ARUP LABORATORIES | Pediatrics

pediatric testing

PATIENTS.ANSWERS.RESULTS.



www.aruplab.com

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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.

We believe in collaborating, sharing knowledge, and contributing to laboratory science in ways 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

Why do so many children's hospitals in the United States use ARUP as their reference laboratory?

Commitment to Pediatric Patient Care

Small Patients. Pediatric patients are unique and require special attention, not only in the first few days of life but throughout childhood and adolescence. ARUP Laboratories is committed to providing quality care for pediatric patients and offers one of the most extensive reference laboratory test menus available today.

Big Challenges. Approximately one-tenth of ARUP's testing is performed on specimens collected from patients between the ages of newborn to 18 years. Small specimen volumes can pose a challenge for the clinical laboratory, but ARUP is able to process and test these specimens with no delays.

Special Pediatric Projects/Reference Intervals

CHILDx. Children's Health Improvement through Laboratory Diagnostics (CHILDx) was jointly sponsored by ARUP Laboratories and the University of Utah Department of Pathology for more than a decade (1999–2012) and included a national advisory committee of pediatric specialists. CHILDx improved healthcare for children by reviewing age-specific reference intervals, developing an advocacy program for pediatric laboratory medicine, and expanding guidelines for laboratory test utilization strategies.

Pediatric Reference Interval Study. Reference intervals for a number of analytes have been established for serum, plasma, and urine. Demographics and health histories were obtained on the healthy children participating in the study. For children age 7 to 17, Tanner staging was performed by a single clinician. This project includes the largest number of children to date for this type of study.

R&D. ARUP actively supports research and development through the ARUP Institute for Clinical and Experimental Pathology. Approximately 10 percent of the ARUP research and development budget is used for pediatric test development in areas such as molecular and biochemical genetics, endocrinology, and oncology.

Pediatric Tests

Extensive Menu. 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 healthy growth and development of the pediatric patient. With a large percentage of testing performed at ARUP, children's hospitals can be more operationally efficient with their referral testing.

Test Interpretation. ARUP Consult®, the Physician's Guide to Laboratory Test Selection and Interpretation, provides background information, test-ordering suggestions, and concise diagnostic advice on disease-related topics. It is co-authored by ARUP's experts and includes recommendations congruent with national guidelines and diagnostic algorithms.

Pediatric Pathology Consultation Services

ARUP's academic affiliation with the Division of Pediatric Pathology at the University of Utah Department of Pathology allows ARUP to provide the highest-quality consultative services for hospitals and laboratories nationwide. Examples of specialty services related to pediatrics include:

- Biochemical genetics
- Electron microscopy
- Fetal autopsy
- Kidney and liver
- Molar pregnancy
- Muscle and nerve
- Pediatric pathology (including tumors)
- Perinatal pathology
- Placental pathology

pediatric experts

Consultations for anatomic and clinical pathology are provided by ARUP's medical directors and clinical consultants. These staff members hold faculty appointments in the Department of Pathology at the University of Utah School of Medicine and are board-certified in their areas of specialty. They conduct research and remain current on diagnostic and therapeutic issues through their involvement in academics and clinical practice.

Executive Management

Julio C. Delgado, MD, MS
Chief Medical Officer
Director of Laboratories
Co-chief, Clinical Pathology Division

Peter E. Jensen, MD
Chair, Department of Pathology and ARUP Board of Directors

Sherrie L. Perkins, MD, PhD
CEO; Medical Director, Hematopathology; Co-Chief, Clinical Pathology; Vice Chair, Pathology; Senior Vice President, Research & Development; Executive Director, ARUP Institute for Clinical & Experimental Pathology®

University of Utah Health

Robert Blaylock, MD
Medical Director, Blood Services and Phlebotomy and Support Services, Immunohematology Reference Lab, University Hospitals and Clinics Clinical Lab, U of U Transfusion Svcs

Christopher M. Lehman, MD
Co-Medical Director, University Hospitals and Clinics Clinical Laboratory

Division of Pediatric Pathology

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Pediatric Pathologist

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Staff Pathologist, Pediatric Pathology

Holly Zhou, MD, MS
Pediatric Pathologist

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Pediatric Pathologist

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Chief, Pediatric Pathology and Electron Microscopy

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Co-Medical Director, Automated Core Laboratory

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Section Chief, Cytogenetics and Genomic Microarray

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Elaine Lyon, PhD, FACMG
Medical Director, Molecular Genetics and Genomics; Medical Director, Pharmacogenomics

Joely A. Straseski, PhD, MS, MT(ASCP), DABCC
Medical Director, Endocrinology; Co-Medical Director, Core Laboratory

Mary Bronner, MD
Co-Division Chief, Anatomic and Molecular Oncologic Pathology
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Medical Director, Microbial Immunology; Parasitology and Fecal Testing; Infectious Disease Rapid Testing

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Medical Director, Biochemical Genetics and Newborn Screening; Section Chief, Biochemical Genetics

Mark A. Fisher, PhD, D(ABMM)
Medical Director, Bacteriology and Antimicrobials

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Medical Director, Renal Pathology

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Medical Director, Analytic Biochemistry
Medical Director, Calculi and Manual Chemistry
Co-Medical Director, Mass Spectrometry

Attila Kumanovics, MD
Assistant Medical Director, Immunology; Co-Director, Immunogenetics

