Stanford



Ruben Y. Luo

Assistant Professor of Pathology

Bio

BIO

Ruben Yiqi Luo, PhD, DABCC, FADLM is an Assistant Professor of Pathology at Stanford University and an Associate Director of Clinical Chemistry Laboratory at Stanford Health Care. He has been dedicated to innovations in laboratory medicine: discovery of novel diagnostic markers and invention of diagnostic technologies. He completed his clinical chemistry fellowship at University of California San Francisco. Prior to the fellowship, he had several years of work experience in the clinical diagnostic industry. He received his PhD in analytical chemistry from Stanford University, and BS in chemistry from Peking University.

His research focuses on (1) discovering the clinical diagnostic value of molecular characteristics of protein biomarkers, and (2) developing high-resolution mass spectrometry and label-free optical sensing technologies for accurate measurement of biomarkers. His research has led to the development of advanced technologies for in-depth characterization of proteoforms and novel analytical methods for clinical diagnostics, and resulted in over 50 research articles and multiple patents.

He stays as an active participant and conference speaker in major academic organizations, including the Association for Diagnostics and Laboratory Medicine (ADLM; formerly AACC), the Mass Spectrometry & Advances in Clinical Lab (MSACL), the American Society for Mass Spectrometry (ASMS), and the American Chemical Society (ACS). His work has been recognized with prestigious academic awards such as the 2025 MSACL Michael S. Bereman Award for Clinical Science Innovation, the 2022 AACC George Grannis Award for Excellence in Research and Scientific Publication, the 2021 NACCCA Outstanding Research Award, and the 2020 American Society for Clinical Pathology (ASCP) “40 Under Forty” Honoree. He currently serves as an associate editor of JMSACL and as an editorial board member of Scientific Reports.

ACADEMIC APPOINTMENTS

- Assistant Professor-Univ Med Line, Pathology
- Member, Bio-X
- Member, SPARK at Stanford
- Faculty Fellow, Sarafan ChEM-H

ADMINISTRATIVE APPOINTMENTS

- Associate Director, Clinical Chemistry Laboratory, Stanford Health Care, (2021- present)

HONORS AND AWARDS

- Michael S. Bereman Award for Clinical Science Innovation, Mass Spectrometry & Advances in the Clinical Lab (2025)
- George Grannis Award for Excellence in Research and Scientific Publication, American Association for Clinical Chemistry (2022)
- Outstanding Research Award, North American Chinese Clinical Chemists Association (2021)

- ASCP “40 Under Forty” Honoree, American Society for Clinical Pathology (2020)
- AACC Academy’s Distinguished Abstract Award, American Association for Clinical Chemistry (2020)
- Annual Scientific Meeting Student Poster Contest 2nd Place, American Association for Clinical Chemistry (2020)
- AACC TDM Division Best Abstract Award for Outstanding Research, American Association for Clinical Chemistry (2020)
- Annual Scientific Meeting Student Poster Contest 1st Place, American Association for Clinical Chemistry (2019)
- AACC TDM Division Best Abstract Award for Outstanding Research, American Association for Clinical Chemistry (2019)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Fellow, Academy of Diagnostics and Laboratory Medicine (2022 - present)
- Chair-Elect, Association for Diagnostics and Laboratory Medicine (Formerly AACC) Northern California Section (2022 - present)
- Member-at-Large, MSSS Division of Association for Diagnostics and Laboratory Medicine (Formerly AACC) (2021 - 2025)
- Member, Association for Diagnostics and Laboratory Medicine (Formerly AACC) (2017 - present)
- Board Member, North American Chinese Clinical Chemists Association (2019 - present)
- Member, American Society for Mass Spectrometry (2018 - present)
- Member, American Chemical Society (2023 - present)

PROFESSIONAL EDUCATION

- Board Certification, American Board of Clinical Chemistry (2020)
- Fellowship, UCSF Clinical Chemistry Fellowship Program (2020)
- PhD, Stanford University (2008)
- BS, Peking University (2003)

PATENTS

- R. N. Zare, Y. Luo, F. Yu. "United States Patent 8,289,519 Surface Plasmon Resonance (SPR) Microscopy Systems, Method of Fabrication Thereof, and Methods of Use Thereof", Stanford University, Oct 16, 2012

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Apply top-down mass spectrometry and label-free immunoassay to the study and utilization of biomarker proteoforms in clinical diagnosis.

