

Wyman, L.A.

LESLIE A. WYMAN

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Van Andel Research Institute
Center for Neurodegenerative Science
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CURRENT ACADEMIC APPOINTMENT

Ph.D. candidate, Van Andel Institute Graduate School

EDUCATION

Van Andel Institute Graduate School (VAIGS)

- Ph.D. in Molecular and Cellular Biology

Grand Rapids, MI
Expected August 2020

Grand Valley State University (GVSU), Frederik Meijer Honors College

- B.S. in Cellular and Molecular Biology

Allendale, MI
2012-2015

RESEARCH EXPERIENCE

Van Andel Institute (VAI)

Graduate student, laboratory of Darren Moore, Ph.D.

Grand Rapids, MI
2015-present

Identified interactions regulating LRRK2 activity and neurotoxicity in Parkinson's disease

- Identified putative interacting domains, designed experiments to test these domains, and demonstrated specific mutations that disrupt the ability of LRRK2 to dimerize using co-immunoprecipitation assays, blue native polyacrylamide gel electrophoresis, and size-exclusion chromatography.
- Determined the effects of disrupting dimerization on LRRK2 enzymatic activity with *in vitro* radioactive kinase assays, western blotting, and GTP-agarose binding assays.
- Elucidated the role of dimerization in LRRK2-mediated neurotoxicity using primary rat neuronal cultures.

Grand Valley State University, Center for Health Sciences

Research assistant, laboratory of Rachel Powers, Ph.D.

Grand Rapids, MI
2013-2015

Developed novel inhibitors of a major enzyme contributing to antibiotic resistance, OXA-1 β -lactamase

- Identified several potential commercially available inhibitors of OXA-1 using a structure-based computational approach and experimentally tested for inhibition.
- Expressed, purified, and crystallized OXA-1 in complex with novel inhibitors.
- Collected data at the Advanced Photon Source (LS-CAT) Synchrotron within Argonne National Laboratory (Argonne, IL) in order to perform x-ray crystal diffraction.
- Determined structure of OXA-1 in complex with an inhibitor at a resolution of 1.98 Å.

TECHNICAL SKILLS

- Co-immunoprecipitation of proteins for analysis by mass spectrometry
- Protein expression and purification
- Protein and DNA electrophoresis
- Size-exclusion chromatography
- Mammalian cell culture
- Fluorescence microscopy
- Genetic manipulation and cloning
- *In vitro* radioactivity assays
- Protein homology modelling

LEADERSHIP EXPERIENCE

Van Andel Institute

Organizing committee, Origins of Cancer Symposium

- Identified and invited speakers to fit the theme of the symposium, established budget and secured external sponsorships, and devised marketing strategies.

Project manager, VAIGS Career Day

- Led a team in organizing the graduate school's annual career day event. Included establishing a timeline, leading team meetings, and managing budget.

Student representative, VAIGS admissions committee

- Reviewed graduate school applications, identified strong candidates, and participated in interviews.

Graduate School Association leadership committee

- Organized events in support of VAIGS students including workshops, networking opportunities, and the annual Graduate Student Retreat.

Grand Valley State University

Student tutor, GVSU Student Services

Guided college-level students to understand course material in cell biology and biochemistry

AWARDS AND HONORS

Van Andel Institute

- Van Andel Institute Graduate School Student Fellowship

Grad Valley State University

- Outstanding Student in Cell and Molecular Biology
- Catalyst Award for Scholarly and Academic Excellence, CMB department
- Undergraduate Research Scholar, Office of Undergraduate Research and Scholarship
- Ronald E. McNair Scholar
- Dean's Honors List
- Phi Kappa Phi Honor Society

CONFERENCES AND PRESENTATIONS

Poster presentations

- 33rd Midwest Enzyme Chemistry Conference; Chicago, IL; October 2013
- West Michigan Undergraduate Research Conference; Grand Rapids, MI; November 2013
- 28th Annual Symposium of the Protein Society; San Diego, CA; July 2014
- 34th Midwest Enzyme Chemistry Conference; Chicago, IL; September 2014
- Midwestern Symposium on Undergraduate Research in Chemistry; Lansing, MI; October 2014
- West Michigan Undergraduate Research Conference; Grand Rapids, MI; November 2014
- Student Scholars Day; Allendale, MI; April 2015
- Grand Challenges in Parkinson's Disease; Grand Rapids, MI; September 2016
- Grand Challenges in Parkinson's Disease; Grand Rapids, MI; September 2017

Invited speaker

- Student Scholars Day; Allendale, MI; April 2015
- West Michigan Undergraduate Research Conference; Grand Rapids, MI; November 2018

Attended

- Society for Neuroscience; San Diego, CA; November 2016
- Society for Neuroscience; Washington, D.C.; November 2017
- Biennial International LRRK2 Meeting; Padua, Italy; September 2018
- Grand Challenges in Parkinson's Disease; Grand Rapids, MI; September 2018

MEMBERSHIPS

VAIGS Graduate Student Association	2015-present
Association for Women in Science, West Michigan Regional Chapter	2016- present
American Association for the Advancement of Science	2016-2018
Society for Neuroscience	2018-present
Biochemical Society	2018-present