# Nousheen Zaidi (PhD)

#### Director

Cancer Research Centre (CRC), University of the Punjab

Website: CRC Website

### Co-founder & Director

Action Research Collective

Website: Action Research Collective

### **Professor**

Cancer Biology Lab – IMMG, University of the Punjab

Website: University Profile

### **Professional Experience**

- Director: Cancer Research Centre (CRC), University of the Punjab, Lahore (Dec 2019 - Present).
- Professor (Tenured): University of the Punjab, Lahore (Since May 2024).
- Associate Professor (Tenured): University of the Punjab, Lahore (Nov 2017 – April 2024).
- Assistant Professor (Tenure Track): University of the Punjab,
   Lahore (July 2012 Oct 2017).
- Postdoctoral Research Associate: Department of Oncology, Drug Discovery Group, Johnson and Johnson, Beerse, Belgium (2011 – June 2012).
- Postdoctoral Researcher: Department of Microbiology & Immunology, Albert Einstein College of Medicine, New York, USA (2009 – 2010).
- Post PhD Researcher: Eberhard Karls University, Tübingen,
   Germany (Aug 2008 Jan 2009).
- **Research Officer**: The Aga Khan University, Karachi (2002-2004).

### **Professional Development**

- Biology Meets Programming: Bioinformatics for Beginners, University of California San Diego, Coursera, Jul 2023.
- Prompt Engineering & Data Analysis for ChatGPT, Vanderbilt University,
   Coursera, July 2023.
- Introduction to Systematic Review and Meta-Analysis, Johns Hopkins University, Jan 2024.

#### Contact

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https://www.linkedin.com/in/nousheen-zaidi-ph-d-83129420a/ Email: director.crc@pu.edu.pk nosheen.mmg@pu.edu.pk

#### **Education**

**PhD in Biochemistry,** Eberhard Karls University, Tübingen, Germany. 2005-2008.

### **Academic Visits**

- Visiting Professorship: Federal Institute for Materials Research and Testing, Berlin (Jun-Aug 2022)
- Visiting Scientist: Federal Institute for Materials Research and Testing, Berlin (Jul-Oct 2021)
- Visiting Scientist: Federal Institute for Materials Research and Testing, Berlin (May-Aug 2019)
- Visiting Scientist: Charité –
   Universitätsmedizin Berlin,
   Berlin (May-Aug 2018)
- Visiting Scientist: Charité –
   Universitätsmedizin Berlin,
   Berlin (May-Aug 2017)
- Visiting Scientist: Eberhard Karls
   University, Tübingen (July-Sep 2015)

# **Selected Honors & Scholarships**

- 1. Fellowship awarded by **German Academic Exchange Service (DAAD)** under Research Stays for University Academics and Scientists, 2022.
- 2. Fellowship for Renewed Research Stay by the **Humboldt Foundation**, 2021.
- 3. Georg Forster Research Fellowship for Experienced Researchers by the **Humboldt Foundation**, 2017-19.
- 4. Scholarship to attend intensive German language course at Goethe Institute, Berlin by the **Humboldt Foundation**, March-June 2017.
- 5. Visiting Researcher Fellowship awarded by **German Academic Exchange Service (DAAD)** under Re-Invitation Program for Former Scholarship Holders 2015.
- 6. PhD Fellowship awarded by **Higher Education Commission**, **Pakistan and German Academic Exchange Service (DAAD)** 2005-2008.
- 7. PhD Fellowship awarded by The Aga Khan University, Karachi 2004.
- 8. Gold Medal for 1st position in M.Sc. Genetics (2002) by University of Karachi.

### **Publications**

### → Edited Volume

1. Special Issue, Clinical implications of targeting lipid metabolism and associated pathways for cancer therapy, Frontiers in Oncology, Forthcoming 2024.

