Piper Robida

Position: Assistant Professor
Department: Biology/Natural Sciences
Phone: 580-327-7976
Website: www.templecollege.edu
Email: Piper.Robida@templecollege.edu
Office: Hutto and Legacy

Courses Taught

Temple College

- General Biology
- Anatomy & Physiology

College/University

- General Biology
- Introduction to Environmental Science
- Introduction to Biology (non-majors)
- Human Anatomy & Physiology
- Cell & Molecular Biology
- Pathophysiology
- Medical Terminology
- General Zoology
- Human Reproductive Biology

Education

- **B.S. in Biology,** Metropolitan State College of Denver *(2011)*
- **Ph.D. in Biomedical Science**, University of South Carolina *(2017)*

Teaching Experience

- **Temple College,** Temple, TX (Assistant Professor, Biology, 08/2025 - Present)
- **Northwestern Oklahoma State University,** Alva, OK, (Associate Professor, Biology, 08/2019 – 07/2025)
- **North Central College,** Naperville, IL (Adjunct Professor, Biology, 03/2018 – 05/2019)
- **University of South Carolina,** Columbia, SC (Teaching Assistant, Biology, 08/2012-05/2017)

Professional Experience

- **University of South Carolina**: Columbia, SC, 01/2013-05/2017
- **Northwestern University**: Chicago, IL, 06/2017 – 06/2019

Professional Presentations

- **Piper Wedman**. Indications of ammonia-oxidizing archaea from a constructed sewage treatment wetland. Oral presentation, Rocky Mountain Branch ASM Spring 2012 Meeting, April 20-21, **2012**, Denver University – Denver, CO
- R.V. Ferrell, A. Remmert, **Piper Wedman**, S. Askar. Detection of an archaeal amoA gene in an enrichment culture from sewage. Poster presentation, 112th General Meeting of American Society for Microbiology, June 16-19, **2012** – San Francisco, CA
- **Piper Wedman**, A. Chumanevich, E. Zumbrun, P. Nagarkatti, M. Nagarkatti, C.A. Oskeritzian. Identification of microRNA expression linked to sphingosine-1-phosphate/Stat3 signaling. Poster presentation, 3rd Annual Southeastern Immunology Symposium, June 7-8, **2014** – Atlanta, GA
- **Piper Wedman**, A. Chumanevich, E. Zumbrun, P. Nagarkatti, M. Nagarkatti, C.A. Oskeritzian. MicroRNA expression profile in atopic dermatitis links cytokine/chemokine expression to sphingosine-1-phosphate/Stat3 signaling. Poster presentation, Southeastern Regional Lipid Conference, November 5-7, **2014** – Cashiers, NC

