This list of ARUP Institute for Learning speakers comprises experts from ARUP Laboratories and the University of Utah School of Medicine Department of Pathology, including ARUP medical directors and executives, laboratory professionals, and members of the University of Utah Medical Laboratory Science Program and the ARUP Institute for Clinical and Experimental Pathology. Lectures in most disciplines of laboratory medicine are available for pathologists, clinicians, and medical laboratory scientists. In addition to the topics listed here, other subjects may be available upon consultation with the ARUP Institute for Learning.

**Archana Agarwal, MD**
Topics: Hematopathology
• Laboratory Diagnosis of Hemolytic Anemia
• Laboratory Diagnosis of Thalassemias and Hemoglobinopathies
• Update in Red Blood Cell Membrane Disorders

**Daniel Albertson, MD**
Topics: Genitourinary and Gynecologic Pathology
• Urologic Pathology

**Erica F. Andersen, PhD, FACMG**
Topics: Cytogenetics and Genomic Microarray
• Copy Number Variant Interpretation
• Cytogenetic Testing in Hematologic Disease
• Cytogenetic Testing in Hereditary Disorders
• Prenatal Cytogenetics

**Pinar Bayrak-Toydemir, MD, PhD, FACMG**
Topics: Molecular Genetics and Genomics
• Clinical Exome Testing
• HHT Testing
• Rett Syndrome
• Sequencing

**Adam Barker, PhD**
Topics: Microbiology
• Advances in the Acid Fast Bacterial Laboratory
• Laboratory Management During a Pandemic
• MALDI-TOF MS in the Clinical Microbiology Laboratory
• Molecular Testing for *Mycobacterium tuberculosis*

**Shelly Bosworth, MS, LCGC**
Topics: Genetic Counseling
• Navigating Genomic Test Orders: Indications and Detection Rates of Genomic Microarray, Exome Sequencing, and Karyotype Analysis
• Prenatal Screening for Chromosome Abnormalities and Neural Tube Defects

**Hunter Best, PhD, FACMG**
Topics: Next Generation Sequencing (NGS) and Biocomputing
• Direct-to-Consumer Genetic Testing
• Gene Discovery in Pulmonary Hypertension

**Mary Bronner, MD**
Topics: Gastrointestinal (GI), Hepatic, and Pancreaticobiliary Pathology, and Molecular Oncology
• Barrett’s Esophagus
• Circulating Tumor DNA
• GI Pathology
• Hereditary GI Cancer Testing
• Idiopathic Inflammatory Bowel Disease

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Karen Brown, MS, MASCP, MLS(ASCP)SM
Topics: Hematology
• Hematology M+Ms: The Maturation, Morphology, and Mystery of Erythrocytes
• Hematology M+Ms: The Maturation, Morphology, and Mystery of Leukocytes
• Hematology M+Ms: Morphology and Mystery (Case Studies)
• Phlebotomy Ps and Qs: Problems and Quandaries in Specimen Collection

Irene De Biase, MD, PhD, FACMG
Topics: Biochemical Genetics
• Diagnostic Findings in Laboratory Testing for Inborn Errors of Metabolism: A Case-Based Discussion
• Factors Affecting the Measurement of Lysosomal Enzymes Activity
• Genetic Counseling and Carrier Detection for Tay-Sachs Disease
• Quantitative Amino Acids Analysis Using Liquid Chromatography Tandem Mass Spectrometry: Do We Have a New Gold Standard?