George M. Rodgers III, MD, PhD
Medical Director, Hemostasis/Thrombosis

test #	test name
	ALLERGENS
0055421	Allergen, Drugs, Amoxicillin
0099628	Allergen, Drugs, Penicillin G (major)
0099629	Allergen, Drugs, Penicillin V (minor)
0055037	Allergen, Epidermals and Animal Proteins, Feather Mix
0097653	Allergen, Food, Casein (Cow's Milk) IgG
0055381	Allergen, Food, Egg Whole
0099569	Allergen, Food, Gluten
2007619	Allergen, Food, Goat Milk IgE
0055020	Allergen, Food, Milk (Cow's)
2012146	Allergen, Food, Milk (Cow's) Components IgE
0055024	Allergen, Food, Peanut
2007211	Allergen, Food, Peanut Components IgE
0097648	Allergen, Food, Peanut IgG
0055054	Allergen, Food, Rice
0099639	Allergen, Food, Strawberry
0055034	Allergen, Food, Wheat
0055122	Allergens, Animal, Dog/Cat Epithelium Profile
0055170	Allergens, Dust/Mite Profile
0055105	Allergens, Hymenoptera, Bee Venom Profile
0050529	Allergens, Pediatric Allergy, March (Progression) Profile
0055300	Allergens, Pediatric Foods/Inhalants Profile
0055121	Allergens, Pediatric Foods Profile 1
0055365	Allergens, Pediatric Inhalants, Southwest
0050152	Allergens, Pediatric Profile IgE
	CARDIOVASCULAR
0030191	B-Type Natriuretic Peptide
0020031	Cholesterol, Serum or Plasma
0050182	C-Reactive Protein, High Sensitivity
0080413	Homocystine, Quantitative, Urine
0020421	Lipid Panel
0050203	Microalbumin, Urine
0050083	proBrain Natriuretic Peptide, NT
0020040	Triglycerides, Serum or Plasma
	DEVELOPMENTAL DELAY EVALUATION
0025040	Cadmium, Urine
0020596	Copper, Serum Free (Direct)
0090060	Cyanide
2010358	Ethosuximide, Serum or Plasma
0090110	Ethylene Glycol

test #	test name
0020745	Lead, Blood (Capillary)
0025050	Mercury, Urine
2010359	Mycophenolic Acid and Metabolites
0025019	Thallium, Urine
0099610	Thallium, Whole Blood
0092066	Thiopurine Methyltransferase, RBC
0099310	Valproic Acid, Free and Total
0020462	Zinc, Urine
0097908	Zonisamide
	ENDOCRINE DISORDERS
0092331	11-Deoxycortisol Quantitative by LC-MS/MS, Serum or Plasm
0081335	1,5 Anhydroglucitol (Glycomark)
0092333	17-Hydroxypregnenolone Quantitative by LC-MS/MS, Serum or Plasma
0092332	17-Hydroxyprogesterone Quantitative by LC-MS/MS, Serum or Plasma
2002348	25-Hydroxyvitamin d2 and d3, Serum, by Tandem Mass Spectrometry
0092330	Adrenal Steroid Quantitative Panel by LC-MS/MS, Serum
2005419	Androstanediol Glucuronide Quantitative
2001638	Androstenedione, Serum or Plasma
2002282	CAH 11 Beta Hydroxylase Deficiency Panel
2002283	CAH 21 Hydroxylase Deficiency Panel
0080407	Catecholamines Fractionated by LC-MS/MS, Urine, Free
2002029	Congenital Adrenal Hyperplasia Treatment Panel
0097222	Cortisol by LC-MS/MS, Urine, Free
0092100	Cortisol/Cortisone by LC-MS/MS, Urine, Free
0070416	C-Telopeptide, Beta-Cross-Linked, Serum
0093247	Estradiol, Males, Children, or Postmenopausal Females, by Tandem Mass Spectrometry
0093248	Estrogens by LC-MS/MS, Serum, Fractionated
0093249	Estrone by Tandem Mass Spectrometry
0070055	Follicle Stimulating Hormone, Serum
0070080	Growth Hormone, Serum or Plasma
0070426	Hemoglobin A1C
2001763	Hirsutism Evaluation Panel
0080422	Homovanillic Acid (HVA), Urine
0070125	IGF-1 (Insulin-Like Growth Factor 1)
0070060	IGF Binding Protein-3

