

Nicole Anderson
(219)713-0837
ander652@purdue.edu

EDUCATION

Purdue University

PULSe/Biological Sciences, PhD Candidate
Expected Graduation Date: December 2024
GPA: 3.81

West Lafayette, IN
2019 – Present

Ball State University

BS, Major Biology | Minor in Chemistry
Graduation year: 2019
GPA: 3.565

Muncie, IN
2015 – 2019

RESEARCH EXPERIENCE

Purdue University

Graduate Research Assistant
Major Professor: Dr. Matthew Olson
Research Description:

- I am interested in studying the complex signaling pathway of the redundant and non-redundant functions of transcription factors STAT3 and BATF in CD4 T helper cells. Throughout our exploratory experiments, we have found that there is an abundance of $\gamma\delta$ T cells in the gut that are associated with the development of spontaneous colitis.
- We hope to focus on further understanding this interaction of conventional T cells with $\gamma\delta$ T cells in barrier sites of the body in both a steady and diseased state.

Ball State University

Undergraduate Chemistry Laboratory Assistant
Major Professor: Dr. Courtney Jenkins
Research Description:

- Used inverse vulcanization techniques to incorporate sulfur with natural monomers into solvent free adhesives as a way to utilize the excessive amounts of leftover sulfur from the petroleum industry.
- These adhesives were improved with the incorporation of mussel mimetic chemistry.

TEACHING EXPERIENCE

2023 Teaching Assistant BIO195, Purdue University, Dr. Matthew Olson
2020 – 2021 Teaching Assistant BIO110, Purdue University, Dr. Mark Browning

MENTORING EXPERIENCE

2023 – Present Alejandra Rodriguez
2023 – Present Franklin Yeo (graduate student)
2022 – 2023 Claire Pfeffer (graduate student)
2022 Leon Laskowski (rotation student)
2021 – Present Charlotte Campbell (undergraduate)
2020 – Present Navjot Kaur (undergraduate)

Nicole Anderson
(219)713-0837
ander652@purdue.edu

PUBLICATIONS

- Wang, L., Pattnaik, A., Sahoo, S.S., Benton, A., Tajmul, M., Stone, E. G., Chakravorty, S., Dhawan, D., Nguyen, M.A., Sirit, I., Zhuang, Y., Ricketts, C., Hadisurya, M., Baral, G., Tinsley, S.L., **Anderson, N.L.**, ... Olson, M.R., Afzali, B., Kazemian, M. (2023). Discovery of novel disease biomarkers and therapeutics by Pathway Ensemble Tool predicated on experimental data Benchmark. *Nature Methods*. – *in review*
- Yan, B., Wang, C., Chakravorty, S., Zhang, Z., Kadadi, S. D., Zhuang, Y., Sirit, I., Hu, Y., Jung, M., Sahoo, S.S., Wang, L., Shao, K., **Anderson, N.L.**, ... Olson, M.R., Afzali, B., Zhao, B., Kazemian, M. (2022). A comprehensive single cell data analysis of lymphoblastoid cells reveals the role of super-enhancers in maintaining EBV latency. *Journal of Medical Virology*, 95(1).
- Canaria, D. A., Clare, M. G., Yan, B., Campbell, C. B., Ismaio, Z. A., **Anderson, N. L.**, ... Olson, M. R. (2022). IL-1 β promotes IL-9-producing Th cell differentiation in IL-2-limiting conditions through the inhibition of BCL6. *Frontiers in Immunology*, 13.
- Park, S., **Anderson, N. L.**, Canaria, D. A., & Olson, M. R. (2021). Granzyme-Producing CD4 T Cells in Cancer and Autoimmune Disease. *ImmunoHorizons*, 5(12), 909–917.

ACADEMIC/PROFESSIONAL HONORS

2023	College of Science Graduate Student Travel Award
2023	National Institutes of Health (NIH) – National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)
2023	Purdue University Teaching Academy Graduate Teaching Award
2023	Purdue University Interdisciplinary Life Science Program (PULSe) Five Minute Thesis Competition Winner
2022	Purdue Graduate Student Government (PGSG) Travel Award
2022	Office of Interdisciplinary Graduate Programs (OIGP) Certificate of Excellence in Interdisciplinary Research Poster Award
2022	Purdue Center for Cancer Research (PCCR) Graduate Student Travel Award
2019	American Chemical Society Distinguished Poster Nominee
2018-2019	Ball State University Mortar Board
2015-2019	Ball State University Dean's list (Spring, Fall, or Summer)
2015-2019	Ball State University STEM scholarship
2015-2019	Ball State University Presidential Scholarship

