



UPMC HILLMAN CANCER CENTER VIRAL ONCOLOGY SYMPOSIUM

Tuesday, October 10th, 2023

Organized by the Cancer Virology Program (CVP),
Community Outreach and Engagement (COE)
and the Head and Neck Program



Douglas R. Lowy, MD
Deputy Director -
National Cancer Institute



Charles M. Rice, PhD
2020 Nobel Prize
Lauréate



Jeffrey I. Cohen, MD
Chief, Laboratory of
Infectious Diseases - NIH



Blossom Damanla, PhD
Vice Dean for Research -
University of North
Carolina at Chapel Hill



Charl Cohen, PhD
President -
Hepatitis B Foundation



Shannon Christy, PhD
Department of Health
Outcomes and Behavior -
Moffitt Cancer Center



The Assembly • 5051 Centre Ave • Pittsburgh, PA



This activity is approved for the following credit: AMA PRA Category 1 Credit™

Welcome to the Viral Oncology Symposium - Hosted and organized by the Cancer Virology Program (CVP), Community Outreach and Engagement (COE) and the Head and Neck Program

Goals / Purposes:

This Symposium is designed to provide state-of-the-art information on the etiologies, mechanisms of oncogenesis of cancer viruses, as well as clinical associated viral cancers, and current detection, prevention, vaccination and treatments to audience of academic and private physicians and nurses, basic scientists, and community.

Target Audience:

Local, national and international academic and private physicians and nurses, and basic scientists as well as other appropriate health care professionals and the community. Participants can earn Continuing Medical Education (CME) Credit.

Location:

The Thomas E. Richards Auditorium of the Assembly Building, UPMC Hillman Cancer Center, University of Pittsburgh Medical Center, 5051 Centre Avenue, Pittsburgh, Pennsylvania, 15213

Time and Date:

8:00 am - 5:30 pm on October 10, 2023

Fee and Registration:

Registration is free but is required for attending the symposium. Breakfast, lunch and coffee will be provided. There will also be a reception directly following the closing ceremony of the symposium. Maximum participants are 100 and will be determined at a first come first serve basis. Deadline for registration is October 1st, 2023. [Register here](#).

Course Handouts:

Presentations will **not** be printed. A copy of presentation slides can be accessed via OneDrive (UPMC employees) or Box (non-UPMC employees). Instructions on how to access program slides will be emailed to the email address that was provided during online registration.

Parking:

Parking is available in The Assembly garage on Morewood Avenue between Centre Avenue and Baum Boulevard. Parking is at your own expense.

Continuing Education:

In support of improving patient care, the University of Pittsburgh is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCM), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physician (CME)

The University of Pittsburgh designates this live activity for a maximum of 7.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Other health care professionals will receive a certificate of attendance confirming the number of contact hours commensurate with the extent of participation in this activity.





A very special thanks to our Organization Committee:



Monica Baskin,
PhD



Robert Ferris,
MD, PhD

Special Thanks to our Main Sponsor:



Shou-Jiang Gao,
PhD



Haitao Guo,
PhD



Patrick Moore,
MD, MPH



For More Information Contact:

Dr. Shou-Jiang (SJ) Gao at: gaos8@upmc.edu
Greg Benzy at: benzyg@upmc.edu

Symposium Program: Opening & Welcome

7:30 - 8:00 Registration and Breakfast

8:00 - 8:05 **Shou-Jiang (SJ) Gao, PhD, The Pittsburgh Foundation Endowed Chair for Drug Development and Immunotherapy Professor in the Department of Microbiology and Molecular Genetics at the University of Pittsburgh School of Medicine Co-Leader of the Cancer Virology Program in the UPMC Hillman Cancer Center**
"Opening / Welcome"

Biography: Dr. Gao is a nationally recognized researcher in viral oncogenesis. Dr. Gao is an elected member of the American Academy of Microbiology. He serves as the Editor-in-Chief for the Journal of Medical Virology, a Section Editor for PLoS Pathogens and an Editorial Board Member for several other scientific journals. Dr. Gao's research revolves around cancer-causing viruses with focus on Kaposi's sarcoma-associated herpesvirus (KSHV) and AIDS-related cancers. He has published > 200 research articles and his lab has been continuously funded with multiple grants from National Institute of Health. The lab applies a comprehensive approach involving genomics, epigenetics, epitranscriptomics, spatial single cell analysis, metabolomics, high-throughput screening, and systems biology to unravel the biology of viral infections, virus-host interactions, cancer metabolism, inflammation, angiogenesis, immune responses and tumor microenvironment with an effort to delineate the mechanisms of viral oncogenesis and develop novel viral and cancer therapeutics.

8:05 - 8:15 **Robert Ferris, MD, PhD, Director, UPMC Hillman Cancer Center, Hillman Professor of Oncology, UPMC Senior Vice President for Oncology Programs, Associate Senior Vice Chancellor for Cancer Research, University Pittsburgh School of Medicine**
"Welcome Remarks"

Biography: Dr. Ferris currently serves on the Editorial Boards of JNCI, JCO, Clinical Cancer Research, and Cancer Immunology Research. He is Editor in Chief of Oral Oncology. He recently completed a 6-year term co-chairing the NCI Steering Committee for Head and Neck Cancer, served as a standing member of NCI Committee A reviewing Cancer Centers, and is currently President-Elect of the American Head and Neck Society. He has co-founded two early phase immuno-oncology companies, in therapeutics discovery and development and in cellular therapeutic strategies for solid and liquid tumors and serves on multiple scientific advisory boards for various biotech companies.

As a head and neck surgical oncologist and translational tumor immunologist, his lab performs neoadjuvant "window" trials developing novel immune-oncology agents, combinations and biomarkers. His group is uniquely positioned to investigate mechanisms of anti-tumor immunity in the tumor microenvironment (TME), as well as tumor cell escape. Dr. Ferris's NIH-funded laboratory is focused on reversal of immune escape and immunotherapy using monoclonal antibodies and vaccines, leading to the first randomized phase II-III trials of head and neck cancer immunotherapy in the world. He was founding director of the Hillman Tumor Microenvironment Center.

He is a Principal Investigator of the University of Pittsburgh Specialized Program of Research Excellence (SPORE) grant for translational head and neck research and a R01 grant focused on T cell receptor dynamics and immune phenotypes regulating response to immunotherapy.



