About ARUP
About ARUP Laboratories

• ARUP is a nonprofit enterprise of the University of Utah and its Department of Pathology and offers more than 3,000 tests and test combinations.

• Performing 99 percent of its testing onsite, ARUP is highly standardized in its testing and provides extremely accurate results.

• ARUP’s business model and test-development efforts are driven by medical necessity rather than short-term financial gains.

• ARUP has some of the most stringent compliance standards and fastest turnaround times in the industry.

• ARUP doesn’t compete with its clients in physician offices.

• ARUP is uniquely positioned to help clients address total cost-of-care and improve net income.
Anatomic Pathology
Anatomic Pathology

• ARUP’s Anatomic Pathology division consists of more than 30 expert pathologists who provide a full range of consultative and diagnostic services, ranging from flow cytometry and molecular diagnostics to surgical pathology.

• Specialties include:
  ◦ Cytopathology
  ◦ Gastrointestinal pathology
  ◦ Hematopathology
  ◦ Immunohistochemistry
  ◦ Molecular oncology
  ◦ Neuropathology
  ◦ Pediatric pathology
  ◦ Renal pathology

www.aruplab.com/AP
ARUP Consult®
The Physician’s Guide
to Laboratory Test Selection
and Interpretation
ARUP Consult®

• ARUP Consult is a free laboratory test selection and decision-support tool designed for use by healthcare professionals.

• ARUP Consult features more than 2,000 lab tests categorized into disease-related topics with links to national guidelines and medical literature.

• Available on the web (www.arupconsult.com) and on your wireless-enabled device (m.arupconsult.com).

• Written and maintained by expert medical faculty and updated regularly.

www.arupconsult.com
ARUP Consultative Services
ARUP Consultative Services

Business Development Solutions
• Market and outreach opportunity assessment
• Pricing strategies and reimbursement analysis
• Strategic business planning
• Test-interval guidance

Laboratory Operations
• Insourcing opportunity evaluation
• Technical operations assessment

Utilization Management: UM+
• Comprehensive and sendout only test-utilization dashboards
• Peer-to-peer benchmarking
• Test-interval guidance
• Decision support via ARUP Consult® and ARUP Gateway™

www.aruplab.com/consulting
ARUP Gateway®
Information management and integration
ARUP Gateway®

- Access to a comprehensive test menu
- Guidance for laboratory test selection and interpretation
- Up-to-date test information
- Detailed information on collection requirements, transportation, reference ranges, and related test documents and information
- Additional laboratory information for staff and patients

www.aruplab.com/suite/gateway
ARUP Institute for Clinical and Experimental Pathology

• The ARUP Institute for Clinical and Experimental Pathology seeks to expand the quantity, quality, and utility of laboratory medicine.

• Since its inception in 1996, the institute has continued to develop and validate new tests and improve methodology.

• University of Utah faculty and ARUP research scientists share their knowledge and experience with the medical community through professional society presentations and original peer-reviewed research.

www.aruplab.com/R&D
ARUP Institute for Learning
ARUP Institute for Learning

• The ARUP Institute for Learning provides reputable educational opportunities and resources to ARUP clients and laboratory professionals.

• The Institute for Learning delivers education, training, consultation, and resources by drawing on the knowledge of medical experts at ARUP.

• The Institute for Learning offers physicians and laboratory professionals a wide variety of opportunities to earn CME/SAM, P.A.C.E.*, and Florida continuing education credits through live, web-delivered, and archived lectures, industry conferences, professional publications, and on-site training, most of which are presented at no charge to participants.

www.aruplab.com/education
ARUP Strengths
ARUP Strengths

• Broad test menu, including next-generation sequencing.

• Conservative testing practices; we do not promote unnecessary tests or inappropriate interpretations.

• Academic focus; ARUP spends $12 million annually on research and development.

• 24/7 operation and fast turnaround time.

• Established couriers and shipping policies.

• Renowned pathologists, medical directors, and genetic counselors who serve as experts and are available to answer clients’ questions.

• Client outreach support.

www.aruplab.com
Clinical
Clinical

• ARUP’s esoteric menu includes more than 3,000 tests and test combinations.

• Medical consultation is provided by some of the most highly regarded medical professionals in the industry.

• ARUP’s comprehensive clinical and anatomic pathology test menu includes the areas of allergy and immunology, chemistry, genetics, endocrinology, fetal risk assessment, genetics, hematology, hepatitis and HIV, infectious diseases, neurology, oncology, and pathology.

• ARUP performs 99 percent of all testing on-site, operating 24 hours per day, seven days a week.

www.aruplab.com/about
Newborn Drug Testing
Newborn Drug Testing

• ARUP offers two test options for newborn drug testing: meconium and umbilical cord tissue.

• High-specificity mass spectrometry technology

• Performed 7 days/week

• Professional consultation available from ARUP’s toxicology medical directors

• Enhanced report available for umbilical cord testing

www.aruplab.com/newborn-drug-testing
Genetics
Genetics

• ARUP’s lab-based genetic counselors are available for consultation with clinicians on test orders and results interpretation.

• Our full-service genetics laboratory menu includes:
  ◦ Molecular genetic testing for single-gene disorders, familial cancer syndromes, and pharmacogenetics.
  ◦ Exome sequencing with symptom-guided analysis and a growing menu of next-generation sequencing panels.
  ◦ Biochemical genetic testing for inborn errors of metabolism.
  ◦ Chromosome analysis and FISH on prenatal, postnatal, and oncology samples.

