### Dr. SAIRA JUSTIN

### **Assistant Professor**

Department of Biology, School of STEM Point Loma Nazarene University (PLNU) 3900 Lomaland Drive, San Diego, CA 92106

### PERSONAL INFORMATION

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S LinkedIn: https://www.linkedin.com/in/dr-saira-justin/

Google Scholar: https://scholar.google.com/citations?user=uOPON6cAAAAJ&hl=en



### May 2019 – Aug 2025 Assistant Professor

Atta-Ur-Rahman School of Applied Biosciences (ASAB), National University of Sciences and Technology (NUST), Pakistan.

## Jan 2025 – Aug 2025 UG Program Coordinator

Atta-Ur-Rahman School of Applied Biosciences (ASAB), National University of Sciences and Technology (NUST), Pakistan.

### **EDUCATION**

### 2015 - 2019 PhD in Natural Sciences

**Cum Laude** 

Johann Wolfgang Goethe-Universität, Frankfurt am Main, Germany.

Thesis Title: Combined Application of a Natural HDAC Inhibitor Sulforaphane with the mTOR Inhibitor Everolimus in the Therapy of Bladder Cancer.

### 2012 - 2014 Master of Science in Healthcare Biotechnology

**GPA 4.0/4.0** 

Atta-Ur-Rahman School of Applied Biosciences (ASAB), National University of Sciences and Technology (NUST), Pakistan.

Thesis Title: Pharmacological Effect of Turmeric on Cognitive Impairment Induced by Scopolamine in Mice.

### 2008 - 2012 Bachelor of Science in Microbiology

**GPA 4.0/4.0** 

Centre of Biotechnology and Microbiology (COBAM), University of Peshawar (UoP), Pakistan. Thesis Title: The Study of MRSA Prevalence in Human Oral Cavity and Antibacterial Investigation of *Vitex agnus castus*.

#### RESEARCH INTERESTS

To investigate complementary and alternative therapies aimed at mitigating resistance in targeted cancer treatments through *in-vitro* preclinical drug efficacy studies. The therapeutic potential of nutraceuticals and bioactive compounds is evaluated as innovative options for urogenital cancers, with the goal of overcoming drug resistance and enhancing treatment outcomes.

A secondary focus involves utilizing nutraceuticals to enhance cognitive and emotional well-being. This research explores their potential as anti-stress therapies and natural stimulants to improve overall cognitive function and combat sleep deprivation using *in-vivo* models.