### → Book chapters

- 2. Munir R, and <u>Zaidi N.</u> Regulation of Lipid Metabolism Under Stress and Its Role in Cancer. Invited chapter in: Metabolism and Epigenetic Regulation: Implications in Cancer. *Springer*. 2022
- 3. Ameer F, Munir R, and Zaidi N. Invited chapter in: Lipid Metabolism in Encyclopedia of Cancer 3rd edition. 2019.
- 4. **Zaidi N** and Kalbacher H. Cathepsin E, Invited chapter in: The Handbook of Proteolytic Enzymes 3rd Edition. 2012.

# → **Journal articles**

- 1. Munir, R. & **Zaidi, N.** (2023). The one with the rumor: COVID-19-related conversations on Pakistani Twitter. Public Health, 225, 277-284
- 2. Munir, R., Lisec, J., Swinnen, J. V., & <u>Zaidi, N.</u> (2022). Too complex to fail? Targeting fatty acid metabolism for cancer therapy. Prog Lipid Res, 85, 101143.
- 3. Shoaib, N., ... N. Zaidi, Population-level median cycle threshold (Ct) values for asymptomatic COVID-19 cases can predict the trajectory of future cases. PLoS One, 2023. 18(3): p. e0281899.
- 4. Noureen, N. and N. Zaidi, Association between human leukocyte antigen (HLA) and end-stage renal disease (ESRD): a meta-analysis. PeerJ, 2023. 11: p. e14792.
- 5. Munir, R., N. Noureen, M. Bashir, N. Shoaib, A. Ashraf, J. Lisec and <u>N. Zaidi</u> (2022). "Cancer Awareness Measure (CAM) and Cancer Awareness Measure MYthical Causes Scale (CAM-MY) scores in Pakistani population." Sci Rep 12(1): 8887.
- 6. Shoaib, N., N. Noureen, A. Faisal, M. Zaheer, M. Imran, A. Ahsan, R. Munir, and <u>N. Zaidi. (</u>2022) Factors Associated with Cycle Threshold Values (Ct-Values) of Sars-Cov2-Rrt-Pcr. Mol Biol Rep 1-6.
- 7. Shoaib, N., Noureen, N., Munir, R., Shah, F. A., Ishtiaq, N., Jamil, N., . . . Zaidi, N. (2021). COVID-19 severity:

