

Dr. HIRA NIAZI

Assistant Professor, Pak-Austria Fachhochschule- Institute of Applied Sciences and Technology (IAST), Pakistan.
IPFP fellow, Government College University (GCU), Lahore, Pakistan.
Postdoctoral fellow, Heinrich Heine University, Düsseldorf, Germany.
PhD, Cellular AND Molecular Biology, Paris Cardiovascular Research center, France

My PhD and postdoctoral research work was on revisiting the role of Sphingosine 1-phosphate (a bioactive lipid mediator) in platelet production and function. Currently, I am working as an Assistant Professor at the Pak-Austria Fachhochschule - Institute of Applied Sciences and Technology, Pakistan and meanwhile, I am looking for a teaching and research position at a prestigious university in USA in order to continue my research work and acquire new skillsets and techniques in a better infrastructure.

PERSONAL INFORMATION

📍 Haripur, KPK, Pakistan.
✉ hiraniazi10@gmail.com 📞 [+92 322 5611299](tel:+923225611299)
❖ <https://scholar.google.com/citations?user=R56gHTEAAAAJ&hl=en>
❖ <https://orcid.org/0000-0003-4737-2613>

WORK EXPERIENCE

2024	<p>Assistant Professor - Biotechnology Pak-Austria Fachhochschule- IAST, Haripur, PK February 2024 – Current</p> <p>Job responsibilities:</p> <ul style="list-style-type: none">Teaching courses (theory and practical performance) at undergraduate level<ul style="list-style-type: none">Biosafety and BioethicsHuman GeneticsFunctional Diagnostics and Laboratory Information System
2023	<p>Assistant Professor (IPFP fellow) Government College University (GCU), Lahore, PK December 2022 – January 2024</p> <p>Job responsibilities:</p> <ul style="list-style-type: none">Teaching courses (theory and practical performance) at undergraduate level<ul style="list-style-type: none">Recombinant DNA technologyMicrobial GeneticsDNA Damage, Repair and CarcinogenesisGenetic engineeringProtein Purification
2022	<p>Selection for IPFP placement and NFDP training February 2022 – November 2022</p> <p>Interim placement for Fresh PhDs (IPFP) fellowship is an initiative by the Higher education Commission of Pakistan to assist exceptional PhD graduates in acquiring professional characteristics for effective teaching and research before their formal entry in the academia. The selected candidates undergo a training named the National Faculty Development program (NFDP).</p>
2021	<p>Research exchange student – Technology transfer (Postdoctoral fellowship) Heinrich Heine University, Düsseldorf, Germany March 2021 – September 2021.</p> <p>Specialization: "Role of S1P in platelet production <i>in vitro</i>"</p> <p>Techniques:</p> <ul style="list-style-type: none">Murine BM stem cell isolation and <i>in vitro</i> megakaryopoiesis.Immunocytochemistry.Flow cytometry (FACS) -
2017	<p>PhD Researcher INSERM U970-Paris Cardiovascular Research Centre (PARCC) January 2017 – October 2020</p> <p>Dissertation: "Sphingosine 1-phosphate signaling in platelet production."</p> <p>Techniques:</p> <ul style="list-style-type: none">Transgenic mouse models (Handling, breeding and experimentation).Complete blood count (CBC) after retro-orbital bleedingImmunohistochemistry (Frozen and Paraffin embedded samples).Microscopy (Scanning bright-field, Fluorescence and Confocal)DNA and RNA extraction, RT-PCR and qPCRFlow cytometry - LSKs, immune cells, plateletsBlood pressure measurement (via tail cuff method)

