Lorin Bachmann, PhD, DABCC

Professor of Pathology
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Education

2007	Clinical Chemistry and Laboratory Medicine Fellow University of Virginia, Charlottesville, VA
2005	PhD, Molecular Medicine, University of Virginia, Charlottesville, VA
2005	Biotechnology Training Program Fellow, University of Virginia, Charlottesville, VA
1996	BS, Biology/Medical Technology, Virginia Tech, Blacksburg, VA

Licenses & Certifications

2008	Diplomate of the American Board of Clinical Chemistry (DABCC)
1996	American Society of Clinical Pathologists (ASCP), Medical Technologist (MT)

Selected Awards & Honors

2025	Certificate of Appreciation: College of American Pathology (CAP). Awarded for contributions to the CAP Accuracy Based Programs Committee
2022	CLSI Service Award: Clinical and Laboratory Standards Institute (CLSI). Awarded for contributions to CLSI C62 guidelines document, Liquid Chromatography Mass Spectrometry Methods
2019	Plenary Lecture Award: Clinical and Pharmaceutical Solutions through Analysis (CPSA). Awarded for contributions in clinical analysis across disciplines.
2017	Outstanding Speaker Award: American Association for Clinical Chemistry (AACC)
2017	Excellence in Education Award: American Association for Clinical Chemistry
2016	CLSI Service Award: Clinical and Laboratory Standards Institute (CLSI). Awarded for contributions to CLSI C57 guidelines document, Mass Spectrometry for Androgen and Estrogen in Serum

Recent Grants and Funding

Former Grants

Evaluation of Use of Single Donor Urine Specimens for Commutability Assessment of Reference Materials for Development of Reference Measurement Systems for Urine Albumin.
Sponsor: National Institutes of Standards and Technology (NIST).
Role: Principal Investigator 7/17/2023-7/16/2024

Alinity i Transplant Assay Clinical Evaluation Protocol.
Sponsor: Abbott Laboratories.
Role: Principal Investigator 5/16/2019-2021

Alinity i STAT hsTnI Design Validation.
Sponsor: Abbott Laboratories.
Role: Principal Investigator 1/1/19-12/8/20

Evaluation of Harmonization of Urine Albumin Measurement.
Sponsor: National Kidney Disease Education Program (NKDEP)/National Institutes of Diabetes and Kidney Disease (NIDDK)
Role: Principal Investigator 5/1/2010-4/3/2012

Professional Service (outside)

2025-present	Member, Document Development Committee, Clinical and Laboratory Standards Institute (CLSI), CLSI QMS30, Good Clinical Practice (GCP) for Participation in Clinical Studies and Trials.
2025-present	Scientific Session Planning Committee Member, 2026 Annual Meeting Organizing Committee, Association for Diagnostics and Laboratory Medicine (ADLM).
2024-present	Member, College of American Pathology Standards Committee.
2023-present	Member, Board of Directors, Clinical Laboratory and Standards Institute (CLSI).
2023-present	Member, Clinical Laboratory and Standards Institute (CLSI) Expert Panel on Clinical Chemistry and Toxicology.
2022-2025	Member, Document Development Committee, Clinical and Laboratory Standards Institute (CLSI), CLSI EP21/EP46, Total Analytical Error.
2021-present	Member, Document Development Committee, Clinical and Laboratory Standards Institute (CLSI), CLSI EP44, a revision of CLSI EP28-A3c, Verifying Reference Intervals in a Medical Laboratory.
2019-present	Member, National Kidney Disease Education Program/International Federation of Clinical Chemistry Laboratory Joint Working Group (NKDEP/IFCC LWG) for Standardization of Urine Albumin.
2019-present	Member, College of American Pathology Accuracy Based Programs Committee.

Recent Invited Presentations

Embracing New Quality Specifications: Adjusting Lab Practices - CLIA 2024 and Beyond. Evaluating the Impact of an Out-of-Control Event. Association for Diagnostics and Laboratory Medicine (ADLM) Annual Meeting, July 28th-Aug 1st, 2024. Chicago, IL.

LC-MSMS 101: Getting Started with Quantitative LC-MS/MS in the Diagnostic Laboratory (4-day workshop). Virtual Short Course, 2023.

Albumin Harmonization: Impact on Serum, Urine, and Body Fluid Interpretation. American Association for Clinical Chemistry (AACC) Annual Scientific Meeting, Chicago, IL, 2022.

CLSI EP26, User Evaluation of Acceptability of a Reagent Lot Change, Clinical and Laboratory Standards Institute, Internationally broadcast webinar 2022.

Perspectives on Quality Control Challenges in the Clinical Laboratory. American Association for Clinical Chemistry (AACC) Annual Scientific Meeting, Chicago, IL, 2022.

Best Practices to Recover from an Out-of-Control Event, Bio-Rad Quality Control Conference, National Webinar. 2021.

Plenary Session: The Impact of Bioanalytical Decision Making on Patient Care. Clinical and Pharmaceutical Solutions through Analysis (CPSA) Annual meeting, PA.

Measurement of 25-OH Vitamin D using a fully integrated, automated sample preparation system for LC-MS/MS in the routine clinical laboratory. 6th Shimadzu International Collaborative Laboratory Forum, 2018, Fukuoka, Japan.

Evaluation of the Shimadzu CLAM 2000 LCMS 8050 integrated system. Shimadzu Headquarters Meeting, 2018, Kyoto, Japan.

