

Curriculum Vitae

Skogerboe, Kristen Johanna Department of Chemistry Seattle University 901 12 th Avenue Seattle, WA 98122	Professor of Chemistry Awarded Diplomate Status: American Board Clinical Chemistry (1988) American Board Medical Genetics (1992) skogerbo@seattleu.edu 206-296-6360
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EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Colorado State University, Fort Collins, CO	B.S.	1978-1982	Chemistry
Iowa State University, Ames, IA	Ph.D.	1982-1986	Chemistry
University of Washington, Seattle, WA		1986-1988	Clinical Chemistry
University of Washington, Seattle, WA		1988-1990	Molecular Genetics

PROFESSIONAL POSITIONS

Professor

2007-Present

Department Chair 2003-2007, 2009-2012
 Associate Professor 2001-2007
 Assistant Professor 1995-2001

Department of Chemistry, Seattle University, Seattle, WA

Research in surfactant proteins and interfacial chemistry;

Teaching General Chemistry, Analytical Chemistry, Forensic Science and Active Learning

Visiting Scholar 2012-2013
 Visiting Associate Professor 2002-2003
 Department of Chemistry, University of Washington (Sabbatical Appointment) 1999, 2002-2009
Proteomics/capillary electrophoresis of protein expression in single neurons (Summers)

Visiting Research Scientist 1998
 Children's Hospital and Medical Center, Seattle, WA (Summer)

Clinical studies in pediatric oncology

Associate Director, Scientific and Technical 199-1995
 Affairs, Molecular Biology Department (1995-2003*)
 Lab Corp, Dynacare, Laboratory of Pathology and Swedish Medical Center, Seattle, WA (*consulting)

Clinical Molecular Genetics, Virology, Oncology and Paternity Testing

Senior Clinical Chemistry Fellow and Molecular Genetics Fellow 1986-1990
 University of Washington, Seattle, WA

Fellowships in Clinical Chemistry and Molecular Genetics

Research Assistant 1982-1986
 Department of Energy, Ames National Laboratory, Iowa State University, Ames, IA

Graduate Research in Analytical Chemistry

Research Associate 1980-1981
 The Procter and Gamble Company, Cincinnati, OH

Personal Products Research, Detergents, and Surfactants

SELECTED PROFESSIONAL MEMBERSHIPS/ACTIVITIES/CONFERENCES

External to Seattle University

- Oral Session judge for the Murdock Undergraduate Research Conference (on-line) November 2020.
- Poster judge for the Murdock Undergraduate Research Conference, Vancouver WA (Nov 2019)
- Oral Presentations at the regional meeting of the American Chemical Society, Portland Oregon (June 2019)
- National Science Foundation Mass Spectrometry MRI Review Panel, Washington DC, (April 2017).
- Society of Western Analytical Professors Conference, Colorado State University, Fort Collins Colorado, "Chemical Signature Analysis" (January 2013).
- American Chemical Society Student Affiliate Review Team, National ACS office, (June 2012).
- Sienna Conference, Sienna Italy, "Dynamic Surface Tension Detection of Industrial Processes, (June 2011).
- Women in Science and Engineering Conference, University of Washington, Seattle, WA, "The importance of undergraduate research in technical education" (March 2010).
- Council of Undergraduate Research Meeting, Missoula MT, "Programmatic Improvement by Departmental Benchmarking: A Case Study" (April 2010).
- Washington Defenders Group; Continuing Legal Education Conference May 2010 Winthrop WA. "The Impact of the National Academy of Science Report on the Forensic Science Community".
- Member: American Chemical Society (ACS) 1982-present.
- Member: American Association of Clinical Chemistry (AACC) 1986-present
- National Abstracts Chair: AACC (2006).
- Annual Meeting Organizing Committee: AACC (2005-2006); Chair of the PNW Region (1993- 1994); Secretary of National Molecular Pathology Division (1995-1996).
- Panel Reviewer: NSF Division of Undergraduate Education CCLI, Washington DC (Jan 2005).
- Institutional Participant: CUR Conference on Institutionalizing Undergraduate Research, Ann Arbor (2007).
- Appointed Member: Washington State Dept. of Health Genetics Advisory Council (2003-present).
- Session Presenter: Johns Hopkins University Center for Talented Youth Odyssey Series (April 2006).
- Huckaby Fellowship Panelist/Reviewer: Graduate College, University of Washington (2001-2004, 2006).
- Conference Attendee: American Association of Clinical Chemistry National Meetings: Orlando, Florida and Chicago, Illinois, earning over 50 hours of continuing education (2005, 2006).
- Institutional participant: International conference on the Scholarship of Teaching and Learning, Vancouver British Columbia, (Nov 2005).
- Workshop Participant: Process Oriented Guided Inquiry of Learning (POGIL) workshops supported by the National Science Foundation, Seattle WA, (2004, 2006).
- Invited Conference Participant: "Research Corporation: Models in Academic Leadership" Tucson Arizona (July 2004).
- Conference Presentation and Session Presider: Biennial Conference of Chemical Education, "Using the World of the Working Chemist to Reform the Undergraduate Analytical Laboratory" Ames Iowa (July 2004).

