

Andrew R. Lynch

Graduate Research Assistant | University of Wisconsin – Madison

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EDUCATION

Ph.D. Cellular and Molecular Pathology

University of Wisconsin – Madison

2017 – in progress

B.S. Biochemistry and Molecular Biology

University of Wisconsin – Eau Claire

Cum Laude

2012 – 2016

PROFESSIONAL EXPERIENCE AND SERVICE APPOINTMENTS

Graduate Research Assistant

Mark Burkard Research Group

University of Wisconsin – Madison School of Medicine and Public Health

Using genomics and cell biology to study causes and consequences of chromosomal instability in human cancer.

2017 – present

Student Recruitment Leader

Cellular and Molecular Pathology Training Program

University of Wisconsin – Madison School of Medicine and Public Health

Responsible for reviewing prospective student applications and facilitation of interview visits.

2018 – present

Student Member (PhD Program Steering Committee)

Cellular and Molecular Pathology Training Program

University of Wisconsin – Madison School of Medicine and Public Health

2019 – present

AFH Caregiver

Reality Unlimited LLC

University of Wisconsin – Madison School of Medicine and Public Health

Provided guidance and companionship for survivors of traumatic brain injury.

2013 – 2017

Undergraduate Research Assistant

University of Wisconsin – Eau Claire Department of Chemistry

Synthesis of linear and cyclic antigenic MUC1 mimotopes via solid-phase peptide synthesis and copper-catalyzed azide-alkyne cycloaddition (CuAAC).

2013 – 2016

NSF REU Peer Mentor

Summer 2016

University of Wisconsin – Eau Claire Department of Chemistry

Facilitated laboratory experiences for a selection of URM STEM students from technical colleges and two-year universities. Instructed and mentored on introductory and organic chemistry, biochemistry, and laboratory methods and safety.

Research Intern

Summer 2014

Tropical Disease Institute of Ohio University and Pontificia Universidad Católica del Ecuador

*Participated in the in-field collection and study of triatomine vectors of *T. cruzi*, the causative parasite in Chagas disease. Aided in a comparative drug study of *Malaria falciparum* infected human cells. Also assisted in rural humanitarian efforts including infrastructure repair and basic clinical care in an underserved region of Ecuador.*

HONORS AND AWARDS

2019 Ruth L. Kirschstein NRSA and Predoctoral Traineeship (Genomic Sciences Training Program – 5T32HG002760)

2017 Ruth L. Kirschstein NRSA and Predoctoral Traineeship (Cellular and Molecular Pathology Training Program – T32GM081061)

2014 University of Wisconsin – Eau Claire Office of Research and Sponsored Programs Faculty-Student Collaboration Award - \$2800

PUBLICATIONS

Yang, T., Her, C., **Lynch, A.R.**, White, R.J., Wang, M., and Westler, W.M. Short proline-substituted MUC1 Mucin peptides can bind to mouse MUC1 monoclonal antibody as revealed by STD NMR. *Journal of Undergraduate Chemistry Research*, 14(1): 5-11, 2015.

PRESENTATIONS

Andrew R. Lynch, Rebeca Garcia Varela, Amber S. Zhou, Irene Ong, Beth A. Weaver, Mark E. Burkard. Measuring chromosomal instability caused by paclitaxel via scCNseq and computational modeling. Department of Medicine, Carbone Cancer Center, University of Wisconsin School of Medicine and Public Health. Cellular and Molecular Pathology Research Symposium. Madison, WI. August 2019. Poster.

Single cell sequencing and agent-based modeling reveal massive chromosome missegregation caused by paclitaxel treatment; Cellular and Molecular Pathology program seminar: Madison, WI, May 2019. Talk.

Andrew R. Lynch, Amber S. Zhou, Beth A. Weaver, Mark E. Burkard. Assessing CIN caused by treatment with paclitaxel via single cell sequencing and agent-based stochastic modeling. Department of Medicine, Carbone Cancer Center, University of Wisconsin School of Medicine and Public Health, ASCB|EMBO Annual Meeting, San Diego, CA. December 8-12, 2018. Poster.

Ryan A. Denu, Justin C. Jagodinsky, **Andrew R. Lynch**, Mark E. Burkard. Analysis of the “centrosome-ome” reveals potential causes of centrosome amplification in human cancer. Department of Medicine, Carbone Cancer Center, University of Wisconsin School of Medicine and Public Health, Genomic Sciences Training Program Annual Retreat, Madison, WI. June 9, 2018. Poster.

Synthesis of Cyclic Antigenic MUC1 Mimotopes; 1st NSF REU Symposium: Eau Claire, WI, August 2016. Talk.

Creation of MUC1 Peptide Mimotopes for Specific Carcinoma Immunotherapy; 1st NSF REU Symposium: Eau Claire, WI, July 2016. Talk.

Andrew R. Lynch and Thao Yang. Synthesis and Analysis of MUC1 Mimotopes. Celebration of Excellence in Research and Creativity (CERCA), Department of Chemistry, University Wisconsin Eau Claire, Eau Claire, WI, April 25-29, 2016. Poster.

Andrew R. Lynch and Thao Yang. Analysis of the Antibody Binding of Derivative MUC1 Peptides via STD NMR, Department of Chemistry, University of Wisconsin-Eau Claire, 249th ACS National Meeting & Exposition, in Denver, CO, March 22nd – 26th, 2015. Poster.

Andrew R. Lynch and Thao Yang. Analysis of the Antibody Binding of Derivative MUC1 Peptides via STD NMR. Celebration of Excellence in Research and Creative Activity (CERCA), 23rd Annual Student Research Day, UWEC, Eau Claire, WI, April 29-30, 2015. Poster.

MEMBERSHIPS

2018 – present	American Society for Cell Biology
2018 – present	American Association for Cancer Research
2014 – 2017	American Chemistry Society