PROJECTS

- Application of Proteoforms in Blood and Cerebrospinal Fluid as Potential Clinical Diagnostic Markers
- Study of β2-Transferrin and Development of a Next-Generation Assay to Detect Cerebrospinal Fluid Leak
- Top-Down Identification of Hemoglobin Variants Using Capillary Electrophoresis Coupled with High-Resolution Mass Spectrometry
- Development of a Therapeutic Drug Monitoring Assay for Immunosuppressive Drugs Using High-Resolution Mass Spectrometry
- Development of a Therapeutic Drug Monitoring Assay for Antifungal Agents Using High-Resolution Mass Spectrometry

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Siqi Li

Publications

PUBLICATIONS

- **Exploration of Semiconductor Chip-Based Single-Molecule Protein Sequencing for Identification of Hemoglobin Variants.** *Analytical chemistry*
  Luo, R. Y., Chinnaraj, M., Blacklock, K., Pike, D., Chorny, I., Vieceli, J., Wong, C. V.
  2026
- **Post-Translationally Modified Proteoforms as Biomarkers: From Discovery to Clinical Use.** *Clinical chemistry*
  Luo, R. Y., Yeung, P. S., Mann, M. W., Zhang, L., Yang, Y. K., Hoofnagle, A. N.
  2025
- **Clonality Determination by Detecting Unmodified Monoclonal Serum Free Light Chains Using On-Probe Extraction Coupled with Liquid Chromatography-High-Resolution Mass Spectrometry.** *Clinical chemistry*
  Yeung, P. S., Liu, Y., Yang, S., Ruan, A., Kerr, C. R., Wong, C. V., Shi, R. Z., Iberri, D. J., Luo, R. Y.
  2024
- **Study of β1-transferrin and β2-transferrin using microprobe-capture in-emitter elution and high-resolution mass spectrometry.** *Scientific reports*
  Luo, R. Y., Pfaffroth, C., Yang, S., Hoang, K., Yeung, P. S., Zehnder, J. L., Shi, R. Z.
  2023; 13 (1): 14974
- **Microprobe-Capture In-Emitter Elution: An Affinity Capture Technique to Directly Couple a Label-Free Optical Sensing Technology with Mass Spectrometry for Protein Analysis.** *Analytical chemistry*
  Luo, R. Y., Yang, S.
  2023
- **Neutral-Coating Capillary Electrophoresis Coupled with High-Resolution Mass Spectrometry for Top-Down Identification of Hemoglobin Variants.** *Clinical chemistry*
  Luo, R. Y., Wong, C., Xia, J. Q., Glader, B. E., Shi, R., Zehnder, J. L.
  2022
- **The study of serum monoclonal protein (M-protein) glycosylation patterns for risk stratification in multiple myeloma**
  Yeung, P., Lu, C., Boneh, E., Ortiz, D., Liu, Y., Xu, B., Barthel, J., Elgebaly, F., Iberri, D., Luo, R.
  OXFORD UNIV PRESS INC.2026
- **Single-molecule protein sequencing: One step closer to the ultimate performance of protein biomarker assays.** *Advances in clinical chemistry*
  Luo, R. Y., Zheng, L., Shin, S. H.
  2026; 135: 39-73
- **Comparison of Information-Dependent Acquisition and Sequential Window Acquisition of All Theoretical Mass Spectra for Untargeted Drug Testing on a Linear Ion Trap-Pulsing Quadrupole-Time of Flight Mass Spectrometer.** *Clinical chemistry*
  Mann, M. W., Lim, L., Luo, R. Y., Lynch, K. L.
  2026
- **Applications of Top-Down Protein Analysis in Clinical Diagnostics.** *Mass spectrometry reviews*
  Mann, M. W., Yeung, P. S., Luo, R. Y.
  2026
- **Establishment of a Top-Down Liquid Chromatography-High-Resolution-Mass Spectrometry Method With Multiple Fragmentation Modes for Clinical Diagnosis of Hemoglobin Variants.** *Journal of mass spectrometry : JMS*
  Ortiz, D., Elgebaly, F., Aquino, R. M., Vidal, H. A., Wong, C. V., Luo, R. Y.
  2026; 61 (4): e70054
- **Early gestational prediction of spontaneous preterm birth using a validated three-protein serum biomarker panel.** *BMC medicine*
  Luo, Q., Wei, J., Ding, Y., Chen, Y., Wu, L., Chou, C. J., Luo, X., Ghafourian, N., Tao, J., Jin, B., Su, K. J., Mortensen, R. D., Schilling, et al
  2026