test #	test name
0020421	Lipid Panel
2007567	Luteinizing Hormone (LH), Pediatric
0070093	Luteinizing Hormone, Serum
0050184	Metanephrines, Plasma, Free
2002058	Porphyrins, Fractionation and Quantitation, Urine
0092334	Pregnenolone by LC-MS/MS, Serum or Plasma
0070115	Prolactin, Serum or Plasma
0099375	Sex Hormone Binding Globulin, Serum or Plasma
0081057	Testosterone, Bioavailable and Sex Hormone Binding Globulin (Total Testosterone), Females or Children
0081058	Testosterone, Females or Children
0081056	Testosterone, Free and Total (SHBG), by LC-MS/MS, Females or Children
0081059	Testosterone, Free, Females or Children
2006550	Thyroglobulin by LC-MS/MS, Serum or Plasma
0070145	Thyroid Stimulating Hormone, Serum or Plasma
0093244	Thyroxine, Free by Equilibrium Dialysis/HPLC-MS/MS
0080470	Vanillylmandelic Acid (VMA) and Homovanillic Acid (HVA), Urine
0080421	Vanillylmandelic Acid (VMA), Urine
2002028	Virilization Panel 1
2002281	Virilization Panel 2
	GASTROINTESTINAL
2002247	Disaccharidase, Tissue
0020612	Xylose Absorption Test
	GENETIC DEVELOPMENTAL DELAY
0040208	Aneuploidy Panel by FISH, 13, 18, 21, X, and Y, Newborn Whole Blood
2005077	Angelman Syndrome and Prader-Willi Syndrome by Methylation
2005564	Angelman Syndrome (*UBE3A*) Sequencing
2011144	Arginine: Glycine Amidinotransferase (*GATM*) Deficiency Sequencing
0051700	Biotinidase Deficiency (*BTD*), 5 Mutations
2004203	Carnitine Deficiency, Primary (*SLC22A5*) Sequencing and Deletion/Duplication
2004931	*CDKL5*-Related Disorders (*CDKL5*) Sequencing
2004935	*CDKL5*-Related Disorders (*CDKL5*) Sequencing and Deletion/Duplication
2012151	Charcot-Marie-Tooth (CMT) and Related Hereditary Neuropathies Panel Sequencing
2012155	Charcot-Marie-Tooth (CMT) and Related Hereditary Neuropathies *PMP22* Deletion/Duplication with Reflex Sequencing Panel

test #	test name
2012160	Charcot-Marie-Tooth Type 1A (CMT1A)/Hereditary Neuropathy with Liability to Pressure Palsies (HNPP), *PMP22* Deletion/Duplication
2012609	CHARGE Syndrome, *CHD7* Sequencing
2002289	Chromosome Analysis, Peripheral Blood
2002299	Chromosome FISH, Metaphase, Prader-Willi Syndrome (15q11.2-13)
2008615	Creatine Transporter Deficiency (*SLC6A8*) Sequencing
2003414	Cytogenomic SNP Microarray
2006267	Cytogenomic SNP Microarray Buccal Swab
2011235	Duchenne/Becker Muscular Dystrophy (DMD) Deletion/Duplication
2011241	Duchenne/Becker Muscular Dystrophy (DMD) Deletion/Duplication with Reflex to Sequencing
2011153	Duchenne/Becker Muscular Dystrophy (DMD) Sequencing
2006332	Exome Sequencing Symptom-Guided Analysis
2008800	Expanded Hearing Loss Panel, Sequencing, 56 Genes
2008803	Expanded Hearing Loss Panel, Sequencing, 56 Genes, and Deletion/Duplication, 53 Genes
0051469	Fanconi Anemia Group C, *FANCC* Gene Mutations, Fetal
2009033	Fragile X (*FMR1*) with Reflex to Methylation Analysis
2011470	*GLI3*-Related Disorders (*GLI3*) Sequencing
2011465	*GLI3*-Related Disorders (*GLI3*) Sequencing and Deletion/Duplication
2006054	Mitochondrial Disorders Panel (mtDNA by Sequencing and Deletion/Duplication, 121 Nuclear Genes by Sequencing, 119 Nuclear Genes by Deletion/Duplication)
0051448	Mucolipidosis, Type IV (*MCOLN1*) 2 Mutations
0051805	Noonan Syndrome (*PTPN11*) Sequencing
2004189	Noonan Syndrome *PTPN11* Sequencing with Reflex to *SOS1* Sequencing
2002470	*PTEN*-Related Disorders Sequencing and Deletion/Duplication
0051614	Rett Syndrome (*MECP2*), Full Gene Analysis
2012015	Skeletal Dysplasia Panel, Sequencing (39 Genes) and Deletion Duplication (35 Genes)
2011457	Smith-Lemil-Opitz Syndrome (*DHCR7*) Sequencing
	HEMATOLOGY
0049010	Acid Hemolysin (Ham Test) Paroxysmal Nocturnal Hemoglobinuria (PNH)
2002719	Acute Lymphocytic Leukemia (ALL) Panel by FISH, Pediatric
0030056	ADAMTS13 Activity
2011622	Alpha Globin (*HBA1* and *HBA2*) Deletion/Duplication

pediatric testing diagnosis and disease management

test #	test name
2001582	Alpha Globin (*HBA1* and *HBA2*) Sequencing
0051495	Alpha Thalassemia (*HBA1* and *HBA2*), 7 Deletions
0010004	Antibody Detection, RBC
0030010	Antithrombin, Enzymatic Activity
0030192	APC Resistance Profile with Reflex to Factor V Leiden
2005010	*BCR-ABL1*, Qualitative with Reflex to *BCR-ABL1* Quantitative
0051421	Beta Globin (*HBB*) HbS, HbC, and HbE Mutation
0050578	Beta Globin (*HBB*) Sequencing
2011114	*CBFB-MYH11* inv(16) Detection, Quantitative
2002292	Chromosome Analysis, Bone Marrow
2002290	Chromosome Analysis, Leukemic Blood
2002298	Chromosome FISH, Interphase
0013008	Direct Coombs (Anti-Human Globulin)
2002440	*EGFR* Mutation Detection by Pyrosequencing
0020610	Erythrocyte Porphyrin, Whole Blood
2007225	*EWSR1* (22q12) Gene Rearrangement by FISH
0030007	Factor II, Activity (Prothrombin)
0030100	Factor IX, Activity
0030075	Factor V, Activity
0030080	Factor VII, Activity
0030095	Factor VIII, Activity
0097720	Factor V Leiden (F5) Mutation
0030105	Factor X, Activity
0030110	Factor XI, Activity
0030115	Factor XII, Activity
2002819	Factor XIII, Qualitative with Reflex to Factor XIII 1:1 Mix
2005400	*FLT3* Mutation Detection by PCR
0080135	Glucose-6-Phosphate Dehydrogenase
2005792	Hemoglobin Evaluation Reflexive Cascade
0050610	Hemoglobin Evaluation with Reflex to Electrophoresis and/or RBC Solubility
0050613	Hemoglobin (Hb) A2 and F by Column
2004686	Hemoglobin Lepore (*HBD-HBB* Fusion), 3 Mutations
0050520	Hemoglobin S, Evaluation with Reflex to RBC Solubility
0049020	Hemoglobin, Unstable
2001614	Hemophilia A (*F8*) 2 Inversions with Reflex to Sequencing and Reflex to Deletion/Duplication
2010494	Hemophilia B (*F9*) Sequencing and Deletion/Duplication