- **Piper Wedman**. Mast cells and sphingosine-1-phosphate during the development of atopic dermatitis. Oral presentation, Newton Symposium, January 30, **2015** – Columbia, SC
- **Wedman P**., Chumanevich A., Zumbrun E., Nagarkatti P., Nagarkatti M., Oskeritzian CA. Identification of microRNA expression profiles in a preclinical model of atopic dermatitis: correlation with cytokine/chemokine expression linked to sphingosine-1-phosphate/Stat3 signaling. Poster presentation at the Dorn VA Research Day, May 19, **2015**, Columbia, SC
- J.W. Fuseler, **Piper Wedman**, A. Aladhami, A. Chumanevich, C.A. Oskeritzian. Mast cells and sphingosine-1- phosphate are linked to early inflammatory remodeling in preclinical atopic dermatitis. Poster presentation, Southeastern Regional Lipid Conference, November 11-13, **2015** – Cashiers, NC
- **Piper Wedman**. Ceramide profiling in preclinical stages of atopic dermatitis: relevance to early pathogenic apoptosis. Oral presentation, Southeastern Regional Lipid Conference, November 11-13, **2015** – Cashiers, NC
- **Piper Wedman**. Skin ceramide profiling points to apoptosis as an early pathogenic clue of atopic dermatitis. Oral presentation. Graduate Student Research Day, April 8, **2015** – Columbia, SC
- **Piper A. Wedman**, A. Aladhami, A.P. Chumanevich, J.W. Fuseler, C.A. Oskeritzian. Mast cells and sphingosine- 1-phosphate are linked to a previously undescribed cellular infiltration of the hypodermis driving pre-symptomatic atopic dermatitis. Poster presentation, Medical Scholarship Day of Focus, April 15, **2015** – Columbia, SC
- **Piper Wedman**., Chumanevich A.P., Aladhami A., Castleberry K.M., Enos R.T., Gandy K.A., Velazquez K.T., Murphy E.A., Fuseler J.W., Nagarkatti M. and Oskeritzian C.A. New insights in atopic dermatitis pathogenesis: Mast cell activation augments ceramide lipids and triggers endoplasmic reticulum stress-induced apoptosis. Southeastern Regional Lipid Conference, November 9-11, **2016** – Cashiers, NC
- **Wedman PA**, Aladhami A, Chumanevich AP, Fuseler JW, Oskeritzian CA. Local remodeling, mast cell activation and sphingosine-1-phosphate elevation precede atopic dermatitis. Invited talk at the **2016** International Congress of Immunology, August 21-26, Melbourne, Australia
- **Wedman P**., Castleberry K.M., Kumte N. I., Aladhami A., Chumanevich A.P., Fuseler J.W., Oskeritzian CA. Redefining the skin hypodermis functions: Newly uncovered site of mast cell- and S1P-mediated pathogenic remodeling in pre-symptomatic eczema. Invited

Talk at the 51st Annual Southeastern Regional Lipid Conference, November 9-11, **2016**, Cashiers, NC

- **Wedman P.A**., Chumanevich A.P., Aladhami A., Castleberry K.M., Enos R.T., Gandy K.A., Velazquez K.T., Murphy A.E., Fuseler J.W., Nagarkatti M., Oskeritzian CA. New insights in atopic dermatitis pathogenesis: mast cell activation augments ceramide lipids and triggers endoplasmic reticulum stress-induced apoptosis. Poster presentation at the 51st Annual Southeastern Regional Lipid Conference, November 9-11, **2016**, Cashiers, NC
- Tanis RM, **Wedman PA**, Chumanevich AP, Aladhami A, Fuseler JW, Oskeritzian CA. Lack of skin mast cell activation and sphingosine-1-phosphate elevation in male mice may explain gender disparity observed in pre- symptomatic atopic dermatitis. Poster presentation at Discover USC, April 20, **2018**, Columbia, SC
- Fuseler JW, Castleberry KM, Kumte NI, **Wedman PA**, Aladhami A, Chumanevich AP, Oskeritzian CA. Mast cells and microvasculature expansion in asymptomatic atopic dermatitis. Poster presentation at the **2018** International Investigative Dermatology Meeting, May 16-19, Orlando, FL.
- Tanis RM, **Wedman PA**, Chumanevich AP, Aladhami A, Fuseler JW, Oskeritzian CA. Lack of skin mast cell activation and sphingosine-1-phosphate elevation in male mice may explain gender disparity observed in pre- symptomatic atopic dermatitis. Poster presentation at the **2018** International Investigative Dermatology Meeting, May 16-19, Orlando, FL
- Jeanty M, **Wedman PA**, Chumanevich AP, Aladhami A, Tanis RM, Zumbrun E, Nagarkatti P, Nagarkatti M, Oskeritzian CA. MicroRNA-34a regulation of mast cell activation by sphingosine-1-phosphate in pre-symptomatic atopic dermatitis. Poster presentation at the CAM/COBRE Center External Advisory Committee Meeting, May 17, **2018**, Columbia, SC
- Jeanty M, **Wedman PA**, Chumanevich AP, Aladhami A, Tanis RM, Zumbrun E, Nagarkatti P, Nagarkatti M, Oskeritzian CA. MicroRNA-34a regulation of mast cell activation by sphingosine-1-phosphate in pre-symptomatic atopic dermatitis. Poster presentation at the NIH/NIGMS 7th Biennial National IDeA Symposium of Biomedical Research Excellence, June 24-26, **2018**, Washington, DC
- **P.A. Robida**, J.A. O'Sullivan, Y. Cao, S.C. Shin and B.S. Bochner. Siglec-8 Engagement Selectively Inhibits Allergen-Dependent Degranulation of Human Skin Mast Cells In Vitro. Poster presentation