- **A Label-Free blocking immunoassay to evaluate Anti-Adalimumab antibody activity in clinical samples** *JOURNAL OF MASS SPECTROMETRY AND ADVANCES IN THE CLINICAL LAB*
  Abdelrazik, J., Iwai, N., Liu, Y., Taylor, N., Luo, R. Y.
  2025; 38: 58-62

- **A fiber optic particle plasmon resonance assay for the detection of neurofilament light as a potential early biomarker for diabetic neuropathy.** *Clinica chimica acta; international journal of clinical chemistry*
  Chen, F., Yeung, P. S., Chang, T. C., Chung, T. C., Yen, H. W., Luo, R. Y.
  2025: 120697

- **Detection of monoclonal alpha heavy chains in the absence of other monoclonal proteins in a patient with a history of IgG-κ MGUS.** *Clinica chimica acta; international journal of clinical chemistry*
  Mann, M. W., Yeung, P. S., Luo, R. Y., Lynch, K. L., Wu, A. H., Lusk, H. J.
  2025; 579: 120636

- **Sequential window acquisition of all theoretical spectra (SWATH) Acquisition on a linear ion trap pulsing quadrupole time-of-flight mass spectrometer improves sensitivity and selectivity in comprehensive urine drug testing**
  Mann, M., Lim, L., Luo, R., Lynch, K.
  OXFORD UNIV PRESS INC.2025

- **Application of capillary electrophoresis-high-resolution mass spectrometry to diagnose 2 rare hemoglobin variants in the San Francisco Bay area.** *Laboratory medicine*
  Lu, C., Wong, C. V., Yeung, P. S., Luo, R. Y.
  2025

- **Metabolic pathway alterations in cerebrospinal fluid as diagnostic biomarkers for primary central nervous system lymphoma.** *Clinica chimica acta; international journal of clinical chemistry*
  Ma, J., Wang, D., Li, X., Zhang, Y., Tang, Q., Ding, Y., Li, X., Jin, B., Luo, R. Y., Thyparambil, S., Han, Z., Chou, C. J., Zhou, et al
  2025: 120377

- **High-resolution mass spectrometry measurement of N-terminal carbamylated hemoglobin as a potential marker for chronic diseases with elevated blood urea levels** *JOURNAL OF MASS SPECTROMETRY AND ADVANCES IN THE CLINICAL LAB*
  Chen, F., Yeung, P., Wong, C., Luo, R. Y.
  2025; 35: 8-13

- **A liquid chromatography-high-resolution mass spectrometry method for separation and identification of hemoglobin variant subunits with mass shifts less than 1 Da** *JOURNAL OF MASS SPECTROMETRY AND ADVANCES IN THE CLINICAL LAB*
  Chen, A., Aquino, R. M., Vidal, H. A., Wong, C. V., Luo, R. Y.
  2025; 35: 1-7

- **Prediction of risk for early or very early preterm births using high-resolution urinary metabolomic profiling.** *BMC pregnancy and childbirth*
  Zhang, Y., Sylvester, K. G., Wong, R. J., Blumenfeld, Y. J., Hwa, K. Y., Chou, C. J., Thyparambil, S., Liao, W., Han, Z., Schilling, J., Jin, B., Marić, I., Aghaeepour, et al
  2024; 24 (1): 783

- **Targeted Multiplex Proteomics for the Development and Validation of Biomarkers in Primary Aldosteronism Subtyping.** *European journal of endocrinology*
  Zhou, F., Ding, Y., Chen, T., Tang, Q., Zhang, J., Thyparambil, S., Jin, B., Han, Z., Chou, C. J., Schilling, J., Luo, R. Y., Tian, H., Sylvester, et al
  2024