Jonathan Carr, JD
Topics: Legal
• Corporate Compliance Programs
• Intellectual Property
• Privacy (HIPAA)
• Risk Management

Julio Delgado, MD, MS
Topics: Immunology
• Clinical Testing for Monoclonal Antibody Therapeutics
• Diagnosis of Monoclonal Gammopathies
• Transplantation-Related Testing

Elena Coupal, MS, LCGC
Topics: Genetic Counseling
• Ethical and Legal Challenges in Genetic Testing
• Genetic Counselors’ Roles in Pharmacogenetic Testing
• Genome Editing: Past, Present, and Future Applications
• Genetics and Genetic Counseling (interactive presentation for groups of 10 or fewer)
• Informed Consent for Genetic Testing

Kelly Doyle, PhD
Topics: Clinical Chemistry and Endocrinology
• Adrenal Gland Function and Associated Laboratory Testing
• Direct and Indirect Methods for Reference Interval Determination
• Introduction to Clinical Mass Spectrometry
• Quality Management—Plan, Implement, Track, Improve

Marc Couturier, PhD
Topics: Infectious Disease
• Artificial Intelligence for the Detection of Gastrointestinal Parasites
• Cases in Parasitology
• Emerging and Zoonotic Infections
• Helicobacter pylori: Update on Disease, Diagnosis, and Discouraging Trends
• Multiplex/Molecular Testing for Gastrointestinal Infections
• Shiga toxinogenic E. coli: A Fully Emerged, Still Underappreciated Pathogen
• What’s New in Tickborne Diseases?

Mark Fisher, PhD, D(ABMM)
Topics: Bacteriology and Microbiology
• MALDI-TOF Bacterial Identification
• Methicillin-Resistant Staphylococcus aureus (MRSA)
• Sequencing Bacterial Identification

Andrew Fletcher, MD, MBA, CPE, CHCQM, FCAP
Topics: Laboratory Business Solutions
• Empowering Your Organization to Demonstrate Value through Utilization Management
• Impact of Pharmacogenetic Panel Testing on a Health Plan: Real Results from a Pharmacogenetic Pilot Program
• Improving Utilization in the Laboratory and Its Downstream Effect on Healthcare Cost
• Laboratory Evolution and Adaptation to Telemedicine: Are We Blockbuster in a Netflix World?
• Laboratory Stewardship: Taking the First Steps to Downstream Savings

Ken Curtis, BS, PBT(ASCP)
Topics: Specimen Management
• Avoiding Specimen Collection Errors That Can Lead to Erroneous Results
• Methods for Tracking, Communicating, and Reducing Specimen Collection Issues
Elizabeth L. Frank, PhD, DABCC
Topics: Clinical Chemistry
- Biochemical Evaluation of Pheochromocytoma
- Biogenic Amines
- Calculi and Calculi Risk Assessment
- Diagnosing Porphyrria
- Laboratory Assessment of Renal Calculi
- Nutritional Assessment—Vitamin Testing
- Porphyrins and Porphyrias

Jonathan R. Genzen, MD, PhD
Topics: Clinical Chemistry and Laboratory Automation
- Body Fluid Testing in the Clinical Laboratory
- Clinical Laboratory Automation
- Data Visualization in Quality Assurance Activities
- Fundamentals of Critical Values

Tracy I. George, MD
Topics: Hematopathology
- Basics of Anemias
- Bench to Bedside: Advances in Mastocytosis
- Cerebrospinal Fluid and Body Fluids
- Diagnostic Hematology
- Myeloproliferative Neoplasms
- Myelodysplastic Syndromes
- New Insights into Reactive Lymphadenopathies
- Principles of Automated Hematologies

Kent Gordon, CPA, MAcc
Topics: Finance
- Accounting Basics for Laboratory Management
- Blood Bank vs Piggy Bank: Keys to Harmonizing Mission and Margin
- Budgeting Basics for Laboratory Management
- Business Decisions in an Agile Culture
- Fitting Finance into the Laboratory
- Fundamentals of Laboratory Reimbursement
- Healthcare Business Fundamentals, Building Your Business Expertise

H. Evin Gulbahce, MD, MSCI
Topics: Breast Pathology
- Atypical Lesions on Core Biopsy: Should They Be Excised?
- Diagnostic Dilemmas and Clinical Conundrums in Breast Pathology
- HER2 Testing: Where Did We Come From and Where Are We Going?

