

Aftab Ahmed, Ph.D.

Research Associate Professor / Manger CUSP Core Facility
Chapman University School of Pharmacy
Harry and Diane Rinker Health Science Campus
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Summary:

Protein biochemist with experience in academia and biotech industries. Skills and expertise in protein purification and characterization. Excellent team worker with strong organizational and management skills.

Citizenship: USA

Education:

- Ph.D. Protein Chemistry, Max-Planck Institute of Biochemistry, Munich - 1989
Germany / HEJ Research Institute of Chemistry, University of Karachi, Karachi, Pakistan.
- M.Sc. Biochemistry, University of Karachi, Karachi, Pakistan.-1979
- B.Sc. (Hons) Biochemistry, University of Karachi, Karachi, Pakistan -1978

Expertise:

- Skills in modern analytical techniques in protein purification and characterization (tissue culture & bioassay, 2D-PAGE electrophoresis, chromatography, HPLC/FPLC, peptide synthesis, protein sequencing, ESI-TOF LC/MS, MALDI-TOF MS System, and Edman protein sequencing.
- Budget planning and vendor contracts and staffing.
- Laboratory management and staff development training.
- Supervised and trained summer interns both in academia and the biotech industries.
- Teaching graduate-level courses in Biopharmaceuticals and Experimental techniques in proteomics

Professional Experience:

Research Associate Professor/Coordinator
CUSP Analytical Core Facility
Biomedical and Pharmaceutical Sciences
School of Pharmacy, Irvine,
Affiliated Faculty Food Science Program
Chapman University, California

January 2015- Present

October 2021-Present

- Responsible for day-to-day operation and management of the Research Core Facility to support CUSP's teaching and research support mission.
- Selection of research instruments to support ongoing and future research needs in proteomics, genomics, and pharmaceutical sciences.
- Responsible for purchasing, installing, and maintaining Research Core Facility instruments and USP797 Clean Room Facility and Industrial Pharmacy Lab.

- Responsible for providing training and supervision of core facility users.
- Supervise three Laboratory Specialists in the day-to-day operation of the analytical core facility.

Research Assistant Professor

April 2008 - 2014

Coordinator RI-INBRE Centralized Core Facility

June 2003- 2014

**Biomedical & Pharmaceutical Sciences, College of Pharmacy,
University of Rhode Island, Kingston, Rhode Island**

- Responsible for managing the RI-INBRE Research Core Facility, equipped with state-of-the-art proteomics, genomics, and pharmaceutical sciences equipment.
- Supervised two Research Assistants in the Core Lab
- Involved in purchasing and installation of facility equipment.
- Providing training and supervision of core facility users.
- Teaching undergraduate and graduate courses.
- Mentored summer interns in proteomics.
- Served as MS/Ph.D. student's thesis committee member.

Staff Scientist – Protein Chemistry R&D

June 1998-February 2002

Organogenesis, Inc., Canton, Massachusetts

- Served as a group leader managing and supervising the protein purification and characterization laboratory.
- Initiated, directed, and executed research and development critical to corporate strategies.
- Employed cell culture-based bioassay, analytical and preparative chromatography, FPLC, RP-HPLC, N-terminal protein sequencing, and MALDI-TOF MS analysis.
- Provided research and technical support in protein analysis to other R&D groups, process development, and manufacturing.
- Supervised research associates, technicians, and college summer interns.

Protein Chemist - Protein Chemistry R&D

September 1996-May 1998

CytoTherapeutics Inc. Lincoln, Rhode Island

- Managed protein sequencing laboratory and supported other R&D groups in protein purification and sequencing.
- Worked on the discovery project to isolate, purify, and characterize novel protein factors for treating neurological disorders.
- Produced condition medium from cell culture to isolate protein factor of interest and performed cell culture-based bioassay.
- Used SDS-PAGE, IEF, protein purification based on size, ion exchange, and affinity chromatography on FPLC and RP-HPLC.
- Coordinated interdepartmental activities and research efforts at scientific literature and conferences.

Protein Chemist

April 1995-August 1996

Harbor UCLA Medical Center, Torrance, California

- Worked on the solid phase peptide synthesis, purification, and characterization of pituitary gland hormone and other growth factors.
- Independently used ABI 433 peptide synthesizer with FMOC chemistry.

- Synthetic peptides purified by RP-HPLC and characterized by SDS-PAGE, Amino acid analysis, and protein sequencing using ABI 477A- sequencing system.