• Cytogenomic SNP microarray on multiple sample types, including blood, buccal swab, POC, and bone marrow.

www.aruplab.com/genetics
High-Resolution Hybrid Urine Drug Screen
High-Resolution Hybrid Urine Drug Screen

- A single urine drug test combines:
  - **Comprehensive** mass spectrometry-based screen with **high-resolution results**
  - 37 compounds detected individually:
    - 19 opioids
    - 11 benzodiazepines, including zolpidem
    - 7 amphetamine-like stimulants, including ritalinic acid (metabolite of methylphenidate) and phentermine
  - **High-performance** immunoassays to detect 9 additional drug classes, including cocaine, marijuana, alcohol, phencyclidine (PCP), carisoprodol/meprobamate, methadone, propoxyphene, tramadol, and barbiturates
  - **Creatinine**, to evaluate quality of the specimen
- Reduces the need for confirmation or other secondary tests, **saving money and time**

www.aruplab.com/pain-management/hybrid-screen
Oncology
Oncology

The ARUP Molecular Oncology Laboratory offers a broad menu of testing and consultative services in oncology.

• Specimen types:
  ◦ Paraffinized tissue (slides and/or blocks)
  ◦ Fresh tissue
  ◦ Fresh-frozen tissue
  ◦ Bone marrow
  ◦ Whole blood and blood products
  ◦ Urine

• Methodologies:
  ◦ IHC
  ◦ FISH
  ◦ PCR
  ◦ RT-PCR
  ◦ Flow cytometry
  ◦ Sequencing
  ◦ Pyrosequencing

• Next-generation sequencing
• Fragment analysis

www.aruplab.com/oncology
Pain Management
Pain Management

• ARUP Pain Management does not promote unnecessary testing or inappropriate interpretation, focusing instead on cost-effective utilization.

• The testing menu includes urine and serum/plasma testing, and features high-resolution screen by time of flight (TOF) mass spectrometry.

• 90 percent of all confirmation tests have a turnaround time of six to eight hours.

• The ARUP Drug Screen Cup can be used to preform on-site drug screens with a kit provided by ARUP.

www.aruplab.com/pain
Pediatrics

• Approximately one-tenth of ARUP’s testing is performed on samples collected from patients between the ages of newborn to 18 years.

• ARUP offers a test menu that accommodates more than 99 percent of pediatric testing requests for the diagnosis and management of conditions that affect the growth and development of children.

• Examples of specialty services related to pediatrics include:
  ◦ Electron microscopy
  ◦ Kidney and liver
  ◦ Muscle and nerve
  ◦ Pediatric pathology (including tumors)
  ◦ Fetal autopsy
  ◦ Umbilical Cord Testing for Drug Detection

www.aruplab.com/pediatrics
Comprehensive Utilization Management
Comprehensive Utilization Management: UM+

- Sendout utilization dashboards
- Peer-to-peer benchmarking
- Unique analytics to identify top improvement opportunities
- Proven interventions to drive down unnecessary testing and reduce costs
- Comprehensive reports detailing the impact of UM improvement measures
- UM consulting from program inception to execution

www.aruplab.com/um
ARUP
Clinical Trials
ARUP Clinical Trials

• ARUP has a long-standing history of supporting the clinical trials industry

• Preliminary evaluation includes test mix, pricing, specimen logistics, and regulatory and legal implications.

• Each project is considered on case-by-case basis.

• ARUP supports studies in which testing can be facilitated under CLIA/CAP regulations.

• For consideration of your project, please contact ARUP’s Clinical Research & Studies Department at (801) 583-2787 or (800) 242-2787.
the art & science of diagnostic medicine
ARUP’s Blog and Magazine

• Discover stories that connect us to you.
• Learn from a variety of voices and perspectives.
• Peek in on expertise and ingenuity.
• Understand more.

Check us out and sign up for our newsletter:
www.aruplab.com/blog
PharmaDx
PharmaDx

• Custom test development and clinical trials testing services to meet the unique requirements of the pharmaceutical industry

• Companion and complementary diagnostic development, including assay development under design control and regulatory submission

• Laboratory testing in support of global clinical trials

• Experienced project managers drawn from the manufacturing, pharmaceutical, biotech, and laboratory testing industries

• High degree of customization and flexibility

• Single point of contact to ensure a successful partnership

www.aruplab.com/pharmaDx
ARUP
Automation
ARUP is one of the most automated laboratories in the United States. Much of our automation is unique, existing nowhere else in the world, and the direct result of our outstanding team of engineers, software developers, and managers.

The main transport and sorting system includes:

- A chain conveyor system that transports tubes from Specimen Processing Workstations
- Interface robotic systems (binders) that read the tube barcodes and transfer the tubes from specimen transport carriers to pucks
- The main MagneMotion automated transport system
- Thawing & mixing workcells
- High-speed automated sorters

www.aruplab.com/automation
Medical Laboratory Science Student Resource Center

The MLS Student Resource Center provides short instructional videos and online learning modules developed for educators and students in the following areas: Hematology, Blood Bank (Immunology), Microbiology, Chemistry (Urinalysis/Body Fluids), Management, and Molecular Diagnostics.

www.arup.utah.edu/mls
Thyroid Test Utilization
Thyroid Test Utilization

Where does your facility measure up when it comes to thyroid test ordering?

Visit the below link to learn how your organization compares to other laboratories when it comes to thyroid test ordering patterns.

Simply input your test volume data and click submit!

Test volume data will not be stored; for academic purposes only.

www.aruplab.com/thyroiddatatesting
ARUP Automation—Journey of a Specimen
ARUP Automation—Journey of a Specimen

What happens when you send a specimen to ARUP?

Visit www.aruplab.com/joas to learn more about our:

- Transportation
- Specimen Receiving
- Automation
- Inside the Laboratory
- Biocomputing
- Medical Directors

www.aruplab.com/joas