Kimberly Hanson, MD, MHS
Topics: Microbiology
- Cytomegalovirus Infections
- Fungal Diagnostics
- Update on Mycobacteriology
- Viral Load Testing in Transplantation

Rhonda Hensley, SM(ASCP)
Topics: Bacteriology and Laboratory Management
- Bacteriology
- Chronic Time Abuse
- Educational Design for Competency and Training in the Lab
- Laboratory Management
- TRASH Performance Evaluations

David Hillyard, MD
Topics: Infectious Disease
- Advances in Hepatitis C Virus (HCV) Molecular Diagnostics and Treatment
- BK Virus Testing in Patients Undergoing Renal Transplants
- Emerging Infectious Diseases
- Hepatitis B Molecular Testing
- Molecular Diagnosis of Viral Respiratory Infections
- Molecular Testing for Encephalitis/Meningitis
- Ongoing Evaluation of Hepatitis C Treatment
- Verification and Validation of Molecular Infectious Disease Tests

Brian Jackson, MD, MS
Topics: Laboratory and Medical Director Leadership
- A Hippocratic Oath for the Diagnostic Industry: Linking Business Sustainability to Ethical Standards
- Analyzing Test-Ordering Patterns: Improving Diagnosis and Reducing Costs
- Ethical Development and Implementation of Artificial Intelligence in Laboratory Medicine
- Laboratory Formularies
- Metrics for Value-Driven Diagnostic Medicine
- The Future of Value-Based Payments and Its Impact on the Laboratory Industry

Elke Jarboe, MD
Topics: Gynecologic Pathology
- Endometrial Intraepithelial Neoplasia
- Pelvic Serous Carcinogenesis

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EDUCATIONAL PRESENTERS

Yuan Ji, PhD, DABCP, FACMG
Topics: Molecular Genetics and Genomics and Laboratory Leadership
- Applying VRIO Framework in Laboratory Strategic Planning
- Artificial Intelligence (AI) for Genomics Medicine
- Building a Sustained Laboratory Leadership Team with Both Medical Expertise and Business Mindset
- Cell-Free DNA-Based Noninvasive Test (NIPT) for Prenatal Aneuploidy Screen: Basics and Latest Developments
- Clinical Pharmacogenetics Testing: Caveats and Opportunities
- In-House Testing or Outsourcing?
- Introduction to Clinical Pharmacogenetics Testing
- Molecular Diagnosis of Skeletal Dysplasia
- Not All Clinical Pharmacogenetics Tests Are the Same: How to Evaluate?
- Prenatal Aneuploidy Screen Using Cell-Free DNA-Based Noninvasive Test (NIPT): Clinical Considerations and Recommendations
- Using LinkedIn to Build a Strong Personal and Organizational Brand

Patti Krautscheid, MS, LCGC
Topics: Genetic Counseling
- Current Recommendations for Genetic Carrier Screening and Expanded Options
- Strategies for Genetic Variant Reclassification
- Utilization Management Prevents Genetic Test Order Errors

Kamisha Johnson-Davis, PhD, DABCC (CC, TC)
Topics: Clinical Toxicology
- Drug Testing for In Utero Drug Exposure
- Nuts and Bolts of Drug Testing
- Testing for Alcohol Exposure Biomarkers
- Therapeutic Drug Monitoring

Marcia Jodah, MS, LCGC
Topics: Genetic Counseling
- Prenatal Carrier Screening: Current Recommendations and Expanded Options

Kamisha Johnson-Davis, PhD, DABCC (CC, TC)
Topics: Clinical Toxicology
- Drug Testing for In Utero Drug Exposure
- Nuts and Bolts of Drug Testing
- Testing for Alcohol Exposure Biomarkers
- Therapeutic Drug Monitoring

