

Akshay Hira

Graduate Research Assistant

Biomedical Sciences, Wright State University

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EDUCATION

Aug 2019 - Present **Ph.D. in Biomedical Sciences** (Advisor: Madhavi Kadakia, Ph.D.)

College of Science and Mathematics
Wright State University, Dayton, Ohio
GPA 3.8/4.0

2019 **M.S. in Biochemistry and Molecular Biology**

College of Science and Mathematics
Wright State University, Dayton, Ohio
GPA 4.0/4.0

2014 **B. Technology in Biotechnology**

Amity Institute of Biotechnology
Amity University, Uttar Pradesh, India
3.0/4.0

WORK EXPERIENCE

Aug 2019 - Present **Graduate Research Assistant, Wright State University, Dayton, OH**

- Actively investigating TIP60 regulation of $\Delta Np63\alpha$ and its association with cisplatin resistance
- TIP60 upregulates transcriptional activity of $\Delta Np63\alpha$ and alters the functional contribution of $\Delta Np63\alpha$ to DNA damage response and subsequent cisplatin resistance

Oct 2017- July 2019 **Graduate Research Assistant, Wright State University, Dayton, OH**

- Worked on a PHITE project funded by DoD MURI grant
- The project studied the differential microRNA biomarker expression in response to moderate and high-intensity exercise regimens using Next Generation Sequencing

Sept 2016- June 2017 **Molecular Genetics Technician, DNAXperts Private Limited, Delhi, India**

- Single handedly managed the inventory list for the entire laboratory
- Trained several new employees and established procedures and assisted in the maintenance, preparation and review of operating policies
- Optimized experimental setups for all molecular diagnostic tests

May 2015- Nov 2015 **Research Lab Volunteer, Department of Pediatrics, Case Western Reserve University, Cleveland, OH**

- Contributed to a project on lung hyper reactivity in neonatal lung airway using mice model
- Performed immunostaining using mice lung tissues as part of the project focused on developmental pulmonology

2014 **Research Intern, Oncquest Laboratories Limited, Delhi, India**

- Worked on a project titled -Thiopurine methyl transferase genotyping in childhood acute lymphoblastic leukemia (ALL) patients using PCR
- Focused on majorly occurring single nucleotide polymorphism (SNP's) in TPMT gene

2013 **Intern, Sir Ganga Ram Hospital, Delhi, India**

- Worked on a project titled -Molecular techniques for Analysis of Genetic disorder Cystic Fibrosis with $\Delta f508$ gene deletion mutation

- 2012** **Summer Intern, Sri Balaji Action Medical Institute, Delhi, India**
- Developed expertise with microbiology techniques and biochemical assays to identify and characterize pathogenic microbes and their link with human disease and infections in diagnostic setting

TEACHING EXPERIENCE

- Fall 2022** **Research Perspectives (BMB 4020/6020), Wright State University, Dayton, OH**
- Fall 2021**
- Lecture/reading course to acquaint students with the research being carried out by the faculty in the Biochemistry and Molecular Biology program
- Fall 2020** **Teaching Assistantship, Biochemistry lab (BMB 3850), Wright State University, Dayton, OH**
- Fall 2018**
- Provided brief overview of the lab experiments; explained the purpose and demonstrated techniques imperative to perform the lab
 - Developed material for all the labs and kept records of supply used or needed. Assisted in final grading for each student based on performance and quality of work
- Spring 2019** **Teaching Assistantship, Biochemistry and Molecular Biology II (BMB 4230)**
Wright State University, Dayton, OH
- Executed grading of problem sets, facilitated review sessions and assisted with exam proctoring

SCIENTIFIC/TECHNICAL SKILLS

Cell Culturing	DNA/RNA isolation	Immunoblot	Cloning
Cell Transfection	RNA Inference	Immunoprecipitation	Next Generation sequencing
Purifying Protein	PCR/q-RTPCR	Bacterial Transformation	Plasmid Isolation

HONORS/AWARDS

- 2023** **Nominated for Data blitz, CoSM Wright State University, Dayton, OH**
- 2023-2024** **President, Biomedical Sciences Student Association (BMSSA)**
- 2023** **Travel Scholarship for Career Development, AAISCR**
- 2023** **Graduate Student Award, American Society for Biochemistry and Molecular Biology (ASBMB)**
- 2022-23** **Treasurer, Biomedical Sciences Student Association (BMSSA)**
- 2022** **Travel Award, American Society for Biochemistry and Molecular Biology (ASBMB)**
- 2018** **Merit based Tuition Scholarship, Wright State University, Dayton, OH**
- 2017** **Merit based Tuition Scholarship, Wright State University, Dayton, OH**
- 2006** **Award for Social service, National Cancer Control Programme, Cancer Aid Society India**

SCIENTIFIC TALK/SEMINARS

- 2023** Data Blitz Session and Poster Presentation, Celebration of Undergraduate & Graduate Research, Scholarship and Creative Activities, Wright State University, Dayton, OH
- 2023** Poster Presentation, DiscoverBMB ASBMB Annual meeting, *Seattle, WA*
- 2023** Brown Bag Oral presentation, Wright State University, *Dayton, OH*
- 2022** Biomedical Sciences PhD program Student seminar, Wright State University, *Dayton, OH*
- 2022** Poster Presentation, Experimental Biology Annual meeting, *Philadelphia, PA*
- 2022** Brown Bag Oral presentation, Wright State University, *Dayton, OH*
- 2021** Biomedical Sciences PhD program Student seminar, Wright State University, *Dayton, OH*
- 2021** Guest Lecture, Sir Ganga Ram Hospital Dept. of Research, *Delhi, India*

- 2021** Brown Bag Oral presentation, Wright State University, *Dayton, OH*
- 2020** Poster Presentation, Symposium for Student Research, Scholarship and Creative Activities
Wright State University, *Dayton, OH*
- 2020** Brown Bag Oral presentation, Wright State University, *Dayton, OH*
- 2019** Poster Presentation, BSOM Central Research Forum, Wright State University, *Dayton, OH*
- 2019** Poster Presentation, Ohio Physiological Society Annual Meeting,
Wright State University, *Dayton, OH*
- 2019** Brown bag Oral presentation, Wright State University, *Dayton, OH*
- 2019** Poster Presentation, CoSM Festival of Research, Wright State University, *Dayton, OH*
- 2018** Brown bag Oral presentation, Wright State University, *Dayton, OH*
- 2011** INCYTE, Second Annual National Biotechnology Extravaganza
Amity University, *Uttar Pradesh, India*

PROFESSIONAL SOCIETY MEMBERSHIP

- 2021- Present** Member, American Society for Biochemistry and Molecular Biology (ASBMB)
- 2022-Present** Associate member, American Association for Cancer Research (AACR)
- 2022** Member, American Association of Indian Scientist in Cancer Research (AAISCR)

PUBLICATIONS

1. Hira, A., Stacy, A. J., Craig, M., Zhang, J., & Kadakia, M. (2022). TIP60 mediated regulation of $\Delta Np63\alpha$ is associated with Cisplatin resistance. *The FASEB Journal*, 36.
2. Hira, A. (2019). *TIP60 regulation of $\Delta Np63\alpha$ is associated with cisplatin resistance* (Master dissertation, Wright State University).
3. Stacy, A. J., Zhang, J., Craig, M. P., Hira, A., Dole, N., & Kadakia, M. P. (2019). TIP60 up-regulates $\Delta Np63\alpha$ to promote cellular proliferation. *Journal of Biological Chemistry*, 294(45), 17007-17016.