- Conference Panelist: Women in Science and Engineering, University of Washington (2003, 2004).
- Panelist: “Preparing Chemical Leaders of Tomorrow: Re-envisioning the Ph.D.” University of Washington; Funded by the Dreyfus Foundation (March 2003).
- Conference Presentation: 12th Annual Women in Science and Engineering Conference “The Path to a Faculty Career” University of Washington (Jan 2003).
- Conference Participant: AACC Oak Ridge Conference “The Post Genome Era: New Targets and New Technologies” Seattle WA (May 2001).
- Conference Presentation/Session Presider: Northwest Regional ACS Meeting, Seattle WA (June 2001).
- Conference Co-author: “Preparing for the professoriate: A graduate student’s perspective” ACS National meeting San Francisco with K.E. Miller (June 2000).
- Conference Presentation: University of Texas Teleconference Network, broadcast nationally “Fetal Hemolytic Disease” (September 1999).
- Conference Presentation: Washington College Chemistry Teachers Association, “Promoting an Understanding of Pressure in General Chemistry” with Vicky Minderhout, Ellensburg, WA (April 1999).
- Conference Presentation: University of Texas Teleconference Network (nationally broadcast) “A Primer on Paternity Testing” (September 1998).
- Member of Project Kaleidoscope; Faculty for the 21st Century(1998-present).
- Expert Witness related to medical/legal issues in Superior/Tribal/Military court jurisdictions, case names provided upon request (1991-present).
- Qualified Inspector for College of American Pathologists: Chemistry and Molecular Biology, various inspection teams (1990-2003).
- Invited Reviewer for Peer Reviewed Journals Analytical Chemistry, Talanta, Clinical Chemistry, Journal of Chemical Education, averaging 4 manuscripts/year (1990-present).
- Conference Presentation at Northwest Medical Laboratory Symposium American Society of Clinical Laboratory Scientists (ASCLS) “Laboratory Insiders View of Paternity Testing” (November 1998).
- Conference Presentation: ASCLS National Meeting “DNA testing in a clinical laboratory: Using PCR for the diagnosis of genetic diseases such as Rh Incompatibility” Atlanta GA (July 1997).
- Pacific Northwest Genetics Groups (PACNORGG), Member DNA Committee (1995-2001).
- Participating Presenter, Expanding Your Horizons, Bellevue Community College (1995-97).
- Clinical Laboratory Educators Teleconference, Secretary, (1996).

Internal to Seattle University

- Science and Engineering College Personnel Committee 2018-Present, Chair 2020
- Ad-hoc Committee for College of Science and Engineering Faculty Governance (2019-Present)
- Director of the Seattle University College of Science and Engineering Bannan Scholars Program (2019-Present)
- Pre-Health Interview Committee (2020- present), (2014- 2018 Faculty Chair, 2017) and (2009-2012)
- University Rank and Tenure Committee 2014-2018
- Provost Awards Committee, Chair 2015-2018
- College of Science and Engineering Strategic Planning Committee Member (2016-Present)
- Member College Personal Committee (2011-12) and (2003-2006)
- Member Ad-Hoc Committee for College Awards (2010)
- Member of Provost Office Academic Excellence Advisory Committee (2008-2012)