Mark Kushnir, PhD
Topics: Mass Spectrometry
- Accurate Measurement of Thyroglobulin in Serum in Presence of Antithyroglobulin Autoantibodies
- Applications of Mass Spectrometry in Endocrinology
- Introduction to Mass Spectrometry: Principles and Applications
- Introduction to Validation of Analytical Methods

Eszter Lázár-Molnár, PhD, D(ABMLI)
Topics: Immunology
- Functional Immune Testing for Defects in Innate and Adaptive Immunity
- HLA Testing for Disease Association Under Transplantation-Related Testing
- Immunopharmacology, Monitoring Immunotherapy, and Immunogenicity Testing
- Transplantation-Related Testing

Marcia Jodah, MS, LCGC
Topics: Genetic Counseling
- Prenatal Carrier Screening: Current Recommendations and Expanded Options

David Layton, MSOM
Topics: Quality Systems
- Applying Lean Principles in the Clinical Laboratory
- Applying Value Stream Mapping and Other Lean Tools in the Clinical Laboratory
- Good, Better, Best—From Kaizen Event to Full Enterprise Lean
- How Reducing the Number of Touches Per Tube in Processing Slashes Errors and Boosts Staff Productivity
- Visualize and Improve the Laboratory with Value Stream Mapping: A Powerful Tool

Kristin Hunt Karner, MD
Topics: Hematopathology
- Bone Marrow Morphology
- Molecular Testing in Myeloid Neoplasms

Eszter Lázár-Molnár, PhD, D(ABMLI)
Topics: Immunology
- Functional Immune Testing for Defects in Innate and Adaptive Immunity
- HLA Testing for Disease Association Under Transplantation-Related Testing
- Immunopharmacology, Monitoring Immunotherapy, and Immunogenicity Testing
- Transplantation-Related Testing
Nicola Longo, MD, PhD
Topics: Biomedical Genetics
- Defects of the Urea Cycle
- Disorders of Creatine Metabolism and Transport
- Inherited Disorders of Fatty Acid Oxidation
- Organic Acidemias

Rong Mao, MD, FACMG
Topics: Molecular Genetics and Genomics
- Clinical Exome Sequencing
- Fragile X Syndrome: Interesting Cases
- Innovation in Molecular Diagnosis
- Introducing Next Generation Sequencing in Clinical Diagnostics
- Molecular Diagnosis for Mitochondrial Disorders
- Using Polymerase Chain Reaction (PCR) in Molecular Diagnosis

Blaine Mathison, BS, M(ASCP)
Topics: Infectious Disease
- Cases in Parasitology
- Laboratory Diagnosis of Microfilariae
- Laboratory Identification of Arthropod Ectoparasites
- Laboratory Identification of Intestinal Helminths
- Laboratory Identification of Intestinal Protozoa
- Medical Entomology
- Morphologic Identification of Parasites in Histology Specimens
- Morphologic Identification of Plasmodium and Babesia
- Zoonotic Helminths

Gwen McMillin, PhD
Topics: Clinical Toxicology and Pharmacogenetics
- Clinical Drug Testing
- Detection of In Utero Drug Exposure
- Mass Spectrometry in the Clinical Lab
- Pharmacogenetics

James McVey
Topics: Laboratory Leadership
- Communicating Hard Things
- Leveraging Generational Differences in the Laboratory
- Transitioning from Lab Staff to Lab Leader

Rodney R. Miles, MD, PhD
Topics: Hematopathology
- Bone Marrow Pathology: Rational Use of Ever-Increasing Ancillary Tests
- Classification of Leukemias and Lymphomas: Increasing Role of Molecular Testing
- Lymphomas of the Central Nervous System
- Lymph Node Pathology: Adding Ancillary Testing to a Foundation of Morphology