### **PUBLICATIONS**

- 1. Ayman M, Irfan A, Sultana N, Farouq K, Usman M, Asghar S, Javed A, **Justin S**. HPV and Urological Cancers: Investigating Renal and Prostate Cancer Associations. Urologic Oncology: Seminars and Original Investigations. Accepted Sep 2025. IF 2.3.
- 2. Yousaf H, Javed A, Sultana N, Farouq K, Usman M, Khan GR, Gomez MK, Asghar S, **Justin S**. Unlocking the Secrets: Exploring the Connection between HPV and Bladder Cancer in Pakistan. Urologic Oncology: Seminars and Original Investigations. 15 April 2025. https://doi.org/10.1016/j.urolonc.2025.03.014. IF 2.4.
- 3. Ghani U, Ghori FH, Qamar MU, Khan H, Azad B, Habib S, **Justin S**, Khan IN, Shah TA, Jardan YAB, Bourhia M, Perveen F, Javed A. SLNP-based CDK4 targeted Nano therapy against Glioblastoma. Frontiers in Oncology, 2024 Nov 22:14:1455816. https://doi.org/10.3389/fonc.2024.1455816. IF 3.5.
- 4. Ali A, Lateef A, Waheed Z, Waseem M, Zaheer T, Gomez MK, Blaheta RA, **Justin S**. Mutation S249C of FGFR3b Promotes Bladder Cancer through Downstream Signaling Proteins FRS2 and FRS3: A Computational Approach. Current Signal Transduction Therapy. 2023 Aug; 18(2). <a href="https://doi.org/10.2174/1574362418666230810094626">https://doi.org/10.2174/1574362418666230810094626</a>.
- 5. Khan N, Khan K, Badshah Y, Trembley JH, Ashraf NM, Shabbir M, Danish L, Afsar T, Almajwal A, **Justin S**, Hasan Z, Razak S. Investigating pathogenic SNP of PKC1 in HCV-induced hepatocellular carcinoma. Scientific Reports. 2023 Aug 2; 13(1):12504. https://doi.org/10.1038/s41598-023-39804-0. IF 3.8.
- 6. Fatima B, Masud R, Sultana N, Javed A, **Justin S**. Detection of human papillomavirus in archival bladder and ovarian cancer samples. Clinical Epidemiology and Global Health. 2023 June, 22: 101339. https://doi.org/10.1016/j.cegh.2023.101339. IF: 2.6
- 7. **Justin S**, Rutz J, Maxeiner S, Chun FK, Juengel E, Blaheta RA. Bladder Cancer Metastasis Induced by Chronic Everolimus Application Can Be Counteracted by Sulforaphane In Vitro. International Journal of Molecular Sciences. 2020 Aug 4; 21(15):5582. <a href="https://doi.org/10.3390/ijms21155582">https://doi.org/10.3390/ijms21155582</a>. IF: 5.6
- 8. **Justin S**, Rutz J, Maxeiner S, Chun FK, Juengel E, Blaheta RA. Chronic Sulforaphane Administration Inhibits Resistance to the mTOR-Inhibitor Everolimus in Bladder Cancer Cells. International Journal of Molecular Sciences. 2020 June 4; 21(11):4026. <a href="https://doi.org/10.3390/ijms21114026">https://doi.org/10.3390/ijms21114026</a>. IF: 5.6
- 9. Rutz J, Maxeiner S, **Justin S**, Bachmeier B, Bernd A, Kippenberger S, Zöller N, Chun FK, Blaheta RA. Low-dosed Curcumin Combined with Visible Light Exposure Inhibits Renal Cell Carcinoma Metastatic Behavior In Vitro. Cancers. 2020 Jan 28;12(2). <a href="https://doi.org/10.3390/cancers12020302">https://doi.org/10.3390/cancers12020302</a>. IF: 6.6

- 10. Rutz J, Juengel E, Euler S, Maxeiner S, **Justin S**, Roos F, Chun FK, Blaheta RA. Chronic sulforaphane application does not induce resistance in renal cell carcinoma cells. Anticancer Research. 2018 Nov; 38(11):6201-6207. https://doi.org/10.21873/anticanres.12974. IF: 2.45
- 11. Juengel E, Euler S, Maxeiner S, Rutz J, **Justin S**, Roos F, Khoder W, Nelson K, Bechstein WO, Blaheta RA. Sulforaphane as an adjunctive to everolimus counteracts everolimus resistance in renal cancer cell lines. Phytomedicine. 2017 Apr 15; 27:1-7. https://doi.org/10.1016/j.phymed.2017.01.016. IF: 3.126
- 12. Khalid A, Shakeel R, **Justin S**, Iqbal G, Shah SAA, Zahid S, Ahmed T. Pharmacological effects of turmeric on learning, memory, and expression of muscarinic receptor genes (M1, M3, and M5) in stress-induced mouse model. Current Drug Targets. 2017; 18(13):1545-1557. <a href="https://doi.org/10.2174/1389450118666170315120627">https://doi.org/10.2174/1389450118666170315120627</a>. IF:3.021
- 13. Juengel E, Maxeiner S, Rutz J, **Justin S**, Roos F, Khoder W, Tsaur I, Nelson K, Bechstein WO, Haferkamp A, Blaheta RA. Sulforaphane inhibits proliferation and invasive activity of everolimus-resistant kidney cancer cells in vitro. Oncotarget. 2016 Dec 20; 7(51):85208-85219. <a href="https://doi.org/10.18632/oncotarget.13421">https://doi.org/10.18632/oncotarget.13421</a>. IF: 6.359