- **Targeted multiplex validation of CSF proteomic biomarkers: implications for differentiation of PCNSL from tumor-free controls and other brain tumors.** *Frontiers in immunology*
  Ma, J., Lin, Z., Zhang, Y., Ding, Y., Tang, Q., Qian, Y., Jin, B., Luo, R. Y., Liao, W. L., Thyparambil, S., Han, Z., Chou, C. J., Schilling, et al
  2024; 15: 1343109

- **An up-conversion fluorescence lateral-flow immunoassay for rapid detection of Daratumumab in serum protein electrophoresis clinical samples.** *Clinica chimica acta; international journal of clinical chemistry*
  Liu, Y., Tao, Y., Yeung, P. S., Lu, M., Liu, J., Yu, F., Shi, R., Yiqi Luo, R.
  2024: 119677

- **Assessment of Community Lead Exposure and Poisoning by Reviewing Medical Records of Patients with Measurable Level of Lead in Blood at an Academic Medical Center**

Brar, N., Zhang, J., Huang, S., Patel, P., Singh, S., Luo, R., Dodd, D., Shi, R.
ELSEVIER SCIENCE INC.2024: S1985-S1986

- **Transport of Full-Length Proteins through a Nanopore: One Step Closer to Single-Molecule Proteomics.** *Clinical chemistry*
  Yeung, P. S., Luo, R. Y.
  2024; 70 (2): 462-463
- **Global metabolomics revealed deviations from the metabolic aging clock in colorectal cancer patients.** *Theranostics*
  Zhang, L., Mo, S., Zhu, X., Chou, C. J., Jin, B., Han, Z., Schilling, J., Liao, W., Thyparambil, S., Luo, R. Y., Whitin, J. C., Tian, L., Nagpal, et al
  2024; 14 (4): 1602-1614
- **Exploring the feasibility of using long-term stored newborn dried blood spots to identify metabolic features for congenital heart disease screening.** *Biomarker research*
  Ceresnak, S. R., Zhang, Y., Ling, X. B., Su, K. J., Tang, Q., Jin, B., Schilling, J., Chou, C. J., Han, Z., Floyd, B. J., Whitin, J. C., Hwa, K. Y., Sylvester, et al
  2023; 11 (1): 97
- **Comparison of liquid chromatography-high-resolution tandem mass spectrometry (MS2) and multi-stage mass spectrometry (MS3) for screening toxic natural products.** *Journal of mass spectrometry and advances in the clinical lab*
  Luo, R. Y., Comstock, K., Ding, C., Wu, A. H., Lynch, K. L.
  2023; 30: 38-44
- **High-throughput quantitation of amino acids and acylcarnitine in cerebrospinal fluid: identification of PCNSL biomarkers and potential metabolic messengers.** *Frontiers in molecular biosciences*
  Ma, J., Chen, K., Ding, Y., Li, X., Tang, Q., Jin, B., Luo, R. Y., Thyparambil, S., Han, Z., Chou, C. J., Zhou, A., Schilling, J., Lin, et al
  2023; 10: 1257079
- **Development of a Urine Metabolomics Biomarker-Based Prediction Model for Preeclampsia during Early Pregnancy.** *Metabolites*
  Zhang, Y., Sylvester, K. G., Jin, B., Wong, R. J., Schilling, J., Chou, C. J., Han, Z., Luo, R. Y., Tian, L., Ladella, S., Mo, L., Maric, I., Blumenfeld, et al
  2023; 13 (6)
- **Mass spectrometry quantitation of immunosuppressive drugs in clinical specimens using online solid-phase extraction and accurate-mass full scan-single ion monitoring.** *Journal of mass spectrometry and advances in the clinical lab*
  Yeung, P. S., Miller, P., Lai-Nyugen, T. B., Cheng, P., Ibrahim, A., Shi, R., Bowen, R. A., Luo, R. Y.
  2023; 28: 99-104
- **Accurate Identification of Hemoglobin Variants By Top-Down Protein Analysis Using Capillary Electrophoresis-HighResolution Mass Spectrometry**
  Luo, R., Wong, C., Xia, J., Glader, B., Shi, R., Zehnder, J. L.
  AMER SOC HEMATOLOGY.2022: 5384-5386
- **Serum peptidomic screening identified circulating peptide biomarkers predictive for preeclampsia.** *Frontiers in cardiovascular medicine*
  Zhao, S., Yin, C., Zhai, Y., Jia, Z., Su, S., Lu, Y., Meng, L., Li, C., Liu, X., Cong, Y., Li, Y., Liu, Y., Chen, et al
  2022; 9: 946433
- **Primary Hyperparathyroidism in Pregnancy: Insights From a Case of a 28-Year-Old Woman With Miscarriages and Hyperemesis Gravidarum** *ANNALS OF LABORATORY MEDICINE*
  Zhang, L., Luo, Y., Hu, Y., Zhai, Y., Gao, H., Cao, Z.
  2021; 41 (3): 336-338
- **Establishment of a High-Resolution Liquid Chromatography-Mass Spectrometry Spectral Library for Screening Toxic Natural Products.** *Journal of analytical toxicology*
  Luo, Y. R., Goodnough, R., Yun, C., Wu, A. H., Lynch, K. L.
  2021
- **A SARS-CoV-2 Label-Free Surrogate Virus Neutralization Test and a Longitudinal Study of Antibody Characteristics in COVID-19 Patients.** *Journal of clinical microbiology*
  Luo, Y. R., Yun, C., Chakraborty, I., Wu, A. H., Lynch, K. L.
  2021; 59 (7): e0019321
- **Development of Label-Free Immunoassays as Novel Solutions for the Measurement of Monoclonal Antibody Drugs and Antidrug Antibodies** *CLINICAL CHEMISTRY*