Shou-Jiang Gao, PhD



Robert Ferris, MD, PhD

Symposium Program: Opening & Welcome (continued)

8:15 - 8:30

**Anantha Shekhar, MD, PhD, Senior Vice Chancellor for the Health Sciences, University of Pittsburgh
John and Gertrude Petersen Dean, Professor of Psychiatry, School of Medicine, University of Pittsburgh
Professor of Clinical and Translational Science, Clinical and Translational Science Institute, University of Pittsburgh
"Welcome Remarks"**

Biography: Dr. Shekhar is a nationally recognized educator, researcher, and entrepreneur with major contributions in medicine and life sciences. At Pitt, Dr. Shekhar leads all six health sciences schools that, for more than a century, have led education and research in their respective fields, propelling scientific discovery and clinical innovation that advance human health. Education at the Schools of the Health Sciences—Dental Medicine, Health and Rehabilitation Sciences, Medicine, Nursing, Pharmacy, and Public Health—emphasizes individualized curricula and inter-professional team-based instruction to train students in core competencies of their chosen health professions while also preparing them as advocates, innovators and stewards of responsible, inclusive health care delivery. Dr. Shekhar's responsibilities at the University of Pittsburgh include shaping the careers of more than 6,000 faculty and staff members, as well as the academic success of approximately 6,000 students annually, all while supporting Pitt's position as a top-ranked recipient of National Institutes of Health (NIH) research funding. He also works closely with UPMC, one of the largest academic medical centers in the nation, to ensure that health care delivery, biomedical research, and education—already among the nation's elite—continue to flourish.

Innovation, transformation and successful collaborations across the private, public, and philanthropic sectors have defined Dr. Shekhar's distinguished career. His areas of expertise include basic and clinical research on the effects of stress, stress-induced psychiatric disorders, and clinical psychopharmacology. His laboratory has developed several translational models for psychiatric disorders as well as identified novel targets for neuropsychiatric disorder treatments in commercial development. Grants from the NIH, private foundations and commercial collaborations have supported his research. He has co-authored more than 250 original scientific papers published in leading basic science and clinical journals. He is a founder of multiple biotech companies developing novel therapies.

Dr. Shekhar is an elected member of the National Academies of Sciences, Engineering, and Medicine's Forum on Drug Discovery, Development, and Translation. He was born in India, earned his medical degree at St. John's Medical College, Bangalore, and PhD in neuroscience at Indiana University.

Section One:

Viral Cancers and Vaccines

Section Chair: Patrick Moore, MD, MPH

**Patrick Moore, MD, MPH
Distinguished Professor of Microbiology and Molecular Genetics, American Cancer Society Professor,
Pittsburgh Foundation Chair in Innovative Cancer Research**

Biography: Patrick S. Moore, is the co-discoverer, together with Yuan Chang, of two of the seven known human cancer viruses: Kaposi's sarcoma herpesvirus (KSHV/HHV8) and Merkel cell polyomavirus (MCPV). Dr. Moore obtained his undergraduate degree from Westminster College in Utah. After graduate work at Stanford University in biophysical chemistry and a medical degree from the University of Utah, Dr. Moore joined the U.S. Centers for Disease Control where he trained as an Epidemic Intelligence Service officer and worked in the Arboviral Disease Branch of the CDC. Following his work at the CDC, Dr. Moore completed a Preventive Medicine Residency, an MPH from the University of Berkeley, and became Deputy Commissioner/City Epidemiologist of the New York City Health Department. In 1993, he joined the faculty of the Columbia University School of Public Health. In 2002, Dr. Moore moved to the University of Pittsburgh where he served as Director of the Cancer Virology Program at the Hillman Comprehensive Cancer Institute. He holds a Distinguished Professorship in the Department of Molecular Microbiology and Genetics and the Pittsburgh Foundation Endowed Chair in Innovative Cancer Research. Dr. Moore is an elected member of the US National Academy of Sciences, American Academy of Microbiology, American Society of Clinical Investigation, and the Association of American Physicians. He has been the recipient of multiple honors including the CDC Langmuir Prize, the Meyenburg Prize for Cancer Research, the Robert Koch Prize for major advances in biomedical sciences, the Charles S. Mott Prize of the General Motors Cancer Research Foundation, and the American Cancer Society Research Professorship.



Anantha Shekhar, MD, PhD



Patrick Moore, MD, MPH
Section One Chair

Section One: Viral Cancers and Vaccines - Section Chair: Patrick Moore, MD, MPH

8:30 - 9:15 **Douglas R. Lowy, MD, Principal Deputy Director of the National Cancer Institute (NCI), National Institutes of Health (NIH), and Chief of the Laboratory of Cellular Oncology in the Center for Cancer Research at NCI**
“Controlling HPV-Associated Cancers Through Vaccination and Screening”

Chronic infection by the human papillomavirus (HPV), which is usually transmitted sexually, is responsible for the development of several cancers, of which cervical cancer is by far the most common worldwide. In the United States, Black and Hispanic women have a higher burden of cervical cancer than White women, and the burden in many low- and middle-income countries (LMICs) is several fold higher than in the US and other high-income countries (HICs). There are two main preventive interventions: HPV vaccination (primary prevention) and cervical cancer screening (secondary prevention). Both interventions have been widely deployed in HICs but cost and logistics have greatly limited their uptake in LMICs. To address these issues, my NCI colleagues and I are conducting research to test the hypothesis that a single vaccine dose can provide long-term protection, while other colleagues are developing high quality cervical cancer screening by a see-and-treat approach that is sufficiently cost-effective to be feasible in LMICs. The one-dose vaccine studies build on findings after three doses that the virus-like particle vaccine: 1) can prevent HPV infection and precancer at the anatomic sites that result in cancer; 2) can induce herd protection for the HPV types targeted by the vaccine, and 3) is associated with a close to 90% reduction in cervical cancer incidence in vaccinees immunized prior to sexual debut. The screening studies are based on the high positive and negative predictive value of, respectively, a positive and negative HPV DNA test combined with an artificial intelligence algorithm built into a smart-phone that enables a digital photo of the cervix in an HPV-positive woman to determine if she has a lesion that should be ablated by treatment.

9:15 - 10:00 **Blossom Damania, PhD, Boshamer Distinguished Professor of Microbiology & Immunology, Vice Dean for Research, School of Medicine, Co-Director of the Program in Global Oncology and the Program in Virology at the Lineberger Comprehensive Cancer Center University of North Carolina-Chapel Hill**
“Oncogenic human herpesviruses and innate immunity”

Gammaherpesviruses including Kaposi's sarcoma-associated herpesvirus (KSHV) and Epstein-Barr Virus (EBV) are ubiquitous pathogens that establish lifelong infections in the human host. These viruses are associated with numerous malignancies and are responsible for significant human cancer burden. These virus-associated cancers are due, in part, to the ability of gammaherpesviruses to successfully evade the innate immune response throughout the course of infection. Our lab has been studying how gammaherpesviruses are detected by various host innate immune sensors and how these viruses evade recognition by host cells.