### CONFERENCE PAPERS/ POSTER PRESENTATIONS/RESEARCH BLOG

- 1. **Justin S**. Unveiling the Link Between HPV and Bladder Cancer: A Call for Public Awareness. NUST Research and Innovation Blog. June 24, 2025. Link.
- 2. Ayman M, Irfan A, Farouk K, Sultana N, Asghar S, Javed A, **Justin S**. HPV and Cancer in Pakistan: Investigating Renal and Prostate Cancer Association. International Conference on Integrative Life Sciences (ICiLS). September 2024.
- 3. Anjum H, Ahfaz HA, Kashaf, Bajwa H, Iqbal B, **Justin S**. Exploring Bacopa monnieri as a Nutraceutical Stimulant Against Sleep Deprivation. International Conference on Integrative Life Sciences (ICiLS). September 2024.
- 4. Shakeel A, Sajid L, Ahmad MZ, Zafar Sameera, **Justin S**. Investigating Accumulative Effect of Fluoxetine and *Fagonia indica* as an Anti-Stress Therapy. 9<sup>th</sup> Annual Neuroscience Conference. August 2023.
- 5. Sajid L, Shakeel A, Ahmad MZ, Zafar Sameera, **Justin S**. Does *Fagonia indica* Application Mitigate Side Effects of Fluoxetine or Do We Need a Deeper Insight? 9<sup>th</sup> Annual Neuroscience Conference. August 2023.
- 6. **Justin S**, Maxeiner S, Rutz J, Roos F, Chun F, Juengel E, Blaheta RA. Combined Application of the Natural HDAC Inhibitor Sulforaphane with the mTOR Inhibitor Everolimus in the Therapy of Bladder Cancer. 10<sup>th</sup> Symposium Urological Research of German Society of Urology in Mainz, Germany. 2018
- 7. Maxeiner S, **Justin S**, Rutz J, Roos F, Chun F, Juengel E, Blaheta RA. Der mTOR Inhibitor Everolimus supprimiert in Kombination mit Sulforaphan das Invasions- und Adhäsions-Verhalten von Blasen Tumorzellen in vitro. 10<sup>th</sup> Symposium Urological Research of German Society of Urology in Mainz, Germany. 2018.

#### TEACHING EXPERIENCE

## **Aug 2025- Present** Assistant Professor

Point Loma Nazarene University (PLNU)

- Teaching undergraduate courses:
  - Microbiology of Infectious Diseases (BIO2020)
  - o Cell Biology and Biochemistry (BIO-2010)

### May 2019 - Aug 2025 Assistant Professor

National University of Sciences and Technology (NUST), Pakistan.

- Taught a diverse array of undergraduate and postgraduate courses:
  - o Proteomics (ABS-839)
  - Molecular Basis of Metabolic Diseases (MMD-991)
  - Cellular and Molecular Pathophysiology (MMD-891)
  - Principles of Healthcare Management (BIT-412)
  - o Clinical Biochemistry (MTD-353)

- o Enzymology (BIO-209)
- o Cell Biology (BIT-115)
- o Introductory Biology (BIO-110)
- O Community Service Learning (CSL-402)
- Civic and Community Engagement (CCE-401)
- Garnered an overall average student feedback rating of 85%, reflecting a commitment to fostering an engaging and enriching learning environment.
- Undergraduate Instruction: Delivered 69 credit hours across various courses, effectively engaging students and enhancing their understanding of core and elective subjects.
- Postgraduate Instruction: Conducted 9 credit hours of advanced coursework, focusing on critical thinking and application of knowledge in specialized areas.
- Appointed multiple times as a Biology Educator for undergraduate courses at the School of Natural Sciences (SNS), NUST, demonstrating a strong commitment to academic excellence.
- Delivered guest lectures for the undergraduate elective course of Pharmacology (BPH-372) and the postgraduate elective course of Behavioral Neuroscience (HCB-945), January 30 to March 15, 2023.