Director, Sequencing & Synthesis Core Facility March 1993-March 1995
University of California, Irvine, California

- Established and directed the DNA/protein Core facility.
- Managed day-to-day operation of ABI-477 protein sequencer, ABI-430A peptide synthesizer, ABI 392 DNA synthesizer, and protein and peptide purification by RP-HPLC.
- Provided training, instruction, and technical support to staff and students.
- Managed instrument service, facility supplies, chemicals, and finances.

Postgraduate Researcher September 1992-February 1993
Dept. of Molecular Biology & Biochemistry
University of California, Irvine, California

- Worked on the purification of the genetic variants of human fibrinogen.
- Employed various electrophoresis, size, ion-exchange chromatography, HPLC, protein modification, chemical, enzymatic digestion, & peptide fingerprinting.
- Operated and analyzed sequence data using ABI 477A and Hewlett Packard HP- 1000 protein sequencers.
- Taught and supervised undergraduate research students in protein biochemistry.

Postdoctoral Fellow September 1989-August 1992
Lab. of Molecular Virology & Carcinogenesis, National Cancer Institute, Frederick, Maryland

- Isolated and purified retroviral proteins from bovine leukemia virus (BLV) and human T-cell leukemia virus (HTLV-1).
- Performed electrophoresis, RP-HPLC, immuno-affinity chromatography, western blotting, ELISA, autoradiography, enzymatic and chemical cleavage, amino acid analysis, and amino acid sequencing.

Postdoctoral Fellow, Dept. of Protein Chemistry May 1988-August 1989
Max-Planck Institute of Biochemistry, Munich, Germany

- Established the complete primary structure of hemoglobin from various carnivores.
- Employed electrophoresis, size exclusion, ion-exchange chromatography, HPLC, peptide fingerprinting, amino acid composition, and protein sequencing using non-commercial gas-phase sequencer sequencing.

Doctoral Fellow, Dept. of Protein Chemistry September 1985-September 1987
Max-Planck Institute of Biochemistry, Munich, Germany

- Established the primary structure of abnormal human hemoglobin variants and carnivore hemoglobin from jaguar and leopard for Ph.D. thesis.
- Isolated and purified three abnormal human hemoglobin variants from Germany and Pakistan by electrophoresis screening over 4000 blood samples.
- Used ion-exchange chromatography, RP-HPLC, peptide fingerprinting, amino acid analysis, and amino acid sequencing.

Awards & Honors

- Selected by the Chapman University School of Pharmacy Graduate students (MSPS and Ph.D.) as the AACP Teacher of the Year for 2017-2018 and 2019-2020.
- Adjunct Faculty, Panjwani Center for Molecular Medicine & Drug Research, International Center for Chemical & Biological Sciences, University of Karachi, Pakistan 2013- Current
- Research Ambassador DAAD program Germany, for the academic year 2012-2021, to promote bilateral education and research between Germany and the USA.
- Visiting Faculty, under President Program for Qualified Pakistani (PPQP) National Talent Pool Program, Govt. of Pakistan – 2013.
Institution served: National Center for Proteomics, University of Karachi, Pakistan
- Visiting Faculty, under President Program for Qualified Pakistani (PPQP) National Talent Pool Program, Govt. of Pakistan – 2012
(i) National Institute for Biology and Genetic Engineering, Faisalabad, Pakistan (ii) HEJ Research Institute of Chemistry, University of Karachi, Pakistan.
- Visiting Faculty, under National Talent Pool Program, Govt. of Pakistan – 2009 Institution served: HEJ Research Institute of Chemistry, University of Karachi, Pakistan
- Max-Planck Society Postdoctoral Fellowship - 1988
- German Academic Exchange Service, Ph.D. Research Fellowship - 1985
- Fellowship for Regional Course in Biochemical Separation Methods - 1983 University of Colombo, Colombo, Sri Lanka
- German language course, Mannheim, Germany – 1985

Teaching Awards at Chapman

- Teacher of the Year for 2019-2020, Chapman University School of Pharmacy Graduate Program by the American Association of College of Pharmacy (AACP).
- Teacher of the Year for 2017-2018, Chapman University School of Pharmacy Graduate Program by the American Association of College of Pharmacy (AACP).

Advising (Undergraduate and Graduate Students) at Chapman-2023-2024

- Paulla Bantin_ BS Biochem
- Michelle Wang _ Pharm.D. Capstone
- Adva Shilon_ Pharm.D. Capstone
- Winnie Fei _ Pharm.D. Capstone
- Seongchan Jeong _ Pharm.D. Capstone
- Dalal Farah_ Pharm.D. Capstone Research
- Tinarena Awaradia_ Pharm.D. Capstone Research

Graduated Students _ Ph.D. from my lab.

