, Macha, Zambia), prioritize clinical samples for analysis and help formulate research questions that can be addressed using the JH-CEIRS clinical, sequencing, diagnostic, serology and virology laboratories. The JH-CEIRS contract was recently renewed as JH-CEIRR, providing seven additional years of support for research on influenza, COVID-19 and other respiratory viruses.

He has been investigating the basic replication and assembly of influenza A virus since his tenure as an assistant professor at the Department of Molecular Microbiology at Washington University in St. Louis and was successful in obtaining an NIH research grant (R01 AI053629) to study the assembly of infectious virus particles. His work on influenza A virus pathogenesis and animal models of disease began at this time with a focus on novel influenza vaccines that could induce immune responses against a number of different virus strains using the mouse as a model system. He was successful in obtaining research funding for these studies from the Whitaker Foundation and the Infectious Diseases Society of America along with two NIH research grants (U01 AI061252 and R01 AI065779). He became interested in studying respiratory virus-host cell interactions and worked with a number of collaborators to establish protocols for generating primary, differentiated respiratory epithelial cell cultures derived from mouse, hamster and human tissue. His work in this area has been supported by three NIH research grants (R21 AI53381, R21 AI059328 and R01AI097417). He has also received support to work on several viruses including bunyaviruses, SARS CoV and hantaviruses.

He established the Center for Emerging Viral and Infectious Diseases (CEVID) through private donations and is building a laboratory network to further basic research into emerging viral diseases. CEVID contributed funding to projects involving Zika virus, enterovirus-D68 and has provided a number of viruses to other investigators to support their research programs.

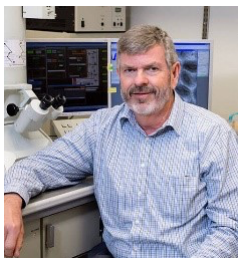


Dr. Marcelo Jacobs-Lorena is a Professor Emeritus in the Department of Molecular Microbiology and Immunology and the Malaria Research Institute at the Johns Hopkins Bloomberg School of Public Health in Baltimore, USA. His research focuses on the life cycle of the malaria parasite in its obligate mosquito vector and in its mammalian host. His laboratory was the first to produce a genetically engineered mosquito that is refractory to the parasite. Presently his laboratory is exploring an alternative strategy by engineering bacteria that live in the mosquito gut to produce anti-malarial compounds. Other projects in the lab investigate mechanisms of parasite fertilization in the mosquito and mechanisms of sporozoite liver infection. Dr. Jacobs-Lorena has over 170 publications in peer reviewed journals, has chaired for 6 years the World Health Organization Committee on Molecular Entomology and is on the editorial board of two scientific journals. In 2009 he was elected fellow of the American Association for Advancement of Science (AAAS), in 2016 he was elected fellow of the American Academy of Microbiology, and in 2021 he received the Johns Hopkins Shikani/El Hibri Prize for Discovery and Innovation.



Dr. David Martinez is a Hispanic immigrant, who learned English at age 13 and experienced numerous challenges due to initial language barriers. After overcoming these barriers and graduating class valedictorian, he attended the University of Oklahoma for his undergraduate studies and obtained a degree in Microbiology with Distinction. Immediately after graduation, he started his Ph.D. studies. He received his Ph.D. from the Molecular Genetics and Microbiology graduate program at Duke University in Dr. Sallie R. Permar's lab. His Ph.D. work was funded by several agencies. He received an NIH NIAID F31 N.R.S.A, an American Society of Microbiology: Robert D. Watkins Graduate Research Fellowship, and a Burroughs Wellcome Graduate Diversity Award. He defended his Ph.D. dissertation in September 2018. He is now finishing his postdoctoral fellowship in Dr. Ralph S. Baric's lab at the University of North Carolina at Chapel Hill. For his postdoctoral work, he was funded by an NIH NIAID T32, an NIH NIAID F32. He is also funded by a Burroughs Wellcome Fund Postdoctoral Enrichment Award, and he is a Hanna H. Gray Fellow of the Howard Hughes Medical Institute. He has published 70 papers (including 21 in Cell, Nature, Science, and NEJM). His research on universal coronavirus vaccines has been recognized with commentaries and coverage by major national and international newspapers and magazines. He recently started a tenure-track faculty position as an Assistant Professor in the Department of Immunobiology at Yale School of Medicine. He began this position and opened his laboratory on May 1st, 2023. His training in microbiology, virology, and immunology at Duke University and UNC Chapel Hill has equipped me with the background and correct set of tools to succeed in the viral immunology research arena. His short and long-term research interests lie at the nexus of immunology and virology, with a particular emphasis on understanding mucosal immunology to design better vaccines against emerging and re-emerging viruses with pandemic potential.