10:00 - 10:45 **Jeffrey I. Cohen, MD, Chief, Laboratory of Infectious Diseases; Chief, Medical Virology Section, National Institute of Health**
“Use of Vaccines and Monoclonal Antibodies to Prevent Epstein-Barr Virus Infection/Disease”

Epstein-Barr virus (EBV) is associated with 200,000 cases of cancer worldwide each year. This includes gastric and nasopharyngeal carcinoma, Hodgkin and Burkitt lymphoma, and post-transplant lymphoproliferative disease. A vaccine to prevent EBV infection and/or disease should reduce the burden of EBV malignancies. We have developed nanoparticle-based vaccines in which EBV glycoproteins are fused to ferritin which self-assemble into a 24-mer with a dense symmetrical array of viral glycoproteins on their surface. Immunization of mice and nonhuman primates with these nanoparticles results in high titers of neutralizing antibody. Transfer of IgG from immunized mice to humanized mice results in protection of the latter from EBV lymphomas after challenge with the virus. We are currently evaluating one of our EBV nanoparticle vaccines in a clinical trial at NIH. EBV vaccines might not be effective in immunocompromised persons who are at high risk of developing EBV lymphoma. We have produced monoclonal antibodies to EBV glycoproteins that potently neutralize EBV infection *in vitro* and have shown that injection of EBV mAbs into humanized mice protects them from EBV lymphomas after challenge with the virus. Thus, vaccines or monoclonal antibodies to EBV may reduce the burden of EBV malignancies.

10:45 - 11:00 **Break**

Brief biographies of these speakers can be found on the following page



Douglas R. Lowy, MD



Blossom Damania, PhD



Jeffrey I. Cohen, MD

Section One: Viral Cancers and Vaccines - Section Chair: Patrick Moore, MD, MPH

8:30 - 9:15 **Douglas R. Lowy, MD, Principal Deputy Director of the National Cancer Institute (NCI), National Institutes of Health (NIH), and Chief of the Laboratory of Cellular Oncology in the Center for Cancer Research at NCI**
“Controlling HPV-Associated Cancers Through Vaccination and Screening”

Biography: Dr. Lowy has received his medical degree from New York University School of Medicine and trained in internal medicine at Stanford University and dermatology at Yale. Dr. Lowy’s research includes the biology of papillomaviruses and the regulation of normal and neoplastic growth. The papillomavirus research is carried out in close collaboration with Dr. John Schiller, and they were involved in the initial development, characterization, and clinical testing of the preventive virus-like particle-based HPV vaccines that are now used in the three FDA-approved HPV vaccines.

Dr. Lowy’s growth regulation research is now focused primarily on the DLC family of tumor suppressor genes and their mechanism of action. In response to the COVID-19 epidemic, he has led the SARS-CoV-2 serology research effort at NCI. Dr. Lowy is a member of the National Academy of Sciences (NAS) and of the Institute of Medicine of the NAS. For their HPV vaccine research, he and Dr. Schiller have received numerous honors, including the 2007 Federal Employee of the Year Service to America Medal from the Partnership for Public Service, the 2011 Albert B. Sabin Gold Medal Award, the 2012 National Medal of Technology & Innovation (awarded in 2014), and the 2017 Lasker-DeBakey Clinical Medical Research Award.

9:15 - 10:00 **Blossom Damania, PhD, Boshamer Distinguished Professor of Microbiology & Immunology, Vice Dean for Research, School of Medicine, Co-Director of the Program in Global Oncology and the Program in Virology at the Lineberger Comprehensive Cancer Center University of North Carolina-Chapel Hill**
“Oncogenic human herpesviruses”

Biography: Dr. Damania’s research focuses on oncogenic human herpesviruses and host-pathogen interactions, with a focus on Kaposi’s sarcoma-associated herpesvirus (KSHV). She uses a multi-faceted approach towards understanding host-pathogen interactions, host innate immune responses to viral infection, as well as viral oncogenesis. She has received several awards and honors. She was named a V Foundation for Cancer Research Scholar, an AACR Gertrude B. Elion Research Scholar, a Burroughs Wellcome Investigator in the Pathogenesis of Infectious Disease, an American Heart Association Established Investigator, and a Leukemia & Lymphoma Society Scholar. She received the 2011 Dolph O. Adams award from the Society for Leukocyte Biology and was named a 2011 Kavli Fellow by the National Academy of Sciences, USA. Dr. Damania is an elected Fellow of the American Academy of Arts and Sciences, the American Academy of Microbiology, and the American Association for the Advancement of Science.

Dr. Damania presently serves on the NCI Board of Scientific Counselors, the NCI Frederick National Laboratory Advisory Committee, the American Society of Microbiology’s Council on Microbial Sciences, and the American Academy of Microbiology Leadership Nominating Subcommittee. She also co-chairs the Burroughs Wellcome Fund Advisory Committee on Infectious Disease.

10:00 - 10:45 **Jeffrey I. Cohen, MD, Chief, Laboratory of Infectious Diseases; Chief, Medical Virology Section, National Institute of Health**
“Use of Vaccines and Monoclonal Antibodies to Prevent Epstein-Barr Virus Infection/Disease”

Biography: Dr. Cohen received his M.D. from The Johns Hopkins University and was a resident in medicine at Duke University. Following a medical staff fellowship at the National Institutes of Health (NIH), he was a clinical fellow in infectious diseases at the Brigham and Women’s Hospital and an instructor in medicine at Harvard University. His laboratory studies the pathogenesis and clinical aspects of human herpesviruses, including Epstein-Barr virus (EBV) and herpes simplex virus (HSV). The laboratory focuses on vaccine development, discovery of monoclonal antibodies to viral proteins, and identification of cellular mutations in patients with severe herpesvirus infections. Recent findings include development of candidate vaccines for HSV and EBV, monoclonal antibodies to EBV, and identification of cellular genes that predispose to severe EBV infections. Clinical projects include a phase I study of an EBV nanoparticle vaccine, studies of patients with chronic active EBV disease, and studies of patients with severe virus infections to define genetic variants associated with the disease..