2016	<p>Graduate research intern INSERM U955-Institut Mondor for Biomedical Research (IMRB) January 2016 – June 2016 Project title: “Differential role of Akt1 and Akt2 in pulmonary hypertension.” Techniques:</p> <ul style="list-style-type: none"> ▪ Murine smooth muscle cell and endothelial cell line manipulation. ▪ Handling of experimental model of pulmonary hypertension (Hypoxia based). ▪ Hemodynamic parameter studies along with organ harvest. ▪ RNA and protein extraction.
2014	<p>Undergraduate research intern Quality Operations Laboratory (QOL), UVAS, Lahore March 2014 –April 2014 Project Title: “Production of attenuated lyophilized vaccine against Peste des Petits Ruminants Virus (PPRV).” (Government of Sindh-funded project) Techniques:</p> <ul style="list-style-type: none"> ▪ Maintenance of Vero cell lines. ▪ Infecting Vero cells with PPRV vaccinal strain i.e. Nigeria 75/l. ▪ Harvesting and stabilization of virus. ▪ Lyophilization of PPRV vaccine.
2013	<p>Undergraduate research intern Quality Operations Laboratory (QOL), UVAS, Lahore June 2013 – November 2013 Project Title: “Molecular characterization of Newcastle Disease Virus #31063.” (USAID-funded project) Techniques:</p> <ul style="list-style-type: none"> ▪ Newcastle Disease Virus RNA extraction. ▪ Inoculation of Newcastle Disease Virus in chicken eggs. ▪ Harvesting, attenuation and inactivation of virus.

HONORS AND AWARDS

1. **Award of IPFP fellowship - 2023**
2. **German blue card talent scholarship for technology transfer – 2021**
3. **Informal distinction awarded by the thesis defense jury – 2020**
4. **Short talk - 2019**
Danish Bioimaging network’s annual meeting at Aarhus, Denmark.
5. **SLC travel grant - 2019**
Best presentation prize awarded by Sphingolipid Club at the 2019 FASEB/SRC meeting in Lisbon, Portugal.
6. **Leducq network's Young Investigator Grant - 2018**
Research grant offered by the transatlantic SphingoNet consortium for a collaborative project with Uppsala University (Gaengel research lab).
7. **HEC Pakistan scholarship, 2015-2020**
Fully funded scholarship for M2 and PhD in France awarded by the Government of Pakistan and Campus France.
8. **HOD’s recognition award - 2014**
Award by the head of the department at IBBT, UVAS in recognition of proctorship, event management and class representation.
9. **Gold medalist, BS Honors Biotechnology - 2014**
10. **UVAS Quiz Club Vice president - 2013, 2014.**
11. **UVAS Scientific Idea competition winner - 2013**
12. **IBBT Department Sports Secretary, 2011-2014**
13. **Class representative, 2010-2014**

EDUCATION / TRAINING

2022	<p>National Faculty Development training (NFDP) NAHE, HEC, Pakistan and RC, HEC, Lahore.</p> <p>Course Modules:</p> <ul style="list-style-type: none"> ■ Effective teaching ■ Course design and policies ■ Assessment ■ Lesson planning and learning activities ■ Lesson delivery ■ Research genesis ■ Research for impact ■ Scholarship of teaching and learning ■ Scholarly writing ■ Launching your career
2017-2020	<p>PhD BCMPP; Specialization in Molecular and cellular biology University Paris Descartes and Sorbonne Paris Cité University, France.</p> <p>Coursework:</p> <ol style="list-style-type: none"> 1. Trans-disciplinary: “Digital imaging in biology; tools and methods”. (3 ECTS / 30 hours) 2. Professional development modules: French as a foreign language (FLE) level B1.1 at Mairie de Paris. (3 ECTS / 30 hours) 3. Scientific modules: “Animal experimentation – designer level (rodents)”. (4ECTS / 40 hours) 4. Training seminar: “Ethics of research and scientific integrity”. (10 hours)
	<p>Conferences/ presentations (2 ECTS/20 hours):</p> <ol style="list-style-type: none"> 1. YRLS conference 2017, 2018 (attendance) 2. Leducq SphingoNet network annual retreat 2018 – Frankfurt, Germany (short presentation) 3. FASEB/SRC conference 2019 - Lisbon : “Lysophospholipid and Related mediators - From Bench to Clinic” (attendance + presentation) (Award for best short talk, sponsored by the Sphingolipid Club (SLC)) https://www.sphingolipidclub.com/awards/ 4. DBN (Danish Bioimaging network annual meeting 2019- Aarhus Denmark) (Short talk) https://www.conferencemanager.dk/dbi-meeting2019/program.html
2015-2016	<p>International Masters 2 Biotherapies: Genes, cells and tissues. (BTCG) University Paris Est Creteil (UPEC), France.</p> <p>Subjects enrolled:</p> <ul style="list-style-type: none"> ■ Fundamental basics of biotherapies ■ High throughput analysis and gene sequencing ■ Scientific watch and communication ■ Biotherapy scope ■ Immunotherapies
2014-2015	<p>M1 MS Healthcare Biotechnology National University of Sciences and Technology, Islamabad, Pakistan. CGPA year 1: 3.82 / 4.0</p> <p>Subjects enrolled:</p> <ul style="list-style-type: none"> ■ Molecular Biology ■ Gene and cell technology ■ Human Health and ■ Cancer Biology ■ Cancer Genetics ■ Molecular Genetics ■ DNA Damage and Repair ■ Biosafety and Bioethics of Biotechnology