Wednesday, July 19

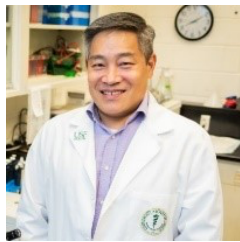


Dr. Scott Weaver is the John Sealy Distinguished Chair in Human Infections and Immunity, Director of the Institute for Human Infections & Immunity (IHII), Scientific Director of the Galveston National Laboratory, and Chair of the Department of Microbiology & Immunology at the University of Texas Medical Branch (UTMB). He leads two major NIH-funded center grants at UTMB: the West African Center for Emerging Infectious Diseases, and the World Reference Center for Emerging Viruses and Arboviruses.



Dr. Weaver is a virologist and mosquito biologist with over 400 peer-reviewed research publications on emerging viruses, mosquito vectors, and vaccine development, as well as many invited presentations at international conferences, and international leadership roles. He has received many awards from national and international scientific societies, including the Walter Reed Medal from the American Society of Tropical Medicine and Hygiene for career research contributions, and the Robert Gallo Award for Scientific Excellence from the Global Virus Network. Dr. Weaver is also a fellow of the American Academy of Inventors in recognition of his contributions to vaccine development, and a fellow of the American Academy of Microbiology and the American Society of Tropical Medicine and Hygiene. He holds nine patents for vaccine and diagnostics development for viral diseases.

Dr. Weaver teaches and mentors young scientists extensively. He was named the Leon Bromberg Professor of Excellence in Teaching and received the Research Mentoring Excellence award at UTMB. He earned his BS degree in biology and music from the College of William and Mary in 1979, his MS degree in entomology from Cornell University in 1982, and his PhD degree in virology from the University of California, San Diego in 1993. Following a postdoctoral fellowship in the Department of Epidemiology and Public Health at Yale University School of Medicine, he joined the UTMB faculty in 1994.



Dr. Michael Teng received his Ph.D. in immunology from the University of Chicago in 1993. He trained as a postdoctoral fellow studying viral pathogenesis at The Scripps Research Institute in La Jolla, CA. Subsequently, he became a research fellow at the National Institute of Allergy and Infectious Diseases, investigating the molecular biology of respiratory syncytial virus (RSV) and RSV vaccine development. In 2002, he accepted a faculty appointment in the Department of Biochemistry and Molecular Biology at the Pennsylvania State University, University Park, PA, where his laboratory continued studies on RSV pathogenesis.

Dr. Teng joined the faculty of the Division of Allergy and Immunology at USF Morsani College of Medicine (MCOM) in 2010 and is director of basic research in the Division. He holds joint appointments in the Departments of Pediatrics, Molecular Medicine, and Pharmaceutical Sciences (College of Pharmacy). Dr. Teng is currently Associate Dean of Ph.D. and Postdoctoral Programs in MCOM. He serves as a grant reviewer for the National Institutes of Health and the American Heart Association. His past and present research funding includes grants from the National Institutes of Health, the American Heart Association, Florida Department of Health, and contracts with pharmaceutical companies.

Dr. Teng's research focuses on the host-virus interactions important for RSV pathogenesis. In particular, he is interested in the mechanisms by which RSV inhibits innate immune responses to enhance viral replication. Understanding the interplay between RSV proteins and innate immunity may lead to the development of more immunogenic RSV vaccine candidates. Additionally, Dr. Teng studies the interactions between cellular signal transduction machinery and viral proteins, with a view to discovering potential targets for antiviral therapy.



Dr. Florian Krammer received his degree in biotechnology from the University of Natural Resources and Life Sciences, Vienna, Austria where he worked on insect cell derived influenza virus-like particle vaccines in the laboratory of Dr. Reingard Grabherr. For his postdoctoral work he joined Dr. Peter Palese's group at the Icahn School of Medicine at Mount Sinai, New York. His postdoctoral work focused on the development of a universal influenza virus vaccine. Dr. Krammer is now an Associate Professor at Mount Sinai. The Krammer laboratory studies cross-reactive antibody responses against the surface glycoproteins of RNA viruses including influenza, hanta and filoviruses.



