

## Akanksha Hada

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### PROFILE

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Immunologist-in-training with expertise in primary T cell isolation, cell culture, and functional assays. Experienced in studying T cell activation and function using primary lymphocytes, such as peripheral T cells and tissue-resident intestinal intraepithelial T lymphocytes (T-IELs). Skilled in applying flow cytometry, molecular techniques, and cell-based assays to uncover immune mechanisms relevant to disease and therapy. Recognized for quick learning, collaborative mindset, teamwork, and leadership in academic and research environments.

### EDUCATION

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- Ph.D. (Animal Sciences), University of Maryland, Department of Animal and Avian Sciences, College Park, Maryland (August 2021 - Expected May 2026)
  - Grad Cumulative GPA: 3.921 / 4.0.
- B.V.Sc. & AH. (DVM equivalent), Agriculture and Forestry University, Rampur, Chitwan, Nepal (October 2013 - October 2018)
  - GPA: 3.68 / 4.0.

### RESEARCH SKILLS & TECHNIQUES

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- **Flow Cytometry:**
  - Multicolor FACS, cell sorting, data analysis (FlowJo).
- **Cell Isolation and Culture:**
  - Isolate and culture primary immune cells (Blood and Lymph nodes T cells and tissue-resident intestinal intraepithelial T lymphocytes) from cattle and mice.
  - Culture and maintain a range of established cell lines derived from various tissue types, including epithelial, fibroblast, and cancer cell lines.
- **Cell Therapy Techniques:**
  - Ex-vivo T cell activation studies evaluated using immune modulation assays, including phenotyping, cytokine profiling, cell proliferation assays, and co-culture systems.
- **Molecular Techniques:**
  - RNA isolation, cDNA synthesis, RT-PCR, qPCR, bacterial transformation, and western blot.
- **Software Proficiency:**
  - Flowjo, GraphPad Prism, Ingenuity Pathway Analysis, SnapGene, and AlphaFold.
  - BioRender, Adobe Illustrator and Procreate for scientific imaging and visualization.
  - Microsoft Word, PowerPoint, and Excel for documentation, presentation, and data analysis.

### PUBLICATIONS

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- **Hada, A., & Xiao, Z.** (2025). T Cell Responses to Influenza Infections in Cattle. *Viruses*, 17(8), 1116. <https://doi.org/10.3390/v17081116>
- **Hada, A., & Xiao, Z.** (2025). Ligands for Intestinal Intraepithelial T Lymphocytes in Health and Disease. *Pathogens*, 14(2), 109. <https://doi.org/10.3390/pathogens14020109>
- **Hada, A., Li, L., Kandel, A., Jin, Y., & Xiao, Z.** (2023). Characterization of Bovine Intraepithelial T Lymphocytes in the Gut. *Pathogens*, 12(9), 1173. <https://doi.org/10.3390/pathogens12091173>
- Kandel, A., **Hada, A., & Xiao, Z.** (2022). Are CD45RO+ and CD45RA- genuine markers for bovine memory T cells? *Animal Diseases*, 2(1). <https://doi.org/10.1186/s44149-022-00057-5>
- Kandel, A., Li, L., **Hada, A., & Xiao, Z.** (2022). Differential Expression of CD45RO and CD45RA in Bovine T Cells. *Cells*, 11(11). <https://doi.org/10.3390/cells11111844>

## SCHOLARLY PRESENTATIONS

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- **Oral presentation** on the topic "Activation of Bovine Intraepithelial T Lymphocytes in the Gut" at the ANSC 38<sup>th</sup> Annual Symposium, University of Maryland, College Park, 2025.
- **Oral presentation** on the topic "Characterization of Bovine Intraepithelial T Lymphocytes in the Gut" at the ANSC 37<sup>th</sup> Annual Symposium, University of Maryland, College Park, 2024.
- **Oral presentation** on the topic "Understanding Cattle Gut Immunity: A Study of Intraepithelial T Lymphocytes" at the 4<sup>th</sup> NAPA Biennial International Scientific Conference, Baltimore, Maryland, 2024.
- **Oral presentation** on the topic "Characterization of Bovine Intraepithelial T Lymphocytes in the Gut" at the Conference of Research Workers in Animal Disease (CRWAD), Marriott Downtown Magnificent Mile, Chicago, 2024.
- **Poster presentation** on the topic "Characterization of Bovine Intraepithelial T Lymphocytes in the Gut" at the AGNR Cornerstone Event 2023, University of Maryland, College Park, Maryland.
- **Poster presentation** on the topic "Exploring the Crucial Role of  $\gamma\delta$  T Cells in Gastrointestinal Mucosal Immunity: Insights from the Cattle Model" at the ANSC 36<sup>th</sup> Annual Symposium, University of Maryland, College Park, 2023.
- **Oral presentation** on the topic "A Journey to Effective Vaccines in Cattle through Immunology" at the Dean's Global Leadership Council Lunch Meeting 2022, Marriott Hotel, College Park, Maryland.
- **Poster presentation** on the topic "Bovine  $\gamma\delta$  T Cells in Gastrointestinal Mucosa" at the ANSC 35<sup>th</sup> Annual Symposium, University of Maryland, College Park, 2022.