test #	test name
2007145	Heparin-Induced Thrombocytopenia (HIT) Antibodies, PF4 IgA and IgM by ELISA
2009008	Hereditary Hemorrhagic Telangiectasia (*ACVRL1* and *ENG*) Sequencing and Deletion/Duplication with Reflex to Juvenile Polyposis (*SMAD4*) Sequencing and Deletion/Duplication
2004992	Juvenile Polyposis (*BMPR1A*) Sequencing and Deletion/Duplication
2001971	Juvenile Polyposis (*SMAD4*) Sequencing and Deletion/Duplication
2002437	*KIT* Mutations in AML by Fragment Analysis and Sequencing
2008003	Leukemia/Lymphoma Phenotyping by Flow Cytometry
2007227	*MYCN* (*N-MYC*) Gene Amplification by FISH
2002257	Osmotic Fragility, Erythrocyte
2002984	Oxygen Dissociation (P50) by Hemoximetry
2004366	Paroxysmal Nocturnal Hemoglobinuria, High Sensitivity, RBC
2005003	Paroxysmal Nocturnal Hemoglobinuria, WBC
0040113	*PAX-FKHR* Translocation by RT-PCR
0030160	Platelet Aggregation Studies
0051718	Platelet Antibodies, Indirect with Reflex to Identification
0051308	Platelet Antigen Genotyping Panel
0099043	Prekallikrein Factor, Activity
0030182	Protein C and S Panel, Functional
0030116	Protein C and S Panel, Total, Antigen
0030113	Protein C, Functional
2003386	Protein C, Functional with Reflex to Protein C, Total and Protein S, Free with Reflex to Protein S, Total
0098894	Protein S Free, Antigen
0030114	Protein S, Functional
0030112	Protein S, Total Antigen
0056060	Prothrombin (F2) G2010A Mutation
0050421	RhCc Antigen (*RHCE*) Genotyping
0051368	RhD Antigen (*RhD*) Genotyping
0050423	RhEe Antigen (*RHCE*) Genotyping
0051368	Rh Genotyping D Antigen (RhD positive/negative and RhD copy number)
2010138	*RUNX1-RUNX1T1* (*AML1-ETO*) t(8;21) Detection, Quantitative
0040114	*SYT-SSX* t(X;18) Translocations by RT-PCR
0056200	Thrombotic Risk, DNA Panel (FVL, Factor II, MTHFR)
0030177	Thrombotic Risk, Inherited Etiologies (uncommon)

* Multiple tests available. Visit the ARUP Laboratory Test Directory at www.aruplab.com to order individual tests.

test #	test name
0030133	Thrombotic Risk, Inherited Etiologies with Reflex to Factor V Leiden (most common)
0030002	von Willebrand Multimeric Panel
0030125	von Willebrand Panel
	IMMUNOLOGIC AND AUTOIMMUNE DISORDERS
0083001	Adenosine Deaminase, RBC
0050080	Anti-Nuclear Antibodies (ANA), IgG by ELISA with Reflex to ANA, IgG by IFA
2007210	Autoimmune Liver Disease Evaluation with Reflex to Smooth Muscle Antibody (SMA), IgG by IFA
0051689	Celiac Disease Dual Antigen Screen
2002026	Celiac Disease Dual Antigen Screen with Reflex
2008114	Celiac Disease Reflexive Cascade
0050198	Complement Activity Enzyme Immunoassay, Total
0051668	Connective Tissue Diseases Profile
2005018	Celiac Disease (*HLA-DQ2* and *HLA-DQ8*) Genotyping
2006356	Chronic Granulomatous Disease (*CYBB* Gene Scanning and *NCF1* Exon 2 GT Deletion) with Reflex to *CYBB* Sequencing
2001613	Crohn Disease Prognostic Panel
0055256	Cyclic Citrullinated Peptide (CCP) Antibody, IgG
2007209	F-Actin and Mitochondrial M2 Antibodies, IgG by ELISA with Reflex to Smooth Muscle Antibody (SMA), IgG by IFA
0050345	Immunoglobulin E
0050577	Immunoglobulin G Subclasses (1, 2, 3, and 4)
0050630	Immunoglobulins (IgA, IgG, and IgM), Quantitative
0050567	Inflammatory Bowel Disease Differentiation Profile
2004359	Leukocyte Adhesion Deficiency Panel
0096056	Lymphocyte Antigen and Mitogen Proliferation Panel
0051584	Lymphocyte Antigen and Mitogen Proliferation Panel with Cytokine Response to Mitogens
0095899	Lymphocyte—Congenital Immunodeficiencies
0095892	Lymphocyte—Total Lymphocyte Enumeration
0096657	Neutrophil Oxidative Burst Assay (DHR)
0050596	Parietal Cell Antibody, IgG
2011156	Primary Antibody Deficiency Panel, Sequencing (35 Genes) and Deletion/Duplication (26 Genes)
2003277	Rheumatoid Arthritis Panel
2003278	Rheumatoid Arthritis Panel with Reflex to Rheumatoid Factor, IgM, IgG, and IgA by EIA
0040325	Sedimentation Rate, Westergren (ESR)
0051589	Toll-Like Receptor Function Assay