### **GRANTS WON**

National Research Program for Universities (NRPU) 2021: Reference research project No 15091 entitled "Evaluation of therapeutic potential of a natural HDAC inhibitor sulforaphane against HPV infected carcinomas" having a total cost of PKR 6.51 million (equivalent to USD 25,000). The project was conducted from April 2022 to December 2024 and has been completed. Project Video Link.

### May 2019 – Aug 2025 Assistant Professor

National University of Sciences and Technology (NUST), Pakistan.

- Higher Education Commission (HEC) Approved Supervisor since 11 October 2019, Pakistan.
- Details of supervised research students as supervisor:

Graduated Research Students		
Program	Student Number	
MS	11	
UG	19	

- Rector's Gold Medal awarded to UG-13 students under my supervision for their exemplary research thesis project at the ASAB Convocation 2024.
- Best Poster Award presented to UG-13 students under my supervision for their exemplary research thesis project at the ASAB Open House 2024.
- Rector's Gold Medal awarded to UG-12 students under my supervision for their exemplary research thesis project at the ASAB Convocation 2023.

#### **ADMINISTRATIVE DUTIES**

### May 2019 – Aug 2025

National University of Sciences and Technology (NUST), Pakistan.

- UG Program Coordinator ASAB: Oversees the coordination, administration, and quality assurance of the undergraduate program, Jan 2025 Aug 2025.
- Advisor for Student Advisory System (SAS) ASAB: Provide guidance and support to students on academic and personal matters, Sep 2024 Aug 2025.
- Co-PI of Cancer Biology Lab, ASAB: Co-leading research focused on cancer biology, diagnosis, and therapeutics, 2024 Aug 2025.
- Focal Person, ASAB for Finding Innovative & Creative Solutions (FICS) 2024 and 2025: Organizing and coordinating the FICS competition to promote innovative and creative solutions among students, Nov 2023 Aug 2025.
- Focal Person, ASAB for NUST Student Forum (NSF): Leading efforts to foster student engagement and facilitate discussions on academic, administrative, and extracurricular issues, Nov 2023 Dec 2024.
- Member of Self-Assessment Reports (SAR) Committee: Tasked with preparing and maintaining the school's SARs and quality audit reports, Nov 2020 Aug 2025.
- Co-PI of Molecular Virology and Viral Oncology Lab, ASAB: Co-leading research focused on viral oncology and therapeutics, 2023 2024.
- Focal Faculty, ASAB for Undergraduate Female Students: Served as a mentor and point of contact for the academic and personal well-being of female students, June 2021 Jan 2024.
- Member of COVID-19 Assurance Focal Group: Ensuring adherence to COVID-19 SOPs among students, faculty, and staff at the school level, Sep 2020 Jan 2024.

- Focal Person of ASAB Journal Club: Designed to enhance the presentation and critical analysis skills of PhD students, Sep 2019 Jan 2024.
- Co-PI of Cancer Biology Lab, ASAB: Co-leading research focused on cancer biology, diagnosis, and therapeutics, 2019 2023.
- Focal Person for Institutional Financial Aid Matters: Coordinated financial aid processes and support for students in need of assistance at ASAB, including guidance on scholarship opportunities, 7 Nov 2022 4 Feb 2023.
- Organizer and Evaluator, MS Thesis Synopsis Defenses, ASAB: Oversaw and assessed the
  postgraduate thesis synopsis defenses at the Department of Healthcare Biotechnology to
  ensure academic standards, 2023.
- Judge, Stage 1 Evaluation of Finding Innovative & Creative Solutions (FICS) 2023: Evaluated student projects and proposals to identify innovative and creative solutions, 2022-2023.
- Student Advisor, ASAB: Provided guidance and support to students on academic and personal matters, 2020 2022.
- Evaluator, Undergraduate Final Year Research Projects: Assessed and provided feedback on final year research projects to ensure academic quality and standards, NUST, 2019, 2020, 2021, and 2022.
- Co-House Master, House Tigers, ASAB Sports Gala: Assisted in organizing and managing events during the sports gala, Spring 2020.