Quality Assurance - The Path to Peace of Mind: Design a Customized and Effective Quality Assurance Program for Your Laboratory, Mass Spectrometry Applications to the Clinical Laboratory (MSACL) annual meeting, 2018, Palm Springs, CA.

Standardization of Urine Albumin Assays, IFCC WorldLab Annual Meeting, Oct 2017, Durban, South Africa.

Selected Publications

Peer Reviewed Papers

Campbell MR, Astles JR, **Bachmann LM**, Brun M, Bryksin J, Erdosy M, Galior K, Holland M, Jennings B, Kondratovich M, Ladwig P, Love S, Antonio Pereira PA, Yundt-Pacheco J. Evaluation of Total Analytical Error for Quantitative Medical Laboratory Procedures. 3rd Ed. CLSI Guideline EP21. Clinical and Laboratory Standards Institute, USA; 2025.

Miller WG, Beasley-Green A, **Bachmann LM**, Budd J, Tan HT, Teo TL, Liu Q, Phinney KW, Shiba S, Seegmiller J. Extent of equivalence of results for urine albumin among three candidate mass spectrometry reference measurement procedures. Clin Chem, 2024; 70(11):1375-1382.

Seegmiller JC, **Bachmann LM**. Urine Albumin Measurements in Clinical Diagnostics [Review]. Clin Chem. 2024; 70(2):382-391.

Williams GW, Downs JW, Wolf CE, Cumpston KL, Tobarran N, Wills BK, **Bachmann LM.** Evaluation of Strontium Interference in Calcium Measurement Procedures and Content in Supplements as Measured by ICP-MS. JALM. 2023;8(2):307-318.

DeVore K, Holland M, **Bachmann LM**, Chromczak JG, Crepet F, Duncan J, Fennell S, Fertey J, Meng QH, Pierson-Perry JF, Pistorino M, Renley R, Simmons VL, Tusneem NA, Varlan AR, Xiong K. CLSI. Evaluation of Stability of In Vitro Medical Laboratory Test Reagents. 2nd ed. CLSI Guideline EP25. Clinical and Laboratory Standards Institute; 2023.

Johansen JV, **Bachmann LM**, Babic N, D'Agostino PM, Danilenko U, Durham AP, Goldford MD, Long IS, Miller WG, Person NB, Standord JE, Vandepoele N, Varlan AR. Clinical and Laboratory Standards Institute (CLSI).User Evaluation of Acceptability of a Reagent Lot Change, 2nd Edition. CLSI guideline EP26. Clinical and Laboratory Standards Institute, USA, 2022.

Clarke W, Molinaro RJ, **Bachmann LM**, Botelho JC, Cao Z, French D, Garg S, Gawoski JM, Grant RP, Hoofnagle AN, Iyer Bagyalakshmi, Kulasingam V, Mason DS, Rappold B, Tacker DH, Truscott SM, Yu Chunli, Zhu Yusheng. Clinical and Laboratory Standards Institute (CLSI). Liquid Chromatography-Mass Spectrometry Methods, 2nd Edition. CLSI guideline C62. Clinical and Laboratory Standards Institute, USA, 2022.

Bystrom C, Grant RP, **Bachmann LM**, DeMarco M, Holmes DT, Hoofnagle AN, Intelmann D, Jeffery D, Kushnir MM, Ladwig P, Lowenthal MS, Master SR, Shuford CM, Thomas S, Whiteaker J. Clinical and Laboratory Standards Institute (CLSI). Quantitative Measurement of Proteins and Peptides by Mass Spectrometry. 1st ed. CLSI guideline C64. Clinical and Laboratory Standards Institute; 2021.

Bachmann LM, Yu M, Boyd JC, Bruns DE, Miller WG. State of Harmonization of 24 Serum Albumin Measurement Procedures and Implications for Medical Decisions. Clinical Chemistry, 2017; 63(3): 770-779.

Miller GM, Seegmiller JC, Lieske JC, Narva AS, **Bachmann LM**. Status of Standardization of Urine Albumin Measurement Procedures. JALM 2017; 2(3):423-429.

Bachmann LM, Nilsson G, Bruns DE, McQueen MJ, Lieske JC, Zakowski JJ, Miller WG. State of the Art for Measurement of Urine Albumin: Comparison of Routine Measurement Procedures to Isotope Dilution Tandem Mass Spectrometry. *Clin Chem* 2014; 60:471-480. *Editorial: Scott MG, Coyne DW. Should We Sweat the Small (Micro) Things? Clin Chem 2014; 60:435-437.*

Oliveira MJ, van Deventer HE, **Bachmann LM**, Warnick GR, Nakajima K, Nakamura M, Sakurabayashi I, Kimberly MM, Shamburek RD, Korzun WJ, Myers GL, Miller WG, Remaley AT. Evaluation of four different equations for calculating LDL-C with eight different direct HDL-C assays. Clin Chim Acta. 2013; 423:135-40.

Book Chapters and Monographs

Bachmann LM, Miller GW. Principles of spectrophotometry and related photometric measurements. In: Clarke W, Dufour RD, eds. Contemporary Practice in Clinical Chemistry. Fourth edition. Washington D.C.: AACC Press. 2020:119-133.

Cook JC, **Bachmann LM**, French D. Steroid Hormones. In: Nair H, Clarke W, eds. Mass Spectrometry for the Clinical Laboratory. First edition. Cambridge: Elsevier Inc, 2017:205-226.