

Massachusetts Infectious Disease Society

2024 Maxwell Finland Awards for Research Fellow Excellence

BCH



Nicholas Venturelli MD

BIDMC



Leslie Blackshear MD

BMC (Adult)



Roshni Singh MD

BWH



David J Roach MD

MGH



Theodore Pak MD PhD

Tufts



Rahma Aldhaferi MD

UMass



Bibek Koirala MD



1) Nicholas Venturelli MD, Boston Children's Hospital (Pediatric ID)

Dr. Venturelli is a pediatrician and researcher with an interest in adolescent health and education. After completing his pediatrics residency at Comer Children's Hospital at the University of Chicago, he joined Boston Children's Hospital as a pediatric infectious disease fellow. He also was accepted to the Pediatric Health Services Research Fellowship, where he is pursuing a Master of Public Health in Clinical Effectiveness while studying HIV/STI prevention among adolescents. His current research utilizes large health insurance claims databases to examine the prevalence of pre-exposure prophylaxis (PrEP) prescriptions, identifying demographic and clinical factors influencing its prescription. In the future, he looks forward to expanding his work into qualitative and implementation science approaches to advance access to sexual health for adolescents and young adults.

2) Leslie Blackshear, MD, Beth Israel Deaconess Medical Center

Dr. Blackshear is conducting a retrospective observational study assessing the impact of an electronic medical record-mediated intervention on blood culture utilization in the setting of a national blood culture bottle shortage. The project also aims to assess the impact of this intervention on cases of hospital-onset bacteremia. In addition to her research, she is focusing on developing skills in antimicrobial stewardship.

3) Roshni Singh MD, Boston Medical Center

Dr. Singh completed a study entitled "Hepatitis C Virus Screening in Pregnant and Non-pregnant Women After Universal Screening Guidelines". In this study, she set out to determine if HCV screening differed among pregnant and non-pregnant women after the 2020 updated CDC and USPSTF guidelines for universal screening and specifically screening with each pregnancy. Using the TriNetx database to obtain incident screening data from 2014-2022, she found a statistically significant slope increase higher for pregnant individuals post-guidance update as compared to that for non-pregnant women, but overall suboptimal screening in both pregnant and non-pregnant women.

4) David J Roach, MD, Brigham & Women's Hospital

Dr. Roach's research interest lies in using techniques in bacterial genomics to better understand important global pathogens such as *Klebsiella pneumoniae*. He also is developing novel gene-based diagnostic platforms to rapidly and cheaply detect bacterial infections of the bloodstream and to characterize their resistance patterns. His goal is to develop the next generation of bacterial diagnostics that are compatible with low-resource environments around the world, as these are the areas most heavily impacted by bacterial infections. Clinically, he is

interested in general infectious disease, the management of complex bloodstream infections, and how decision making is impacted with emerging diagnostics.

5) Theodore Pak, MD, PhD, Massachusetts General Hospital

Dr. Pak is an infectious diseases physician-scientist at Massachusetts General Hospital conducting research on how artificial intelligence methods can enhance the analysis of electronic health records for patients with high-impact infectious diseases. His experiences working as a medical resident and infectious diseases fellow throughout the COVID-19 pandemic sparked his interest in investigating the efficacy of respiratory virus infection control interventions, the associations between antibiotic treatments and sepsis outcomes, and the use of machine learning to improve retrospective cohort analyses. Dr. Pak is currently working on a K08-funded project that uses large language models to extract presenting symptoms, healthcare exposures, and other risk factors from the clinical notes for >100k sepsis patients, with the aim of discovering new sepsis phenotypes identifying who is most likely to benefit from either narrow- or broad-spectrum initial antibiotics..

6) Rahma Aldhaferi, MD, Tufts Medical Center

Dr. Rahma Aldhaferi is a dedicated Infectious Diseases fellow at Tufts Medical Center in Boston, MA, currently in her second year of fellowship. She completed her Internal Medicine Residency at George Washington University and is pursuing a Master's degree in Clinical and Translational Science from Tufts University alongside her fellowship training. Dr. Aldhaferi's research focuses on leveraging artificial intelligence (AI) to identify missed opportunities for patient linkage to PrEP (pre-exposure prophylaxis) care during emergency room visits. Her ultimate goal is to enhance HIV prevention efforts, particularly for underserved and at-risk populations, contributing to equitable healthcare access and improved public health outcomes.

7) Bibek Koirala, MD, UMass Memorial Medical Center

Dr. Bibek Koirala is currently an infectious disease fellow at the University of Massachusetts Chan Medical School. As part of his research portfolio, he conducted a retrospective cohort study at UMass Memorial Medical Center to assess the clinical outcomes associated with the early versus delayed initiation of combination therapy involving daptomycin and ceftaroline in patients with persistent MRSA bacteremia. With the study successfully completed, Dr. Koirala aims to further augment the sample size in order to enhance the statistical power and generalizability of the findings. In addition, he is actively engaged in retrospective analyses of community-acquired respiratory viral infections, focusing on their epidemiology, coinfection rates, risk factors, and clinical outcomes. His clinical and research interests encompass antimicrobial resistance, respiratory viral infections, and tuberculosis. Following the completion of his fellowship, Dr. Koirala aspires to pursue an academic career in the field of infectious diseases.