### **EDITORIAL AND REVIEWING DUTIES**

- Assistant Editor for International Journal of Pathology (IJP), eISSN: 2079-7516 (HEC Y Category), Oct 2023 present.
- Associate Editor for NUST Journal of Natural Sciences (NJNS), eISSN: 2710-222X (HEC Y Category), Oct 2021 - Dec 2023.
- Reviewer for Molecules, eISSN: 1420-3049 (IF 4.2).
- Reviewer for International Journal of Molecular Sciences (IJMS), eISSN; 1422-0067 (IF 4.9).
- Reviewer for National Health Challenge Grants and Researcher-Initiated Grants offered by Health Research Institute, National Institute of Health (NIH), Pakistan, 2022.

#### **TRAINING & COURSES**

- Leadership Readiness; 15<sup>th</sup> and 16<sup>th</sup> April 2025.
- Leadership and Management Skills for Professionals; 13<sup>th</sup> 17<sup>th</sup> May 2024.
- Inspiration, Iteration, & Innovation by Zurich University of Applied Sciences (ZHAW); 2<sup>nd</sup> 10<sup>th</sup> July 2021.
- Office 365: Microsoft Teams Administration Virtual Training, Part 1; 17<sup>th</sup>-18<sup>th</sup> June 2021
- Managing Time & Cost Overrun in Project; 7<sup>th</sup> -11<sup>th</sup> June 2021.
- Development of Key Performance Indicators (KPIs); 17<sup>th</sup> -19<sup>th</sup> February 2021.
- Rural Healthcare for Sustainable Development" Training; 8<sup>th</sup> -12<sup>th</sup> February 2021.
- Communication Theory: Bridging Academia and Practice; Coursera August 2020
- Effective Problem-Solving and Decision-Making; Coursera July 2020
- Creating Inclusive Spaces in Academia; 27<sup>th</sup> February 2020.

• Dealing Tax Matters in Government Departments; 19<sup>th</sup> - 21<sup>st</sup> February 2020.

### CONFERENCES/ SEMINARS/WORKSHOPS/TALKS

- Convened a seminar titled "Breaking Taboos and Building Hope: Decoding Complexities in STDs, Cancer, and Diabetes" on 3<sup>rd</sup> December 2024 at ASAB, NUST, Pakistan
- Organized the "International Conference on Integrative Life Sciences" (ICiLS-2024) scheduled on 25<sup>th</sup> 27<sup>th</sup> September 2024 at ASAB, NUST, Pakistan.
- Presented at the 2023 Young Woman Scientist Webinar by the Association of Korean Women Scientists and Engineers (KWSE).
- Delivered a guest lecture on the "Conduct of Examinations" to the faculty of ASAB, NUST, providing valuable insights and guidelines for effective assessment, 1st September 2023.
- Organized NUST Summer School (NSS) 2023. The event allowed High School students to learn about their future career prospects and gave them a view of life at NUST.
- Organized NUST Conference on Agricultural Sciences and Technology (NCAST) 2023 on 14<sup>th</sup> 16<sup>th</sup> March 2023 at ASAB, NUST, Pakistan.
- Organized NUST Summer School (NSS) 2022. The event allowed High School students to learn about their future career prospects and gave them a view of life at NUST.
- Organized International Conference on Water, Energy, and Environment for Sustainability (IC-WEES) 2021 on 27<sup>th</sup> 29<sup>th</sup> October 2021 at ASAB, NUST, Pakistan.
- Participated and published two abstracts in the 10<sup>th</sup> Symposium Urological Research of the German Society of Urology in Mainz, Germany, organized by Arbeitsgruppe Urologische Forschung in December 2018.
- Participated and organized the International Brain Research Organization-Asia/Pacific Regional Committee (IBRO-APRC) Associate School of Neuroscience, held at ASAB, NUST, from 30<sup>th</sup> September to 4<sup>th</sup> October 2013.