at the 2019 Academy of Allergy, Asthma and Immunology Annual Meeting, February 22-25, **2019**, San Francisco, CA

- **PA Robida**, AP Chumanevich, KAO Gandy, JW Fuseler, P Nagarkatti, M Nagarkatti, and CA Oskeritzian. Skin mast cells mediate ceramide elevation and apoptosis at the early pre-symptomatic phase of atopic dermatitis in a human-like mouse model. Poster presentation at World Immune Regulation Meeting XV, June 30 – July 3, **2021**. Virtual Meeting.
- Bochner BS, **Robida PA**, Rische CH, Cao Y, Krier-Burris R, Scott EA, and O'Sullivan JA. Phenotypic and functional characterization of Siglec-6 on human mast cells. Oral Presentation at Collegium Internationale Allergologicum 2022 Virtual Academy Session, April 22, **2022**. Virtual Meeting.
- CD Carlucci, Y Hui, AP Chumanevich, **PA Robida**, KAO Gandy, JW Fuseler, M Sajish, P Nagarkatti, M Nagarkatti, and CA Oskeritzian. Resveratrol mitigates early ceramide elevation and apoptosis at the onset of eczema in mice. Poster presentation at 12th International Ceramide Conference, April 16-20, **2023**, Charleston, SC
- J Fuseler, N Kumte, **P Robida**, and C Oskeritzian. Mast cells control pathogenic capillary-like small blood vessel network expansion in pre-lesional atopic dermatitis. Oral presentation at 18th International Congress of Immunology, November 27 – December 2, **2023**, Cape Town, South Africa
- K Doane, **P Robida.** Halobacterium in Gypsum Crystals. Poster Presentation at Ranger Research Day, November 22, 2024, Alva, OK

Professional Publications

Original Investigations

- C.A. Oskeritzian, N.C. Hait, **P. Wedman**, A. Chumanevich, *et al*. The sphingosine-1-phosphate/sphingosine-1- phosphate receptor 2 axis regulates early airway T-cell infiltration in murine mast cell-dependent acute allergic responses. *J Allergy Clin Immunol*. **2015** April; 135(4):1008-18.
- **P. Wedman**, A. Aladhami, M. Beste, M.K. Edwards, A. Chumanevich, J.W. Fuseler, C.A. Oskeritzian. A new image analysis method based on morphometric and fractal parameters for rapid evaluation of in situ