- Studying the clinical and demographic risk factors for adverse outcomes. PLoS One, 16(8), e0255999. doi:10.1371/journal.pone.0255999.
- 8. Lisec J, Jaeger C, Rashid R, Munir R, **Zaidi N**: Cancer cell lipid class homeostasis is altered under nutrient-deprivation but stable under hypoxia. BMC Cancer 2019, 19(1):501.
- 9. Munir R, Lisec J, Swinnen JV, **Zaidi N**: Lipid metabolism in cancer cells under metabolic stress. Br J Cancer 2019, 120(12):1090-1098.
- 10. Munir R, Lisec J, Jaeger C, **Zaidi N.** Abundance, fatty acid composition and saturation index of neutral lipids in colorectal cancer cell lines. Acta Biochim Pol. 2021.
- 11. Shoaib N, Bashir M, Munir R, Rashid R, **Zaidi N**. Expression of lipid transport-associated genes in lipid-deprived cancer cells. Genes Cells. 2021.
- 12. Riaz N, Munir R, Lisec J, **Zaidi N**: Revisiting the Association between Human Leukocyte Antigen and End-Stage Renal Disease. Accepted for publication in PLOSone August 2020.
- 13. Ameer F, Munir R, Usman H, Rashid R, Shahjahan M, Hasnain S, **Zaidi N:** Lipid-load in peripheral blood mononuclear cells: Impact of food-consumption, dietary-macronutrients, extracellular lipid availability and demographic factors. Biochimie 2017, 135:104-110.
- 14. Usman H, Ameer F, Munir R, Iqbal A, Zaid M, Hasnain S, Scandiuzzi L, **Zaidi N:** Leukemia cells display lower levels of intracellular cholesterol irrespective of the exogenous cholesterol availability. *Clin Chim Acta* 2016, 457:12-17.
- 15. Iqbal A, Zaid M, Munir R, Usman H, Kalbacher H, Scandiuzzi L, **Zaidi N**: Atypical plasma lipid profiles in leukemia. *Clin Chim Acta* 2016, 452:129-133.
- 16. Usman H, Rashid R, Ameer F, Iqbal A, Zaid M, Hasnain S, Kalbacher H, **Zaidi N**: Revisiting the dyslipidemia associated with acute leukemia. *Clin Chim Acta* 2015, 444:43-49.
- 17. Rashid R, Ameer F, Kalbacher H, Scandiuzzi L, **Zaidi N**: Aberrant de novo cholesterogenesis: Clinical significance and implications. *Clin Chim Acta* 2015.
- 18. Munir R, Usman H, Hasnain S, Smans K, Kalbacher H, **Zaidi N**: Atypical plasma lipid profile in cancer patients: cause or consequence? *Biochimie* 2014, 102:9-18.
- 19. Zaid M, Ameer F, Munir R, Rashid R, Farooq N, Hasnain S, <u>Zaidi N</u>: Anthropometric and metabolic indices in assessment of type and severity of dyslipidemia. J Physiol Anthropol 2017, 36:19.
- 20. Daniels VW, Smans K, Royaux I, Chypre M, Swinnen JV, **Zaidi N**: Cancer cells differentially activate and thrive on de novo lipid synthesis pathways in a low-lipid environment. *PLoS One* 2014, 9:e106913.
- 21. Ameer F, Scandiuzzi L, Hasnain S, Kalbacher H, **Zaidi N**: De novo lipogenesis in health and disease. *Metabolism* 2014.
- 22. **Zaidi N**, Lupien L, Kuemmerle NB, Kinlaw WB, Swinnen JV, Smans K: Lipogenesis and lipolysis: The pathways exploited by the cancer cells to acquire fatty acids. *Prog Lipid Res* 2013, 52:585-589.
- 23. **Zaidi N**, Swinnen JV, Smans K: ATP-citrate lyase: a key player in cancer metabolism. *Cancer Res* 2012, 72:3709-3714.
- 24. **Zaidi N**, Royaux I, Swinnen JV, Smans K: ATP citrate lyase knockdown induces growth arrest and apoptosis through different cell- and environment-dependent mechanisms. *Mol Cancer Ther* 2012, 11:1925-1935.
- 25. Chypre M, Zaidi N, Smans K: ATP-citrate lyase: a mini-review. Biochem Biophys Res Commun 2012, 422:1-4.
- 26. **Zaidi N**, Maurer A, Nieke S, Kalbacher H: Cathepsin D: a cellular roadmap. *Biochem Biophys Res Commun* 2008, 376:5-9.

- 27. Zaidi N, Kalbacher H: Cathepsin E: a mini review. Biochem Biophys Res Commun 2008, 367:517-522.
- 28. **Zaidi N**, Hermann C, Herrmann T, Kalbacher H: Emerging functional roles of cathepsin E. *Biochem Biophys Res Commun* 2008, 377:327-330.
- 29. Waraich RS, Zaidi N, Moeschel K, Beck A, Weigert C, Voelter W, Kalbacher H, Lehmann R: Development and precise characterization of phospho-site-specific antibody of Ser(357) of IRS-1: elimination of cross reactivity with adjacent Ser(358). *Biochem Biophys Res Commun* 2008, 376:26-31.
- 30. Burster T, Reich M, Zaidi N, Voelter W, Boehm BO, Kalbacher H: Cathepsin E regulates the presentation of tetanus toxin C-fragment in PMA activated primary human B cells. *Biochem Biophys Res Commun* 2008, 377:1299-1303.
- 31. <u>Zaidi N</u>, Herrmann T, Voelter W, Kalbacher H: Recombinant cathepsin E has no proteolytic activity at neutral pH. *Biochem Biophys Res Commun* 2007, 360:51-55.
- 32. **Zaidi N**, Herrmann T, Baechle D, Schleicher S, Gogel J, Driessen C, Voelter W, Kalbacher H: A new approach for distinguishing cathepsin E and D activity in antigen-processing organelles. *FEBS J* 2007, 274:3138-3149.
- 33. <u>Zaidi N</u>, Burster T, Sommandas V, Herrmann T, Boehm BO, Driessen C, Voelter W, Kalbacher H: A novel cell penetrating aspartic protease inhibitor blocks processing and presentation of tetanus toxoid more efficiently than pepstatin A. *Biochem Biophys Res Commun* 2007, 364:243-249.