Luo, Y., Chakraborty, I., Lazar-Molnar, E., Wu, A. H. B., Lynch, K. L.
2020; 66 (10): 1319-1328

- **Simultaneous quantitation of four androgens and 17-hydroxyprogesterone in polycystic ovarian syndrome patients by LC-MS/MS** *JOURNAL OF CLINICAL LABORATORY ANALYSIS*
  Cao, Z., Lu, Y., Cong, Y., Liu, Y., Li, Y., Wang, H., Zhang, Q., Huang, W., Liu, J., Dong, Y., Tang, G., Luo, Y. R., Yin, et al
  2020; 34 (12): e23539
- **A case of unexplained duodenal ulcer and massive gastrointestinal bleed** *CLINICA CHIMICA ACTA*
  Luo, Y., Goodnough, R., Menza, R., Badea, A., Luu, H., Kornblith, L. Z., Lynch, K. L.
  2020; 506: 188-190
- **A thin-film interferometry-based label-free immunoassay for the detection of daratumumab interference in serum protein electrophoresis** *CLINICA CHIMICA ACTA*
  Luo, Y., Chakraborty, I., Zuk, R. F., Lynch, K. L., Wu, A. H. B.
  2020; 502: 128-132
- **Kinetics of SARS-CoV-2 Antibody Avidity Maturation and Association with Disease Severity.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
  Luo, Y. R., Chakraborty, I., Yun, C., Wu, A. H., Lynch, K. L.
  2020
- **Is High-Resolution Liquid Chromatography-Multistage Mass Spectrometry (LC-HR-MSn) a Good Choice for Screening Toxic Natural Products?**
  Luo, Y. R.
  American Association for Clinical Chemistry.
  2020 ; AACC Academy's Scientific Shorts
- **Label-Free Detection of Therapeutic Monoclonal Antibody Interference**
  Luo, Y. R.
  American Association for Clinical Chemistry.
  2020 ; Clinical Laboratory News
- **Correlation of Breath and Blood Delta(9)-Tetrahydrocannabinol Concentrations and Release Kinetics Following Controlled Administration of Smoked Cannabis** *CLINICAL CHEMISTRY*
  Lynch, K. L., Luo, Y., Hooshfar, S., Yun, C.
  2019; 65 (9): 1171-1179
- **Azo coupling-based derivatization method for high-sensitivity liquid chromatography-tandem mass spectrometry analysis of tetrahydrocannabinol and other aromatic compounds** *JOURNAL OF CHROMATOGRAPHY A*
  Luo, Y., Han, J., Yun, C., Lynch, K. L.
  2019; 1597: 109-118
- **Quantitation of Cannabinoids in Breath Samples Using a Novel Derivatization LC-MS/MS Assay with Ultra-High Sensitivity** *JOURNAL OF ANALYTICAL TOXICOLOGY*
  Luo, Y., Yun, C., Lynch, K. L.
  2019; 43 (5): 331-339
- **Drug Induced Liver Injury and Lactic Acidosis Associated with Chronic Sustained Release Nicotinamide Exposure** *American Journal of Biomedical Science & Research*
  Goodnough, R., Monto, A., Luo, Y. R., Lynch, K. L., Blanc, P. D.
  2019; 5 (2): 000894
- **Ligand Immobilization in Protein Interaction Studies – An Unattended Amine Coupling Protocol with Automatic Coinjection Activation**
  Luo, R., Bronner, V., Zafir-Lavie, I., Thornton, K., Shezifi, D.
  Bio-Rad Laboratories.
  2014 ; Bioradiations
- **Novel Liposome-Capture Surface Chemistries to Analyze Drug-Lipid Interaction Using the ProteOn™ XPR36 System**
  Edri, M., Luo, R., Rabkin, E., Nimri, S., Shezifi, D.
  Bio-Rad Laboratories.

