

Samantha L. Elliott

Director, Center for Inclusive Teaching & Learning
Associate Professor of Biology
St. Mary's College of Maryland, St. Mary's City, MD 20686

Work Experience

Founding Director, Center for Inclusive Teaching & Learning, St. Mary's College of Maryland (2019-present)
Associate Professor, St. Mary's College of Maryland (2006-present)
Assistant Director for Faculty Programs, TLTC, University of Maryland (2018-2019)
Visiting Scholar, Center for Teaching Excellence, University of Maryland (2012-2013)
Adjunct Instructor, Durham Technical Community College (2005)
Research Associate, Duke University (2004-2006)

Education

Special Advanced Student, University of Maryland (2018-present), courses in educational measurement and statistics (18 credits completed as of January 2022)
Graduate Research Assistant, UNC-Chapel Hill (1999-2004) Ph.D. Immunology
Undergraduate student, Furman University (1995-1999) B.S. Biology, B.A. German

Professional Societies

American Association for the Advancement of Science (AAAS)
American Association of Immunologists (AAI)
American Society for Microbiology (ASM)
National Association of Biology Teachers (NABT)
Professional and Organizational Development Network (POD)
Society for the Advancement of Biology Education Research (SABER)

Undergraduate Classes Taught

BIOL101: Contemporary Bioscience with Laboratory
BIOL105/105L: Principles of Biology I and Laboratory
BIOL109: Emerging Scholars Program
BIOL438: Cancer Cell Biology with Laboratory
BIOL470: Immunology
BIOL493/494: St. Mary's Project (over 80 undergraduate theses mentored)
COREP201: Effective Teaching and Learning
DeSousa-Brent Summer Bridge program
IDIS122: Introduction to Public and Environmental Health
SCIE330: Science Education Research and Practice

Grants, Fellowships and Awards

NSF ADVANCE grant (2021-2026, \$781,552) Collaborative Research: Online Learning Communities for Gender Equity: Targeting Departmental Level Change in STEM with Drs. Melissa Dancy (Western Michigan University), Apriel Hodari (Eureka Scientific), and Kelly Mack (AAC&U/PKAL).

Partnership for Undergraduate Life Science Education (PULSE) Leadership Fellow (2015-present; on reserve for 2021-2022 academic year)

AAC&U/PKAL Summer Leadership Institute (participant in 2012, mentor in 2019 and 2021)

NSF S-STEM grant # (2013-2017, \$598,000). SMCM STEM Navigators. Co-Principal Investigators: Dr. David Kung (Mathematics, Lead 2013-2014), Dr. Samantha Elliott (Biology, Lead 2014-2015), Dr. Leah Eller (Chemistry), Dr. Joshua Grossman (Physics), and Dr. Lindsay Jamieson (Computer Science, Lead 2016-2017). (January 2013-2017, \$598,000).

Lumina Foundation grant (2011-2012, \$20,000). Course Redesign for Principles of Biology I: Reclaiming the small-college experience. co-PIs: Holly Gorton (Lead), Samantha Elliott, Linda Coughlin and Lin Muilenburg.

Biology Scholars Research Residency Fellowship (2008-2009)

NIH NSRA Post-doctoral Fellowship (2005-2006)

Select peer-reviewed publications

(Full list of publications can be found on [Google Scholar](#))

Sumali Pandey, Heather A. Bruns, Danielle L. J. Condry, Louis B. Justement, Adam J. Kleinschmit, Archana Lal, Sarah Sletten, Rebekah T. Taylor, Rebecca L. Sparks-Thissen, Thiru Vanniasinkam, and Samantha L. Elliott. Antigen versus immunogen and the importance of consistency in immunological education. Submitted to *Immunohorizons*, January 2022

Ellen R. Swanson, Emek Kose, Elizabeth A. Zollinger and Samantha L. Elliott. Mathematical Modeling of Tumor and Cancer Stem Cells Treated with CAR-T Therapy and Inhibition of TGF- β . Under revision at *Bulletin of Mathematical Biology* as of January 2022.

