ARLG
Antibacterial Resistance Leadership Group

July 2024
Q3 Newsletter

Welcome to the ARLG Newsletter! Here, you will receive important updates from ARLG regarding recent events, grants, publications, and the committees that help us work toward our mission: to prioritize, design, and execute clinical research that will impact the prevention, diagnosis, and treatment of infections caused by antibiotic-resistant bacteria.

Get Involved with ARLG

ARLG continuously accepts proposals for clinical studies designed to prevent, diagnose, treat, or eradicate antibiotic-resistant bacterial pathogens. We also award grants and fellowships to qualified investigators. If you are interested in getting involved with ARLG, apply now or contact us for more information.

Submit a Proposal

Contact Us

News

GENO-STELLAR™: An Interview with Blake Hanson, PhD

Blake Hanson, Ph.D., serves as the Principal Investigator for the GENO-STELLAR™ project. In his role with the Antibacterial Resistance Leadership Group (ARLG), he has contributed to the sequencing and analysis of bacterial genomes for the CRACKLE-2, SNAP, and POP projects. As an ARLG Trialist in Training, Hanson has received exceptional mentorship, which has significantly impacted his career and laid the foundation for his recent R01 submission to advance GENO-STELLAR.

GENO-STELLAR is a free web-based tool designed to analyze *Klebsiella pneumoniae* genomes by comparing user-uploaded data to a curated set of isolates from the ARLG CRACKLE-2 study. It provides molecular epidemiology characterizations and antibacterial resistance information, aiding clinicians in guiding antibiotic selection and predicting patient outcomes. Unique in its integration of high-quality genome assemblies, antibacterial susceptibility data, and clinical data, GENO-STELLAR is continuously improving based on user feedback. Future developments include expanding support to other pathogens, predictive modeling of antibacterial susceptibility, and better integration with clinical systems, aiming to enhance its role in managing multi-drug resistant bacterial infections.

Read More

ARLG Spotlight - Publications Manager, Brooke Walker, MS

Brooke Walker, MS has been the ARLG Publications Manager since June 2023. Her multi-faceted role includes overseeing compliance with ARLG's Publications Policy and NIH's Public Access Policy, facilitating reviews, tracking statuses, generating reports for ARLG and NIH leadership, and editing and submitting ARLG journal supplements. Brooke started working at DCRI in April 2021 and began focusing on ARLG publications in the Summer of 2023. Since then, Brooke has worked with ARLG leadership, investigators, and reviewers to ensure research is published according to ARLG's high standards. Brooke also recently helped with the editing and submission of the ARLG journal supplement "The Antibacterial Resistance Leadership Group (ARLG): Innovation and Evolutionn" published in *Clinical Infectious Diseases*.

Read more

ARLG Spotlight - Infectious Diseases Fellow Natalie Mackow, MD

Natalie Mackow, MD, an Infectious Diseases Fellow at the University of North Carolina School of Medicine, was awarded an ARLG fellowship in 2023. Under the

mentorship of Dr. David van Duin, Dr. Mackow has engaged in projects within the Multi-Drug Resistant Organism (MDRO) network.

Her primary research focuses on redefining anaerobic antibiotic coverage and its impact on patient outcomes. Using retrospective hospital data, Dr. Mackow is evaluating the relationship between anaerobic antibiotic exposure and subsequent infections with MDROs, aiming to inform antibacterial therapy practices for patients with severe burns and other critically ill populations. This research is crucial as infection is a leading cause of death among burn patients, who face prolonged hospital stays and frequent antibiotic exposures.

The ARLG fellowship has been pivotal for Dr. Mackow, providing protected research time, collaboration opportunities, and essential training in biostatistics, data science, and epidemiology through a Master's program at UNC. This support has facilitated her growth as an independent investigator in the field of antibacterial resistance.

Read more

Events

ESCMID Global 2024 Recap

The ESCMID Global 2024 conference, formerly known as ECCMID, took place from April 27-30 in Barcelona, Spain. The conference brought together infectious disease researchers from across the globe, including many members of the ARLG Network, for scientific education, collaboration, and the exchange of ideas.