### SKILLS IN LABORATORY TECHNIQUES

### Cellular and Molecular Biology Techniques

- Cell Culture: Cryopreservation, thawing, culturing, and passaging of cells.
- Cellular Assays: Cell viability, proliferation, apoptosis, invasion, and metastatic assays.
- Protein Analysis: Protein extraction, Bradford quantification, and Western blotting.
- Nucleic Acid Techniques: DNA and RNA extraction from tissue samples, and Gel Electrophoresis
- Gene Expression Analysis: Reverse transcription polymerase chain reaction (RT-PCR), and conventional PCR for gene expression analysis.
- Biochemical Assays: LFTs (Liver Function Tests), RFTs (Renal Function Tests), and Cholesterol tests (Total, HDL, LDL), etc.
- ELISA (Enzyme-Linked Immunosorbent Assay) for detecting proteins, hormones, or antigens.

### **Animals' Experimental Techniques**

Mouse Handling and Breeding: Handling, breeding, and maintaining mouse colonies.

- Behavioral Studies: Fear conditioning and fear extinction learning, Morris water maze testing (spatial learning and memory), marble burying (anxiety-like behavior), exit circle test (anxiety/escape behavior), beam balance test (motor coordination and balance), open field test (locomotor activity and anxiety), social interaction test (social behaviors), novel object recognition test (memory and cognitive function).
- Animal Sacrifice and Organ Harvesting: Procedures for humane sacrifice and subsequent brain tissue harvesting for histological or molecular studies.

## **Microbiology Techniques**

- Bacterial Culturing and Isolation: Culture media preparation, autoclaving, streaking, spread plate method, pour plate method, lawn preparation, slant preparation, and serial dilution.
- Colony Counting and Characterization.
- Microbial Identification Techniques: Gram staining, biochemical tests (catalase, oxidase, coagulase, urease, DNase tests, etc.), microscopy.
- Antibiotic Resistance Testing: Kirby-Bauer disk diffusion method.

### **CURRICULUM DEVELOPMENT AND PROGRAM DESIGN**

### **Programs Launched**

• MS Molecular Medicine Program at ASAB, NUST: Contributed to working papers and approvals through the Institutional Curriculum Review Committee (ICRC) in November 2020, the University Curriculum Review Committee (UCRC) in February 2021, and the 60<sup>th</sup> Academic Council Meeting (ACM). Assisted in submitting documents to the Higher Education Commission (HEC), resulting in the No Objection Certificate (NOC) issuance on 14<sup>th</sup> July 2021, enabling the program to commence in Fall 2021.

### **New Courses Designed**

• Advances in Public Health, a postgraduate elective course, was approved at the 60<sup>th</sup> Academic Council Meeting (ACM), NUST.

## **Revision of Existing Courses**

- Enzymology (BIO-209), undergraduate core course, approved in the 63<sup>rd</sup> Academic Council Meeting (ACM), NUST.
- Pharmacology (BPH-372), lab manual for an undergraduate elective course.

### **Student Internship Programs (2022 - present)**

Summer Research Internships: Offered internships to a total of 16 undergraduate and postgraduate students. The program included a 2-week internship in the Cancer Biology and Molecular and Viral Oncology Labs, focusing on basic molecular techniques. Students received hands-on training in micro pipetting, RNA extraction, gel electrophoresis, cDNA synthesis, gene expression via conventional PCR and reverse transcriptase PCR, and report writing. Additionally, an 8-week internship in the Cell Culture Lab emphasized practical skills related to cell culture techniques, including cryopreservation, thawing, passaging, microscopy, cell counting, cell viability assay, dose-response analysis, and IC50 calculations.

