

Abigail Pajulas
Graduate Student
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EDUCATION

2018 -present Ph.D. Candidate in Microbiology and Immunology
Indiana University, Purdue University – Indianapolis

2014-2018 B.S. in Exercise Science - Honors
California State University, Northridge (CSUN)

ACADEMIC HONORS & AWARDS

May 2022 **AAI Trainee Abstract Awardee**
Awarded \$750 to present at a Block Symposium and poster presentation at AAI Immunology 2022 in Portland, Oregon

March 2022 **Toastmasters International Area level - International Speech Contest – 2nd place**
Delivered a 5-7 minute speech at the area level

Feb 2022 **SACNAS CareerCon Participant**

2019 – present **T32 Predoctoral Fellowship Recipient, T32 AI060519 Immunology and Infectious Disease Training Program, IU School of Medicine**

2014 – 2018 **Undergraduate Dean’s List Honors, CSUN**
GPA >3.5 (4.0 scale) in 12 graded classes

2014 – 2018 **General Education Honors Program, CSUN**

2016 – 2018 **NIH Maximizing Access to Research Careers (MARC) Fellowship Undergraduate Student Training in Academic Research (U-STAR), CSUN**

Oct 2017 **SACNAS – Travel Scholarship**
Society for Advancing Chicanos/Hispanics & Native Americans in Science. The scholarship included conference registration, round-trip flight, and lodging (approximately \$1,500).

May 2017 **University of Colorado, Denver – Anschutz Medical Campus – Graduate Experiences for Multicultural Students**
The GEMS program, a highly competitive summer research program, provided a rigorous biomedical research training opportunity with close mentoring for 10 weeks. The program also awarded scholars with a \$4,000 stipend.

Aug 2017 **Presidential Scholarship Award**
This \$10,000 scholarship awarded undergraduate students the opportunity to work with faculty mentors on significant projects for one year. It is reserved for Cal State Northridge undergraduates who have earned at least 60 units with a 3.5 GPA.

May 2015 **Promising Sophomore Award – Asian-American Studies, CSUN**

Aug 2014 **Associated Students Scholarship, CSUN**
Awarded \$2,000 to students with >3.5 GPA, a statement of purpose and 2 letters of recommendations.

ACADEMIC APPOINTMENTS

- 2019-present **Graduate Research Assistant**
Department of Microbiology and Immunology – IUPUI, Mark Kaplan Ph.D.
 Investigated the role of T helper 9 cell-mediated mast cell expansion and function in immediate hypersensitivity reactions.
- Fall 2018 **Graduate Research Rotation**
Department of Microbiology and Immunology – IUPUI, Haitao Guo, Ph.D.
 Investigated the role of Hepatitis B virus precore and core protein's effects on cccDNA stability and/or transcription.
- Fall 2018 **Graduate Research Rotation**
Department of Microbiology and Immunology – IUPUI, Frank Yang, Ph.D.
 Screened for phenotypical and transcriptional mutations from a transposon mutant library to find important sites for OspC expression in *Borrelia burgdoerferi*.
- 2017 – 2018 **Undergraduate Research Assistant- MARC U-STAR Scholar**
Department of Microbiology – CSU Northridge, Sean Murray, Ph.D.
 Investigated the role of PhaA, PhaB, and PhaC in promoting (p)ppGpp accumulation in *Caulobacter crescentus*
- Summer 2017 **Undergraduate Research Assistant – GEMS Intern**
Department of Microbiology – UC Denver, Stefan Pukatzki, Ph.D.
 Examined the role of toxin-coregulated pilus on *Vibrio cholerae* and its effects on type VI secretion system by using killing assays with *Escherichia coli*.
- 2016 – 2018 **Undergraduate Research Assistant, Center of Achievements – Brown Center,**
Department of Kinesiology – CSU Northridge, Taeyou Jung, Ph.D.
 Analyzed Brain Activity using fNIR During Dual Task Walking in Individuals with Parkinson's Disease
- Fall 2016 **Undergraduate Teacher's Assistant**
 Introduction to Gerontology, Department of Psychology – CSUN
- 2016 – 2018 **Undergraduate Research Assistant & Lab Coordinator**
Department of Psychology – CSU Northridge, Luciana Laganá, Ph.D.
 Assessed the impact of anti-bias films on reducing stereotypes and increasing empathy towards discriminated minorities

PUBLICATIONS

* First Author

Fu Y*, Wang J, Zhou B, Pajulas A, Gao H, Ramdas B, Koh B, Ulrich BJ, Yang S, Kapur R, Renauld JC, Paczesny S, Liu Y, Tighe RM, Licona-Limon P, Flavell RA, Takatsuka S, Kitamura D, Tepper RS, Sun J, Kaplan MH.* An IL-9-pulmonary macrophage axis defines the allergic lung inflammatory environment. *Science Immunology*. 2022

Ulrich BJ*, Kharwadkar R*, Chu M, Pajulas A, Muralidharan C, Koh B, Fu Y, Gao H, Hayes TA, Goplen NP, Nelson AS, Liu Y, Linnemann A, Licona-Limón P, Flavell RA, Sun J, and Kaplan MH. IL-9 is required for multi-cytokine producing tissue-resident memory CD4+ T cell-dependent allergic airway recall responses. *Science Immunology*. 2022