Dr. Gage Moreno's research interests focus on blending computational and experimental techniques to understand the factors that influence viral evolution and transmission. He is a computational genomicist with extensive experimental experience in evolutionary and population genetics. His research has primarily focused on using genomics, evolution, and epidemiology to; i) understand the evolutionary processes acting on acute infections, ii) understand the demographic- and pathogen-specific factors driving emerging infectious disease outbreaks, iii) develop genomics-based tools that improve transmission inference from outbreaks of emerging infectious diseases.



Dr. Richard H. Scheuermann is the Director of Informatics at the J. Craig Venter Institute (JCVI) and a Professor of Pathology at U.C. San Diego. He received a B.S. in Life Sciences from the Massachusetts Institute of Technology, and a Ph.D. in Molecular Biology from the University of California, Berkeley. After completing his doctoral research, he accepted an independent research position at the Basel Institute for Immunology in Switzerland. In 1992 he joined the faculty in the Department of Pathology at the University of Texas Southwestern Medical Center in Dallas where he rose to the rank of Professor with tenure. In 2001 he made a career shift into the discipline of bioinformatics, initiated with a sabbatical year at the San Diego Supercomputer Center. In 2012 Dr. Scheuermann moved to San Diego to become the Director of Informatics at JCVI. Dr. Scheuermann has applied his deep knowledge in molecular immunology and infectious disease toward the development of novel computational data mining methods and knowledge representation approaches, including the development of biomedical ontologies and their use in data mining, novel methods for the analysis of gene expression, protein network and flow cytometry data, and novel comparative genomics methods. These computational methods have been made available through several public database and analysis resources, including the Influenza Research Database (IRD; www.fludb.org), the Virus Pathogen Resource (ViPR; www.viprbrc.org) and the Immunology Database and Analysis Portal (ImmPort; <https://import.niaid.nih.gov/>) through support from the U.S. National Institutes of Health.



Dr. Anders Vahlne is currently working as Professor in the Department of Laboratory Medicine (LABMED), H5, Karolinska Institutet, Sweden. Anders Vahlne research interest includes Clinical Virology and has successfully completed their Administrative responsibilities. Anders Vahlne has authored of many research articles related to Clinical Virology.

Thursday, July 20



Dr. Ted Pierson received his Ph.D. from The Johns Hopkins University School of Medicine in 2001. During his graduate studies with Dr. Robert F. Siliciano, he investigated the molecular biology of the pre-integration state of HIV-1 latency and the contribution of this reservoir toward the persistence of HIV-1 in humans. Dr. Pierson trained as a postdoctoral fellow and research associate with Dr. Robert W. Doms at the University of Pennsylvania, where he developed interests in the virology and immunology of arboviruses, including West Nile and dengue viruses. In 2005, Dr. Pierson was recruited to the Laboratory of Viral Diseases (LVD) to initiate an independent research program focused on flavivirus biology. His laboratory, the Viral

Pathogenesis Section, uses quantitative functional approaches to explore fundamental and translational questions related to the structure of flaviviruses, their interactions with cells, and humoral immunity. These perspectives are used to guide the development of vaccines, and techniques for the evaluation of humoral immunity. In 2017, Dr. Pierson assumed the role of chief of LVD. Dr. Pierson is an American Academy of Microbiology Fellow and is a recipient of the NIH Director's Ruth L. Kirschstein Mentoring Award.



Dr. Nicole Doria-Rose is Chief of the Humoral Immunology Core at the Vaccine Research Center, National Institutes of Health, USA. She obtained her PhD from Cornell University in 1998 followed by post-doctoral work at the Seattle Biomedical Research Institute. Her research focus is the identification and characterization of broadly neutralizing antibodies from HIV-infected patients, with an emphasis on patients followed from the time of infection. She developed a high-throughput method for culturing and screening single B cells for antibody discovery, and with this method her team isolated the most potently HIV-neutralizing antibody yet known. At the Vaccine Research Center, she leads a program that evaluates the immune responses to HIV-1 infection and to novel immunogens, and investigates the clinical use of broadly neutralizing antibodies for prevention of HIV-1. She also led a team to

develop a neutralization assay for SARS-CoV-2, the virus that causes COVID-19, and provided data in support of the mRNA vaccines now in use worldwide.