10:45 - 11:00 **Break**



Douglas R. Lowy, MD



Blossom Damania, PhD



Jeffrey I. Cohen, MD

Section Two:

Keynote presentation by Nobel Prize Laureate Dr. Charles M. Rice

Section Chair: Haitao Guo, PhD

11:00 - 12:00 Charles M. Rice, PhD, 2020 Nobel Prize Laureate

Head, Laboratory of Virology and Infectious Disease, Director, Stavros Niarchos Foundation Institute for Global Infectious Disease Research, Maurice R. and Corinne P. Greenberg Professor, The Rockefeller University
“Chronic viral hepatitis and cancer: Insights from promising new models and approaches”

Despite the remarkable advances in prevention and treatment, chronic viral hepatitis accounts for nearly 1 million deaths each year from end-stage liver disease including cancer. The vast majority of individuals chronically infected with hepatitis B virus (HBV) and hepatitis C virus (HCV) remain untreated. Even those cured of HCV are still at risk of developing hepatocellular carcinoma (HCC). We lack effective curative therapies for chronic hepatitis B and progress is needed in terms of early diagnosis and HCC treatment. One roadblock to better understanding of HCV associated HCC had been the lack of a tractable animal model. I will highlight the discovery of a rodent, HCV-like, hepatitis virus, adapted to infection of laboratory mice, where chronic infection leads to liver cancer with high penetrance. Preliminary characterization of this model suggests that it shares many characteristics with HCV associated HCC, with utility for understanding oncogenic mechanisms, immune control vs exhaustion, and disease progression. In the second part of the lecture, I plan to discuss some of our recent work on HBV. This includes a new method for launching HBV infection using synthetic pre-genomic RNA. This has allowed a deep dive into the structure and function of HBV polymerase using deep mutational scanning. New insights are emerging that we hope will be useful for the current focus of the HBV field—to achieve a lasting, treatment free, functional cure.

12:00 - 1:00 Lunch

Section Three:

Viral oncogenesis and anti-viral

Section Chair: Yuan Chang, MD

1:00 - 1:20

Haitao Guo, PhD, Cancer Virology Program, UPMC Hillman Cancer Center, Department of Microbiology and Molecular Genetics, University of Pittsburgh School of Medicine
“Epigenetic regulation of HBV cccDNA minichromosome and antiviral approach”

Chronic hepatitis B virus (HBV) infection remains a significant public health burden worldwide. HBV covalently closed circular DNA (cccDNA) is essential to the virus life cycle by serving as the persistent form of viral genome and transcription template, its complete elimination or inactivation during chronic infection is considered critical to a cure but has not been achieved by current antivirals. cccDNA is formed through a DNA repair process of the viral genomic relaxed circular DNA (rcDNA), and once formed, cccDNA exists in a stable episomal minichromosome decorated with host histones and nonhistone proteins. Accumulating evidence suggests that epigenetic modifications of cccDNA contribute to viral replication and the outcome of chronic HBV infection. Furthermore, HBV X protein (HBx) is known as a cccDNA transcription activator and essential for maintenance of cccDNA at transcriptionally active epigenetic state. Here, I will discuss the current progress on HBV cccDNA formation and epigenetics research, focusing on our recent studies that utilized proteomic approach to identify host factors involved in cccDNA formation and epigenetics, as well as a screening of epigenetic compound library for cccDNA transcription inhibitors in a cccDNA reporter system (Marchetti et al. J. Virol. 2022; Kim et al. PLoS Pathog. 2022; Yu et al. Antiviral Res. 2023). Elucidating the molecular mechanisms of cccDNA biosynthesis and epigenetic regulation could allow us to elaborate new strategies for addressing the unmet clinical need.

Yuan Chang, MD - Section Three Chair

Distinguished Professor of Pathology, American Cancer Society Professor, UPMC Chair in Cancer Virology Research

Brief biographies of these speakers can be found on the following page



Charles M. Rice, PhD



**Haitao Guo, PhD
Section Two Chair**



**Yuan Chang, MD
Section Three Chair**

Section Two: Keynote presentation by Nobel Prize Laureate Dr. Charles M. Rice - Section Chair: Haitao Guo, PhD

11:00 - 12:00 Charles M. Rice, PhD, 2020 Nobel Prize Laureate, Head, Laboratory of Virology and Infectious Disease Director, Stavros Niarchos Foundation Institute for Global Infectious Disease Research
Maurice R. and Corinne P. Greenberg Professor, The Rockefeller University
"Chronic viral hepatitis and cancer: Insights from promising new models and approaches"

Biography: Dr. Rice is one of the world's most accomplished virologists and a prominent figure in research on members of the Flaviviridae including hepatitis C virus (HCV). His research team has helped to understand the biogenesis and structure of HCV-encoded proteins, discovered a highly conserved RNA element at the 3' terminus of HCV genome RNA, and produced the first infectious molecular clone of the virus - an essential tool for future studies on this important human pathogen. His laboratory has established cell culture systems and animal models for studying HCV replication and evaluating antiviral efficacy. He has co-authored over 500 articles in the field of virology, serves as a reviewer for numerous journals, is a past President of the American Society for Virology, a Fellow of the American Association for the Advancement of Science, a Member of the U. S. National Academy of Sciences, and a recipient of the M. W. Beijerinck, Dautrebande, Robert Koch, InBev Baillet-Latour prizes, the Lasker-DeBakey Clinical Medical Research Award, and the Nobel Prize in Physiology or Medicine.

12:00 - 1:00 Lunch

Section Three: Viral oncogenesis and anti-viral - Section Chair: Yuan Chang, MD

1:00 - 1:20 Haitao Guo, PhD, Cancer Virology Program, UPMC Hillman Cancer Center,
Department of Microbiology and Molecular Genetics, University of Pittsburgh School of Medicine
"Epigenetic regulation of HBV cccDNA minichromosome and antiviral approach"

Biography: Dr. Guo received his PhD in 2001 from Wuhan University, China. From 2002 to 2004, he received his postdoctoral training under supervision of Dr. Bill Mason in Fox Chase Cancer Center, where he started his research on hepatitis B virus (HBV). Then he joined Drexel University as a member of faculty for 9 years. In 2014, he joined Indiana University as an Associate Professor and became Full Professor in 2019. Since fall 2019, he is a Professor in University of Pittsburgh and Co-Leader of cancer virology program in UPMC Hillman Cancer Center. Dr. Guo's research is focused on molecular virology, virus-host interactions, innate control of virus infection, and antiviral development. Dr. Guo has been serving as editor and/or editorial board member for major journals such as Hepatology, Journal of Virology, Journal of Medical Virology, Antiviral Research, etc., and he has served as the standing member of NIH Virology B Study Section from 2017-2021. He is currently the Co-Chair of the Hepatitis B Special Interest Group for the American Association for the Study of Liver Diseases (AASLD), Co-Chair of Virology Working Group of the International Coalition to Eliminate Hepatitis B (ICE-HBV), and Member of the Scientific Advisory Council of International HBV Meeting. He has served as the co-organizer of the 2015 International HBV Meeting. Dr. Guo has published about 100 papers and 3 patents. Dr. Guo has trained more than 30 graduate students and postdoctoral fellows. He has served as mentor for several NIH training grants. He has also served as mentor for a NIDDK K01 recipient. Dr. Guo has been awarded the Bruce Witte Fellow of Hepatitis B Foundation, 2017 IUSM Showalter Scholar, 2017 IUPUI Research Frontiers Trailblazer Award, 2019 IU Trustee's Teaching Award, 2020 UPMC Hillman Senior Faculty Fellow for Innovative Cancer Research, and in 2022 he was elected to the American Academy of Microbiology.