mammalian mast cell status. *Microsc Microanal*. **2015** Dec; 21(6):1573-1581.
- Chumanevich, **P. Wedman**, C.A. Oskeritzian. Sphingosine-1-phosphate/sphingosine-1-phosphate receptor 2 axis can promote mouse and human primary mast cell angiogenic potential through upregulation of vascular endothelial growth factor-A and matrix metalloproteinase-2. *Mediators Inflamm*. **2016** Jan: 1503206.
- Chumanevich, **P.A. Wedman**, C.A. Oskeritzian. Methods for Analyzing Sphingosine-1-Phosphate Signaling in Human and Mouse Primary Mast Cells. *Methods Mol Biol.* **2018**;1697:21-30.
- **P.A. Wedman**, A. Aladhami, A.P. Chumanevich, J.W. Fuseler, C.A. Oskeritzian. Mast Cells and Sphingosine-1- Phosphate Underlie Prelesional Remodeling in a Mouse Model of Eczema. *Allergy*. **2018** Feb;73(2):405-415.
- Wei Y, Chhiba KD, Zhang F, Ye X, Wang L, Zhang L, **Robida PA** et al. Mast Cell-Specific Expression of Human Siglec-8 in Conditional Knock-in Mice. *Int J Mol Sci*. **2018** Dec;20(1).
- Dispenza MC, Krier-Burris RA, Chhiba KD, Undem BJ, **Robida PA** and Bochner BS. Bruton's tyrosine kinase inhibition effectively protects against human IgE-mediated anaphylaxis. *J Clin Invest*. **2020** Sep 1;130(9):4759- 4770.
- **Robida PA**, Chumanevich AP, Gandy AO, Fuseler JW, Nagarkatti P, Nagarkatti M and Oskeritzian CA. Skin Mast Cell-Driven Ceramides Drive Early Apoptosis in Pre-Symptomatic Eczema in Mice. *Int J Mol Sci.* **2021** Jul 22;22(15):7851.
- Tanis RM*, **Wedman-Robida PA***, Chumanevich AP, Fuseler JW and Oskeritzian CA. The mast cell/S1P axis is not linked to pre-lesional male skin remodeling in a mouse model of eczema. * co-first authors. *AIMS Allergy and Immunology*, **2021**, 5(3): 160-174.
- **Robida PA**, Rische CH, Ben-Baruch Morgenstern N, Janarthanam R, Cao Y, Krier-Burris RA, Korver W, Xu A, Luu T, Schanin J, Leung J, Rothenberg ME, Wechsler JB, Youngblood BA, Bochner BS and O'Sullivan JA. Functional and Phenotypic Characterization of Siglec-6 on Human Mast Cells. *Cells*. **2022** Apr; 11(7): 1138.
- Carlucci CD, Hui Y, Chumanevich AP, **Robida PA**, Fuseler JW, Sajish M, Nagarkatti P, Nagarkatti M and Oskeritzian CA. Resveratrol Protects against Skin Inflammation through Inhibition of Mast Cell, Sphingosine Kinase-1, Stat3 and NF-κBp65 Signaling Activation in Mice. *Int. J. Mol. Sci.* **2023**, *24*(7), 6707.

Literature Reviews

- **P.A. Robida**, P.G. Puzzovio, H. Pahima, F. Levi-Schaffer, B.S. Bochner. Human Eosinophils and Mast Cells: Birds of a Feather Flock Together. *Immunol Rev*. **2018** Mar;282(1):151-167.

Awards

- Rocky Mountain Branch ASM Fall 2011 Meeting, October 7-8, **2011** Colorado College – Colorado Springs, CO **Travel Award**
- Indications of ammonia-oxidizing archaea from a constructed sewage treatment wetland. Oral Presentation at the Rocky Mountain Branch ASM Spring 2012 meeting, April 20-21,**2012**, Denver University – Denver, CO **Undergraduate, Oral Presentation, 2nd Place**
- Local and systemic cytokine/chemokine expression profiling during the onset of atopic dermatitis: deciphering a new function for sphingosine-1-phosphate?
- **2014 SC-INBRE Bioinformatics Pilot Project Grant, Wedman (Co-PI), 07/01/14-06/30/15**
- New insights in atopic dermatitis pathogenesis: Mast cell activation augments ceramide lipids and triggers endoplasmic reticulum stress-induced apoptosis. Southeastern Regional Lipid Conference, November 9-11, **2016** – Cashiers, NC - **Travel Award**
- Siglec-8 Engagement Selectively Inhibits Allergen-Dependent Degranulation of Human Skin Mast Cells In Vitro. American Academy of Allergy, Asthma and Immunology Annual Meeting, February 22-25, 2019 – San Francisco, CA - PhD Travel Scholarship
- OER Grant Awardee, Oklahoma State Regents for Higher Education (OSRHE), **23/24** and **24/25**

Campus/Campuses

- Temple College Hutto Campus, Legacy Campus