test #	test name
	INFECTIOUS DISEASE TESTING
0060245	*Acanthamoeba and Naegleria* Culture
0065066	Adenovirus 40–41 Antigens by EIA
2007473	Adenovirus, Qualitative PCR
0093057	*Bartonella* Species by PCR
2001775	*Bordetella pertussis* Antibodies, IgA, IgG, and IgM by ELISA with Reflex to Immunoblot
0065078	*Bordetella pertussis* by PCR
0065080	*Bordetella pertussis/parapertussis* by PCR
0050267	*Borrelia burgdorferi* Antibodies, Total by ELISA with Reflex to IgG and IgM by Western Blot (Early Disease)
0060715	*Chlamydophila pneumoniae* by PCR
0060241	*Chlamydia trachomatis* and *Neisseria gonorrhoeae* by Transcription-Mediated Amplification (TMA)
0060243	*Chlamydia trachomatis* by Transcription-Mediated Amplification (TMA)
0050503	Coxsackie A9 Virus Antibodies by CF
2002932	Coxsackie A Antibodies (A-2, 4, 7, 9, 10, and 16 Serotypes)
0060055	Coxsackie B Virus Antibodies
0060045	*Cryptosporidium* Antigen by EIA
0060130	Cystic Respiratory Culture
0050622	Cytomegalovirus Antibodies, IgG and IgM
2004760	Cytomegalovirus Antiviral Drug Resistance by Sequencing
0060040	Cytomegalovirus by PCR
0060031	Cytomegalovirus by PCR, Whole Blood or Bone Marrow
0065004	Cytomegalovirus Rapid Culture
0051813	Cytomegalovirus, Quantitative PCR
0050779	Diphtheria, Tetanus, and *H. Influenzae* b Antibodies, IgG
0060053	Echovirus Antibodies
0060047	*E. coli* Shiga-like Toxin by EIA
0050249	Enterovirus Detection by RT-PCR
0050600	Epstein-Barr Virus Antibody Panel I
*	Epstein-Barr Virus Antibody Testing
0050246	Epstein-Barr Virus by PCR
0060142	Eye Culture
2011660	Gastrointestinal Parasite and Microsporidia by PCR
2011150	Gastrointestinal Parasite Panel by PCR
0060048	*Giardia* Antigen by EIA
2010925	*Helicobacter pylori* Breath Test, Pediatric

* Multiple tests available. Visit the ARUP Laboratory Test Directory at www.aruplab.com to order individual tests.

test #	test name
0020597	Hepatitis A Virus Panel
0020457	Hepatitis Panel, Acute with Reflex to HBsAg Confirmation
*	Hepatitis Virus Testing
0051152	Herpes Simplex Type 1 and Type 2 Glycoprotein G-Specific Antibodies, IgG by ELISA (HerpeSelect)
0060041	Herpes Simplex Virus by PCR
*	Herpes Simplex Virus Type 1 and/or 2 Antibody Testing
0050385	Heterophile Antibody (Infectious Mononucleosis) by Latex Agglutination, Qualitative
2007697	Heterophile Antibody (Infectious Mononucleosis) by Latex Agglutination with Reflex to Titer
0093061	Human Immunodeficiency Virus 1 DNA PCR, Qualitative
0055670	Human Immunodeficiency Virus 1, Genotyping
0055598	Human Immunodeficiency Virus 1 RNA Quantitative Real-Time PCR
2005375	Human Immunodeficiency Virus Type 1 (HIV-1) Antibody with Reflex to Human Immunodeficiency Virus Type 1 (HIV-1) Antibody Confirmation by Western Blot
2007469	Influenza A Virus H1/H3 Subtyping by Real-Time RT-PCR
0060284	Influenza Virus A and B DFA with Reflex to Influenza Virus A and B Rapid Culture
0050375	Measles (Rubeola) Antibodies, IgG and IgM
0065055	Measles (Rubeola) Virus Culture
0099589	Mumps Virus Antibody, IgM
*	Mumps Virus Antibody Testing
0065056	Mumps Virus Culture
2009387	Mumps Virus RNA Qualitative, Real-Time PCR
0060256	*Mycoplasma pneumoniae* by PCR
0060244	*Neisseria gonorrhoeae* by Transcription-Mediated Amplification (TMA)
0051281	Norovirus Group 1 and 2 Detection by RT-PCR
2006247	Parainfluenza 1–4 by RT-PCR
0065120	Parvovirus B 19 Antibodies, IgG and IgM
0060043	Parvovirus B 19 by PCR
0060051	Pinworm
0060288	Respiratory Syncytial Virus DFA
0060289	Respiratory Viruses DFA
0060764	Respiratory Virus Mini Panel by PCR
2007805	Respiratory Virus Panel by PCR

