

# R&D | 2018

ARUP INSTITUTE FOR CLINICAL AND  
EXPERIMENTAL PATHOLOGY<sup>®</sup>

The research arm of ARUP Laboratories





## ARUP LABORATORIES

As a nonprofit, academic institution of the University of Utah and its Department of Pathology, ARUP believes in collaborating, sharing knowledge, and contributing to laboratory science in ways that benefit our clients and their patients.

Our test menu is one of the broadest in the industry, encompassing more than 3,000 tests, including highly specialized and esoteric assays. We offer comprehensive testing in the areas of genetics, molecular oncology, pediatrics, and pain management, among others.

ARUP's clients include many of the nation's university teaching hospitals and children's hospitals, as well as multihospital groups, major commercial laboratories, and group purchasing organizations. We do not compete with our clients for physician office business, choosing instead to support clients' existing test menus by offering highly complex assays and accompanying consultative support so clients can provide exceptional patient care in their local communities.

Offering analytics, consulting, and decision support services, ARUP provides clients with the utilization management tools necessary to prosper in this time of value-based care. Our UM+ program helps clients control utilization, reduce costs, and improve patient care. In addition, ARUP is a worldwide leader in innovative laboratory research and development, led by the efforts of the ARUP Institute for Clinical and Experimental Pathology®.

ARUP's reputation for quality is supported by our ability to meet or exceed the requirements of multiple regulatory and accrediting agencies and organizations. ARUP participates in the CAP laboratory accreditation program and has CLIA certification through the Centers of Medicare and Medicaid Services. In December 2016, ARUP earned accreditation to the ISO 15189:2012 standard under CAP.

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collaborating,  
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that provide  
the best value  
for the patient.  
Together,  
ARUP and  
its clients will  
improve patient  
care today and  
in the future.



**patients. answers. results.®**

A laboratory test is more than a number; it is a person,  
an answer, a diagnosis.®

ISO 15189  
**CAP**  
ACCREDITED  
COLLEGE of AMERICAN PATHOLOGISTS

## THE ARUP INSTITUTE FOR CLINICAL AND EXPERIMENTAL PATHOLOGY

Founded in 1996 by members of the Department of Pathology at the University of Utah School of Medicine, the ARUP Institute for Clinical and Experimental Pathology—the research arm of ARUP Laboratories—is at the forefront of innovative research and development, with a focus that represents the entire scope of lab medicine, including chemistry, immunology, infectious disease, and anatomic pathology.

The institute sponsors projects within four broad categories: creating new laboratory tests; improving current clinical laboratory tests; evaluating and critiquing tests, including alpha- and beta-site protocols; and conducting basic and clinical research projects. Research is conducted under protocols approved by the University of Utah Institutional Review Board (IRB) and other applicable regulations.

By using the research expertise of university-based scientists and the resources and acumen of ARUP, the institute's projects have been extremely effective in expanding the quantity, quality, efficiency, and sophistication of laboratory tests. To date, institute researchers have developed and validated approximately 1,500 new diagnostic tests, as well as adapted and validated commercially available tests for use by ARUP.

Additionally, hundreds of fellows and residents have been trained in programs developed by the R&D Institute. These professionals now hold scientific and administrative positions in leading institutions around the world.



ARUP has a professional staff of over 3,000 technical and administrative employees. ARUP's medical directors and consultants, all of whom hold MD and/or PhD degrees, are nationally and internationally recognized pathologists, subspecialty-qualified clinicians, and board-certified clinical scientists. As part of ARUP's academic mission, the institute's researchers and medical directors publish an average of 120 peer-reviewed publications each year. In addition, the R&D institute has more than 180 presentations annually at national and international organizations and scientific conventions.

The institute collaborates worldwide with companies to develop new tools and services for the improvement of patient care. Businesses large and small have benefited from ARUP's R&D expertise and CLIA certification. The institute's innovative and original research has resulted in patents administered through the University of Utah's Venture and Technology Commercialization Center.

With more than 50 technical sections, 50 medical directors, and 100 scientists, the ARUP Institute for Clinical and Experimental Pathology encompasses a wide range of interests covering the entire spectrum of laboratory medicine.

Staff expertise includes:

- Autoimmune disorders
- Clinical toxicology
- Cytopathology
- Endocrinology
- Flow cytometry
- GC/LC mass spectrometry/tandem mass spectrometry
- Hematopathology
- Cellular immunology and cytokine analyses
- Human and biochemical genetics
- Immunohematology
- Immunology and microbial serology
- Infectious diseases
- Laboratory automation
- Mass spectrometry
- Molecular diagnostics
- Multianalyte detection technologies
- Anatomic pathology
- Pharmacogenomics
- Next-generation sequencing
- Tumor markers

The institute is an excellent source of information for ARUP clients, who may contact medical directors directly through ARUP Client Services or ARUP's website at [www.aruplab.com/R&D](http://www.aruplab.com/R&D).

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## MISSION STATEMENT

The institute's mission is to be at the forefront of innovative  
RESEARCH and DEVELOPMENT in clinical laboratory medicine.

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# results

Most university-based research is driven by investigator initiative, which encourages originality and innovation but may hinder the rapid translation of research findings into practical clinical applications. In contrast, the ARUP Institute for Clinical and Experimental Pathology strives for a smooth translation of basic research into applied science and clinical assays.

This focused approach and responsiveness has led to new assays in all areas of laboratory medicine. Novel assays employing multianalyte technology have been developed to monitor tumor markers, therapeutic drugs, autoimmune/allergy inflammatory responses, and vitamin and nutritional status.

The institute has also facilitated the introduction of new instrumentation and approaches for analyzing genetic diseases, as well as the metabolic and immune status of patients.

Institute research projects are directed by departmental faculty members in conjunction with institute research scientists. Research proposals and progress are formally reviewed annually. This unique

combination of investigator-initiated, goal-oriented research has proven to be extremely effective in bringing new tests to market and improving existing assays, with the end result of improved patient care.

## Scientific Resource

The Institute for Clinical and Experimental Research shares papers, posters, and presentations from institute scientists on its website at [www.arup.utah.edu](http://www.arup.utah.edu). ARUP's medical directors and scientists present short topic videos to clarify test topics, as well as longer video lectures that can be viewed for free continuing education units.

ARUP's comprehensive Laboratory Test Directory, available on [www.aruplab.com](http://www.aruplab.com), contains links to ARUP Consult®, The Physician's Guide to Laboratory Test Selection and Interpretation, which can be found at [www.arupconsult.com](http://www.arupconsult.com). The site, available for no obligation or fee in mobile format, contains nearly 2,000 searchable lab tests categorized into disease-related topics and more than 65 algorithms to support clinical decision-making.

ARUP's website also includes test lists organized by specialty, including genetics, oncology, pediatrics, and pain management.

ARUP Connect™, ARUP's secure information portal, provides a suite of web-based tools to manage reference laboratory testing, including submitting patient orders, printing shipping labels, accessing test results, and downloading charts and enhanced reports.







[www.aruplab.com](http://www.aruplab.com) | [www.arupconsult.com](http://www.arupconsult.com)

**ARUP LABORATORIES**

500 Chipeta Way  
Salt Lake City, UT 84108-1221  
Phone: (800) 522-2787  
Fax: (801) 583-2712  
[www.aruplab.com](http://www.aruplab.com)

*ARUP is a nonprofit enterprise of the University of Utah  
and its Department of Pathology.*

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