2014	<p>Graduate Assessment Test (Selected for Fully funded Scholarship for M2 and PhD in France, awarded by HEC, Pakistan) Percentage: 85 Percentile: 99.94%</p>
2010-2014	<p>BS (Honors) Biotechnology (Gold Medal) University of Veterinary and Animal Sciences, Lahore, Pakistan. CGPA= 3.87/ 4 84.66% A-grade</p> <ul style="list-style-type: none"> ▪ Biotechnology (Basics): Genetics, Molecular Biology, Cell Biology, Immunology, Genomics, Proteomics and Metabolomics, Cell Culturing, Genetic Resources and Conservation, Recombinant DNA technology, Downstream technology. ▪ Biotechnology (Applied): Nanobiotechnology, Pharmaceutical, Agricultural, Food, Environmental, Diagnostics, Fungal, Health, Microbial, Bioethics and Biosafety. ▪ Chemistry/Biochemistry: Biochemistry, Metabolism and biosynthesis, Organic Chemistry, Inorganic Chemistry, Physical Chemistry, Analytical Chemistry, Biochemical Engineering. ▪ Computer Courses: Bioinformatics, Database Management System, Visual Programming, Data Structure, Fundamentals of Algorithms. ▪ Mathematics Courses: Introduction to Mathematics, Linear Algebra, Differential Equation. <p>Virtual University, Pakistan.</p> <ul style="list-style-type: none"> ▪ Programming Courses e.g. Basics of computer, Introduction to Programming, Object Oriented Programming ▪ Mathematics Courses: Discrete Mathematics, Calculus and Analytical Geometry. ▪ English Courses: English Comprehension, Communication Skills, Business and Technical English writing.
2007-2010	<p>Intermediate Education (Grade 11-12) Examination: Federal Board of Intermediate and Secondary Education, Islamabad. Total score: 1100 Obtained score: 892 Percentage: 81%</p>
2005-2007	<p>Secondary School Education (Grade 9-10) Examination: Aga Khan University Education Board, Karachi. Total score: 850 Obtained score: 719 Percentage: 84.5%</p>

Online education

2014-2016	<p>Online courses (by Coursera, edX, FutureLearn):</p> <ol style="list-style-type: none"> 1. University of Glasgow, Scotland. (Cancer in the 21st Century) 2. University of Melbourne, Australia. (Epigenetic control of Gene Expression) 3. The Ohio State University, USA. (Introduction to the Science of Cancer) 4. University of Edinburgh, Scotland. (Nudge-it: Understanding obesity) 5. University of California, San Francisco, USA. (Genomic and Precision Medicine). 6. University of Pennsylvania, USA. (Vaccines) 7. University of Maryland, Washington DC, USA. (Genes and Human Condition) 8. University of Michigan, USA (AIDS: Fears and hope) 9. University of Copenhagen, Denmark. (Diabetes: A Global Challenge) 10. The Ohio State University, USA. (Introduction to Pharmacy) 11. University of Pennsylvania, USA. (Vital Signs) 12. Pittsburgh University, USA. (Epidemics, Pandemics and Outbreaks) 13. University of California, Irvine, USA. (Preparation for Introductory Biology) 14. Jacobs University, Bremen, Germany. (DNA: From structure to Therapy) 15. Nanyang Technological University, Singapore (Introduction to Forensic Science)
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PERSONAL SKILLS