#### ACADEMIC DISTINCTION/AWARDS/HONORS

- Honorable Prize of 50,000 KRW for presenting at the 2023 Young Woman Scientist Webinar organized by the Association of Korean Women Scientists and Engineers (KWSE).
- Awarded the Most Popular Poster at the ASAB Poster Exhibition, Dec 2023.
- Secured Magna Cum Laude in PhD thesis defense, February 2019.
- Secured NUST Faculty Development Program (FDP) Abroad Scholarship, 2014/2015.
- Awarded the President's Gold Medal for securing 1<sup>st</sup> position in the MS program, 2014.
- Topped Postgraduate MS Course with a GPA of 4.0/4.0, 2014.
- Awarded a laptop under the Prime Minister's National Laptop Scheme 2013-2014.
- Awarded the Gold Medal for securing 1<sup>st</sup> position in the BS program, 2012.
- Topped Undergraduate Course with a GPA of 4.0/4.0, 2012.

### RESEARCH COLLABORATIONS

- Prof. Dr. Khalid Farouk, Department of Urology and Kidney Transplantation, Fauji Foundation Hospital (FFH), Pakistan.
- Prof. Dr. Nuzhat Sultana, Department of Pathology, Northwest School of Medicine (NWSM), Pakistan.
- Prof. Dr. Ishrat Jabeen, School of Interdisciplinary Engineering & Sciences (SINES), NUST.
- Dr. Aneela Javed, Atta-Ur-Rahman School of Applied Biosciences (ASAB), NUST.
- Dr. Mehpara Farhat, Department of Biological Sciences, National University of Medical Sciences (NUMS), Rawalpindi, Pakistan.
- Prof. Dr. Roman Blaheta, Department of Urology and Pediatric Urology, University Medicine Mainz, Germany.

#### **MEMBERSHIPS**

• World Women in Science and Technology (WWST), Oct 2024 - present.

### RESEARCH STUDENTS SUPERVISED

• List of research thesis projects supervised as a primary supervisor:

MS Graduated Students		
No.	Thesis Title	Graduation Year
1.	Molecular Investigation of Fluoxetine and <i>Fagonia indica</i> Combination Therapy for Stress-Induced Cognitive Impairment	16 <sup>th</sup> July 2025
2.	Investigating <i>Bacopa monnieri</i> as a Natural Stimulant for Cognitive Enhancement in Acute Rapid Eye Movement (REM) Sleep-deprived Mice	16 <sup>th</sup> July 2025
3.	Exploring the Metabolic Effects of <i>Fagonia indica</i> in Mitigating Fluoxetine-Induced Toxicity for Stress Management	8 <sup>th</sup> July 2025
4.	Computational Insights into the Therapeutic Potential of <i>Bacopa monnieri</i> as a Natural Stimulant to Mitigate Sleep Deprivation	8 <sup>th</sup> July 2025