test #	test name
0050552	Rubella Antibodies, IgG and IgM
0060134	Stool Culture and *E. coli* Shiga-Like Toxin by EIA
0028903	*Streptococcus* (Group A) Rapid with Reflex to Culture
0060705	*Streptococcus* (Group B) by PCR
0050725	*Streptococcus pneumoniae* Antibodies, IgG (14 Serotypes)
0050772	TORCH Antibodies, IgG
0050665	TORCH Antibodies, IgM
0050521	*Toxoplasma gondii* Antibodies, IgG and IgM
0050162	Varicella-Zoster Virus Antibodies, IgG and IgM
0060042	Varicella-Zoster Virus by PCR
0060282	Varicella-Zoster Virus DFA with Reflex to Varicella-Zoster Virus Culture
0050228	West Nile Virus Antibodies, IgG and IgM by ELISA, CSF
0050226	West Nile Virus Antibodies, IgG and IgM by ELISA, Serum
0050229	West Nile Virus RNA by RT-PCR
	MATERNAL/FETAL TESTING
2006848	Acetylcholinesterase and Fetal Hemoglobin, Amniotic Fluid
2002288	Chromosome Analysis, Products of Conception
2005762	Chromosome Analysis, Products of Conception, with Reflex to Genomic Microarray
2002297	Chromosome FISH, Prenatal, 13, 18, 21, X, and Y, Amniotic Fluid
0095229	Cystatin C, Serum
2003414	Cytogenomic SNP Microarray
2002366	Cytogenomic SNP Microarray—Fetal
0082024	Fetal Fibronectin
2001743	Fetal Hemoglobin Determination for Fetomaternal Hemorrhage
0020407	Lactose Tolerance
0080940	Lamellar Body Counts
0081293	Maternal Screening, Sequential, Specimen 1
0081150	Maternal Serum Screen, First Trimester
0081062	Maternal Serum Screening, Integrated, Specimen 1
0081064	Maternal Serum Screening, Integrated, Specimen 2
0051755	Molar Pregnancy, 16 DNA Markers
2007537	Non-Invasive Prenatal Testing for Fetal Aneuploidy
2010232	Non-Invasive Prenatal Testing for Fetal Aneuploidy with Microdeletions
2009077	Non-Invasive Prenatal Testing for RhD Genotyping, Fetal

test #	test name
2008704	Prenatal Carrier Screening, Next-Generation Sequencing, 85 Disorders with Fragile X
2007541	Prenatal Carrier Screening Panel, 85 Disorders with Fragile X
0080269	Quad Screen Alpha Fetoprotein, hCG, Estriol, and Inhibin A
0050547	Twin Zygosity, 16 Markers
	METABOLIC DISORDERS
0040033	Acylcarnitine Quantitative Profile, Plasma
0081170	Acylglycine, Quantitative, Urine
2011902	Adrenoleukodystrophy, X-Linked (*ABCD1*) Sequencing
2011906	Adrenoleukodystrophy, X-Linked (*ABCD1*) Sequencing and Deletion/Duplication
2011415	Alpha-Iduronidase Enzyme Activity in Leukocytes
2009389	Amino Acids Quantitative by LC-MS/MS, Plasma
2009419	Amino Acids Quantitative by LC-MS/MS, Urine
0080137	Amino Acids Quantitative, CSF
0020043	Ammonia, Plasma
0051700	Biotinidase Deficiency (*BTD*), 5 Mutations
0051730	Biotinidase Deficiency (*BTD*) Sequencing
0093362	Biotinidase, Serum (with paired normal control)
0051682	Carnitine Deficiency, Primary (*SLC22A5*) Sequencing
0080068	Carnitine, Free and Total (includes carnitine, esterified)
0081308	Carnitine, Free and Total, Urine
0080065	Carnitine, Free, Plasma
0081110	Carnitine Panel
0080067	Carnitine, Total, Plasma
0080512	Carnitine Transport, Fibroblasts
2007069	Citrullinemia, Type 1(*ASS1*) Sequencing
2011157	Cobalamin/Propionate/Homocysteine Metabolism Related Disorders Panel, Sequencing (25 Genes) and Deletion /Duplication (24 Genes)
0020408	Comprehensive Metabolic Panel
2002328	Creatine Disorders Panel, Plasma or Serum
2002333	Creatine Disorders Panel, Urine
0081106	Cystine Quantitative, Urine
0081105	Cystinuria Panel
0080351	Ehlers-Danlos Syndrome Type VI Screen, Urine
0081296	Galactose-1-Phosphate in Red Blood Cells
0051175	Galactosemia, (*GALT*) Enzyme Activity and 9 Mutations
2006697	*GALT* (Galactosemia) Sequencing
0020024	Glucose, Plasma or Serum

