Welcome to the 2018 Q3 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 reduce the public health threat of antibacterial resistance.

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.

ARLG at IDWeek 2018™

The ARLG is pleased to be a part of IDWeek 2018™.

The ARLG will be featured in a Meet-the-Professor Session on Saturday, October 6, 7:15 a.m.– 8:15 a.m. in Room W2002. Updates from the ARLG session will focus on defining elements of a pragmatic clinical trial, discussing how host gene expression-based diagnostics distinguish bacterial and viral infection, and highlighting three future challenges of antimicrobial drug resistance. It will include case studies from research supported by ARLG as well as details on how to get involved with the group.

You are invited to the Duke Clinical Research Institute (DCRI) reception on Friday, October 5, 6:00 p.m. – 8:30 p.m. (see details below). You can also connect with the ARLG leaders, Vance Fowler, Chip Chambers, and Heather Cross, at the DCRI booth #501 on Saturday, October 6, 11:00 a.m. – 1:00 p.m.

Don’t miss out on learning what’s new from the ARLG and connecting with colleagues at IDWeek 2018™. Check out these featured ARLG sessions and a comprehensive list of all sessions.

News and Upcoming Events

Duke Clinical Research Institute Reception during IDWeek 2018™

Friday, October 5, 2018
6:00 p.m.-8:30 p.m. PST
Hilton San Francisco Union Square
Vista Lounge - 45th Floor
333 O'Farrell Street

Join your ARLG and DCRI colleagues for a private reception.
Are you presenting at IDWeek 2018tm or an upcoming conference on an ARLG study?

Let us know!

Contact Us

What’s New from ARLG?

Check out the following new materials. Feel free to download, print, and share the fact sheets with your colleagues and the summary of results with your patients.

ARLG Fact Sheet

ARLG Laboratory Center Fact Sheet

PROOF Summary of Results

RADICAL Summary of Results

Update from the Gram-Negative Committee

Yohei Doi, MD, PhD
Division of Infectious Diseases
University of Pittsburgh School of Medicine
ARLG Gram-Negative Committee Chair

The Gram-Negative Committee (GNC) strives to advance knowledge of challenging resistant Gram-negative infections and enhance patient outcomes. Dr. Yohei Doi, chair of the committee, provides thoughts and insights on contributions to date and future plans.

The GNC accomplishes its goals, often in collaboration with other committees and special emphasis panels, through:

1. Conceiving and designing clinical research studies, and
2. Reviewing and prioritizing clinical research protocols relevant to Gram-negative infections that are submitted to the ARLG Steering Committee.

Since its inception, the GNC reviewed and prioritized proposals have led to 21 ARLG studies addressing unmet needs in Gram-negative bacterial infections.

Implemented studies range from observational cohorts (e.g. CRACKLE, CREST), to those addressing pharmacokinetics (e.g. PROOF, ACUMIN), diagnostics (e.g. RAPIDS-GN, PRIMERS I-IV) and a randomized strategy trial (FOCUS). These studies have led to 46 manuscripts in peer-review journals and 40 abstract presentations at national and international scientific conferences.

Our committee is also going global as part of
ARLG's expanding international presence. The GNC has members from the U.S., Canada, Argentina, Israel, and Australia. We also provide mentoring opportunities to ARLG mentees whose research interests include Gram-negative infections. These junior investigators rotate through the committee and gain valuable experience through discussions and mentorship opportunities.

Moving forward, we plan to continue to generate and prioritize clinical studies involving resistant Gram-negative bacterial infections that will address knowledge gaps, inform the professional and lay communities, and ultimately advance clinical care.

ARLG SPOTLIGHT

Ephraim Tsalik, MD, PhD
Duke University Medical Center
Associate Director of Diagnostics and MASTERMIND
(MASTER protocol for evaluating Multiple Infection Diagnostics)

About my role in ARLG

I have two primary roles in ARLG: 1) as a contributor and 2) as recipient. As a recipient, I am the principal investigator for the Rapid Diagnostics in Categorizing Acute Lung Infections (RADICAL) study. ARLG has been a supporter of RADICAL from the project’s initial phase. We are currently in phase two of three expected phases. RADICAL-I focused on the development of a platform capable of measuring gene expression in a clinically meaningful way. RADICAL-II is testing the platform in a heterogeneous population with considerations for age, ethnicity, co-morbidities, and geographic location. We envision RADICAL-III as a clinical-utility study where real-time results will be used to determine the clinical value of the test in discriminating bacterial and viral infections. RADICAL results will be presented at IDWeek 2018 and ARLG created this summary of study results geared towards the public reader.

As a contributor to ARLG, I am the associate director of the ARLG Laboratory Center, where I work with other ARLG leaders. Our goal is to interface with industry, investigators, and other academic partners to leverage ARLG resources that include:

- Intellectual access to international thought leaders,
- Microbiological access to clinically well-characterized Gram-positive and Gram-negative bacteria through the Virtual Biorepository (VB) Catalogue, and
- Financial support of studies that advance or evaluate diagnostics for antibacterial resistance.

My work in diagnostics led to an interest in the MASTERMIND (MASTER protocol for evaluating Multiple Infection Diagnostics) concept that is based on the following premise: One single participant can provide information and samples for the simultaneous evaluation of multiple diagnostics. This concept, similar to platform studies used in oncology, represents the first standardized approach in the development of diagnostics.

An example of the MASTERMIND protocol in action is the MASTER-GC study. MASTER-GC evaluated three different platforms for the detection of extragenital gonorrhea and chlamydia infections. One of our biggest achievements of this study was the collaboration of three companies, who are typically competitors in this space, to work together towards one common goal: Use the study results to support their own FDA application for these new indications.

Extragenital infections are infrequent enough that no one company would be motivated to fund an individual research and diagnostic program; however, the companies agreed to participate knowing that ARLG was providing funding, resources, and support. In the end, the companies were happy with their participation and the study has the potential to be a win-win situation for all parties involved.

The next MASTERMIND study will focus on blood-stream infections. We are interested in evaluating diagnostics that detect pathogens directly from a blood sample, without the need
Impact of ARLG Research Funding to my Career

My career has always focused on the type of questions that we are investigating in RADICAL and MASTERMIND. ARLG’s support has been instrumental for the development and advancement of these studies by providing financial security that allows me to focus on the work and resources to hire and support research staff. In addition, I have received recognition in the institutional and scientific communities for this new and evolving approach to diagnosing illness that has the potential to answer larger questions in science and medicine.

Benefits of ARLG

Personally, what I have appreciated most from ARLG is their visionary and innovative approach to combat antimicrobial resistance. When I started out in my career researching new diagnostic approaches for host-gene expression, I often encountered skepticism and received many negative responses from conventional funding sources. However, ARLG recognizes that we cannot continue with the same approach and expect a different solution. I really want to express my gratitude to ARLG for their willingness to take a risk on an outlandish idea that has turned into an exciting and a promising RADICAL change to clinical practice.

Awards and Achievements

2018 SHEA William Jarvis Award

Maria Souli MD. ARLG project leader, will be the recipient of the 2018 SHEA William Jarvis Award for her article titled “Reduction of Environmental Contamination with Multidrug-Resistant Bacteria by Copper-Alloy Coating of Surfaces in a Highly Endemic Setting.” ICHE (2017), 38(7): 765-771.

The award aims to recognize the most outstanding international clinical study published in Infection Control and Hospital Epidemiology (ICHE) in 2017.

The award will be presented during IDWeek 2018™, October 5, at 4:30 p.m. in North Hall D, Moscone Center.

Recent Publications

Check out the following recent ARLG publications since March 1, 2018.


