

Nicole A. Perry

(513) 257-7780

nicole.a.perry@vanderbilt.edu

(School Address)

Chowning Square Apartments

4141 Woodlawn Dr. Apt. 81

Nashville, TN 37205

EDUCATION

2019 Ph.D., Pharmacology, Vanderbilt University, Nashville, TN (anticipated)

2014 B.S., Biology, Wittenberg University, Springfield, OH (University Honors; Departmental Honors; Summa Cum Laude)

2014 B.A., Chemistry, Wittenberg University, Springfield, OH (University Honors; Summa Cum Laude)

2014 Minor in Music, Wittenberg University, Springfield, OH

RESEARCH EXPERIENCE

- Spring 2015
to Present **Graduate Research Student**, Department of Pharmacology
Supervisors: Dr. Vsevolod Gurevich and Dr. Tina Iverson
Research/PhD Thesis: I am studying the interaction between non-visual arrestins and their receptor cognates in order to identify residues that enhance arrestin's receptor specificity, as well as structural basis of arrestin activation and downstream signaling
- Spring 2015
(Rotation 4) **Graduate Research Student**, Department of Pharmacology
Supervisor: Dr. Tina Iverson
Research: Crystallized the antigen SF100 and analyzed its structure using x-ray crystallography
- Winter 2015
(Rotation 3) **Graduate Research Student**, Department of Pharmacology
Supervisor: Dr. Vsevolod (Seva) Gurevich
Research: Investigated the ability of arrestin-3 to scaffold the ASK1-MKK4/7-JNK3 cascade using Western Blots and cell transfection assays
- Winter 2014
(Rotation 2) **Graduate Research Student**, Biological Sciences Department
Supervisor: Dr. Jim Patton
Research: Assessed whether mosaic-overexpression of ptk2.2 resembles the jawless phenotype of a morpholino knockdown of miR-27a in *Danio rerio*
- Fall 2014
(Rotation 1) **Graduate Research Student**, Pathology, Microbiology and Immunology Department
Supervisor: Dr. Jim Cassat
Research: *Staphylococcus aureus* osteomyelitis; investigated the virulence of *sucC* and *sucD* mutant strains of *S. auerus* using cytotoxicity and biofilm assays
- Summer 2013 **National Science Foundation Research Experience Undergraduates**, University of Tennessee Knoxville, Microbial Ecology
Supervisor: Dr. Steven Ripp
Research: Examined *cspA* gene expression in response to variant temperature conditions using qRT-PCR
- Spring 2013 –
Fall 2013 **Undergraduate Research Assistant**, Developmental Biology
Supervisor: Dr. Michelle McWhorter
Research: Analyzed the effect of carbaryl on muscle development in *Danio rerio* using antibody staining
- Summer 2012 –
Winter 2012 **Undergraduate Research Assistant**, Organic Chemistry
Supervisor: Dr. Peter Hanson
Research: Investigated the effects of ion-exchange resins Amberlyst-15 and Nafion in the Au^I-catalyzed hydration of alkynes
- Summer 2012 **Undergraduate Research Trip**, Gerace Research Center in San Salvador, Bahamas, Marine Biology
Supervisor: Dr. Jim Welch, Dr. Kathleen Riensel
Research: Monitored the effects of human interaction on the health of coral reef beds (Monument Reef, Sue Point, and Sand Dollar Bay and Reef) in San Salvador, Bahamas
- Fall 2011 **Undergraduate Research Assistant**, Microbiology

Supervisor: Dr. Jay Yoder

Research: Studied tick excreta as an off-host aggregation factor for female *Rhipicephalus sanguineus*

ORAL PRESENTATIONS AT MEETINGS

2015 **Perry, N.A.** Structural basis of arrestin-3-mediated signaling. Vanderbilt Pharmacology Retreat, Nashville, TN.

POSTER PRESENTATIONS AT MEETINGS

2015 **Perry, N.A.**, Stoy, H., Chen, Q., Gurevich, E., Zhan, X., Iverson, T.M., and Gurevich, V.V. Ability of peptide mini-scaffolds to serve as JNK3 activators. 11th International NPY-PYY-PP Meeting, Leipzig, Germany.

2015 Chen, Q., Gilbert, N.C., **Perry, N.A.**, Berndt, S., Zhuo Y., Vishnivetskiy, S., Klug, C.S., Gurevich, V.V., Iverson, T.M. The structure of activated arrestin3. 11th International NPY-PYY-PP Meeting, Leipzig, Germany.

2014 **Perry, N.A.** Temperature Affects *cspA* Expression in *Pseudomonas fluorescens* HK44. American Chemical Society, Dayton Section. Abstract: ACS print publication.

2013 **Perry, N.A.** Temperature Affects *cspA* Expression in *Pseudomonas fluorescens* HK44. University of Tennessee Knoxville, Knoxville, TN.

2013 **Perry, N.A.**, Saba, A.M., and Ward, K.L. The Effect of Human Interaction on the Health of Coral Reefs in San Salvador, Bahamas. Butler University Undergraduate Research Conference, Indianapolis, IN.

2013 **Perry, N.A.** and Coggins, J.N. Effects of ion-exchange resins Amberlyst-15 and Nafion in the Au¹-catalyzed hydration of alkynes. Wittenberg University, Springfield, OH.

2012 **Perry, N.A.**, Saba, A.M., and Ward, K.L. The Effect of Human Interaction on the Health of Coral Reefs in San Salvador, Bahamas. Wittenberg University, Springfield, OH.

2011 **Perry, N.A.**, Tomko, P.M., Hedges, B. Z. and Yoder, J.A. High temperature resistance for success of the red velvet mites in the landscape. Kentucky Academy of Science, Murray, KY. Abstract: KAS On-line publication.