test #	test name
0020542	Glucose Tolerance Test
2001510	Glutarylcarnitine, Quantitative, Urine
2011140	Guanidinoacetate Methyltransferase (GAMT) Deficiency Sequencing
2008125	Hexosaminidase A Percent and Total Hexosaminidase in Leukocytes
2008121	Hexosaminidase A Percent and Total Hexosaminidase, Plasma or Serum
0099869	Homocysteine, Total
2011167	Keratan Sulfate Quantitative, Urine add: Methylmalonic Acid, Serum or Plasma
0020421	Lipid Panel
2012266	Lysosomal Acid Lipase Activity, Dried Blood Spot
0051205	Medium Chain Acyl-CoA Dehydrogenase (*ACADM*), 2 Mutations
0051758	Medium Chain Acyl-CoA Dehydrogenase Deficiency (*ACADM*) Sequencing
2008591	Methylenedioxypyrovalerone (MDPV) Quantitative, Urine
0081352	Mucopolysaccharides Electrophoresis and Quantitation, Urine
0081357	Mucopolysaccharides, Quantitative, Urine
2007599	Mucopolysaccharidosis Type 1, Total HS and NRE (SensiPro) Quantitative, Serum or Plasma
2007488	Mucopolysaccharidosis Type 1, Total HS and NRE (SensiPro) Quantitative, Urine
0099289	Organic Acids, Plasma
0098389	Organic Acids, Urine
2004896	Ornithine Transcarbamylase Deficiency (*OTC*) Sequencing and Deletion/Duplication
0092458	Orotic Acid and Orotidine, Urine
0080336	Phenylalanine and Tyrosine, Plasma (monitoring only)
0080315	Phenylalanine Monitoring, Plasma (monitoring only)
2007406	Pipecolic Acid, Serum or Plasma
0080342	Pyridinoline and Deoxypyridinoline by HPLC, Urine
2007401	Succinylacetone, Quantitative, Urine
0080355	Tyrosine, Plasma
2002001	Very Long-Chain Acyl-CoA Dehydrogenase Deficiency (*ACADVL*) Sequencing
2004250	Very Long-Chain and Branched-Chain Fatty Acids Profile
	MOLECULAR TESTING FOR INHERITED DISORDERS
0051266	Achondroplasia (*FGFR3*) 2 Mutations
0051382	*ACVRL1* and *ENG* Sequencing and Deletion/Duplication

test #	test name
0051256	Alpha-1-Antitrypsin and A1A Genotype with Reflex to Phenotype
2002398	Alport Syndrome, X-linked (*COL4A5*) Sequencing and Deletion/Duplication
0055654	Apolipoprotein B (APOB) Mutation Detection
2006540	Aortopathy Panel, Sequencing and Deletion/Duplication, 21 Genes
0051415	Ashkenazi Jewish Diseases, 16 Genes
0051288	Bloom Syndrome (*BLM*), 1 Variant
0051433	Bloom Syndrome (*BLM*) 2281del6/ins 7 Mutation
0051453	Canavan Disease (ASPA), 4 Variants
0051374	Connexin 26 (*GJB2*) Sequencing
2013661	Cystic Fibrosis (*CFTR*), 165 Pathogenic Variants
2013662	Cystic Fibrosis (*CFTR*), 165 Pathogenic Variants, Fetal
2013663	Cystic Fibrosis (*CFTR*), 165 Variants with Reflex to Sequencing
2013664	Cystic Fibrosis (*CFTR*), 165 Variants with Reflex to Sequencing and Deletion/Duplication
0051110	Cystic Fibrosis (*CFTR*) Sequencing
2008803	Expanded Hearing Loss Panel, Sequencing, 56 Genes, and Deletion/Duplication, 53 Genes
0097720	Factor V Leiden (F5) R506Q Mutation
2003220	Factor XIII (*F13A1*) V34L Variant
2004915	Familial Adenomatous Polyposis Panel: *APC* Sequencing, *APC* Deletion/Duplication, and *MYH 2* Mutations
2002658	Familial Mediterranean Fever (*MEFV*) Sequencing
2001961	Familial Mutation, Targeted Sequencing
0051468	Fanconi Anemia, Group C (*FANCC*), 2 Variants
2002662	Freeman-Sheldon Syndrome (*MYH3*) Sequencing Exon 17
0051438	Gaucher Disease (*GBA*), 8 Variants
0051476	Glaucoma (Primary Congenital), *CYP1B1* Sequencing
2001956	Hearing Loss, Nonsyndromic, Connexin 30 (*GJB6*), 2 Deletions
2001992	Hearing Loss, Nonsyndromic Panel (*GJB2*) Sequencing, (*GJB6*), 2 Deletions, and Mitochondrial DNA, 2 Mutations
0055656	Hereditary Hemochromatosis Mutation Detection
2012052	Hereditary Hemolytic Anemia Sequencing, 28 Genes
2009337	Hereditary Hemorrhagic Telangiectasia (HHT) Panel, Sequencing and Deletion/Duplication,5 Genes
0051650	HNPCC/Lynch Syndrome (*MLH1*) Sequencing and Deletion/Duplication
0051654	HNPCC/Lynch Syndrome (*MSH2*) Sequencing and Deletion/Duplication
0051656	HNPCC/Lynch Syndrome (*MSH6*) Sequencing and Deletion/Duplication
0051737	HNPCC/Lynch Syndrome (*PMS2*) Sequencing and Deletion/Duplication
2008848	Holoprosencephaly Panel, Nonsyndromic, Sequencing and Deletion/Duplication, 11 Genes
0051367	Hypochondroplasia (*FGFR3*), 2 Mutations
2007535	Infantile Epilepsy Panel, Sequence Analysis and Exon-Level Deletion/Duplication, 51 Genes
2004992	Juvenile Polyposis (*BMPR1A*) Sequencing and Deletion/Duplication
2001971	Juvenile Polyposis (*SMAD4*) Sequencing and Deletion/Duplication
2009306	Kabuki Syndrome (*KMT2D*) Sequencing
0051644	Kell Antigen Genotyping (*KEL1/KEL2*)
2002945	Legius Syndrome (*SPRED1*) Sequencing and (*NF1*) Sequencing Exon 22 (Exon 17)
2009302	Li-Fraumeni (*TP53*), Sequencing
2009313	Li-Fraumeni (*TP53*), Sequencing and Deletion/Duplication
2004543	*LMNA*-Related Disorders (*LMNA*) Sequencing
2002705	Loeys-Dietz Syndrome (*TGFBR1* and *TGFBR2*) Sequencing
2005360	Multiple Endocrine Neoplasia Type 1 (*MEN1*) Sequencing and Deletion/Duplication
0051390	Multiple Endocrine Neoplasia Type 2 (*MEN2*), *RET* Gene Mutations by Sequencing
2004911	*MUTYH*-Associated Polyposis (*MUTYH*), 2 Mutations
2010772	Noonan Spectrum Disorders Panel, Sequencing, 15 Genes
2004195	Noonan Syndrome (*SOS1*) Sequencing
2010876	Pancreatitis, Panel (*CFTR, CTRC, PRSS1,* and *SPINK1*) Sequencing
2004980	Plasminogen Activator Inhibitor-1, PAI-1 (*SERPINE1*) Genotyping
0051308	Platelet Antigen Genotyping Panel
2012255	Polycystic Kidney Disease, Autosomal Dominant (*PKD1* and *PKD2*) Sequencing
2012250	Polycystic Kidney Disease, Autosomal Dominant (*PKD1* and *PKD2*) Sequencing and Deletion/Duplication
2007533	Progressive Myoclonic Epilepsy Panel, Sequence Analysis and Exon-Level Deletion/Duplication, 12 Genes
0056060	Prothrombin (*F2*) G20210A Mutation