- Chair of Science and Engineering External Review Process Committee (2009)
- Co-Director of SUURA (Seattle University Undergraduate Research Association) (2008-2012)
- Director of Seattle University Summer Research Program (2008)
- Representative to Western Conversations, Jesuit University Colleague group held at University of San Francisco (2008)
- Endowed Missions Fund Committee (2008-2012)
- Contributing member to the Murdock Foundation Undergraduate Research Program Grant (2008)
- Member of Science and Engineering Dean Search Committee (2007)
- Member of Seattle University Science and Engineering Facilities Task Force (2006-present)
- Bannan Scholars Program Invited Lecturer, “Proteomics and Analytical Chemistry” (Oct 2005)
- Presentation: Overview of Chemistry Facilities to Seattle University: 1) Dean’s Council, 2) Executive Team, and 3) Academic Assembly (2005-2006)
- Chemistry Department Search Committees (2000-2001, 2003-2005)
- Faculty Participant Seattle University School of Law Forensic Expert (2001-2011)
- Panelist Seattle University New Faculty Institute “Making Scholarship a Priority” (2004, 2005)
- Seattle University Criminal Justice Search Committee (2004-2005)
- Seattle University Core Revitalization Subcommittee, Science and Engineering (2001)
- Seattle University Dean’s Search Advisory Committee Chair (1998)
- Pauling Award Committee, ACS, Seattle University (1996)

EXPERIENCE AND EXPERTISE

- Chemical methods of analysis including atomic spectroscopy, high performance liquid chromatography, mass spectrometry, electrophoresis and immunoassay. Development and validation of spectroscopic and chromatographic methods.
- Teaching general, analytical chemistry and organic chemistry laboratory and introductory laboratory medicine, forensic science and medical technology. Extensive interests in collaborative learning and community outreach in the area of science education.
- Laboratory techniques for Southern blot and Polymerase Chain Reaction (PCR) based methods of DNA analysis. Protein analysis using 2-D capillary electrophoresis of single cells
- Interpretation of DNA data for the diagnosis of:

• Alpha thalassemia	• Chronic Myelogenous Leukemia
• Cystic fibrosis	• Ewing’s Sarcoma
• Huntington’s disease	• Cat Scratch Disease
• Sickle Cell disease	• Rhabdomyosarcoma
• Fragile X syndrome	• Twin zygosity
• Maternal cell contamination	• Viral load testing for HIV/ HCV
• Prader Willi syndrome	• Uniparental disomy studies
• Fetal Rh Typing	• DNA identity determinations

GRANTS AND AWARDS (Research Support)

- Seattle University College of Science and Engineering Summer Research Mentorship Stipend (\$5000), Summer 2020, 2017.
- Murdock Foundation co-author on behalf of the institution for Undergraduate Science Research Program (Award Amount: \$330,000, funded 2009).

- Sherman Fairchild Foundation co-PI “Promoting the development of problem solving skills in undergraduate science students at Seattle University” Awarded June 2006 (Award Amount: \$500,000 divided between Chemistry/Physics/Biology).
- Merck Foundation/AAAS: “Promoting the Synergy between Chemistry and Biology at Seattle University” Awarded February 2005 (Award Amount: \$60,000 (three years, plus institutional match)
- Seattle University Provost Assessment Award: Benchmarking the Seattle University Chemistry department by Comparison with a Variety of Undergraduate Institutions” Awarded 2004 (Award Amount: \$5,000)
- Bannan Foundation Equipment Award: “Atomic Absorption Spectrophotometry” Awarded 2004 (Award Amount: \$16,000)
- Core Revitalization Award “An Interdisciplinary Core Course Based on Forensic Science”: CO-PI with Dr. Jackie Helfgott Awarded June 2001 (Award Amount: \$5,000)
- Research Corporation Grant: “Modeling Surfactant Protein Interactions with Dynamic Surface Tension Analysis” Awarded November 2000 (Award Amount: \$27,000, plus \$17,000 institutional match)
- Dreyfus Foundation Grant: “Using the World of the Working Chemist to Reform the Analytical Chemistry Laboratory” Awarded January 2000 (Award Amount: \$20,000, plus \$11,000 institutional match)
- Huckabay Foundation “Preparing Future Faculty” Fellowship awarded to Keith Miller, mentored Dr. Miller while he was a Huckabay Fellow at Seattle University, Fall 1999
- Bannan Foundation Equipment Award, “Gas Chromatographic Equipment for Chemical Separations and Detection in the Chemistry and Environmental Engineering Departments at Seattle University” Awarded 1998 (Award Amount: \$12,000)
- Bannan Foundation Equipment Award, “Fluorescence and Fluorescence Polarization Equipment for Biochemical Analysis at Seattle University” 1999 (Award Amount: \$21,000)
- Bannan Foundation Equipment Award, “Chromatographic Equipment for Surface Tension Analysis in the Chemistry at Seattle University” 1999 (Award Amount: \$9,500)
- Van Slyke Society American Association of Clinical Chemistry Research Grant, “Rapid Examination and Determination of Surfactants by Simultaneous Surface Tension and Surface Adsorption Analysis,” Awarded 1996-1997 (Award Amount: \$10,000)
- Summer Faculty Fellowship, 1997, 2001; Faculty Development Award, Seattle University, 1997, 1998
- Young Investigator Award, ACLPS (Academy of Clinical Laboratory Physicians and Scientists), 1989
- Pace Academic Graduate Scholarship, Iowa State University, 1982-1985
- Outstanding Teaching Award, Colorado State University, 1982
- Scholarship recipient: President’s scholar and Lelia Morgan Women’s Scholarship, CSU 1978-1982
- Elected to SPURS, Mortar Board, and Phi Kappa Phi, 1982