### → Other Publications

- 1. Cancer: Myths and Facts (Awareness Booklet), 2020. Cancer Research Centre.
- 2. Zaidi, N. (2015). Science and religion. The News. http://tns.thenews.com.pk/science-religion/#.WaMFdtFLflU

### → Abstracts published in Journals

- 1. Zaidi N. Impact of low-lipid environment on de novo lipid synthesis pathways in cancer cells. Journal for ImmunoTherapy of Cancer 2015, 3(Suppl 2):P424
- Abbas F, Sanaullah R, <u>Zaidi N</u>, Talati J, Siddiqui AA, Siddiqui K. A comparative assessment of the sensitivity of telomerase assay with other molecular markers for the diagnosis of human bladder cancer. JPMA (2002) 52: [Suppl12] ppS33.
- 3. Abbas F, Sanaullah R, **Zaidi N**, Talati J, Siddiqui AA, Siddiqui K. A comparative assessment of the sensitivity of TRAP assay in diagnosis of human bladder cancer. **BJU International** 2004. Vol 94, Supplement.

# **Teaching Experience**

Associate Professor 2017-Present

Department of Microbiology & Molecular Genetics, University of the Punjab

#### Courses:

- Oncology (Undergrad Level) (25-30 students per session)
- Labs in Oncology (Undergrad Level) (25-30 students per session)
- Cancer Genetics (Master's Level) (15-25 students per session)
- Cell Culture Techniques (Undergrad Level) (25-30 students per session)
- Introduction to Metabolomics (Ph.D. Level) (10-20 students per session)
- Molecular Genetics (Undergrad Level) (25-30 students per session)

<u>Short/Summer School Courses</u>: Courses titled Assays in Cancer Biology, Working with Tumor Spheroids, GraphPad Prism, Craft of Scientific Writing, Cell Culture Techniques, and Applications, and Methods in Cancer Biology. These courses were offered to graduate and undergraduate biology students. The number of students ranged from 20 to 40 for different sessions.

Responsibilities: Planning course content, delivering lectures, and evaluating performance.

### **Associate Professor/Director**

2019-Present

Cancer Research Centre, University of the Punjab

<u>Short/Summer School Courses</u>: Courses titled Tumor Metabolism (Forthcoming Feb 2021), Cancer Biology, R-Programming, & GraphPad Prism. These courses were offered to graduate and undergraduate biology students. The number of students ranged from 20 to 40 for different sessions.

**Responsibilities**: Planning course content, delivering lectures, and evaluating performance

Assistant Professor 2012-2016

 $\label{lem:decomposition} \textit{Department of Microbiology \& Molecular Genetics, University of the Punjab}$ 

# **Courses:**

- Oncology (Undergrad Level) (25-30 students per session)
- Cancer Genetics (Master's Level) (15-25 students per session)
- Behavioral Genetics (Ph.D. Level) (10-20 students per session)
- Cell Biology (Undergrad Level) (25-30 students per session)
- Cell Biology Labs (Undergrad Level) (25-30 students per session)

<u>Short/Summer School Courses</u>: Courses titled Craft of Scientific Writing, Western Blotting, and Biosafety and Risk Assessment. These courses were offered to graduate and undergraduate biology students. The number of students ranged from 20 to 60 for different sessions.