- Dr. Taibah Aldakhil – August 2023
- Dr. Saud Alshammari - May 2022
- Dr. Mekdes Megeressa – January 2021

Graduated Students _ MSPS from my lab.

- Taran Harris - MSPS, 2024
- Saud Alshammari – MSPS, 2019
- Mehshid Ammini -MSPS 2019
- Ayman Bawazeer – MSPS, 2018
- Taibah Aldakhil – MSPS, 2018
- Soliel K. Doman- MSPS, 2016

Graduated Undergraduate Research Students (2017-2023)

- Jonathan Boules, BS Health Sciences
- Kadambri Ayithi, BS Biochemistry, 2022
- Van Do, FEAP, 2020
- Haley Reinhard, BS Biochemistry, 2019
- Ayah Khader, BS Health Sciences - 2018
- Lucy Chen, BS Chemistry, Chapman University, Orange, 2017
- Caroline Aziz, BS Biochemistry, Chapman University, Orange, 2017

Chapman Pharm.D. Program

Graduated Student Pharmacist Pharm.D. APPE Rotations (2017- 2021)

- Soliel Doman
- Yen Hai Nguyen
- Farida Mossad-Ahmed
- An Le
- Kassidy Vo
- Duy Nguyen
- Loc Nguyen
- Mohini Bawa
- Thai Sam
- Esther Min
- Kristy Nishikawa
- Crystal Pham
- Phoung Nguyen
- Nicole Sakamoto
- Aliya Williams
- Stephen Selvanayagam
- Jimmy Nguyen
- Onyeka P. Godwin

- Tiffany Nguyen

Graduated Student Pharmacist Pharm.D. T3- Capstone Research (2021-2022)

- Van Do
- Minh Nguyen

Graduated Student Pharmacist Pharm.D. Capstone Research (2018-2020)

- Lauren Chin
- John Lee
- Kristine Nguyen
- Eileen Hsiao
- Janice Yoo
- Martha K. Sebina
- Soliel K.Doman
- Laura Ko
- Haena Kim
- Parth Patel
- Tiffany Lu
- Rabka Gajiani

Co-mentor for Student Pharmacist Pharm.D. Capstone Research (2017-2018)

- Long Lo
- An Tran
- An Le
- Ester Min
- Kristy Nishikawa
- Phoung Nguyen
- Nicole Sakamoto
- Long Lo

Thesis Committee Member of MSPS Students of Chapman University

- Yazeed Alanazi
- Razan Orfali
- Paul Park
- Emad Althagafi
- Madhawi Alanazi
- Nedaa Alamori
- David Akinwale
- Qamar Alshammari
- Cassandra Dill

- Ryan Stueber
- Nouf Alshammari

Thesis Committee Member of Ph.D. Students of Chapman University

- Paul Park
- Imran Sajid
- Maha Jamal
- David Akinwale
- Qamar Alshammari
- Jonathan Moreno

Thesis Committee Member of MS Food Science Students of Chapman University

- Christianne Yapor
- Akira K. Ishii
- Amanda N. Rogers

Teaching MSPS/Ph.D. and Pharm.D. Courses

- Course Coordinator/Instructor PHS627/L-Instrumental Analysis, Fall 2023, 2024
- Instructor PHS602-Drug Discovery & Development, Fall 2023, 2024
- Course Coordinator/Instructor PHS623-Pharmaceutical Analysis –PHS623, Spring 2016-
- Course Coordinator/Instructor PHS614- Biologics Fall 2015-2021
- Instructor for PHS702- Research rotations, Fall 2016-2023
- Guest Instructor BCHM 302, Orange, Spring 2016-2022
- Course Instructor Pharm.D. course Biopharmaceuticals Pharm642, Fall 2016
- Guest Instructor PHS632- Introduction to Pharmaceutical Manufacturing Processes, Spring 2015, 2019

Service

- Member Science Committee, School of Pharmacy 2019-2023
- Member, GPRC, School of Pharmacy 2016-2017 and 2018-2019
- Chair, GPRC, School of Pharmacy 2015-2016 and 2017-2018

Chapman Grant (2017-2018)

Co-Principal Investigators: Aftab Ahmed and Ayman Noreddin

Title: Joshanda Herbal Extract, A Promising Natural Product Against Development of *Staphylococcus aureus* Biofilm.