PEER-REVIEWED PUBLICATIONS

1. Skogerboe, Kristen J; Haughn, Noah*; Purcell, Haley*; Jackels, Susan, C*. " Comparison of Sensory Analysis and Quantitative levels of 3-isopropyl-2-methoxypyrazine in ground East African coffee having Potato Taste Defect." Submitted to *Journal of Food and Agricultural Chemistry* December 2020.
2. Sudel, P.E.; Pierce, K.M.; Prebihalo, S.E.; Skogerboe, K.J.; Wright, B.W.; Synovec, R.E. "Development of Gas Chromatographic Pattern Recognition and Classification Tools for Compliance and Forensic Analyses of Fuels: A Review." *Analytical Chimica Acta*, 2020, 1132, 157-186. doi.org/10.1016/j.aca.2020.07.027
3. Prebihalo, S.E.; Ochoa, G.S.; Berrier, K.L.; Skogerboe, K.J.; Cameron, K.L.; Trump, J.R.; Svoboda, S.J.; Wickiser, J.K.; Synovec, R.E. "Control-Normalized Fisher Ratio Analysis of Comprehensive Two-Dimensional Gas Chromatography Time-of-Flight Mass Spectrometry Data for Enhanced Biomarker Discovery in a Metabolic Study of Orthopedic Knee Injury" *Anal. Chem.* 2020, 92, 23, 15526–15533. doi.org/10.1021/acs.analchem.0c03456
4. Brooke C. Reaser, Nathaniel E. Watson, Sarah E. Prebihalo, David K. Pinkerton, Kristen J. Skogerboe, Robert E. Synovec: "**Management and Interpretation of Capillary Chromatography-Mass Spectrometry Data**" *Hyphenations of Capillary Chromatography with Mass Spectrometry*, Edited by Peter Q. Tanchida and Luigi Mondello, Elsevier Inc, 2020, pp 449-475
5. Marney, L.C.; Hoggard, J.C.; Skogerboe, K.J. and Synovec, R.E. "Methods of Discovery-Based and Targeted Metabolite Analysis by Comprehensive Two-Dimensional Gas Chromatography with Metabolomics" Dan Raftery, Editor, Humana Press USA, 2014.
6. Skogerboe, K.J. "Innovation, Success, Error and Confidence in Forensic DNA Testing" published in *Forensic Science and the Administration of Justice: Critical Issues and Directions* Kevin Strom and Matthew Hickman, Editors, Sage Publishing, 2014.
7. Fitz, B. D.; Reaser, B. C.; Pinkerton, D. K.; Hoggard, J. C.; Skogerboe, K. J.; Synovec, R. E. *Analytical Chemistry*. "Enhancing Gas Chromatography – Time of Flight Mass Spectrometry Data Analysis Using Two-Dimensional Mass Channel Cluster Plots" 4/15/2014, Vol. 86 Issue 8, pages 3973-3979. 7p. DOI: 10.1021/ac5004344.
8. Bramanti, E.; Skogerboe, K.J.; Synovec, R.E. "Chemical analysis in a drop: a dynamic surface tension detector for polymer and protein characterization." *Polymer International* Volume 62, Issue 8, August 2013, Pages: 1135–1143. DOI: 10.1002/pi.4553
9. Pierce, K.M.*; Bramanti, E.; Onor, M.; Spiniello, R.; Kangas, A.; Skogerboe, K.J.; Synovec, R.E. "Analysis of Commercial Beverage Products by Size Exclusion Chromatography coupled with UV-Vis Absorbance Detection and Dynamic Surface Tension Detection," *Talanta*, 2009, 80, 1445-1451.
10. Bramanti, E.; Allegrini, C*; Onor, M.; Raspi, G.; Skogerboe, K.J.; Synovec, R.E. "Flow Injection Analysis with Diode Array Absorbance Detection and Dynamic Surface Tension Detection for Studying Denaturation and Surface Activity of Globular Proteins," *Analytical Biochemistry*, 2006, 351, 100-113.