One of the conference highlights was a presentation by Dr. Nicholas A. Turner, MD, who unveiled findings from the **D**albavancin as an **O**ption for **T**reatment of ***S****taphylococcus aureus* Bacteremia (DOTS) study. Dr. Turner reported that Dalbavancin is non-inferior to the standard of care (SOC) therapy for treating complicated *Staphylococcus aureus* bacteremia, including right-sided infective endocarditis. The primary outcome, measured by the Desirability of Outcome Ranking (DOOR) at day 70, showed promising results with Dalbavancin administered in two doses of 1500 mg on days 1 and 8.

The event also featured a poster presentation by Felicia Ruffin, PhD, MSN, on the **R**acial

DisparitiEs in CarbaPenem-Resistant Bacteria: EpidemiOlogy and OutComEs of US PatientS (REPROCESS) study, which explores the outcomes of Black women hospitalized in the US with carbapenem-resistant Enterobacterales bloodstream infections. This study utilized and analyzed data from three ARLG-funded observational studies, SNAP, CRACKLE-2, and POP, to identify factors associated with differences in outcomes among Black and White patients with multi-drug resistant gram-negative infections.

Dr. Lee Gottesdiener, MD presented another notable poster showcasing the Prospective Observational *Pseudomonas* study - Multi-Drug Resistant Organism (POP-MDRO) study. POP-MDRO uses the master MDRO protocol for prospective, multicenter, observational cohort studies to provide detailed clinical and microbiologic data in carbapenem-resistant *P. aeruginosa* (CRPA) pulmonary and bloodstream infections in hospitalized patients to inform future interventional and diagnostic studies.

All sessions from ESCMID Global 2024 will be available on the event's online platform until October 30, 2024, for registered attendees.

For more details, visit the ARLG studies page to stay updated on the studies featured at ECSMID Global 2024 and other ongoing research.

IDWeek 2024

Mark your calendars for IDWeek 2024 taking place in Los Angeles, California, from October 16-19, 2024. This annual meeting brings together the Infectious Diseases Society of America, the Society for Healthcare Epidemiology of America, the HIV Medicine Association, the Pediatric Infectious Diseases Society, and the Society of Infectious Diseases Pharmacists for the common goal of advancing infectious disease research. It's the leading event where infectious disease health professionals can meet to share knowledge, build connections, and enhance their skills, all with the goal of advancing patient care and public health.

Register now: IDWeek 2024 Registration

The late-breaker abstract submission site for IDWeek 2024 is now open. These abstracts are highly competitive and must contain novel, cutting-edge information. Submit your abstract online by **August 14 at 11:59 p.m. ET**. Note that retrospective studies will not be considered.

Submit a late-breaker abstract

We look forward to seeing you there!

Study Milestones

View recent ARLG study updates.

Innovations QoL	Quality of life (QoL) assessments in studies of patients undergoing treatment for intra-	Manuscript in Progress

abdominal infections, complicated urinary tract infections, skin and skin structure infections, and hospital-acquired or ventilator-associated bacterial pneumonia.

REPROCESS	**R**acial Dispariti**E**s in Carba**P**enem-**R**esistant Bacteria: Epidemi**O**logy and Out**C**om**E**s of U**S** Patient**S**	Manuscript in Progress

Go to the ARLG Studies page for more milestones and updates!

Learn More

New Publications

View the following recent ARLG publications.

Hareza DA, Cosgrove SE, Simner PJ, Harris AD, Bergman Y, Conzemius R, Jacobs E, Beisken S, Tamma PD for the Antibacterial Resistance Leadership Group; Is Carbapenem Therapy Necessary for the Treatment of Non-CTX-M Extended-Spectrum β-Lactamase-Producing Enterobacterales Bloodstream Infections?; Clin Infect Dis. 2024 May 15;78(5):1103-1110. doi: 10.1093/cid/ciad703.

Weston G, Giri A, Komarow L, Ge L, Baum KR, Abbenante E, Gallagher JC, Jacob JT, Kaye KS, Kim AC, Huskins WC, Zervos M, Herc E, Patel R, van Duin D, Doi Y; Clinical Outcomes in Patients Infected with Ertapenem-Only-Resistant Enterobacterales versus Multi-Carbapenem-Resistant Enterobacterales; J Antimicrob Chemother. Published online June 12, 2024. doi:10.1093/jac/dkae186.