5.	Evaluating the Therapeutic Potential of Natural HDACi, Sulforaphane, against HPV-infected Carcinomas	26 <sup>th</sup> June 2025	
6.	Investigating Anti-Inflammatory Potential of Fluoxetine and Fagonia indica Combination Therapy for Stress Management	20 <sup>th</sup> May 2025	
7.	<i>In Silico</i> Analysis of FGFR3b R248C and FGFR4 G388R Mutations in Bladder Cancer: Implications for Downstream Signaling Pathways	7 <sup>th</sup> March 2025	
8.	Investigating Prevalence and Genotyping of High-Risk HPV in Prostate Cancer Patients of Pakistan	23 <sup>rd</sup> Aug 2024	
9.	Genotyping of High-Risk HPV in Renal Cell Carcinoma Patients from Pakistan	23 <sup>rd</sup> Aug 2024	
10.	Prevalence and genotyping of high-risk HPV in bladder cancer patients from Pakistan	24 <sup>th</sup> Nov 2023	
11.	Prevalence and Genotype Distribution of Human Papillomavirus (HPV) in Renal Cell Carcinoma Patients in Pakistan	7 <sup>th</sup> Aug 2023	
UG Graduated Students (Final Year Thesis Research Project)			
	UG Graduated Students (Final Year Thesis Research Projec	t)	
No.	UG Graduated Students (Final Year Thesis Research Projec Thesis Title	t) Graduation Year	
No.	· · · · · · · · · · · · · · · · · · ·	,	
	Thesis Title  Investigating the Potential Stimulant Effects of <i>Bacopa monnieri</i> in Acute Rapid Eye Movement (REM) Sleep-deprived Mice	Graduation Year	
1.	Thesis Title  Investigating the Potential Stimulant Effects of Bacopa monnieri in Acute Rapid Eye Movement (REM) Sleep-deprived Mice (Rector's Gold Medal, & ASAB Open House Best Poster Award)  Investigating Accumulative Effect of Fluoxetine and Fagonia indica as an Anti-Stress Therapy	Graduation Year 2024	
1.	Thesis Title  Investigating the Potential Stimulant Effects of Bacopa monnieri in Acute Rapid Eye Movement (REM) Sleep-deprived Mice (Rector's Gold Medal, & ASAB Open House Best Poster Award)  Investigating Accumulative Effect of Fluoxetine and Fagonia indica as an Anti-Stress Therapy (Rector's Gold Medal)  Investigating Cumulative Effect of Curcumin and Vitamin D on	Graduation Year 2024 2023	
1. 2. 3.	Thesis Title  Investigating the Potential Stimulant Effects of Bacopa monnieri in Acute Rapid Eye Movement (REM) Sleep-deprived Mice (Rector's Gold Medal, & ASAB Open House Best Poster Award)  Investigating Accumulative Effect of Fluoxetine and Fagonia indica as an Anti-Stress Therapy (Rector's Gold Medal)  Investigating Cumulative Effect of Curcumin and Vitamin D on Learning and Memory Using Restraint Stress Mice Model  Investigating Cumulative Effect of Curcumin and Vitamin D as an	Graduation Year 2024 2023 2022	

• Member of the Guidance & Examination Committee (GEC) of PhD research thesis projects:

PhD Graduated Students		
No.	Thesis Title	Completion Date
1	Evaluation of Time-Dependent Effects of Aluminum Exposure on Synaptic Impairment	20 <sup>th</sup> Aug 2024
2	Pharmacological Evaluation of Cocoa Flavanols Extract in Learning and Memory Impairments in Metals-Induced Neurotoxicity	26 <sup>th</sup> April 2024

# **COMPUTER SKILLS**

MS Office (Word, PowerPoint, Excel, Forms, Teams), GraphPad Prism, Image J, GIMP2, CellQuest, Sigma Plot, Citavi, Zoom, Skype.

#### **LANGUAGES**

English, Urdu, Punjabi, and German (A1 level).

### **HOBBIES & INTERESTS**

Enjoy playing badminton and board games, playing guitar, listening to music, painting, and exploring various genres of movies and TV series, with a particular interest in superhero narratives.

### REFERENCES

## • Prof. Dr. phil. nat. Roman Blaheta

Department of Urology and Pediatric Urology University Medicine Mainz, Mainz, Germany

Email: roman.blaheta@unimedizin-mainz.de, Phone: +496131175092

### • Prof. Dr. Peter John

Atta-Ur-Rahman School of Applied Biosciences (ASAB) National University of Sciences and Technology (NUST), Islamabad, Pakistan.

Email: pjohn@asab.nust.edu.pk, Phone: +925190856151