**<u>Responsibilities:</u>** Planning course content, delivering lectures, and evaluating performance.

Lab Instructor 2006-2009

University of Tubingen

Assisted Dr. Hubert Kalbacher with delivering this pre-designed practical course in immunological techniques.

# **Mentoring Experience**

Level	Status	Student's Name	Thesis Title	Year
Ph.D	Completed	Muhammad Zaid	Genetic, Metabolic and Anthropometric Variations Associated with Aberrant Plasma Lipid Profiles	2014-18
		Hina Usman	Regulation of Plasma and Cellular Cholesterol Levels in Acute Myeloid and Lymphatic Leukemia	2013-18
	Rimsha Munir		2D versus 3D cell culture: studying the metabolic pathways in cancer cells.	2014-19
	Fatima Ameer Lipid Metabolism in malignant and hematopoietic cells.		2014-19	

		Rida Rashid	Extracellular Lipid Availability and Lipid Metabolism in Cancer Cells	2014-20
		Naila Noreen	Human leukocyte antigens (HLA) variations and immune- mediated diseases	2018-22
		Zunaira Shoukat	The current state of breast cancer diagnosis, prognosis, and awareness in Pakistan.	2015-22
		Naila Shoaib	Pathophysiology of Coronavirus Disease 2019 (COVID-19) in Pakistan	2021-24
		Irfan Khan	Association between Body Indices and Cancer Biomarkers in Human Population	2022-
	Ongoing	Farhad Ali Shah	Effect of Lead Poisoning on RBC indices.	2023-
		Maryam Ikram	To be decided.	2024 -
		Hajira Malik	Health impacts of E.coli contamination in the water supply: A comprehensive case study of Chungi Amar Sidhu, Lahore	2022-23
		Sabahat Nosheen	Spatial Analysis and Mapping of Microbial Water Quality in Lahore	2022-23
		Maham Qasim	Hepatic Function Panel in the Population with high Hepatitis C Burden	2021-22
		Bushra Bibi	Effects of Environmental Lead Exposure on Patients' Blood Profiles.	2021-22
	Completed	Noshaba Ishtiaq	Revisiting the impact of Hypoxia on Lipid Accumulation in Cancer Cells	2020-21
		Hina Tabassum	Factors determining the severity of COVID-19 in Pakistani population.	2020-21
		Arwa Faisal	SARS-cov-2: Differences between men and women in Pakistan.	2020-21
		Muniba Basir	Microarray profiles of lipid-deprived cancer cells.	2019-20
ters		Naila Shoaib	Effect of palmitate-supplementation on microarray profiles of lipid-deprived cancer cells.	2019-20
Masters		Arifa Ashraf	A Study on the Potential Anti-Proliferative effects of Different Traditional South Asian Medicinal Plant Extracts on Cancer Cells.	2019-20
		Farhad Ali Shah	Allele Polymorphism and Haplotype Diversity of HLA-A, -B, -C, -DRB1, -DQB1 and -DQA1 Loci in Pakistani Population	2019
		Maham	The effect of short-term moderate physical activity intervention on plasma lipid profiles and lipid-load in peripheral blood mononuclear cells	2018-19
		Mehar-un-Nisa Saleem	Studying the association of various demographics, metabolic and clinical factors with a body shape index (ABSI)	2017-18
		Maria Ramzan	Effect of hypoxia on cell proliferation and lipid-load: A comparison between 2-dimensional (2D) and 3-dimensional (3D) cell culture systems	2016-17
		Areeb Iqbal	Cholesterol Homeostasis in Acute Leukaemia Patients: Studying the Intra- and Extracellular Cholesterol Content	2014-15
		Rida Rashid	Lipoproteins and lipoprotein ratios: studying anomalies and correlations in cancer patients.	2013-14

