ARLG
Antibacterial Resistance Leadership Group

October 2021
Q4 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

Access IDWeek 2021

On September 29, the annual IDWeek conference marked its 10th anniversary by kicking off a virtual program chock full of exciting presentations from ARLG experts and many other internationally renowned leaders in infectious diseases.

The event is over, but luckily, you can catch sessions, abstracts, or exhibits you missed with on-demand access now through December 31. For new attendees, there is still time to register and view content.

Don't miss your last opportunity to see ARLG's top leaders discuss the latest AMR topics. Use the IDWeek Guide to plan your on-demand sessions today.

Learn more

ARLG Spotlight: Sixto Manuel Leal Jr.

About my role in the ARLG

I received an ARLG Early Stage Investigator Seed Grant to develop a novel diagnostic test for *C. difficile*. As an ARLG junior faculty member, I have been able to connect and collaborate with new colleagues in and outside of my institution, which has been essential for the success of my current project and will continue to be beneficial in the future. ARLG support also enabled the recruitment of expert clinical research nurses to assist with sample collection as well as the lab staff and reagents needed to execute this research.

Sixto Manuel Leal Jr, MD, PhD
Director of Clinical Microbiology
University of Alabama at Birmingham

About my research

With support from the ARLG, my team has developed and validated a novel multiplex RT-PCR assay that incorporates four distinct *C. difficile*-specific targets and an intrinsic control that detects toxin gene expression with 2000-fold greater sensitivity than current methods.

Impact of ARLG mentoring and funding on my career

The ARLG Early Stage Investigator Seed Grant supports the success of individuals seeking to execute translational research projects. It allows investigators to tap into global expertise and find the right contacts to move projects forward. I highly recommended that junior trainees with solid research ideas and motivation actively engage the ARLG to help kick start their careers in antimicrobial resistance research.

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2022 Bartlett ARLG Fellowship Deadline

The **December 1 deadline** to apply for the Dr. John G. Bartlett ARLG Fellowship is just around the corner.

This two-year, full salary-funded opportunity includes mentoring from ARLG senior leaders as well as training in epidemiology or statistics from the Duke University School of Medicine Clinical Research Training Program or an equivalent program at another institution.

Fellows interested in training with leading infectious disease experts for a career in AMR research can get more information or apply at arlg.org/fellowships.

To help spread the word about this opportunity, please go to the fellowship resources page where you can find emails, banner images, an infographic and other content to help raise awareness.

Learn more

Spread the word

Apply for the Early Faculty Seedling Award Today!

Applications for the ARLG's newest opportunity, the Early Faculty Seedling Award, are now open! This award provides 50% of current salary support per year to conduct protected research for up to two years and up to $25,000 in direct costs for research over the two years.

Infectious disease fellows at the 4th or 5th year of fellowship are eligible to apply as well as individuals with an MD or non-MD PhD in any discipline with a faculty appointment of less than five years.

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News

Yale Appoints Melinda Pettigrew the Anna M. R. Lauder Professor of Epidemiology

Earlier this year, the Yale University School of Public Health (YSPH) selected Melinda Pettigrew, PhD, as the Anna M. R. Lauder Professor of Epidemiology. Dr. Pettigrew is the Chair of the ARLG Diversity Working Group and a member of the Laboratory Center Consortium Team.

Melinda Pettigrew, PhD

Read more

ECRAID Launches as the First European Clinical Research Network of Its Kind

The launch of a new European clinical trial network in September will aid in the battle to combat antimicrobial resistance by delivering rapid, high quality research studies. The European Clinical Research Alliance for Infectious Diseases (ECRAID) features a coordinated, single-point-of-access model that aims to streamline infectious diseases research, reduce costs, and accelerate medical advancements.

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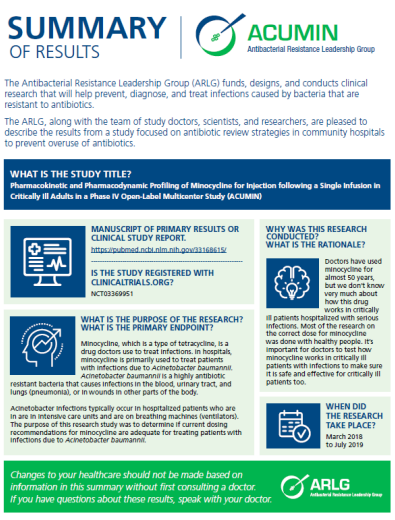
ACUMIN Study Summary Now Available!

A lay summary of results has been posted for the Pharmacokinetic and Pharmacodynamic Profiling of Minocycline for Injection following a Single Infusion in Critically Ill Adults in a Phase IV Open-Label Multicenter Study (ACUMIN).

The rate of infections with *Acinetobacter baumannii* bacteria is rising worldwide. The Centers for Disease Control (CDC) has called this bacteria an urgent public health threat. Although doctors use minocycline to treat patients with *Acinetobacter baumannii* infections, most research was done with healthy people. The purpose of the ACUMIN study is to learn more about the best dose of minocycline to help treat critically ill patients with serious infections.