CONFERENCES/WORKSHOPS ATTENDED

2024	Crohn's & Colitis Congress
2023	Digestive Diseases Week (DDW)
2023	Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception
2023	Purdue Cancer Research Day
2022	Cleveland Clinic Morgenthaler Postdoc Symposium

Nicole Anderson
(219)713-0837
ander652@purdue.edu

2022 Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception
2021 National institutes of health (NIH) F31 fellowship workshop
2021 Autumn Immunology Conference (AIC)
2021 Purdue Cancer Research Day
2020 American Association of Immunologist (AAI) intro. course in immunology
2020 Developing your teaching toolkit: professionalism workshop
2020 Developing you teaching toolkit: engaging all learner's workshop
2019 American Chemical Society (ACS) Conference

ORAL AND POSTER PRESENTATIONS

2023 Digestive Diseases Week
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and the development of inflammatory bowel disease (IBD)." *Digestive Diseases week, American Gastroenterological Association (AGA) animal models of IBD: Pre-Clinical Treatment of Intestinal Inflammation*. Poster presentation. Summer 2023.

2023 Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception, Life Sciences*. Poster presentation. Summer 2023.

2023 Purdue Cancer Research Day
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Purdue University Institute for Cancer Research, Cancer Research Day*. Poster presentation. Spring 2023.

2023 Purdue University Interdisciplinary Life Science Program (PULSe) Five Minute Thesis Competition
Anderson, N. L. and Olson, M. R., "The role of immune cells in Inflammatory Bowel Disease (IBD)." *Purdue University Interdisciplinary Life Science Program (PULSe) Spring Recruitment*. Oral presentation. Spring 2023.

2022 Autumn Immunology Conference (AIC)
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Autumn Immunology Conference, Regulation of Immune Responses*. Oral and poster presentation. Fall 2022.

2022 Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception, Life Sciences*. Virtual presentation. Summer 2022.

2022 American Society for Nutrition
Wang, Y., Uffelman, C., Hill, E. Anderson, N.L., Reed, J., Olson, M., Campbell, W., "The effects of red meat intake on inflammation biomarkers in humans: a systematic review and meta-analysis of randomized controlled trials." *American Society for Nutrition*. Poster presentation. Spring 2022.

2021 Autumn Immunology Conference (AIC)
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Autumn Immunology Conference, Regulation of Immune Responses*. Oral and poster presentation. Fall 2021.

2021 Purdue Cancer Research Day
Anderson, N. L. and Olson, M. R., "A STAT3-BATF axis regulates T cell homeostasis and disease." *Purdue University Institute for Cancer Research, Cancer Research Day*. Poster presentation. Fall 2021.

2019 American Chemical Society Conference

Nicole Anderson
(219)713-0837
ander652@purdue.edu

Anderson, Nicole. "Developing Adhesives from Elemental Sulfur, Garlic Essential Oil, and Divinylbenzene through Inverse Vulcanization." *American Chemical Society PMSE*. Poster Presentation. Spring 2019.

2018 Ball State University Chemistry Research Immersion Summer Program (CRISP)

Anderson, Nicole; Jenkins, C. J. "Developing Adhesives from Elemental Sulfur, Garlic Extracts, and Catechol through Inverse Vulcanization." *Ball State University Chemistry Research Immersion Summer Program (CRISP)*. Oral and Poster Presentation. Summer 2018.

PROFESSIONAL MEMBERSHIPS

2020 American Association of Immunologists (AAI)
2019 American Chemical Society

OTHER EXPERIENCE/SERVICE

2022 – Present PULSe Graduate Student Organization (GSO) Student Activities Coordinator
2020 – Present Greek Life Chapter Advisor Alpha Phi Sorority
2019 – Present Women in Science (WISP) member
2020 – 2022 PULSe Graduate Student Organization (GSO) Social Media Chair
2020, 2021 Alpha Phi North and East Leadership Conference
2017 -2019 Member of Rho Lambda Honors Society
2018 Alpha Phi Convention
2017 – 2018 Alpha Phi Sorority President
2017, 2018 Alpha Phi Northern Leadership Conference
2018 Ball State Leadership Legacy Conference
2016 – 2017 Alpha Phi Sorority Vice President of Programming and Education
2016 – 2019 Part Time Job at Ulta Beauty