## FELLOWSHIPS, AWARDS, AND GRANTS

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- **Ann G. Wylie Dissertation Fellowship** for Spring 2026, from the Graduate School at the University of Maryland (UMD), 2025.
- **AAVI 1<sup>st</sup> Place Oral Presentation**, awarded by the American Association of Veterinary Immunologists (AAVI) at the Conference of Research Workers in Animal Disease (CRWAD), 2024.

- **Graduate Student Summer Research Fellowship** for Summer 2024, from the Graduate School at the University of Maryland (UMD), 2024.
- **Conference of Research Workers in Animal Disease (CRWAD) Student Travel Grants**, 2023.
- **Jacob K. Goldhaber Travel Grants**, provided by the Graduate School at the University of Maryland (UMD), 2023.
- **Outstanding Graduate Assistant Award**, from the Graduate School at the University of Maryland (UMD), 2022.
- **Dean's Fellowship**, from the Graduate School, UMD, 2021-2022.

## MENTORSHIP EXPERIENCE

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- **Graduate Student Mentor**, Xiao Lab, University of Maryland, 2024
  - Supervised and trained graduate students, focusing on immunology lab techniques.
- **Undergraduate Student Mentor**, Xiao Lab, University of Maryland, 2022
  - Supervised and trained an undergraduate student, focusing on immunology lab techniques.

## LEADERSHIP EXPERIENCE

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- **President**, Animal Sciences Graduate Student Association (ASGSA), 2024-2025, Department of Animal and Avian Sciences, University of Maryland, College Park, USA.
- **General Member**, American Association of Veterinary Immunologists (AAVI), 2025, USA.
- **General Member**, Society for Mucosal Immunology, 2025, USA.
- **Organization Administrator**, Nepali Graduate Students Association (NGSA), 2024, University of Maryland, College Park, USA.
- **Member**, ANSC Diversity, Equity, Inclusion & Respect (DEIR) ad hoc committee, University of Maryland, College Park, USA.

## TEACHING EXPERIENCE

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- **Graduate Teaching Assistant**, ANSC103: Principles of Animal Science Laboratory Fall 2025, University of Maryland, College Park.
- **Graduate Teaching Assistant**, ANSC103: Principles of Animal Science Laboratory Fall 2024, University of Maryland, College Park.
- **Graduate Teaching Assistant**, ANSC103: Principles of Animal Science Laboratory Fall 2023, University of Maryland, College Park.
- **Graduate Teaching Assistant**, ANSC103: Principles of Animal Science Laboratory Fall 2022, University of Maryland, College Park.
- **Graduate Teaching Assistant**, ANSC103: Principles of Animal Science Laboratory Spring 2022, University of Maryland, College Park.

## INVITED TALKS

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- **Guest lecturer**, Cross-cultural Anthrozoology, Canisius University, Buffalo, New York, 2024.

- **Guest Speaker**, ANSC Career Night, University of Maryland, College Park, 2025.

## CAREER HISTORY

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- Lecturer, Nepal Polytechnic Institute, Chitwan, Nepal (May 2021 – July 2021).
- Technical Sales Executive, New Hope Agro Business Private Limited, Chitwan, Nepal (March 2019 - July 2021).
- Technical Veterinary Officer, Annapurna Veterinary Centre, Banepa, Nepal (September 2018 - March 2019).
- Assistant Veterinary Surgeon, Animal Nepal, Animal Birth Control Program, Lumbini, Nepal (July 2018 - August 2019).
- Intern, Central Veterinary Hospital, Tripureshwor, Nepal (February 2018 - August 2018).

## REFERENCE

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- Dr. Younggeon Jin (ygjin@umd.edu)
- Dr. Wenbin Tuo (wenbin.tuo@ars.usda.gov)
- Dr. Zhengguo Xiao (xiao0028@umd.edu), *Ph.D. Advisor*