		Fatima Ameer	Metabolic profiles of haematological cancer patients revisited: studying the irregularities and interdependencies of plasma glucose and lipid levels	2013-14
		Rimsha Munir	Blood lipid profiles in cancer patients- site specific analysis.	2012-13
		Warisha Nabeel	Assessing the Impact of Permissible chromium Levels in Water on Human Cell Morphology and Proliferation	2022-23
		Misbah Mumtaz	Impact of Serum Concentration on Lipid Accumulation in Cancer Cells.	2020-21
		Hajra Malik	Travel history of SARS-cov-2 patients in Pakistan.	2020-21
		Fatima Nawaz	Clinical history of SARS-cov-2 patients in Pakistan.	2020-21
		Tatheer Fatima Rizvi	COVID-19 Incidence in Pakistan: Studying the Effects of Age	2020-21
		Esha Munawar	COVID-19 Incidence in Lahore: Comparing the Percentage Positive Results in Two Diagnostic Centres	2020-21
		Tooba Khan	Tracking Symptoms of COVID19 in Pakistan	2020-21
	Completed	Bushra Bibi	The effects of metabolic stress on cell proliferation rates in isogenic primary (SW480) and metastatic (SW620) colon cancer cell lines	2019-20
		Aqsa Javed	Impact of cell seeding-density on hypoxia-induced lipid accumulation in cancer cells.	2019-20
Undergrad		Wajeeha Zainab	The effect of short-term moderate physical activity intervention on various metabolic parameters in healthy participants.	2019-20
		Noshaba Ishtiaq	Hypoxia-induction by parafilm-wrap method vs. Cobalt chloride method: effects on cell proliferation and triglyceride-accumulation in HCT-116 colon cancer cells	2018-19
		Najeeha Javed	Duration of hypoxia: effects on cell proliferation and cellular cholesterol levels in HCT-116 colon cancer cells.	2018-19
		Amna Saleem	Studying the association between body roundness index (BRI) and plasma lipid profiles	2017-18
		Hafiza Ishrat Fatima	Triglyceride and phospholipid content in cancer cells under metabolic stress	2017-18
		Ayesha Ali	Effect of cafeteria-style diets on metabolic-factors and behavioural-traits in BALB/c mice.	2017-18 2017-18 2016-17
		Nimrah Farooq	Impact of diets with different nutritive values on plasma lipid profiles and lipid-load in peripheral blood mononuclear cells	2016-17
		Tuba Fayyaz	Breast cancer awareness and screening practices: studying the impact of educational background, family history of cancer and brief video training sessions.	2016-17
		Shajan Qaisirani	Lipid homeostasis in peripheral blood mononuclear cells	2015-16
		Ibrar Iqbal	Novelty-seeking trait in humans and mice: studying the impact of social-environment	2015-16
		Komal Saleem	Acute Myeloid Leukemia: Metabolic Alterations in the Peripheral Blood Environment and Intracellular Cholesterol Reservoirs	2014-15

Hafsa Anwar	Acute Lymphocytic Leukemia: Metabolic Alterations in the Peripheral Blood Environment and Intracellular Cholesterol Reservoirs	2014-15
Komal Ejaz	Plasma glucose levels and cancer: revisiting the differences between control and cancer populations	2013-14
Rabbia Tariq	Plasma lipids and lipoproteins in haematological malignancies: revisiting the differences between control subjects and cancer patients	2013-14
Asma Kalsoom	Plasma lipids and lipoproteins in gynaecological malignancies: revisiting the differences between control subjects and cancer patients	2013-14
M. Jaffer Hussain	Aberrant plasma cholesterol profile in cancer patients	2012-13

### **Short Courses/Training Workshops Attended**

- German Language Course, forthcoming Mar-June 2017, Goethe institute, Berlin, Germany.
- Gaslini Advanced Course in Basic and Applied Immunology, 2007 Genoa, Italy.
- German Language Course, 2005 Jan-Mar, Goethe institute, Mannheim, Germany.
- German Language Course, 2004 Sep-Nov, Goethe institute, Karachi, Pakistan.
- Molecular Biology Techniques. Sep 2004, The Aga Khan University, Karachi, Pakistan.