Ellen R. Swanson, Samantha L. Elliott, Elizabeth A. Zollinger, and Emek Kose. Cancer Stem Cell Division: Mathematical Models and Insights. *Current Stem Cell Reports* (in press)

Tugba Akman, Emek Kose, and Samantha Elliott. Mathematical Modeling of Pancreatic Cancer Treatment with Cancer Stem Cells. *Journal of Biological Systems* (in press)

Bruns HA, Wisenden BD, Vanniasinkam T, Taylor RT, Elliott SL, Sparks-Thissen RL, Justement LB, Pandey S. Inside the Undergraduate Immunology Classroom: Current Practices that Provide a Framework for Curriculum Consensus. *J Microbiol Biol Educ*. 2021 Jan 29;22(1):22.1.8. doi: <https://doi.org/10.1128/jmbe.v22i1.2269>.

Johnson, A., & Elliott, S. 2020. Culturally Relevant Pedagogy: A Model To Guide Cultural Transformation in STEM Departments. *Journal of microbiology & biology education*, 21(1), 21.1.35. <https://doi.org/10.1128/jmbe.v21i1.2097>

Samantha L Elliott, Emek Kose, Allison L Lewis, Anna E. Steinfeld, Elizabeth A Zollinger. 2019. Modeling the Stem Cell Hypothesis: Investigating the Effects of Cancer Stem Cells and TGF- β on Tumor Growth. *Mathematical Biosciences and Engineering* 16(6): 7177–7194. DOI: 10.3934/mbe.2019360

Dolan, E. L., Elliott, S. L., Henderson, C., Curran-Everett, D., John, K. S., & Ortiz, P. A. (2018). Evaluating discipline-based education research for promotion and tenure. *Innovative Higher Education*, 43(1), 31-39.

Jeffrey N. Schinske, Virginia L. Balke, M. Gita Bangera, Kevin M. Bonney, Sara E. Brownell, Robert S. Carter, Douglas Curran-Everett, Erin L. Dolan, Samantha L. Elliott, Linnea Fletcher, Beatriz Gonzalez, Joseph J. Gorga, James A. Hewlett, Stacey L. Kiser, Jenny L. McFarland, Anjali Misra, Apryl Nenortas, Smith M. Ngeve, Pamela A. Pape-Lindstrom, Shannon B. Seidel, Matthew C. Tuthill, Yue Yin, and Lisa A. Corwin. 2017. Broadening Participation in Biology Education Research: Engaging Community College Students and Faculty. *CBE-Life Sciences Education* 16(2): mr1. doi: 10.1187/cbe.16-10-0289

Select non-peer-reviewed media

Samantha Elliott. 2017. Recognition and Support for Scholarly Teaching. ASM Education blog.

Samantha L. Elliott. 2016. From the Editor-in-Chief: Questions of Gender Equity in the Undergraduate Biology Classroom. *Journal of Microbiology & Biology Education* 17(2): 186-188.

American Academy of Microbiology. 2016. Promoting Responsible Scientific Research. <https://www.asm.org/index.php/colloquium-reports/item/4510-promoting-responsible-scientific-research>

ASM Editorial Committee on Sample Test Questions, an ad hoc committee of the ASM Education Board. 2016. *ASM Sample Questions in Microbiology*. ASM Press.

Samantha L. Elliott, Beth A. Fisher, Frederick Grinnell and Michael J. Zigmond (eds). 2015. *Perspectives on Research Integrity*. ASM Press

Select Conference Presentations, Workshops and Invited Talks

Samantha Elliott and Spencer Benson. 2021. Inclusive Teaching Begins with Understanding Bias. American Society for Microbiology Conference for Undergraduate Educators June 2021 (virtual). Oral presentation.

S. L. Elliott, T. Vanniasinkam, H. Bruns, D. Condry, L. Justement, A. Kleinschmidt, A. Lal, J. Liepkalns, P. Mixer, T. Paustian, R. Pritchard, S. Sletten, R. Sparks-Thissen, R. Taylor, S. Pandey. 2021. Development and Validation of Fundamental Statements and Key Competencies for Undergraduate Immunology Education. World Microbe Forum June 20-24, 2021 (virtual). Poster presentation.

Samantha Elliott. 2021. COVID-19 as a paradigm shift in undergraduate education. American Society for Plant Biology regional meeting. Invited talk (re-scheduled from 2020).

Samantha Elliott and Cleo Hughes-Darden. 2018. PULSE Ambassadors workshop/site visit. Stevenson University.

Taylor Allen and Samantha Elliott. 2018. PULSE Ambassadors workshop/site visit. Muhlenburg College.