Wang J*, Pajulas A*, Fu Y, Adom J, Zhang W, Nelson AS, Spandou, D., Kaplan MH* . T cell-mediated wound healing is diminished by allergic skin inflammation. *Manuscript accepted for publication for the Journal of Investigative Dermatology.*

Fu Y*, Pajulas A, Wang J, Zhou B, Cannon A, Cheung CCL, Zhang J, Zhou H, Fisher AJ, Omstead D, Khan S, Han L, Renauld JC, Paczesny S, Liu Y, Yang L, Tighe RM, Licona-Limón P, Flavell RA, Takatsuka S, Kitamura D, Sun J, Bilgicer B, Sears CR, Yang K, Kaplan MH. Pulmonary interstitial macrophages are required to mediate the pro-tumorigenic effects of IL-9. *Manuscript in revision for Nature Communications.*

Pajulas A*, Fu Y, Cheung CCL, Zhou B, Chu M, Cannon A, Zhang, J, Alakhras N, Ulrich BJ, Nelson A, and Kaplan MH. T cell interleukin-9 drives mast cell progenitor proliferation and CCR2-dependent migration in allergic asthma. *Manuscript in preperation for JACI.*

PRESENTATIONS

* Principal Investigator
_ Presenter

Pajulas, A. and Kaplan, M.* (2022, May). *Th9-derived IL-9 promotes CCR2-dependent mast cell accumulation in the allergic lung.* Poster accepted for oral and poster presentation at American Association of Immunologist Annual Meeting, Portland, Oregon.

Pajulas, A. and Kaplan, M.* (2021, May). *Generation of mice with a conditional Il9 allele.* Poster accepted for presentation at American Association of Immunologist Annual Meeting, Virtual Conference.

Pajulas, A. and Kaplan, M.* (2020, October). *Elucidating the Role of IL-9 Secreting CD4+ T Helper Cells in Promoting Mast Cell Expansion in Pulmonary Models of Inflammation.* Poster accepted for oral presentation at SACNAS Conference, Virtual Conference.

Pajulas, A., Rocha, A., Stott, K., Bueno, D., Schreiner, S., Arvizu, I., Vu, S., and Murray, S.* (2018, March). Identification of genes essential for PHB Biosynthesis in *Caulobacter crescentus*. Poster accepted for presentation at the Annual Bay Area Microbial Pathogenesis Symposium, San Francisco, CA.

Lagana, L.* , Mamikonian-Zarpas, A., S., Balian, O., Valencia, Y.E., and Pajulas, A. (2018, August). Assessment Strategies Targeting the Risk of Falling in Older Age: A Literature Review. Poster accepted for presentation at the American Psychological Association, San Francisco, CA.

Lagana, L.* , Nakhla, M., Chavez, S., Balian, O., Grewe, D., and Pajulas, A. (2018, April). A Literature Review on How to Improve Attitudes towards Individuals with Physical Impairments. Poster accepted for presentation at the 98th Annual Convention of the Western Psychological Association, Portland, Oregon.

Pajulas, A., Anderegg, A., and Pukatzki, S. (2017, October). Bacterial Competition: Difference in the translocation of effector proteins from *Vibrio cholerae* to *Escherichia coli*. Poster accepted for

presentation at the Society for Advancement of Chicanos and Native Americans in Science, Salt Lake City, UT.

PROFESSIONAL APPOINTMENTS

- 2022-2023 Student Representative, **Department of Microbiology and Immunology**
- 2019-present **Communicators at IUPUI (Toastmasters International)**
- 2022-2023 – Secretary
 - 2021-2022 – President
 - 2020-2021 – VP of Education (Awarded President’s Distinguished Club)
 - 2019-2020 – VP of Public Relations (Awarded President’s Distinguished Club)
- 2019-present **SACNAS at IU School of Medicine**
- 2022-2023 – Secretary
 - 2021-2022 – Co-President
 - 2020-2021 – President
 - 2019-2020 – Vice-President

MEMBERSHIPS

- Member**, Society for the Advancement of Chicanos/Hispanics and Native Americans in Science
- Member**, American Association of Immunologists
- Member**, International Cytokine & Interferon Society (ICIS)
- Member**, Association of American University Women
- Member**, Kappa Omicron Nu International Honor Society Member, CSU Northridge

STUDENT MENTORING

- Summer 2022 Jennifer Zhang – High school student
- Spring 2021 Matthew Austin – MD/PhD Student
- Summer 2020 Jeffrey Bloodworth – PhD Student

SERVICE AND OUTREACH

- 2022 Presenter, 1st year IBMG Student Info Session - Think Talk Study
- 2022 Presenter, IU Summer Undergraduate Student Series
- 2022 Judge, Hoosier Science Engineering Fair
- 2022 IBMG K-12 Outreach – Science Demonstration at Christamore House
- 2021 IBMG Recruitment and Outreach - Attend SACNAS Meeting
- 2021 Presenter, 1st year IBMG Student Info Session - Think Talk Study
- 2020 Judge, Hoosier Science Engineering Fair
- 2020 Panelist, SACNAS at IUSM chapter - Diversity Conference Mini-Symposium
- 2020 IBMG Recruitment and Outreach - Attend SACNAS Meeting
- 2020 Presenter, 1st year IBMG Student Info Session - Think Talk Study
- 2019 Panelist, SACNAS – Graduate Student Panel Discussions for Undergraduates
- 2019 Presenter, 1st year IBMG Student Info Session - Think Talk Student