### **Other Professional Services**

### → Professional Memberships

- Academic Editor for PLOS ONE Editorial Board (2022).
- Reviewer for Dutch Cancer Society (KWF Kankerbestrijding), (2018 Present).
- Reviewer for Biosafety Bio-resource Committee, Punjab University, Lahore, (2013 Present).
- Reviewer for National Science Centre Poland (2020).
- Reviewer for Higher Education Commission, Pakistan (2020-Present).

### → Reviewing Services for Academic Journals

### Ad Hoc Reviewer for:

- Cancers (2023)
- FEBS Open Bio (2018)
- Cellular Physiology and Biochemistry (2017).
- Journal of Clinical Lipidology (2017).
- British Journal of Cancer (2017).
- BBA- Clinical (2017).
- Journal of Lipid Research (2016, 2017).
- Medical Principles and Practice (2016)
- Future Oncology (2016).
- EB Bioscience (2016).
- Oncotarget (2016).
- International Journal of Cancer (2015).

- Journal of Surgical Oncology (2015).
- Lipids (2015).
- Food and Chemical Toxicology (2014).
- Biochemical Pharmacology (2014).
- BBA Molecular Cell Research (2013)

# **Supervisory Services**

- Supervising a team of researchers involved in water quality mapping of Lahore. https://acrobat.adobe.com/link/review?uri=urn%3Aaaid%3Ascds%3AUS%3Acae64615-f235-3cc6-a3f3-8752e94eefdc
- Supervised a team of researchers involved in collection and digitization of COVID-19 pandemic data in Pakistan. The data and the related maps are presented at https://www.covidinpakistan.com/.
- Supervised a team of researchers involved in collecting and digitization of data on COVID-19 infodemic
  in Pakistan. The data and the initial analyses are presented at
  https://www.covidinpakistan.com/infodemic/.
- Worked on a project related to generating cancer-related content (booklets and video clips https://www.youtube.com/watch?v=VleOrd1ggzw) in local Pakistani languages.
- Curated a poster exhibition on Cancer Myths and Misconceptions together with undergrad students.

# **Selected Presentations**

- Water Contamination as a Risk Factor for Childhood Stunting, Path2Dev Conference Program, LUMS, Dec 2023.
- Mapping Water Quality, Climate Governance & Sustainable Development Guest Talk Series, ITU, Dec 2023.
- Metabolic Crosstalk between Leukemia Cells and Tumor Microenvironment presented at Updates in Hematological Malignancies LUMS, Lahore, Pakistan, 3rd-4th Jan 2020.
- Cancer Myths and Facts presented at **CancerBio Conference** Feb 2020.
- History of Cancer invited talk at the University of Management and Technology, 14th March 2019.
- Cancer cell lipid class homeostasis is altered under nutrient deprivation but stable under hypoxia. Invited talk at the **University of Management and Technology**, 14th March 2019.
- Poster presented at Society for Immunotherapy of Cancer 30th Anniversary Annual Meeting, Maryland, USA, Nov 2015.
- Poster presented at ICACT 25th International congress on Anti-Cancer Treatment, Paris, France.
   Feb 2014.
- Poster presented at Symposium: Tumor Metabolism meets Immunology. Regensburg, Germany. April 2013.

- Poster presented at **Keystone symposium: Cancer and Metabolism**. Banff, Alberta, Canada. February 2012.
- Poster presented at **Annual Meeting of the German Society for Immunology**. Heidelberg, Germany. September 2007.
- Poster presented at 3rd Summer School in Proteomic Basics. South Tyrol, Italy. August 2006.