Dr. Sung Hee Ko's research interests are the study of virus genetic diversity and its evolution using single genome sequencing. He has developed a high-throughput and high-accuracy single genome sequencing strategy by combining unique molecular identifiers and long-read sequencing technology. The method has been applied to studies of HIV dynamics under bNAb treatment and intra-individual SARS-CoV-2 evolution.



Dr. Tongqing Zhou joined the Dale and Betty Bumpers Vaccine Research Center in 2001, became a Staff Scientist in 2005, and was promoted to the position of chief, Structural Bioinformatics Core in 2018. Dr. Zhou received his Ph.D. in Cell Biology from the Chinese Academy of Sciences and M.Sc in Electronic and Computer Controlled Systems from Wayne State University. He is joined by the two co-heads of the core, Drs. Gwo-Yu Chuang and Chen-Hsiang Shen. Dr. Gwo-Yu Chuang received his Ph.D. training under the mentorship of Dr. Sandor Vajda, Boston University. Dr. Shen received his Ph.D. training under the mentorship of Dr. Irene Weber, Georgia State University. Drs. Peter Kwong and Lawrence Shapiro also serve as advisory mentors to this section.

Dr. Sarah Andrews received her B.S. in Microbiology from Oregon State University in 2000 and her Ph.D. in Immunology from the University of Washington in 2008. As a graduate student she studied B cell development and tolerance with Dr. David Rawlings. She did her postdoctoral work at the University of Chicago in the laboratory of Dr. Patrick Wilson, investigating the human B cell response to influenza vaccination. She joined the VRC in November of 2014 as a Staff Scientist in the Vaccine Immunology Program where she studies the B cell immunobiology of Phase I influenza vaccine trials conducted by the VRC.



Dr. Cristina Cassetti is the Deputy Director of the Division of Microbiology and Infectious Diseases (DMID) at the National Institutes of Allergy and Infectious Diseases (NIAID), a component of the US National Institutes of Health (NIH). Dr. Cassetti has a Ph.D. in virology from the University of Rome, Italy. She conducted research on poxviruses replication at the NIH, influenza virus biology at Rutgers University and HPV vaccine development at the Vaccine Discovery Department at Wyeth (now Pfizer). In 2003 she became a Program Officer at NIAID where she was responsible for the management and direction of extramural research programs on several emerging viral diseases of global health importance including influenza and dengue. In 2016, she was appointed to coordinate the Zika research response in extramural NIAID and to manage translational research in the Virology Branch. In 2017 she was appointed as Chief of the Virology Branch in DMID. In 2019 she became the Deputy Director of DMID where she shares full responsibility with the Director for providing scientific and management leadership in planning, conducting, and evaluating DMID's extramural research program of national and international scope. DMID is the lead NIAID extramural division responsible for research on all infectious human pathogens other than HIV. DMID also has a critical role as the lead component of NIH in efforts to develop countermeasures for potential agents of bioterrorism and emerging infectious diseases.



Dr. Peter Kilmarx is Acting Director of the Fogarty International Center and Acting Associate Director for International Research at the National Institutes of Health. He joined Fogarty as Deputy Director on July 1, 2015, and assumed his current roles on January 15, 2023.

Dr. Kilmarx is an expert on infectious disease research and HIV/AIDS prevention. During his tenure at Fogarty he has led analysis of NIH global health activities, built coalitions with high-level NIH and external stakeholders, and represented the Center and NIH in national and international forums. He co-lead an initiative to transform African health professional education and research, resulting in the formation of the [African Association for Health Professions Education and Research \(AFREHealth\)](#), as well as the [African Postdoctoral Training Initiative \(APTIT\)](#), which brings African postdoctoral fellows to NIH. He has also focused on efforts to [increase equity in global health research](#) and [build global capacity for pandemic preparedness](#).