11. Bramanti, E.; Allegrini, C*.; Skogerboe, K.J.; Synovec, R.E. "High-Throughput Screening of Protein Surface Activity via Flow Injection Analysis-pH Gradient-Dynamic Surface Tension Detection," *Anal. Chem.*, 2005, 77(1), 250-258.
12. Quigley, W.W.C.; Bramanti, E.; Staggemeier, B.A.; Miller, KE; Nabi, A; Skogerboe, KJ; Synovec, RE. "Determination, by Dynamic Surface-Tension Analysis, of the Molar Mass of Proteins Denatured in Guanidine Thiocyanate" *Analytical and Bioanalytical Chemistry*, 2004, 378, 134-143.
13. Souter, V.; Kapur, R.P.; Nyholt, D.R.; Skogerboe, K.J.; Myerson, D.; Ton, C.C.; Opheim, K.E.; Easterling, T.R.; Shields, L.E.; Montgomery, G.W.; Glass, I.A. "A Report of Dizygous Monochorionic Twins," *N Engl J Med* 2003, 349, 154-158.
14. Miller, K.E.; Bramanti, E.; Prazen, B.J.; Prezhdo, M.*; Skogerboe, K.J.; Synovec, R.E. "Multidimensional Analytical of Polyethylene Glycols by Size Exclusion Chromatography and Dynamic Surface Tension Detection," *Anal. Chem.*, 2000, 72, 4372-4380.
15. Miller, K.E.; Skogerboe, K.J.; Synovec, R.E. "Novel Calibration of a Dynamic Surface Tension Detector: Flow Injection Analysis of Kinetically-Hindered Surface-Active Analytes," *Talanta*, 50, 1045-56, 1999.
16. Olson, N.A.; Skogerboe, K.J.; Synovec, R.E. "Hydrophobic Interaction Chromatography Coupled with Dynamic Surface Tension Detection for the Determination of Surface Active Species in Protein Formulations," *Journal of Chromatography A*, 806: 239-50, 1998.
17. Olson, N.A.; Synovec, R.E.; Bond, W.B*.; Alloway, D.M*.; Skogerboe, K.J. "Dynamic Surface Tension and Surface Adhesion Detection for the Rapid Analysis of Surfactants in Flowing Aqueous Liquids," *Anal. Chem.* 69: 3496-3505, 1997.
18. Anderson, D.J.; Guo, B.; Xu, Y.; Ng, L.M.; Kricka, L.J.; Skogerboe, K.J., Hage, D.S.; Schoeff, L.; Wang, J.; Sokoll, L.J.; Chan, D.W.; Ward, K.M.; Davis, K.A. "Clinical Chemistry," *Anal. Chem.*, 69, 165R-229R, 1997 (Skogerboe, K.J. "Molecular Biology Techniques in Clinical Chemistry, 193R-196R).
19. Conway, K.A.; Sako, J.; Skogerboe, K.J. "Preparation of Genomic DNA suitable for Restriction Enzyme Digestion from Whole Blood Collected with Heparin as an Anticoagulant," *Clin. Chem.* 42, 1995.
20. Skogerboe, K.J. "Molecular Biology Techniques," *Anal. Chem.*, 67, 1995, 449-454.
21. Keitges, E.A.; Skogerboe, K.J.; Luthardt, F.W.; "Mosaic trisomy 14 diagnosed at amniocentesis, confirmed in CVS cultures, but absent in fetal skin cultures," *Cytogenet Cell Genet* 63, 248, 1994.
22. Skogerboe, K.J. "Molecular Biology Techniques," *Anal. Chem.* 65: 1993, R416-419.
23. Skogerboe, K.J.; West, S.F.; Smith, C.; LeCrone, C.; Terashita, S*.; Detter, J.D.; Tait, J.F. "BCB inclusion bodies: In Reply," *Arch. Path. Lab. Med.* 117, 1993.
24. Skogerboe, K.J.; West, S.F.; Smith, C.; LeCrone, C.; Terashita, S*.; Detter, J.D.; Tait, J.F. "BCB inclusion bodies: relation to DNA-determination genotype," *Arch. Path. Lab. Med.* 116, 1012-1018, 1992.
25. West, S.F.; Skogerboe, K.J.; LeCrone, C.; Detter, J.D. "Prenatal diagnosis of Hb Bart's Hydrops Fetalis," *Clinical Laboratory Science* 5, 53-56, 1992.