Yuan Chang, MD - Section Three Chair
Distinguished Professor of Pathology, American Cancer Society Professor, UPMC Chair in Cancer Virology Research

Biography: Yuan Chang is a Distinguished Professor in the Department of Pathology and holds the UPMC Endowed Chair in Cancer Virology at the Hillman Comprehensive Cancer Institute at the University of Pittsburgh. In 1994, Dr. Chang co-discovered Kaposi's sarcoma associated herpesvirus (KSHV/HHV8), with her husband Dr. Patrick S. Moore. In 2002, Dr. Chang moved to the University of Pittsburgh where the Chang-Moore laboratory identified the most recently discovered human tumor virus, Merkel cell polyomavirus (MCV). Dr. Chang is an elected member of the US National Academy of Sciences, American Academy of Microbiology, American Society of Clinical Investigation, and the Association of American Physicians. She has been the recipient of multiple honors including the Robert Koch Prize, the Paul Marks Prize, the Mott Prize of the General Motors Cancer Research Foundation, and an American Cancer Society Research Professorship.



Charles M. Rice, PhD



Haitao Guo, PhD
Section Two Chair



Yuan Chang, MD
Section Three Chair

Section Three: Viral oncogenesis and anti-viral - Section Chair: Yuan Chang, MD (continued)

1:20 - 1:40 **Masa Shuda, PhD, Assistant Professor, Cancer Virology Program, UPMC Hillman Cancer Center**
“Why does Merkel cell polyomavirus cause cancers with a Merkel cell phenotype?”

Merkel cell polyomavirus (MCV) is the most recently discovered human tumor virus that causes human Merkel cell carcinoma (MCC), a rare neuroendocrine skin cancer resembling human Merkel cells. MCV is clonally integrated in MCC tumor genome and drives tumor cell proliferation by stably expressing its small T (sT) and large T (LT) oncoproteins. To investigate MCV persistence and oncogenesis, an identification of MCC origin cells that are persistently infected with MCV and transformed by viral oncoproteins is essential. We previously identified that transgenic expression of viral sT oncoprotein in mouse Merkel cells does not induce MCC and revealed that MCV LT and sT oncoproteins directly promote Merkel cell lineage gene expression in MCV-positive(+) MCC cells. These data suggest that Merkel cells are not MCC origin cells, but MCV T antigen promotes the Merkel cell-like phenotype of MCC.

We recently identified that Sox9(+) hair follicle stem cells are adult Merkel cell progenitor cells in mice. Thus, we examined if viral oncoprotein expression can transform the Sox9(+) hair follicle cells into human MCC-like tumors. Transgenic sT expression in the Sox9(+) dermal cells induced tumors that express cytokeratin (KRT) 8, an epithelial marker expressed in MCC. However, no neuroendocrine markers were expressed in the tumor. When a pRb (RB1) knockout that mimics the pRb-inhibitory function of LT is induced together with sT expression, we detected significant induction of neuroendocrine markers (INSMT, CHGA) as well as an additional epithelial marker KRT20, all of which are expressed in MCC. However, two Merkel cell lineage factors seen in MCC, Atoh1 and Sox2, were not induced. These data suggest that LT targeting of pRb plays a critical role in the manifestation of neuroendocrine phenotype of MCC, but inhibition of additional LT targets such as p130(RBL2) and p107(RBL1) may be required for a formation of tumors that fully resemble human MCC in mice. Nevertheless, Sox9(+) hair follicle stem cells are the first dermal cells that MCV oncoproteins and pRb ablation can transform into neuroendocrine tumors similar to MCC; thereby making them potential candidate cells in which persistent MCV infection causes MCC.

1:40 - 2:00 **Renfeng Li, PhD, Associate Professor, Cancer Virology Program, UPMC Hillman Cancer Center**
“Decoding EBV reactivation: unleashing therapeutic potential against virus-associated cancers”

Epstein-Barr virus (EBV) infects 95% of the human population and contributes to approximately 2% of all human cancers. To date, there are no EBV-specific therapies to eradicate the EBV-associated cancers. Due to the unique presence of EBV in tumors, oncolytic therapies based on reactivation of latent virus is a promising approach for targeted treatment of EBV-associated cancer. However, a deeper understanding of the underlying mechanisms by which host factors control EBV lytic replication is essential to develop such anti-cancer strategies. Our previous studies demonstrated site-specific cleavage of host restriction factors is a new way to promote EBV replication. To identify novel EBV restriction factors that are cleaved by caspase, we utilized immunoprecipitation coupled with quantitative mass spectrometry to monitor protein cleavage in Akata EBV positive cell lines upon lytic induction. Among over 1000 identified proteins that are cleaved during EBV replication, we focused on polycomb repressive complexes 1 (PRC1) proteins for further functional analysis. PRC1 represses transcription by introducing post-translation modifications on lysine 119 of histone H2A (H2AK119ub) located in the regulatory region of target genes. However, the role of PRC1 in EBV replication remains unknown. Here, using CRISPR-Cas9 genomic editing method, we found that the depletion of PRC1 E3 ligase subunit RING1 significantly promotes EBV lytic gene expression. We further demonstrated that RING1 depletion suppresses H2AK119ub level on EBV lytic gene promoters and that lytic induction leads to RING1 cleavage and reduced H2AK119ub level to promote EBV lytic gene expression. We then utilized a ubiScan approach to identify RING1 substrate and found that, in addition to H2A, RING1 depletion suppresses the ubiquitination of over 1000 proteins, including m6A RNA modification pathway proteins. Together our study identifies RING1 as a novel caspase substrate and host restriction factor that represses EBV lytic replication. Ongoing study will determine how RING1 represses EBV replication via targeting H2A and other cellular proteins, and how RING1 is antagonized to promote EBV replication for potential anti-cancer treatment.



Masa Shuda, PhD

Renfeng Li, PhD

Brief biographies of these speakers can be found on the following page

Section Three: Viral oncogenesis and anti-viral - Section Chair: Yuan Chang, MD (continued)

1:20 - 1:40 **Masa Shuda, PhD, Assistant Professor, Cancer Virology Program, UPMC Hillman Cancer Center**
“Why does Merkel cell polyomavirus cause cancers with a Merkel cell phenotype?”