He previously served as the Center for Disease Control and Prevention's Country Director in Zimbabwe, providing oversight for 30 CDC staff who managed implementation of the U.S. efforts to reduce HIV/AIDS, tuberculosis (TB), and malaria. A Rear Admiral and Assistant Surgeon General in the U.S. Public Health Service, Dr. Kilmarx served as the CDC Ebola response team leader in Sierra Leone in September-October 2014, and as principal deputy team leader in Guinea in January-February 2015. Previously, he initiated the CDC response to the Ebola outbreak in Kasai Occidental, Democratic Republic of Congo (DRC), in 2007, and led household surveillance in the Ebola outbreak in Kikwit, DRC, in 1995.

Dr. Kilmarx held a variety of leadership positions at the CDC, including senior advisor to the Director for Health Reform and chief of the Epidemiology Branch—both in the Division of HIV/AIDS Prevention. He also served as director of the CDC partnership with Botswana to combat HIV/AIDS, TB and related conditions, as well as the chief of the CDC's Sexual Transmission Research Section in Thailand. Previously, he completed assignments in Pakistan and the DRC. An experienced clinical trials manager, he has served as principal investigator on microbicide trials in Thailand, as senior investigator on TB and HIV trials in Botswana, and as principal investigator on HIV studies he initiated at public health facilities in Zimbabwe.

After earning his M.D. from Dartmouth-Brown's Combined Program in Medicine, Dr. Kilmarx completed both his internal medicine residency and infectious disease clinical fellowship at Johns Hopkins Hospital, Baltimore. He remains board-certified in both specialties and is a fellow of the Infectious Diseases Society of America and of the American College of Physicians. He has published numerous peer-reviewed journal articles and book chapters, and serves on the editorial board of *Sexually Transmitted Diseases*. He began his international career as a Peace Corps volunteer in the DRC (then Zaire), where he helped develop fisheries that are still productive today.

Dr. Kilmarx has received numerous awards including the NIH Director's Group Award for piloting an NIH-Wide China Office at the U.S. Embassy in Beijing to more effectively support and accelerate NIH's research investments in China, the U.S. Public Health Service (USPHS) Distinguished Service Medal for a distinguished USPHS career responding to HIV/AIDS and other infectious disease threats and building health research capacity worldwide, and the USPHS Presidential Unit Citation, for “extraordinary courage and the highest level of performance in action throughout the United States Government's response to the Ebola outbreak.



Dr. Avi Nath is the Clinical Director of the National Institute of Neurological Disorders and Stroke (NINDS) at NIH, where he is also Chief of the Section of Infections of the Nervous System, Director of the Translational Center for Neurological Sciences. He specializes in neuro-immunology and neurovirology. His research is focused on studying the clinical manifestations and pathophysiology and developing treatments for neurological infections with a focus on HIV infection and endogenous retroviruses. In recent years, he has studied the neurological complications of emerging infections including Ebola, Zika virus and SARS-CoV-2 and conducts research on patients with undiagnosed neuroinflammatory disorders. He has served on advisory committees to the NIH, CDC, FDA and WHO. He is the past President and the recipient of the Pioneer award from the International Society of NeuroVirology. He received the Wybran award from the Society of Neuroimmune Pharmacology for contributions to Neurovirology. He also received the NIH Director's award for his work on SARS-CoV-2 and the Health and Human Services Secretary's award for his work on Ebola infection. He is an elected member of the Association of American Physicians, an elected Fellow of the American Association for the Advancement of Science and a Board member of the American Neurological Association.

Friday, July 21



Dr. Stefan Sarafianos holds the Nahmias-Schinazi Distinguished Professor endowed chair at Emory University, where he serves as Co-Director of the Laboratory of Biochemical Pharmacology. He also serves as Co-Director of the B-HIVE U54 Center at Seattle Children's. Since 1993, Dr. Sarafianos has published >185 manuscripts in retroviral structural biology, biochemistry, and virology. The structures solved through his collaborations are seminal in the field of HIV drug resistance and DNA polymerases. His lab develops novel inhibitors and characterizes their mechanisms of inhibition and resistance. Notably, his work with EFdA has resulted in >25 publications and licensing by Merck. Since 2003, his work with coronaviruses has focused on discovery of antivirals that block RNA unwinding and viral entry. Recently his lab has focused on



developing tools for extensive screening and mechanistic characterization of inhibition, drug resistance, and basic biology of coronaviruses, including SARS-CoV-2, Mpox virus (MPXV), and Nipah Virus (NiV)



Dr. Andrew Talal is a leading expert in liver disease. His work through UBMD has led to many improvement in treatment of patients with viral hepatitis and other forms of liver disease. We offer trial therapies to patients with liver disease if they meet the protocol criteria of our clinical trials. Our patient-care efforts include digital outreach: his colleagues and he co-authored an article for the inaugural issue of the patient-oriented online magazine “HCV Next.”