LANGUAGE SKILLS	Mother tongue(s)	URDU				
	Other language(s)	Levels: A1/A2: Basic user. B1/B2: Independent user. C1/C2 Proficient user				
		UNDERSTANDING		SPEAKING		WRITING
		Listening	Reading	Spoken interaction	Spoken production	
	English	C1	C1	C1	C1	C1
	French	B1	B1	B1	B1	B1
German	A1	A1	A1	A1	A1	
COMMUNICATION SKILLS	<p>Good communication skills gained through my experience as:</p> <ul style="list-style-type: none"> ▪ Various collaborations within PARCC and inside and outside France ▪ Campus France representative for cultural and social integration of incoming Pakistani students ▪ Research Associate at QOL, UVAS, Lahore ▪ Class Representative for 4 years in BS (Honors) ▪ UVAS Proctors Board Member ▪ Invigilation at British Council, France 					
ORGANISATIONAL / MANAGERIAL SKILLS	<ul style="list-style-type: none"> ▪ Recreational Tour arrangements ▪ 10 study tours arranged at various laboratories, hospitals and institutions in a single semester as a part of scope for biotechnology. (CEMB, IPH, Jinnah Hospital, Mayo Hospital, Lab one, QOL, UDL, Fatimid Foundation, Lahore) ▪ Participation in management of various events at UVAS, UPEC and UPSC (for convocation, funfair, sports week, spring week, annual dinners, farewell and welcome parties) 					
TEAMWORK SKILLS	<ul style="list-style-type: none"> ▪ YAROH Foundation Campus Ambassador at NUST ▪ UVAS Sports team – department representation ▪ UVAS Quiz club vice presidency and management of quiz competitions each year by team co-ordination ▪ Team member-Lokk Sujjag campaign for voters' awareness – 2013 					
PRESENTATIONS	<ul style="list-style-type: none"> ▪ FASEB / SRC Lysophospholipid conference - 2019 (Best short talk prize) ▪ Danish Bioimaging network meeting – 2019 ▪ Doctoral school presentation competition – 2019 ▪ Leducq SphingoNet members annual meeting - 2018 ▪ Early career researcher meetings at PARCC – 2018, 2019 ▪ Environmental Biotechnology: Biosafety Guidelines (First Position interclass competition, UVAS, Lahore) 					
BIOINFORMATICS TOOLS	<ul style="list-style-type: none"> ▪ MEGA5 ▪ KEGG ▪ STRING ▪ NCBI BLAST ▪ ExPASy ▪ SHEsis ▪ Primerfox ▪ Primer3 ▪ Clustal Omega ▪ UniProtKB/ SwissProt ▪ PopGen 					



PUBLICATIONS

Total published original research articles: 3 | Total citations: 123 | Personal IF= 41

1. Published literature review article
BIOACTIVE LIPIDS AND CANCER METASTASIS TO BONE.
 JCMT (I.F. = 2.01) | 2021
 Saier L. et al.
<http://dx.doi.org/10.20517/2394-4722.2021.87>

2. Published article
ENDOTHELIAL S1P1 SIGNALING COUNTERACTS INFARCT EXPANSION IN ISCHEMIC STROKE.
 Circulation Research (I.F. = 23.21) | 2021
 Nitzsche A. et al.
<https://doi.org/10.1161/CIRCRESAHA.120.316711>

3. Published article
SPHINGOSINE 1-PHOSPHATE-REGULATED TRANSCRIPTOMES IN HETEROGENOUS ARTERIAL AND LYMPHATIC ENDOTHELIUM OF THE AORTA.
 eLife (I.F. = 8.713) | 2020
 Engelbrecht E. et al.
<https://doi.org/10.7554/eLife.52690>