26. Skogerboe, K.J.; West, S.F.; Murillo, M.D.; Glass, M.W.; Shaunak, S.*; Tait, J.F. "Newborn genetic screening for sickle cell disease: correlation of DNA analysis with hemoglobin electrophoresis," *Clin. Chem.* 37, 454-458, 1991.
27. Skogerboe, K.J. "Clinical Chemistry: Spectrophotometry," *Anal. Chem.* 63: 1991, R231-235
28. Skogerboe, K.J.; West, S.F.; Murillo, M.D.; Tait, J.F. "Development and evaluation of a simplified method for detection of the delta F508 mutation in cystic fibrosis," *Clin. Chem.* 36, 1984-1986, 1990.
29. Skogerboe, K.J.; Felix-Slenn, T.*; Synovec, R.E. "Ion chromatographic determination of oxalate in Plasma: Correlation study with an enzymatic method," *Anal. Chim. Acta* 237, 299-304, 1990.
30. Skogerboe, K.J.; West, S.F.; Murillo, M.D.; Tait, J.F. "PCR dot blots: Large signal differences between sense and anti-sense probes," *BioTechniques* 9, 154-156, 1990.
31. Skogerboe, K.J.; Labbe, R.F.; Rettmer, R.L.; Sundquist, J.P.; Gargett, A.M.* "Chemiluminescent measurement of total urinary nitrogen for accurate calculation of nitrogen balance," *Clin. Chem.* 36, 752-755, 1990.
32. Howard, J.D.; Skogerboe, K.J.; Case, G.A.; Raisys, V.A.; Lacsina, E.Q. "Death following accidental sodium azide ingestion," *J. Forensic Toxicology* 35, 193-196, 1990.
33. Skogerboe, K.J.; McLaughlin, M.K.; Labbe, R.F. "Comparison of sample preparation techniques for the measurement of total nitrogen in stool and food samples," *Clin. Chem.* 35, 1114, 1989.
34. Skogerboe, K.J.; Johnson, C.*; Labbe, R.F. "Resolution of several issues in the HPLC analysis of urinary porphyrins," *Clin. Chem.* 34, 1115, 1989.
35. Labbe, R.F.; Skogerboe, K.J.; Rettmer, R.L.; Davis, H.A*. "Laser photobioactivation mechanisms: *In vitro* studies using ascorbic acid uptake and hydroxyproline formation as biochemical markers of irradiation response," *J. Lasers Surg. Med.* 10, 201-207, 1990.
36. Skogerboe, K.J. "Contributions of Analytical Chemistry to the Clinical Laboratory," *Anal. Chem.* 60, 1271A-5A, 1988.
37. Skogerboe, K.J.; Raisys, V.A.; Friel, P.N.; Yerby, M.S. "A method for in-vitro prediction of phenytoin toxicity," *Clin. Chem.* 33, 1019, 1987.
38. Skogerboe, K.J.; Yeung, E.S. "Straylight reduction in fiber optic probes," *Anal. Chem.* 59, 1812-1814, 1987.
39. Skogerboe, K.J.; Yeung, E.S. "Single laser thermal lens detector for microbore liquid chromatography based on high frequency modulation," *Anal. Chem.* 58, 1014-1018, 1986.
40. Skogerboe, K.J.; Yeung, E.S. "Quantitative gas chromatography without analyte identification by ultrasonic detection," *Anal. Chem.* 56, 2684-2686, 1984.
41. Miller, D.A.; Skogerboe, K.J.; Grimsrud, E.P. "Enhancement of electron capture detector response to polycyclic aromatic and related hydrocarbons by addition of oxygen to carrier gas," *Anal. Chem.* 52, 464-467, 1981.

*Undergraduate co-authors (included on 12 papers total over all years)