His lab has received multi-year funding for its research programs in translational and clinical research. During the course of our translational research, members of his lab and he developed techniques for animal and human liver sampling that will enable sorting of liver cells in order to understand drug distribution in the liver during treatment and to develop ways to measure liver drug concentration. These translational research techniques will enable physicians to base drug dosing on the data gathered from the site of antiviral action in the liver instead of measuring the plasma concentration that is more reflective of systemic exposure. This may be an important breakthrough because of the fine line between drug efficacy and toxicity: the techniques will help physicians pinpoint the precise amount of drug needed for maximum benefit to the patient. In the area of clinical research, we are studying care models for viral hepatitis. We are conducting a study sponsored by the Centers for Disease Control and Prevention (CDC) Foundation to assess telemedicine to treat hepatitis C (HCV) in patients who are in treatment for substance use. By creating processes that simplify testing and improve provider and patient awareness and by expanding recommendations for HCV screening, patients can receive more timely care and treatment. He teaches GI fellows, residents and students in the outpatient setting. He is also very interested in mentoring, and he supervises residents and fellows in clinical research as well as in his laboratory. The enriching experience his trainees receive affords them excellent placement opportunities once their training is complete. A number of his former trainees have been listed as co-authors on manuscripts.



Dr. Shyam Kottlil is the Professor of Medicine and Associate Chief of Clinical Care and Research at the Institute of Human Virology (University of Maryland). He trained at Brown University and at the National Institutes of Health prior to his appointment at University of Maryland. He is a national leader in the management of hepatitis C infection and has conducted several clinical studies in the inner city community clinics in District of Columbia and Baltimore. He has published over 150 peer reviewed publications and serves as a member of the National HCV Treatment Guidelines Committee member.



Dr. Jim Tartaglia is an internationally recognized vaccine R&D leader with over 30 years of experience in industry, including exposure to partnerships with private sector, government and international agencies. Jim is experienced and respected for creating and leading multi-disciplinary teams to deliver business objectives, address complex problems, especially towards developing and licensing products in the veterinary and human vaccine areas. Jim is recognized for strong leadership, stakeholder engagement, and team management skills within matrix organizations, with a proven track record in Vaccine R&D, General management, Project leadership, Strategic Planning and Execution, Stakeholder relationship Management. In his current role as Global



Head of Development and LCM, Jim oversees a vaccine portfolio of 25 projects extending from phase I/II through LCM in the areas of influenza, pediatric combination vaccines, RSV, rabies, Yellow Fever, pneumococcal and meningococcal vaccines. In his role, Jim is currently based in Swiftwater, PA, USA. In his over 30 year tenure with Sanofi, Jim held positions of site head for R&D at the Toronto site and various portfolio leadership roles. Prior to joining Sanofi Pasteur-Canada in 1999, Jim held the position of Executive Director of Research at Virogenetics Corporation of Troy, New York, a former subsidiary of Sanofi Pasteur. While at Virogenetics, he helped develop the poxvirus vector technology as an immunization vehicle for both veterinary and human application, including HIV and cancer.



Dr. Konstantin Chumakov is an Associate Director for Research at the Office of Vaccines Research and Review at the US Food and Drugs Administration, and an Adjunct Professor at George Washington University and the University of Maryland. He holds a PhD (1979) in molecular biology and Doctor of Sciences degree (1987) from Moscow State University. In 1973-1987 he was a Research Scientist at the Laboratory of Molecular Biology and Bioorganic Chemistry of Moscow State University. From 1987 to 1989, he headed the Laboratory of Bacterial Genetics at the Institute of Microbiology of the Soviet Academy of Sciences in Moscow. In 1989 he moved to the FDA Center for Biologics Evaluation and Research (CBER) in Bethesda, Maryland, and since 1997 leads a research laboratory in the Division of Viral Products. His scientific interests are in creation of molecular methods for the evaluation and quality control of vaccines and other biological products. The primary focus of his studies is related to poliovirus and polio vaccines.