Biography: Masahiro (Masa) Shuda obtained a Ph. D. in Molecular Virology at the Tokyo Medical and Dental University, Tokyo, Japan where he studied the host cell gene expression deregulated by human immunodeficiency virus (HIV) and hepatitis C (HCV) virus infection. Masa joined the University of Pittsburgh as a postdoctoral fellow and was involved in the initial discovery of Merkel cell polyomavirus (MCV) in Drs. Patrick Moore and Yuan Chang’s lab in 2008. He has been an Assistant Professor in the Dept. of Microbiology and Molecular Genetics in the University of Pittsburgh. The current focus of his research is to understand the mechanisms of MCV persistence and viral T antigen-induced Merkel cell carcinogenesis.

1:40 - 2:00 **Renfeng Li, PhD, Associate Professor in the Department of Microbiology & Molecular Genetics, Cancer Virology Program, UPMC Hillman Cancer Center**
“Decoding EBV reactivation: unleashing therapeutic potential against virus-associated cancers”

Biography: Before joining Pitt in 2023, Dr. Li was a tenured Associate Professor at Virginia Commonwealth University (VCU). His laboratory is focused on understanding the mechanism controlling Epstein-Barr virus (EBV) latency and reactivation with a long-term goal of developing novel strategies to cure virus-associated diseases. In the past 9 years, Dr. Li’s laboratory has been focusing on host restriction factors in herpesvirus replication and the viral evasion mechanisms, which results in a series of high-profile publications in PLOS Pathogens (2015 and 2018), Cell Reports (2017 and 2019) and mBio (2021). Dr. Li has also been awarded several complete grants from NIH (K99/R00 and R01) and American Cancer Society (ACS Research Scholar).

Dr. Li’s lab aims to address EBV latency and reactivation using both B cells and epithelial cells. His group identified PIAS1 as a key regulator of EBV lytic replication and uncovered a novel mechanism by which EBV exploits apoptotic caspases to antagonize PIAS1-mediated restriction (Zhang et al, Cell Reports 2017). Dr. Li also received an EBV & Kaposi’s Sarcoma associated herpesvirus (KSHV) Scholarship Award provided by the International Conference on EBV & KSHV in 2018.

At Pitt, Dr. Li and group members are utilizing an innovative immunoprecipitation coupled with quantitative MS approach to monitor protein cleavage in EBV-positive Burkitt lymphoma cells upon lytic induction. Among more than 1000 proteins that they identified as caspase substrates during EBV replication, they are focusing on hnRNP2B1 and PRC1 complex protein RING1 for further functional analysis. Dr. Li’s group is also developing novel strategies to reactivate EBV for anti-cancer therapy.



Masa Shuda, PhD



Renfeng Li, PhD

Section Three: Viral oncogenesis and anti-viral - Section Chair: Yuan Chang, MD (continued)

2:00 - 2:20 **Kathy Shair, PhD, Assistant Professor, Cancer Virology Program, UPMC Hillman Cancer Center**
“Towards reducing the burden of nasopharyngeal carcinoma by studying the molecular properties of Epstein-Barr virus”

Dr. Shair’s research program on EBV-associated nasopharyngeal carcinoma is interdisciplinary involving principles in molecular virology, bioinformatics, cancer biology, cell biology, and epidemiology. In this seminar, Dr. Shair will present her translational studies on 3-D cell culture and single cell RNA-sequencing (scRNA-seq). Furthermore, she will highlight how liquid biopsy used in a multiplex serology screen against a library of EBV proteins, show promise for reducing cancer burden by risk assessment. Data will be presented on the challenges, solutions, and benefits of using scRNA-seq to disentangle heterogeneous EBV infection programs (latent vs. lytic). She will illustrate important considerations for an informative serological survey against EBV proteins and how this information can inform EBV-associated cancer risk. Such a risk assessment assay could be used to prioritize high-risk individuals for an early cancer detection screen currently being implemented in nasopharyngeal carcinoma endemic populations. Her studies are consistent with the hypothesis that lytic infection is a risk factor for nasopharyngeal carcinoma, and she will demonstrate how defining properties associated with EBV infection can inform cancer risk.

2:20 - 2:50 **Robert Ferris, MD, PhD, Director, UPMC Hillman Cancer Center, Hillman Professor of Oncology, UPMC Senior Vice President for Oncology Programs, Associate Senior Vice Chancellor for Cancer Research, University Pittsburgh School of Medicine**
“Optimizing standard and innovative therapies for HPV+ head and neck cancer”

Human papillomavirus (HPV) as an ideologic cause of an increasing subset of head and neck cancers in Western countries has led to the development of specific therapeutic approaches, given the generally better prognosis of this virus-associated cancer, as opposed to typical carcinogen induced head and neck squamous cell carcinoma. Prospective clinical trials evaluating the intensity of therapy or reduction in treatment intensity for good prognosis, HPV-associated HNSCC have been reported in recent years, including the advent of cancer immunotherapy. The latter would appear highly appropriate for a virus-induced cancer. Novel clinical trials specific to HPV positive HNSCC, particularly harnessing cancer immunotherapy and vaccines will be discussed.

2:50 - 3:00 **Break**

Brief biographies of these speakers can be found on the following page



Kathy Shair, PhD

Robert Ferris, MD, PhD

Section Three: Viral oncogenesis and anti-viral - Section Chair: Yuan Chang, MD (continued)

2:00 - 2:20 **Kathy Shair, PhD, Assistant Professor, Cancer Virology Program, UPMC Hillman Cancer Center**
“Towards reducing the burden of nasopharyngeal carcinoma by studying the molecular properties of Epstein-Barr virus”

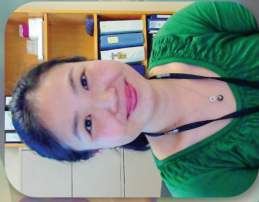
Biography: Dr. Shair is a molecular virologist who completed her Ph.D. studies on poxvirus molecular mimicry with Dr. Antonio Alcamí at the University of Cambridge, U.K. She trained as a postdoc with Dr. Nancy Raab-Traub at the University of North Carolina-Chapel Hill, where she studied Epstein-Barr virus (EBV) oncogenic mechanisms. Her current research focuses on the molecular pathogenesis of EBV infection in nasopharyngeal carcinoma (NPC). She developed two types of 3-D cell culture models to study the stratified and pseudostratified epithelium of the nasopharynx. In collaboration with physician scientists at the UPMC Hillman Cancer Center, her group established a biobank of conditionally reprogrammed primary nasopharyngeal cells. She has been featured in the series “mSphere of Influence” (mSphere, 2020 Sep 23;5(5):e00954-20) and is an Associate Editor for the Journal of Medical Virology (JMR: 20.693). In addition to her review service at the NIH, and her participation in organizing the gamma-herpesvirus session at the International Herpesvirus Workshop, Dr. Shair is passionate about empowering the next generation of budding virologists. She has organized professional development engagements such as the Powerhour at the Gordon Research Conference.