4. Published article
MURINE PLATELET PRODUCTION IS SUPPRESSED BY S1P RELEASE IN THE HEMATOPOIETIC NICHE, NOT FACILITATED BY BLOOD S1P SENSING.
 Blood Advances (I.F. = 7.637) | 2019
 Niazi H. and Zoghndani N. et al.
<https://doi.org/10.1182/bloodadvances.2019031948>

5. Submitted Book Chapters
GENOME EDITING.
 Elsevier | TBD

6. Manuscript in preparation
ROLE OF S1P IN GAUCHER DISEASE PATHOLOGY.
 TBD | TBD
 Niazi H. et al.

ADDITIONAL PROJECTS

1. Renal dysfunction associated with Gaucher disease type 1 and its resolution with differential kinase knockout.
2. Sickle cell disease-associated splenomegaly and associated pathology of immune cells.
3. Significance of lymph versus blood S1P gradient on the egress and mobilization of monocytes and hematopoietic stem cells in mice.
4. Differential role of lymph and blood S1P gradient loss in maintenance of vascular barrier function.
5. Role of proteases in basement membrane integrity in the placental labyrinth.
6. Elucidation of the role of lipidome in megakaryocyte differentiation and maturation.

INTERNATIONAL COLLABORATORS

FRANCE	<ul style="list-style-type: none">▪ Melanie Franco, INTS, France▪ Pierre-Louis Tharaux, PARCC, France▪ Najet Debili, Institute Gustave Roussy, France▪ Sylvain Provost, Lariboisiere Hospital, France▪ Christilla Bachelot-Loza, Faculty of Pharmacy, UPD, France.
USA	<ul style="list-style-type: none">▪ Timothy Hla, Harvard Medical school and Boston Children's hospital, USA▪ Marie Kono and Maria L. Allende, NIH and NIDDK, USA
GERMANY	<ul style="list-style-type: none">▪ Markus Graeler, University Clinic and Sepsis center, Jena, Germany.▪ Bodo Levkau, Institute for Molecular Medicine 3, Dusseldorf, Germany.▪ Josef Pfeilschifter, Institute for General Pharmacology and Toxicology, Frankfurt, Germany.▪ Dagmar Meyer zu Heringdorf, Institute for General Pharmacology and Toxicology, Frankfurt, Germany.
SWEDEN	<ul style="list-style-type: none">▪ Konstantin Gaengel, Uppsala University, Sweden.
SINGAPORE	<ul style="list-style-type: none">▪ Long Nam Nguyen, National University of Singapore.

REFERENCES

<p>Can be furnished upon request from any of the following:</p> <ul style="list-style-type: none">▪ Dr. Muhammad Nauman Aftab, Director, Dr. Ikram-ul-Haq Institute of Industrial Biotechnology, GCU, Lahore, PK.▪ Dr. Alain TEDGUI, Head of Institute, PARCC, Paris, France.▪ Dr. Anja NITZSCHE, Senior Postdoctoral fellow, Charité Hospital, Germany.▪ Dr. Pierre-Louis THARAUX, team leader 8A, PARCC, Paris, France.▪ Dr. Serge Adnot, Senior professor and team leader, team 8, Institut Mondor de Recherche Biomédicale, INSERM U955, Créteil, France.▪ Dr. Mario OLLERO, team leader, Institut Mondor de Recherche Biomédicale, INSERM U955, team 21, Créteil, France.▪ Dr. Shariq Anwar, Senior Postdoctoral fellow, Institut Mondor de Recherche Biomédicale, INSERM U955, team 8, Créteil, France.▪ Dr. Mélanie FRANCO, team leader, team 1, INTS, Paris, France.▪ Dr. Muhammad Jawad HASSAN, Associate Professor, NUMS, Rawalpindi, Pakistan.▪ Dr. Muhammad Nauman ZAHID, Postdoctoral Associate, Department of population medicine and diagnostic sciences, Cornell University Ithaca, NY, USA and Assistant Professor, University of Bahrain.
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