Andrew R. Lynch

Graduate Research Assistant | University of Wisconsin – Madison
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EDUCATION

Ph.D. Cellular and Molecular Pathology 2017 – in progress
University of Wisconsin – Madison

B.S. Biochemistry and Molecular Biology 2012 – 2016
University of Wisconsin – Eau Claire
Cum Laude

PROFESSIONAL EXPERIENCE AND SERVICE APPOINTMENTS

Graduate Research Assistant 2017 – present
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.

Student Recruitment Leader
Cellular and Molecular Pathology Training Program 2018 – present
University of Wisconsin – Madison School of Medicine and Public Health
Responsible for reviewing prospective student applications and facilitation of interview visits.

Student Member (PhD Program Steering Committee)
Cellular and Molecular Pathology Training Program 2019 – present
University of Wisconsin – Madison School of Medicine and Public Health

AFH Caregiver
Reality Unlimited LLC 2013 – 2017
University of Wisconsin – Madison School of Medicine and Public Health
Provided guidance and companionship for survivors of traumatic brain injury.

Undergraduate Research Assistant 2013 – 2016
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).

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. Kirschtein NRSA and Predoctoral Traineeship (Genomic Sciences Training Program – 5T32HG002760)

2017 Ruth L. Kirschtein 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

2020 – present	American Society of Human Genetics
2018 – present	American Society for Cell Biology
2018 – present	American Association for Cancer Research
2014 – 2017	American Chemistry Society