2014 ; Bioradiations

- **Analyzing Binding Kinetics with Surface Plasmon Resonance Complemented with Direct Mass Spectrometry on the Same Sensor Chip**
  Luo, R., Zhu, M., Roth, S., Plows, F.
  Bio-Rad Laboratories.
  2013 ; Bioradiations
- **A Novel Biotinylated Ligand-Capture Method with Surface Regeneration Capability for Label-Free Biomolecular Interaction Analysis**
  Zhu, M., Shezifi, D., Nimri, S., Luo, R.
  Bio-Rad Laboratories.
  2013 ; Bioradiations
- **Immobilization of Active Kinases for Small Molecule Inhibition Studies**
  Popplewell, J., Luo, R.
  Bio-Rad Laboratories.
  2013 ; Bioradiations
- **Microfluidic Device for Coupling Capillary Electrophoresis and Matrix-Assisted Laser Desorption Ionization-Mass Spectrometry** *JALA*
  Luo, Y., Xu, S., Schilling, J. W., Lau, K. H., Whitin, J. C., Yu, T. T., Cohen, H. J.
  2009; 14 (5): 252-261
- **Perforated membrane method for fabricating three-dimensional polydimethylsiloxane microfluidic devices** *LAB ON A CHIP*
  Luo, Y., Zare, R. N.
  2008; 8 (10): 1688-1694
- **Microfluidic device for immunoassays based on surface plasmon resonance imaging** *LAB ON A CHIP*
  Luo, Y., Yu, F., Zare, R. N.
  2008; 8 (5): 694-700
- **PHYS 2-Analysis of biomolecular heterogeneity using fluorescence fluctuation spectroscopy**
  Zare, R. N., Kim, S., Luo, Y.
  AMER CHEMICAL SOC.2007
- **ANYL 396-Combining microfluidics with surface plasmon resonance imaging for rapid label-free immunoassays**
  Luo, Y., Yu, F., Zare, R. N.
  AMER CHEMICAL SOC.2007
- **Controlling electroosmotic flow in poly(dimethylsiloxane) separation channels by means of prepolymer additives** *ANALYTICAL CHEMISTRY*
  Luo, Y., Huang, B., Wu, H., Zare, R. N.
  2006; 78 (13): 4588-4592
- **Optimized separation of isoquinoline alkaloids in Thalictrum herbal medicine by microemulsion electrokinetic chromatography** *JOURNAL OF LIQUID CHROMATOGRAPHY & RELATED TECHNOLOGIES*
  Luo, Y. Q., Bo, T., Li, M., Gong, S. X., Li, K. A., Liu, H. W.
  2003; 26 (11): 1719-1730
- **Separation of isoquinoline alkaloids and saponins by microemulsion electrokinetic chromatography with anionic and cationic surfactants** *CHROMATOGRAPHIA*
  Bo, T., Zhong, L., Li, M., Luo, Y. Q., Li, K. A., Liu, H. W., Guo, D. A.
  2002; 56 (11-12): 709-716