# **Grants & Funding**

Status	Funding Period	Funding Agency	Grant Title	Amount Granted
Active Grants	2023	Punjab University - Research at Cancer Research Centre.	Grant for cell culture facility.	350,000 PKR
	2021-22	Punjab University - Research at Cancer Research Centre.	Relationship between the multiple cancer biomarkers and metabolic parameters	500,000 PKR
	2021	Punjab University	Mapping COVID19 Cases Across Lahore	200,000 PKR
	2020-21	Punjab University -under Projects for Cancer Research Centre.	Effect of environmental stress on metabolic gene expression profiles of cancer cells	400,000 PKR
	2020-21	SSRC	COVID-19 Social Media Infodemic	5000 USD
	2020	Pakistan Science Foundation	Grant to organize a conference on cancer biology.	
Grants	2016-17	COMSTECH-TWAS Research Grants	Mevalonate pathway: a potential target for leukemia therapeutics.	820,000 PK
Completed Grants	2014 - 19	Higher Education Commission	National Research Program for Universities - Anticancer Therapy: Targeting De Novo Lipid Synthesis.	16,790,000 PKR
Ō	2020	Punjab University	Annual Research Grant	200,000 PK
	2019	Punjab University	Annual Research Grant	200,000 PK
	2017	Punjab University	Annual Research Grant	150,000 PK
	2016	Punjab University	Annual Research Grant	150,000 PK
	2015	Punjab University	Annual Research Grant	150,000 PK
	2014	Punjab University	Annual Research Grant	150,000 PK
	2013	Higher Education Commission	Start-up Research Grant - Identification and Validation of Promising Drug Targets and Antitargets for Cancer Therapy within the Mevalonate Pathway	500,000 PK
	2013	Punjab University	Annual Research Grant	150,000 PK

2013	Punjab University	Seed Grant- Grant for developing eukaryotic 250, 000 PKR	
		cell culture facility at MMG, Punjab	
		University.	

# **Events Organized**

- Online Workshop on R programming (for beginners), 27th 28th July 2020.
- Online Workshop on GraphPad Prism on 13th July 2020.
- CancerBio Conference 2020, Punjab University, Lahore, Feb, 2020.
- Workshop titled Assays in Cancer Biology, Punjab University, Lahore, Dec 2019.
- Workshop titled Working with Tumor Spheroids, Punjab University, Lahore, Dec 2019.
- Workshop on *GraphPad Prism* 8, Punjab University, Lahore, 4<sup>th</sup> November 2019.
- Three-Day Breast Cancer Awareness Camp at Punjab University, Oct 2019.
- Workshop on Craft of Scientific Writing, Punjab University, Lahore, Sep, 2019.
- A Short Course on Cancer Biology-2019 Edition, Punjab University, Lahore, Feb, 2019.
- Workshop on Craft of Scientific Writing, Punjab University, Lahore, Feb, 2018.
- Workshop on Cell Culture Techniques and Applications, Punjab University, Lahore, Nov, 2018.
- Cell Culture Quiz, Punjab University, Lahore, 2018.
- Cancer Genetics Quiz, Punjab University, Lahore, 2018.
- Workshop on Methods in Cancer Biology, Punjab University, Lahore, Feb, 2017.
- Workshop on Eukaryotic Cell Culture, Punjab University, Lahore, Feb, 2017.
- Cell Culture Quiz, Punjab University, Lahore, 2016.
- Oncology Quiz, Punjab University, Lahore, 2016.
- Workshop on Craft of Scientific Writing, Punjab University, Lahore, Dec, 2016.
- Workshop on Western Blotting, Punjab University, Lahore, April, 2016.
- Workshop on 2D and 3D Eukaryotic Cell Culture System, Punjab University, Lahore, 9<sup>th</sup> -10<sup>th</sup> Feb, 2016.
- Workshop on GraphPad Prism 6, Punjab University, Lahore, 24<sup>th</sup> November 2015.
- Workshop on Western Blotting, Punjab University, Lahore, 5th May 2015.
- Workshop on Eukaryotic Cell Culture Techniques, Punjab University, Lahore, 28th April 2015.
- Workshop on Biosafety and Risk Assessment, Punjab University, Lahore, 19th April 2014.

### Languages

- Urdu (native proficiency)
- English (native proficiency)
- German (intermediate proficiency, B1)
- Sindhi (advanced proficiency)
- Punjabi (advanced proficiency)
- Hindi (basic proficiency in Devnagri script)