test #	test name
2003405	Pulmonary Arterial Hypertension (*BMPR2*) Sequencing and Deletion/Duplication
2002730	*RASA1*-Related Disorders (*RASA1*) Sequencing
2009298	Tay-Sachs Disease (*HEXA*) Sequencing and 7.6kb Deletion
0051428	Tay-Sachs Disease (*HEXA*), 7 Variants
0051506	Thanatophoric Dysplasia, Types 1 and 2 (*FGFR3*), 13 Mutations
2002965	Von Hippel-Lindau (*VHL*) Sequencing and Deletion/ Duplication
2001778	Y Chromosome Microdeletion
2010716	Wilson Disease (*ATP7B*) Sequencing
	NEPHROLOGY
0080432	Beta-2 Microglobulin, Urine
0020135	Calcium, Ionized, Serum
0020474	Creatinine Clearance, Urine
0020025	Creatinine, Serum or Plasma
0070035	Cyclosporine A by Tandem Mass Spectrometry
2008403	Glomerular Basement Membrane Antibody, IgG by Multiplex Bead Assay and IFA
0020725	Glomerular Filtration Rate, Estimated
0050203	Microalbumin, Urine
0092458	Orotic Acid and Orotidine, Urine
0020482	Oxalate, Urine
2011828	Phospholipase A2 Receptor (PLA2R) Antibody, IgG with Reflex to Titer
0020029	Protein, Total, Serum or Plasma
0020479	Protein, Total, Urine
0020144	Renal Function Panel
	Renal Pathology Special Studies
0090612	Tacrolimus by Tandem Mass Spectrometry
0020023	Urea Nitrogen, Serum or Plasma
0020350	Urinalysis, Complete

test #	test name
	PEDIATRIC DRUG TESTING
0092311	Barbiturates, Confirmation, Meconium
2011763	Carbamazepine, Free and Total, Serum or Plasma
0090260	Carbamazepine, Total
0092312	Cocaine and Metabolites, Confirmation/Quantitation, Meconium
0092314	Confirmation/Quantitation, Opiates, Meconium
0070035	Cyclosporine A by Tandem Mass Spectrometry
0058902	Cyclosporine A, C2 by Tandem Mass Spectrometry
2013098	Cytochrome P450 Genotype Panel
2006621	Drug Detection Panel by High-Resolution Time-of-Flight Mass Spectrometry, Umbilical Cord Tissue
0092520	Drugs of Abuse Confirmation/Quantitation, Benzodiazepines, Meconium
0092316	Drugs of Abuse Confirmation/Quantitation, Cannabinoids (Marijuana), Meconium
0092313	Drugs of Abuse Confirmation/Quantitation, Methadone and Metabolite, Meconium Drugs of Abuse
0092516	Drugs of Abuse Panel, Meconium, Screen with Reflex to Confirmation/Quantitation
0092118	Everolimus by Tandem Mass Spectrometry
0094030	Felbamate
0090003	Flecainide
0098627	Keppra (Levetiracetam)
2003182	Lacosamide (Vimpat), Serum
0098834	Oxcarbazepine Metabolite
0092315	Phencyclidine (PCP), Confirmation/Quantitation, Meconium
0090230	Phenobarbital
0090141	Phenytoin, Free and Total
2011609	Pregabalin, Serum or Plasma
0090202	Primidone and Metabolite
2003176	Rufinamide, Serum or Plasma
0098467	Sirolimus by Tandem Mass Spectrometry
0090612	Tacrolimus by Tandem Mass Spectrometry

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