Blaine Mathison, BS, M(ASCP)
Topics: Infectious Disease
- Cases in Parasitology
- Laboratory Diagnosis of Microfilariae
- Laboratory Identification of Arthropod Ectoparasites
- Laboratory Identification of Intestinal Helminths
- Laboratory Identification of Intestinal Protozoa
- Medical Entomology
- Morphologic Identification of Parasites in Histology Specimens
- Morphologic Identification of Plasmodium and Babesia
- Zoonotic Helminths

Gwen McMillin, PhD
Topics: Clinical Toxicology and Pharmacogenetics
- Clinical Drug Testing
- Detection of In Utero Drug Exposure
- Mass Spectrometry in the Clinical Lab
- Pharmacogenetics

Karen A. Moser, MD
Topics: Hematology
- Direct Oral Anticoagulants (DOAC) and the Clinical Laboratory
- Laboratory Measurement of D-Dimer
- Lupus Anticoagulant Testing

Ryan A. Metcalf, MD, CQA(ASQ)
Topics: Transfusion Medicine
- Adverse Events Related to Blood Transfusion
- Patient Blood Management

Gordon Nelson, C(ASCP), NRCC-TC
Topics: Clinical Toxicology
- Clinical Drug Testing
- Cost-Effective Utilization of Urine Drug Testing for Patients with Chronic Pain
- High-Resolution Hybrid Urine Drug Screen for Managing Costs and Time in Pain Management
- Observations in National Laboratory Inspections
- Testing by Mass Spectrometry

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Ryan Nelson, PharmD
Topics: Pharmacogenetics
- Germline Pharmacogenetics
- Precision Medicine in Cancer Care
- Somatic Pharmacogenetics

Marzia Pasquali, PhD
Topics: Biochemical Genetics
- Disorders of Amino Acid Metabolism
- Fatty Acid Oxidation Defects
- Galactosemia
- Mucopolysaccharidoses
- Newborn Screening
- Organic Acidemias

David P. Ng, MD
Topics: Hematopathology
- Diagnosis of Lymphoproliferative Neoplasms
- Diagnosis of Myeloid Neoplasm
- Flow Cytometry Artifacts and Panel Design
- Introduction to Gating Strategies
- Minimal Residual Disease Detection

Jay L. Patel, MD, MBA
Topics: Hematopathology
- Evolving Diagnosis of Myelodysplastic Syndromes in the Era of Genomic Medicine
- Molecular Tools for Minimal Residual Disease Assessment in AML
- Practical Use of Next Generation Sequencing in Patients with Acute Myeloid Leukemia

Amanda Openshaw, MS, LCGC
Topics: Genetic Counseling
- All in the Family: How Genetic Counselors Facilitate Familial Genetic Testing

Lauren Pearson, DO, MPH
Topics: Laboratory and Medical Director Management
- CLIA Regulations
- Method Validation and Verification: Case Studies and Laboratory Challenges

Chérie Petersen, BA
Topics: Laboratory Communication, Engagement, Leadership, and Service
- Are You a Customer Service “Have” or “Have Not”?
- Communicating When There is Potential for Conflict
- Communication Biohazard
- Communication Skills: How “Connected” Are You?
- The Customer-Driven Laboratory: Your Leadership Role in a Culture Reform
- Customer Service: What’s in It for Me?
- Empowered Communications through Behavior-Style Identification
- Exceptional Service Based on Principles
- If Only You Could Have a Do-Over: A Customer Service Case Study
- Leadership Strategies for Cultivating Engagement
- Leading with Authority Rather Than Power
- Making Work Meaningful: The Key to Positive Morale
- Management Strategies for Creating a Culture of Service Excellence
- Pursuing Service Excellence
- Quantifying the Financial Impact of Service Excellence

Rick Panning, MBA, MLS(ASCP)CM
Topics: Laboratory Business Solutions
- Decentralizing Testing in the Physician Office Lab Environment
- Lab 2.0
- Laboratory Workforce
- Leadership
- Regulatory and Legislative Updates—What Happens in Washington, D.C., Does NOT Stay in Washington, D.C.
- Optimizing Laboratory Care
- Personnel Licensure
- Succession Planning
- Total Cost of Care
- Utilization Management
EDUCATIONAL PRESENTERS