SUMMARY OF RESULTS

ACUMIN
Antibacterial Resistance Leadership Group

The Antibacterial Resistance Leadership Group (ARLG) funds, designs, and conducts clinical research that will help prevent, diagnose, and treat infections caused by bacteria that are resistant to antibiotics.

The ARLG, along with the team of study doctors, scientists, and researchers, are pleased to describe the results from a study focused on antibiotic review strategies in community hospitals to prevent overuse of antibiotics.

WHAT IS THE STUDY TITLE?
Pharmacokinetic and Pharmacodynamic Profiling of Minocycline for Injection following a Single Infusion in Critically Ill Adults in a Phase IV Open-Label Multicenter Study (ACUMIN)

MANUSCRIPT OF PRIMARY RESULTS OR CLINICAL STUDY REPORT
https://pubmed.ncbi.nlm.nih.gov/33168615/

IS THE STUDY REGISTERED WITH CLINICALTRIALS.ORG?
NCT03369951

WHY WAS THIS RESEARCH CONDUCTED? WHAT IS THE RATIONALE?
Doctors have used minocycline for almost 50 years, but we don't know very much about how this drug works in critically ill patients hospitalized with serious infections. Most of the research on the correct dose for minocycline was done with healthy people. It's important for doctors to test how minocycline works in critically ill patients with infections to make sure it is safe and effective for critically ill patients too.

WHAT IS THE PURPOSE OF THE RESEARCH? WHAT IS THE PRIMARY ENDPOINT?
Minocycline, which is a type of tetracycline, is a drug doctors use to treat infections. In hospitals, minocycline is primarily used to treat patients with infections due to *Acinetobacter baumannii*. *Acinetobacter baumannii* is a highly antibiotic resistant bacteria that causes infections in the blood, urinary tract, and lungs (pneumonia), or in wounds in other parts of the body.

Acinetobacter infections typically occur in hospitalized patients who are in are in intensive care units and are on breathing machines (ventilators). The purpose of this research study was to determine if current dosing recommendations for minocycline are adequate for treating patients with infections due to *Acinetobacter baumannii*.

WHEN DID THE RESEARCH TAKE PLACE?
March 2018 to July 2019

Changes to your healthcare should not be made based on information in this summary without first consulting a doctor. If you have questions about these results, speak with your doctor.

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Study Milestones

View recent ARLG study updates.

FAST	**F**ast **A**ntibiotic **S**usceptibility **T**esting for gram-negative bacteremia	Start-up
RADICAL-3	**R**apid **D**iagnostic **i**n **C**ategorizing **A**cute **L**ung Infections	Study Design
MDRO: SHREC	MDRO: **S**tudy of **H**ighly **R**esistant **E**scherichia **c**oli	Data Analysis
PHAT	Isolation and characterization of lytic **PHA**ges that **T**arget MDR bacteria	Manuscript Submitted

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

Learn More

Recent Publications

View the following recent ARLG publications.

Mumma JM, Howard-Anderson J, Morgan J, Schink K, Wheatley MJ, Kraft C, Lane M, Kaufman N, Ayeni O, Brownsword EA, Jacob JT. Healthcare Worker Mental Models of Patient Care Tasks in the Context of Infection Prevention and Control. Infect Control Hosp Epidemiol. 2021 Sep 10;1-6. doi: 10.1017/ice.2021.368. Online ahead of print.

Patel R, Polage CR, Dien Bard J, May L, Lee F, Fabre V, Hayden MK, Doernberg SDB, Haake DA, Trautner BW, Grigoryan L, Tsalik EL, Hanson KE; on behalf of the Antibacterial Resistance Leadership Group and the Infectious Diseases Society of America. Envisioning Future UTI Diagnostics. Clin Infect Dis. 2021 Aug 31;ciab749. doi: 10.1093/cid/ciab749. Online ahead of print.

Mehta N, Wang T, Friedman-Moraco RJ, Carpentieri C, Mehta AK, Rouphael N, Dhere T, Larsen CP, Kraft CS, Woodworth MH. Fecal Microbiota Transplantation Donor Screening Updates and Research Gaps for Solid Organ Transplant Recipients. J Clin Microbiol. 2021 Jun 16;JCM0016121. doi: 10.1128/JCM.00161-21. Online ahead of print.

Wang R, Han JH, Lautenbach E, Tamma P, Thom K, Alby K, Blumberg EA, Bilker WB, Werzen A, Omorogbe J, Tolomeo P, Anesi JA. Clinical prediction tool for extended-spectrum beta-lactamase-producing enterobacterales as the etiology of a bloodstream infection in solid organ transplant recipients. Transpl Infect Dis. 2021 Mar 16;e13599. doi: 10.1111/tid.13599. Online ahead of print.

Yu C, Littleton S, Giroux N, Mathew R, Ding S, Kalnitsky J, Petzold EW, Ko ER, Tsalik EL, Sempowski GD, Denny TN, Burke TW, McClain MT, Woods CW, Shen X, Saban DR. MAIT Cell Responses Differ by Sex in COVID-19. Med (N Y). 2021 Jun 11;2(6):755-772.e5. doi: 10.1016/j.medj.2021.04.008. Epub 2021 Apr 13.