2:20 - 2:50 **Robert Ferris, MD, PhD, Director, UPMC Hillman Cancer Center, Hillman Professor of Oncology, UPMC Senior Vice President for Oncology Programs, Associate Senior Vice Chancellor for Cancer Research, University Pittsburgh School of Medicine**
“Optimizing standard and innovative therapies for HPV+ head and neck cancer”

Biography: As a head and neck surgical oncologist and translational tumor immunologist, Dr. Ferris' lab performs neoadjuvant “window” trials developing novel immune-oncology agents, combinations and biomarkers. His group is uniquely positioned to investigate mechanisms of anti-tumor immunity in the tumor microenvironment (TME), as well as tumor cell escape. Dr. Ferris's NIH-funded laboratory is focused on reversal of immune escape and immunotherapy using monoclonal antibodies and vaccines, leading to the first randomized phase II-III trials of head and neck cancer immunotherapy in the world. He was founding director of the Hillman Tumor Microenvironment Center. He is a Principal Investigator of the University of Pittsburgh Specialized Program of Research Excellence (SPORE) grant for translational head and neck research and a R01 grant focused on T cell receptor dynamics and immune phenotypes regulating response to immunotherapy. Dr. Ferris has an h-index of 105 and his >420 peer-reviewed scientific and clinical publications have garnered >43,000 citations. He is lead investigator of several practice-changing, prospective randomized trials, including Checkmate-141 published in NEJM which led to the FDA approval of Nivolumab for head and neck cancer, ECOG 3311 (published in JCO in late 2021), testing radiation dose-deintensification after transoral robotic surgery (TORS) for HPV+ oropharynx cancer, as well as ECOG-ACRIN 3132, using p53 mutational testing in HPV-negative cancer, to predict response to radiation versus chemoradiation.

Dr. Ferris currently serves on the Editorial Boards of JNCI, JCO, Clinical Cancer Research, and Cancer Immunology Research. He is Editor in Chief of Oral Oncology. He recently completed a 6-year term co-chairing the NCI Steering Committee for Head and Neck Cancer, served as a standing member of NCI Committee A reviewing Cancer Centers, and is currently President-Elect of the American Head and Neck Society. He has co-founded two early phase immunology companies, in therapeutics discovery and development and in cellular therapeutic strategies for solid and liquid tumors and serves on multiple scientific advisory boards for various biotech companies.

2:50 - 3:00 **Break**



Kathy Shair, PhD



Robert Ferris, MD, PhD

Section Four:

Community Outreach and Engagement of viral cancers

Section Chair: Monica Baskin, PhD



Section Chair:
Monica Baskin,
PhD

3:00 - 3:30 **Jose Zevallos, MD, MPH, Professor and Chairman, Department of Otolaryngology, the Eugene N. Myers, M.D., Professor, University of Pittsburgh School of Medicine**
"Barriers to HPV Vaccination in the US Military Community"

Human papillomavirus (HPV) associated malignancy is increasing among US Veterans, and HPV vaccination is the only primary prevention available for all HPV-associated cancers. In this study we aim to measure HPV vaccination prevalence among eligible Veterans and identify sociodemographic factors associated with vaccine uptake. United States (US) Veterans with at least one primary care visit from 2018-2020 aged 18-26 years were identified from the US Veterans Health Administration (VHA) Corporate Data Warehouse. We examined HPV vaccination status by age, sex, race/ethnicity, socioeconomic status, branch of service, and geographic region in the VHA. The National Health and Nutrition Examination Survey (NHANES) from 2017-2020 was used to compare HPV vaccination prevalence to the general US population. Geographical differences in vaccination were represented by mapping vaccine prevalence estimates in young Veterans by VHA Districts, Integrated Service Networks (VISNs), and states. Among young Veterans aged 18-26 years (n=128,279), 30.2% of females and 18.7% of males had any history of HPV vaccination. In the US general population, the prevalence of HPV vaccination was 62.4% and 37.0%, respectively. Geographically, VISN 5 (4.4% [95% CI: 3.7%-5.1%]) and VISN 17 (11.9% [95% CI: 6.65%-7.61%]) had the lowest prevalence among all VISNs. In an adjusted model, young male Veterans have lower odds of vaccination (0.52 [95% CI:0.50-0.53]) compared to young female Veterans. The odds of vaccination decrease with increasing age. Also, Veterans living in zip codes with lower average household incomes have lower odds of vaccination. HPV vaccination in eligible Veterans is less than half of that in the US general population. We note the significant variance in vaccine prevalence by geographic regions and demographic factors that differ from the civilian population. The data presented in this study can be used by the VHA and military communities to design prevention strategies tailored to active-duty military and eligible Veteran populations and reduce the future burden of HPV-associated cancers.

3:30 - 4:00 **Chari Cohen, PhD, President, Hepatitis B Foundation - VIRTUAL**
"Strategies for Community Engagement on Hepatitis B and Liver Cancer"

Chronic hepatitis B infection has a physical, emotional, social, and professional impact that can reduce quality of life, though is largely under-prioritized in clinical management, clinical trial planning or drug development. As we work towards global elimination of hepatitis B, it is critical that we include the voices and understand the lived experiences, preferences, and challenges of those living with hepatitis B. This discussion will highlight these areas and discuss strategies for engaging with highly impacted communities and key stakeholders. The discussion will include tested strategies for multi-cultural, multi-platform engagement, and working alongside people with hepatitis B as partners in research and program development. We will highlight effective strategies and programs, including storytelling for advocacy and engagement, and community-based coalition building and multi-sectoral partnerships for improving prioritization and increasing hepatitis B programming across cities, states, regions and the U.S.

4:00 - 4:30 **Shannon M. Christy, PhD, Assistant Member, Department of Health Outcomes and Behavior, H. Lee Moffitt Cancer Center and Research Institute**
"Conducting Community-engaged HPV Vaccination Research"

The vast majority (92%) of human papillomavirus (HPV)-related cancers could be prevented if age-eligible individuals received the HPV vaccine. Still, HPV vaccination uptake rates remain suboptimal. Indeed, HPV vaccination completion rates among United States adolescents ages 13-17 were 61.7% in 2021. Examples of community-engaged HPV vaccine research will be presented including a multi-level intervention aimed at promoting HPV vaccination among adolescents receiving care in eight community health centers. In addition, ideas for methods of engaging community members in HPV vaccination efforts will be shared.