PRESENTATIONS

- Applying Top-Down Mass Spectrometry to Clinical Chemistry Lab: Characterization of β2-Transferrin and Identification of Hemoglobin Variants - Consortium for Top-Down Proteomics Seminar Series (October 20, 2022)
- Application of Capillary Electrophoresis-Mass Spectrometry to the Clinical Practice of Hemoglobin Variant Identification - CASMS Conference (October 19, 2022)
- Applying Top-Down High-Resolution Mass Spectrometry to Analyze Proteoforms: Characterization of β2-Transferrin and Identification of Hemoglobin Variants - AACC Annual Scientific Meeting & Clinical Lab Expo (July 27, 2022)

- Label-Free Immunoassay: From a Biomolecular Interaction Characterization Tool to a Clinical Chemistry Platform - AACC Annual Scientific Meeting & Clinical Lab Expo (July 26, 2022)
- Label-Free Immunoassay: An Emerging Platform in Clinical Immunology and Therapeutic Biologics Monitoring - AACC Annual Scientific Meeting & Clinical Lab Expo (July 25, 2022)
- Clinical Diagnosis of Hemoglobin Variants Based on Top-down Structural Characterization Using Capillary Electrophoresis-Coupled High-Resolution Mass Spectrometry - ASMS Conference (June 6, 2022)
- Capillary Zone Electrophoresis Coupling with High-Resolution Mass Spectrometry for Top-down Structural Characterization of Hemoglobin Variants - MSACL Annual Conference & Exhibits (April 7, 2022)
- A Therapeutic Drug Monitoring Assay of Immunosuppressants Using TurboFlow LC and High-Resolution Mass Spectrometry - MSACL Annual Conference & Exhibits (April 7, 2022)
- Finding the “Silent Killers” – Mass Spectrometry for Identifying Natural Toxins - Clinical Mass Spectrometry Forum (April 9, 2022)
- Applications of Label-Free Immunoassays in SARS-CoV-2 Serology - Gator Bio Webinar Series (November 18, 2020)
- Clinical Toxicology Applications of High-Sensitivity and High-Resolution Mass Spectrometry - Mass Spectrometry for Clinical Diagnosis (September 16, 2019)
- High-Resolution Mass Spectrometry Library for Identification of Natural Product Toxicity Cases - NACCCA Annual Meeting (August 7, 2019)
- Rapid Plate-Format Label-Free Immunoassays for Quantitation of Monoclonal Antibody Drugs and Detection of Anti-Drug Antibodies in Serum Samples - AACC Annual Scientific Meeting (August 6, 2019)
- Quantitation of Cannabinoids in Breath Samples Using a Novel Derivatization LC-MS Assay with Ultrahigh Sensitivity - ASMS Conference (June 6, 2019)
- A Novel Derivatization Method for High-Sensitivity LC-MS/MS Analysis of Aromatic Compounds – Quantitation of Cannabinoids in Human Breath - MSACL Annual Conference & Exhibits (April 3, 2019)
- High-Resolution Mass Spectrometry Analysis for Toxicity Associated with Natural Products - Clinical Mass Spectrometry Forum (March 15, 2019)
- A Novel Derivatization-Based LC-MS/MS Method with High Sensitivity for Quantitation of Cannabinoids in Breath Samples - AACC Annual Scientific Meeting (August 1, 2018)
- Simple and Rapid LC-MS/MS Methods for Quantitation of Five Cannabinoids in Breath and Blood Samples - MSACL Annual Conference (January 24, 2018)
- Derivatization for Clinical Mass Spectrometry: A Thing in the Past or the Future - Clinical Mass Spectrometry Forum (March 30, 2018)
- Developing Microfluidic Chips for Coupling Capillary Electrophoresis with Matrix-Assisted Laser Desorption Ionization-Mass Spectrometry - PITTCON Conference (March 3, 2008)
- Combining Microfluidics with Surface Plasmon Resonance Imaging for Rapid Label-Free Immunoassays - ACS National Meeting (August 22, 2007)