

To prioritize, design and execute clinical research that will reduce the public health threat of antibacterial resistance

Antibacterial Resistance Leadership Group (ARLG) Update

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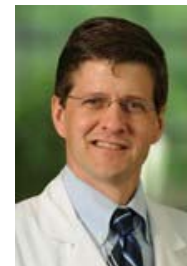
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ARLG Executive Committee

Chair: Vance Fowler

The ARLG-EC serves as the main governing body of the network and is responsible for overseeing all ARLG activities. The EC, which includes key colleagues at NIAID, provides the final determination on scientific priorities and project, seed grant and fellow selection.



Vance Fowler

ARLG Steering Committee

Chair: Chip Chambers

The SC advises the ARLG-EC on scientific strategy, direction and individual project selection and overall prioritization. This is informed by a number of subcommittees and special emphasis panels:



Chip Chambers

Subcommittee/Panel	Chair
Gram Negative Bacteria	Brad Spellberg
Stewardship and Infection Prevention	Ebbing Lautenbach
Gram Positive	Sara Cosgrove
Diagnostics and Devices	Robin Patel
Special Populations	Melinda Pettigrew
Pharmacokinetic	Keith Rodvold
Pediatrics	Robert Daum

Leadership and Operations Center

Directors: Chip Chambers (Scientific Agenda), Vance Fowler (Operations)

The LOC is responsible for the development, feasibility assessment and operational aspects needed to implement and complete the ARLG projects. The LOC is primarily housed at Duke Clinical Research Institute (DCRI) and is overseen by the ARLG Program Leader: Dr. Heather Cross.



Heather Cross

Laboratory Center

Directors: Barry Kreiswirth & Robert Bonomo

The LC consists of a Scientific Component and a Technical Component. The Scientific Component is led by Drs. Barry Kreiswirth at Rutgers and Robert Bonomo at Case Western Reserve University. This component has overall responsibility for establishing an efficient LC for protocol development and conduct of ARLG approved studies.

The Technical Component consists of the DCRI Advanced Biomarkers Group, Public Health Research Institute, LabCorp and the ARLG Laboratory Consortium. This component provides the laboratory services of the ARLG including standard microbiological studies (e.g. organism identification and susceptibility testing), biobanking and establishment of specimen repositories, laboratory support for antibacterial drug assays for PK/PD analyses and studies, consultative services and access to specialized assays of laboratory studies through the ARLG Laboratory Consortium or external sources.



Robert Bonomo



Barry Kreiswirth

For more information about the ARLG, its leaders and its current projects, please visit arl.org

The Laboratory Center will begin solicitations for strains to include in the ARLG Virtual Biorepository this Quarter.

The Virtual Biorepository will serve as a rich resource for investigators wanting to conduct studies as part of the ARLG.

Statistical and Data Management Center

Director: Scott Evans

The SDMC is responsible for statistical and central data management activities of the ARLG projects. It supports the ARLG research agenda by establishing an infrastructure to facilitate the efficient and optimal design, conduct, data monitoring, analyses and reporting of high-quality clinical research studies. The SDMC has a central role in standardizing and harmonizing statistical and data management across the ARLG studies, sites and its associated networks. The SDMC is active in all stages of ARLG projects; feasibility reviews, protocol development, data collection instruments, creation of data and statistical monitoring plans, statistical analysis and final reporting. The SDMC consists of a Statistical and Data Analysis Center (SDAC) at the Harvard School of Public Health and a Data Management Center (DMC) at the DCRI.



Scott Evans

ARLG Project Spotlight



Rapid Gene Detection of MDR GNB to Direct and Improve Patient Outcomes (PRIMERS)
Principal Investigators: Barry Kreiswirth and Robert Bonomo

The goal of PRIMERS is to identify an efficient, cost-effective platform with which to discriminate resistant and susceptible antibiotics by identifying and genotyping the *bla* genes of multidrug resistant Gram negative bacterial isolates. The ultimate goal of this project is to identify the best platform for implementation in clinical practice.

To accomplish this goal, the PRIMERS I study was conducted in which 100 isolates were compared across four platforms. Results were compared to resistance and susceptibility information obtained from MIC data and the two best performing platforms were identified. These two platforms, the Abbot PLEX-ID and the MB-PCR are now being examined in PRIMERS II with a selection of 200 isolates.

Current ARLG Projects

Name	Title	PI
CRACKLE	Carbapenem-resistant Klebsiella pneumoniae in hospitalized patients	David van Duin
DICON	Antimicrobial Stewardship Effectiveness in the Community Hospital Setting	Dev Anderson
ZEST	A Phase 2, multi-center, randomized, double-blind study to assess safety, tolerability and effectiveness of study drug in the treatment of patients with complicated UTIs	Brad Spellberg
NICU_AR	Data mining antibacterial resistance studies in NICU patients	Brian Smith

ARLG Fellowship and ESI Recipient

Julia Messina, MD MSc was selected to receive the first ARLG Fellowship. She is currently a fellow in Infectious Diseases at Duke University Hospital.

Ritu Banerjee, MD PhD of the Mayo Clinic was selected to receive ESI funding for her project, *Clinical and economic impact of rapid identification and susceptibility testing of pathogens growing in blood culture bottles*. Dr. Robin Patel will serve as her mentor.



Julia Messina



Ritu Banerjee

Publications

Andrea M. Hujer, Kristine M. Hujer, Thomas Hall, Christine Marzan, Ranga Sampath, David J. Ecker, T. Nicholas Domitrovic, Liang Chen, Federico Perez, Barry Kreiswirth, Vance Fowler, Henry F. Chambers, Robert A. Bonomo and The Antibacterial Resistance Leadership Group (ARLG). **Using Molecular Diagnostics to Decipher the Genetic Basis of Antibiotic Resistance in Clinical Isolates of Gram-Negative Bacteria**. [Abstract 42292]. Poster presentation at IDWeek 2013. San Francisco, CA; October 2-6, 2013.

Jessica E. Ericson, Christoph P. Hornik, Joshua Thaden, Reese H. Clark, Heather Cross, Vance G. Fowler, Daniel K. Benjamin Jr, P. Brian Smith for the Antibacterial Resistance Leadership Group. **Empirical vancomycin therapy for coagulase-negative staphylococcal sepsis in infants**. Submitted to the Pediatric Academic Societies (PAS) Meeting 2014