Brief biographies of these speakers can be found on the following page

Jose Zevallos, MD, MPH

Chari Cohen, PhD

Shannon Christy, PhD

Section Four: Community Outreach and Engagement of viral cancers - Section Chair: Monica Baskin, PhD

3:00 - 3:30 **Jose Zevallos, MD, MPH, Professor and Chairman, Department of Otolaryngology, the Eugene N. Myers, M.D., Professor, University of Pittsburgh School of Medicine**
"Barriers to HPV Vaccination in the US Military Community"

Biography: Dr. Zevallos is the Eugene N. Myers, M.D. Chair of Otolaryngology at the University of Pittsburgh Medical Center (UPMC). As Chair, he leads both the academic department and the 40-hospital UPMC otolaryngology service line. Prior to this position, he served as Division Chief of Head and Neck Surgery at Washington University School of Medicine and the Siteman Cancer Center in St. Louis, MO. Dr. Zevallos completed his residency in Otolaryngology/Head and Neck Surgery at Baylor College of Medicine followed by fellowship with Dr. Mark Urken at Mount Sinai Beth Israel in New York City. Dr. Zevallos is a nationally and internationally recognized expert on the epidemiology and genomics of HPV-associated oropharyngeal cancer. His clinical practice includes the full depth and breadth of head and neck surgical oncology, with a special emphasis on transoral robotic surgery and complex thyroid surgery. In addition to his clinical practice, Dr. Zevallos runs an NIH-funded translational research laboratory at UPMC Hillman Cancer Center and is the PI of a clinical trial focused on surgical treatment deintensification for HPV+ oropharyngeal cancer. He has published more than 130 peer-review articles on topics in head and neck cancer and is a frequently invited visiting professor and speaker throughout the United States, Europe, and Latin America. Dr. Zevallos is also an entrepreneur and inventor. He is the founder of a molecular diagnostics start-up company, Droplet Biosciences, based in Cambridge, MA, and the chief scientific advisor and co-inventor of novel soft robotics technology with Vine Medical (Santa Barbara, CA).

3:30 - 4:00 **Chari Cohen, PhD, President, Hepatitis B Foundation - VIRTUAL**
"Strategies for Community Engagement on Hepatitis B and Liver Cancer"

Biography: Dr. Cohen is President of the Hepatitis B Foundation. She conducts research and implements programs to reduce health disparities and improve health outcomes associated with hepatitis B, hepatitis D and liver cancer. Dr. Cohen is co-chair of the Hep B United coalition, co-founder and chair of Hep B United Philadelphia, co-founder and chair of CHIPO: Coalition Against Hepatitis for People of African Origin; co-chair of the Hep Free PA coalition. She is a member of the ICE-HBV steering committee, HepVu advisory committee, HBV Forum for Collaborative Research, and Patient Advocacy Group of the AASLD.

Dr. Cohen is Professor at the Baruch S. Blumberg Institute, and adjunct faculty for Geisinger Commonwealth School of Medicine. She received her DrPH in Community Health and Prevention from Drexel University and her MPH from Temple University. She will present on "Strategies for Community Engagement on Hepatitis B and Liver Cancer."

4:00 - 4:30 **Shannon M. Christy, PhD, Assistant Member, Department of Health Outcomes and Behavior, H. Lee Moffitt Cancer Center and Research Institute**
"Conducting Community-engaged HPV Vaccination Research"

Biography: Dr. Christy is an Assistant Member in the Department of Health Outcomes and Behavior, holds a secondary appointment in the Department of Gastrointestinal Oncology, and is a Member of the Center for Immunization and Infection Research in Cancer at Moffitt Cancer Center. She also holds a courtesy appointment of Assistant Professor in the Department of Oncologic Sciences at University of South Florida in the Morsani College of Medicine. Dr. Christy completed a PhD in Clinical Psychology at Indiana University-Purdue University Indianapolis. She also completed National Cancer Institute-funded R25 predoctoral and postdoctoral fellowships in Behavioral Oncology.

The overarching goals of Dr. Christy's research program are to improve public health and reduce cancer disparities. Her program of research includes examining the associations between psychosocial factors, health beliefs, affect, social determinants of health, patient-provider communication, and engagement in cancer preventive and early detection behaviors as well as designing and evaluating the efficacy of theory-based educational interventions aimed at promoting cancer preventive and early detection behaviors including, but not limited to, colorectal cancer screening, human papillomavirus (HPV) vaccination, and hepatitis C virus screening. Much of her work is conducted with multidisciplinary collaborators and utilizes community-engaged approaches.



Jose Zevallos, MD, MPH



Chari Cohen, PhD



Shannon Christy, PhD

Section Four: Community Outreach and Engagement of viral cancers - Section Chair: Monica Baskin, PhD (continued)

4:30 - 5:00 **Monica Baskin, PhD, Assistant Vice Chancellor for Community Health Equity, Health Sciences, Professor of Medicine, Division of Hematology/Oncology, School of Medicine, Associate Director of Community Outreach and Associate Director of Health Equity, UPMC Hillman Cancer Center**
"Community Engagement around Viruses and Vaccines: Who, what, when and why?"

The value of community engagement in research and public health practice has received more prominent attention in the wake of mandated expectations of NCI-designated cancer centers and the recent COVID-19 pandemic. Effective community engagement can lead to better research designs and study outcomes. In addition, authentic and sustained community engagement is associated with greater uptake of health promoting behaviors and implementation of practices and policies that promote health equity. To maximize the benefits of community engagement, it is critical to define the community (who), identify the course of action needed (what), determine the best timing for intervention (when), and clarify intentions of both the investigator(s) and the community (why). This presentation will review basic principles and theoretical models of community engagement and discuss the aforementioned questions (who, what, when, and why) in the context of research and public health practice related to cancer-related viruses and vaccines.

Biography: Dr. Baskin is a Professor of Medicine and Assistant Vice Chancellor for Community Health Equity at the University of Pittsburgh School of Medicine and Associate Director for Community Outreach and Engagement and Associate Director for Health Equity at the UPMC Hillman Cancer Center. She received her Bachelor of Arts in psychology and sociology from Emory University, and a Master of Science in community counseling and Ph.D. in counseling psychology from Georgia State University. She is a licensed psychologist whose research focuses on minority health and health disparities. Her research utilizes community-based participatory methods to better understand and address individual, family, and environmental factors associated with the prevention and control of cancer and other chronic diseases such as diabetes and heart disease. Over nearly two decades, her research program has been funded by the National Institutes of Health (NIH), Robert Wood Johnson Foundation (RWJF), and other regional and local foundations. Dr. Baskin is a past president of the Society of Behavioral Medicine (SBM) and currently serves as Chair of the World Cancer Research Fund/American Institute for Cancer Continuous Update Project Global Expert Committee on Cancer Incidence.

5:00 - 5:30 **Marty Griffin, Cancer survivor, investigative reporter and radio talk show host at KDKA-AM radio in Pittsburgh**
"Cancer survival" No CME credit awarded

5:30 - 5:40 **Closing Ceremony**

5:40 - 6:30 **Reception**



Monica Baskin, PhD



Marty Griffin

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