2011 Jajack, A.J., **Perry, N.A.**, Hedges, B.Z. and Yoder, J.A. Female bed bugs exhibit reduced ability to maintain water balance after multiple traumatic insemination events. Kentucky Academy of Science, Murray, KY. Abstract: KAS On-line publication.

PUBLICATIONS

1. Chen, Q., Gilbert, N.C., **Perry, N.A.**, Berndt, S., Zhuo Y., Vishnivetskiy, S., Klug, C.S., Gurevich, V.V., Iverson, T.M. 2015. The structure of activated arrestin3. Cell. Submitted.
2. Zhan, X., Stoy, H., Kauod, T.S., **Perry, N.A.**, Chen, Q., Perez, A., Els-Heindl, S., Slagis, J.V., Iverson, T.M., Beck-Sickinger, A.G., Gurevich, E.V., Dalby, K.N., and Gurevich, V.V. 2016. Peptide mini-scaffolds facilitates JNK3 activation in cells. Scientific Reports.
3. Prokop, S., Vishnivetskiy, S.A., **Perry, N.A.**, Hunyady, L., Iverson, T.M., and Gurevich, V.V. Differential manipulation of basal and agonist-induced arrestin-3 binding to GPCRs. Journal of Biological Chemistry. Submitted.
4. Xu T, **Perry N**, Chauhan A, Saylor G, Ripp S. 2014. Microbial indicators for monitoring pollution and bioremediation, p.115-132. In Das S (ed.), Microbial Biodegradation and Bioremediation. Elsevier, New York, NY.

LEADERSHIP ACTIVITIES

- Spring 2016 **Member** of Mortar Board Organizational Study Committee
- Summer 2014 **Speaker** on the Graduate Alumni Panel at the National Mortar Board Conference in Atlanta, Georgia
- Summer 2014 **Guest Speaker** for Kiwanis Club in Mason, Ohio
- Spring 2014 **Baccalaureate Speaker**
- Prepared and delivered a keynote speech at the Baccalaureate service before Commencement
- Fall 2013 – **Mortar Board Arrow and Mask Chapter**, Wittenberg University
- Spring 2014 Position: President
- Organized service activities and events, led monthly meetings
- Fall 2011 – **Residence Life**, Wittenberg University
- Spring 2014 Position: Community Advisor for Polis International House
- Supervised and independently managed the residence hall
- Fall 2011 – **Beta Beta Beta Biological Honorary Society**, Wittenberg University
- Spring 2012 Position: Treasurer

Fall 2010 –
Spring 2014

Managed the budget for the group
Former Positions: Historian
Chamber Orchestra, Wittenberg University
Position: Principal Chair Violist
Led and determined musical style for my section

SOCIETY MEMBERSHIPS

2015 American Association for the Advancement of Science (AAAS)
2013 Phi Beta Kappa (PBK)
University Honors Program
Departmental Honors in Biology
Omicron Delta Kappa (ODK)
Mortar Board Arrow and Mask chapter
2012 Beta Beta Beta Biological Honorary Society
2010 Alpha Lambda Delta Honor Society (ALD)

AWARDS

2015 T32 Research Training Grant for Predoctoral Fellows in Pharmacology
Second place oral presentation at the Vanderbilt Pharmacology Retreat
2014 Alternate for Fulbright U.S. Student Program Research Grant in Argentina
Mortar Board Fellow (\$5,000 stipend)
James T. Gregory Award for Outstanding Research Potential (\$400 stipend)
Summa Cum Laude
Dean's List
2013 Presidential Scholar (Top 13 of the class)
Recipient of NSF Grant for an REU at the University of Tennessee for Microbial Ecology
Recipient of the Outstanding Biology Student Award
Dean's List
2012 Omicron Delta Kappa Sophomore Involvement Award
Dean's List
2011 Alpha Lambda Delta Honor Society
Dean's List
2010 Kiwanis Club Scholarship (\$4,000 stipend)
Rotary Club Scholarship (\$500 stipend)
Wittenberg Scholar Award

VOLUNTEER

Winter 2014 **Mortar Board Alumni Achievement Award Selection Committee**
Reviewed nominations for the prestigious Alumni Achievement Award given at the Mortar Board National Conference in 2015
Spring 2014 **Baccalaureate**
Assisted in the planning of the Baccalaureate service at Wittenberg University
Fall 2013-
Spring 2014 **Mortar Board** Arrow and Mask Chapter, Wittenberg University
Planned and attended service activities that focused on upholding the principles of service, leadership, and scholarship and organized projects for the national pro-literacy project "Reading is Leading"
Spring 2011 **Habitat for Humanity in San Salvador, El Salvador and Springfield, Ohio**
Installed siding on a house in Springfield, Ohio and worked on the foundation for a home in El Salvador
Spring 2011 **CPR and First Aid Certification**
Fall 2010-
Spring 2014 **Volunteer Activities**, Wittenberg University
Actively participated in a variety of service projects at Wittenberg University that include a position as the advisor for Hall Government (Woodlawn Hall, Polis Hall), performances at fundraisers for the American International Association and Up 'Til Dawn, and

involvement in service Saturday projects (Make a Difference Day, Culture Fest

References

1. Dr. Vsevolod V. Gurevich, Department of Pharmacology, Vanderbilt University, Nashville, TN 37235, 615-322-7070 (lab)
2. Dr. Tina M. Iverson, Department of Pharmacology, Vanderbilt University, Nashville, TN 37235, 615-322-7817 (lab)
3. Dr. Steven Ripp, Research Assistant Professor, Center for Environmental Biotechnology, University of Tennessee Knoxville, Knoxville, TN, (865) 974-9605 (office)