Samantha L. Elliott. 2018. Aligning Learning Objectives and Course Outcomes. New College of Florida

Samantha L. Elliott. 2018. Promoting Inclusion in the Classroom. New College of Florida

Heather Seitz, Samantha L. Elliott and Andrea Rediske. 2018. The Essentials of Education Research: From Development to Publication. American Society for Microbiology Conference for Undergraduate Educators (ASMCUE) Austin, TX, USA July 26-29, 2018. Oral presentation.

Suzanne Cahn^{S*}, Gabrielle Collins*, Kelly Neiles and Samantha L. Elliott. 2017. Impact of Immediate Feedback Assessment Technique on student performance in undergraduate introductory biology. Society for the Advancement of Biology Education Research Conference. Minneapolis, MN, July 28-30, 2017. Poster presentation

Judy Awong-Taylor, Samantha L. Elliott and Loretta Brancaccio-Taras. 2016. PULSE: Taking Transformation from the Classroom to the Departmental Level. American Society for Microbiology Conference for Undergraduate Educators (ASMCUE) Bethesda, MD, USA July 21-24, 2016. Oral presentation.

Samantha L. Elliott. 2016. Can We Teach Ethical Behavior? American Society for Microbiology Microbe 2016, Boston, MA, USA June 16-20, 2016. Invited talk.

Kelrick, Michael, Gary Reiness, Mary Smith and Samantha Elliott. 2016. PULSE Ambassadors workshop/site visit. Morgan State University.

Samantha L. Elliott. 2016. Publishing Your Biology Education Research. Biology Scholars Capstone meeting, Bethesda, MD USA. July 20, 2016

Samantha L. Elliott. 2015. Long-term Retention of Students After Curricular Reform in First Semester Introductory Biology. Gordon Research Conference on Undergraduate Biology Education Research. Bates College, Lewiston, ME, USA. July 12-17, 2015. Poster presentation.

Samantha L. Elliott, Pamela Marshall and Andrea Rediske. 2015. Incorporating Responsible Conduct of Research (RCR) in Your Teaching Toolbox: Lessons from the *JMBE* Theme Issue on Scientific Ethics. American Society for Microbiology Conference for Undergraduate Educators (ASMCUE) Austin TX, USA May 28-31, 2015. Oral presentation.

Samantha Elliott. 2014. Strategies for Student-Centered Learning and Teaching. Student-Centered Education in Asian Universities Seminar, University of Macau. Invited Talk.

Select Committees and Service

Programmatic (SMCM Biology Department)

Assessment Coordinator (2015-2018)

Assessment Committee (2009-2014)

St. Mary's Project Shepherd (2015-2017)

Curriculum Review Committee (2006-2007, 2013-2014)

Beta Beta Beta Biological Honor Society advisor (2008-2012)

Institutional

SMCM Rapid Action Task Force on Pandemic Teaching (co-chair, May-June 2021)

SMCM LEAD Curriculum Implementation Committee (2018-2020)

SMCM Teaching & Learning Committee (2013-2018; co-chair 2016-2018)

SMCM Institutional Assessment Implementation Committee (2016-2018)

SMCM Academic Planning Committee (2013-2016)

SMCM Institutional Review Board (2013-2014)

Maryland College Access Challenge Grant advisor (2011-2018)

At-risk student advising (2010-2011)

SMCM representative, *COPLAC* 2011-2015

SMCM Summer Undergraduate Research Fellows, Founding Director (2012-2014)

Women-in-Science House (WiSH) Living and Learning Center co-advisor (2007-2012)

Disciplinary

Executive Editor, *College Teaching* (Sept 2021-present)

NSF Research Coordination Network in Undergraduate Biology Education (RCN-UBE)

grant (PI, role, years)

Immunoreach (Pandey, participant, 2021-2022)

Biology Education Intersegmental Collaborative (Lo, mentor, 2019-2021)

CCREST (Seitz, speaker/facilitator, 2018-2021)

Biochemistry Education (Bell, steering committee, 2012-2013)

Introductory Biology (Uno, participant, 2010-2012)

Fulbright Specialist Roster (Biology Education) (2016-present)

Editor-in-Chief, Journal of Microbiology and Biology Education (2014-2018)

Committee of Examiners, GRE Subject Test in Biochemistry, Cell and Molecular Biology, Educational Testing Services (2011-2015)

Video reviewer, Faculty Institutes for Reforming Scientific Teaching IV (FIRST IV) (2011-2013)