George Rodgers, MD, PhD
Topics: Hematology
• Case Studies in Hemostasis
• Heparin-Induced Thrombocytopenia
• Thrombophilia Testing: Useful or Not?
• Thrombotic Thrombocytopenic Purpura

Wade Samowitz, MD
Topics: GI Pathology and Molecular Oncology
• Molecular Testing in Colorectal Cancer
• Molecular Testing in Solid Tumors
• Pathways of Colorectal Carcinogenesis

Robert Schlaberg, MD, Dr Med, MPH
Topics: Infectious Disease
• Human Papillomavirus (HPV) Testing for Cervical Cancer Screenin: New Assays, New Questions
• Laboratory Diagnosis of Clostridium difficile-Associated Disease
• Molecular Testing for Sexually Transmitted Diseases
• Next Generation Sequencing for Pathogen Detection

Patricia Slev, PhD, D(ABCC)
Topics: Immunology
• COVID-19 Serology
• Hepatitis C Viral Infection and IL28B Genotyping
• Infectious Disease Serology
• Newborn Screening for Severe Combined Immunodeficiencies (SCIDs)
• Noninvasive Assessment of Liver Fibrosis (FibroMeter) Serologic Assays for Viral Hepatitis (A, B, and C) Infection
• Serologic Assays, Screening, and Confirmatory for HIV Infection

Joey Straseski, PhD, MS, MT(ASCP), DABCC
Topics: Clinical Chemistry and Endocrinology
• Assessing Fertility: Markers of Ovarian Reserve
• Calcium Homeostasis and Vitamin D: What Are Vitamin Tests Actually Measuring?
• Diagnostic Tests Used to Assess Polycystic Ovary Syndrome (PCOS)
• Jumping the Pediatric Reference Interval Hurdles
• Laboratory Assessment of Renal Function
• Laboratory Testing for Diabetes
• Measurement of Parathyroid Hormone-Related Peptide (PTHrP) Using LC-MS/MS: Old Protein, New Assay
• Method Evaluation Basics
• More Than a Flag: Myths and Realities of Interpreting Reference Intervals
• Reproductive Hormones: What, Why, and How Do We Measure Them?
• The Critical Role of the Laboratory in the Investigation of Hypoglycemia
• The Delta Check in Action: An Essential Quality Improvement Tool
• Thyroglobulin Antibody Testing: Do We Need It? How Do We Use It?
• Utility of Mass Spectrometry in Endocrinology: Reports from the Front Line
• What the Heck is Anti-Müllerian Hormone?

Kristi Smock, MD
Topics: Hematology
• Basic Coagulation Testing
• Heparin-Induced Thrombocytopenia
• Thrombotic Thrombocytopenic Purpura
• von Willebrand Disease

Diana G. Wilkins, MS, PhD, MT(ASCP)
Topics: Clinical Toxicology
• Biomarkers of Acetaminophen Toxicity: Protein-Derived APAP-CYS and Other Indicators in the Overdose Setting
• Biomonitoring of Periconceptual Exposure to Selected Chemical Agents: The Bisphenol-A Example
• Forensic Toxicology in Postmortem Investigation: Tales from the Dead

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Samantha Wiley, MS, LCGC
Topics: Genetic Counseling
  • BRCA Testing Recommendations: It’s Not Just Breast Cancer Anymore
  • Hereditary Colorectal Cancer: When and How to Order Germline Testing
  • Testing for Hereditary Cancer Syndromes: Genetic Counseling, Testing, and the Guidelines to Help

Benjamin L. Witt, MD
Topics: Cytopathology
  • Fine Needle Aspiration (FNA) Cytology of the Head and Neck: Common Cases and Their Possible Pitfalls
  • Salivary Gland Pathology