Approved co-supervisor Ph.D. students by the University of Karachi, Pakistan

Following visiting, students worked in my lab at Chapman

- Umaima Akhtar, University of Karachi, Pakistan, 2018-2019
- Yamna Khurshid, University of Karachi, Pakistan, 2017-2018

- Meshal Nazeer, University of Karachi, Pakistan, 2016-2017

Research and Service at University of Rhode Island, USA

Served as a member of the graduate examination committee of the following students:

- Bharat Madhavan - MS BMS, University of Rhode Island, USA – 2007
- Jacqueline Kocab MS, BMS, University of Rhode Island, USA – 2008
- P. K. Pampati, Ph.D. Chemistry, University of Rhode Island-2009
- P. Seneviratne, Ph.D. Chemistry, University of Rhode Island-2009
- Padmanie C. Seneviratne, Ph.D. University of Rhode Island, USA -2011
- Sreekanth Suravajjala, Ph.D. University of Rhode Island, USA - 2012
- Sravanthi Vadlamannati, Ph.D. Chemistry, University of Rhode Island -2013
- Wendy Liu, Ph.D. Chemistry, University of Rhode Island -2012
- Pratik Sheth, Ph.D. Biomed & Pharm. Sciences, University of Rhode Island -2013
- Elain Foun, MS. Chemistry, University of Rhode Island – 2013

Served as mentor for summer research for the following students at URI:

- Tyler Perry, SURP 2014, University of Rhode Island, 2014
- Ana Orteza Sandoval SURP 2013, Community College of Rhode Island -2013
- Soliel Doman – SURP 2012, Community College of Rhode Island, USA – 2012
- Hilary Friedman –SURP-2011, Pharmacy, University of Rhode Island, USA- 2011
- Humera Faraz – HEJ Res. Inst. of Chem. University of Karachi, Pakistan – 2011
- Asita Brandmuller - Pharmacy, University of Braunschweig, Germany – 2008
- Simon Schroeder - Pharmacy, University of Braunschweig, Germany -2007
- Linh Souphanthavong Biology, University of Rhode Island, USA - 2007

Served as a foreign reviewer for the Ph.D. thesis of following students from Pakistan and India

- Tazeen Ansari, Dow University of Health Sciences, Karachi, Pakistan - 2023
- Syed Ali Raza, Abdul Wali Khan University, Mardan, Pakistan – 2023
- Yasir Ali, Abdul Wali Khan University, Mardan, Pakistan – 2023
- Zaid A. Razzak, University of Karachi, Pakistan – 2023
- Sana Aureanzeb, University of Karachi, Pakistan – 2023
- Mohammed Saleem, University of Karachi, Pakistan-2022
- Tabinda Salim, University of Karachi, Pakistan – 2022
- Nabila Sher Mohammed, KMU Pheshawar, Pakistan – 2022
- Fiza Iftikhar, University of Karachi, Pakistan – 2022
- Faisal Khan, University of Karachi, Pakistan- 2022
- Syeda Uroosa Hashmi, University of Karachi, Pakistan _ 2021
- Saadia Laraib, University of Peshawar, Pakistan- 2021
- Syed F. Ahmed, University of Karachi, Pakistan 2020
- Mehwish Durrani, Khyber Medical University – 2020
- Subhaswaraj Pattnaik, Pondicherry University, Puducherry, India 2020
- Binte Zehra, University of Karachi, Pakistan – 2019
- Muniza Shaikh, University of Karachi, Pakistan – 2018

- Asif Khan, University of Peshawar, Pakistan – 2018
- Saba Majeed, University of Karachi, Pakistan - 2018
- Anum Gul, University of Karachi, Pakistan – 2017
- Ghulam Serwar, University of Karachi, Pakistan - 2017
- Anab Fatima, University of Karachi, Pakistan - 2014
- Naeem Aamir, Islamia University of Bahawalpur, Pakistan-2010
- Farhat Amin, University of Peshawar, Pakistan – 2009

Reviewer Assignments

- BMC Complementary Medicine and Therapies
- Journal of Microbiology, Biotechnology and Food Science
- Journal of Animal and Plant Science
- Journal of Protein Chemistry
- Electrophoresis
- Protein & Peptide Letters
- African Journal of Biotechnology
- Journal of Biotechnology
- Microbial Pathogenesis
- Brazilian Journal of Pharmaceutical Sciences (BJPS)
- Plos One

Invited Speaker & Workshop Resource Person

- 5th. National Workshop on Classical Protein Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Pakistan -2022
- 4th. National Workshop on Classical Protein Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Pakistan -2018
- 3rd. National Workshop on Classical Protein Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Pakistan -2017
- 2nd. National Workshop on Classical Protein Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Pakistan -2016
- 1st. National Workshop on Classical Protein Chemistry, Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, Pakistan - 2014
- Workshops: (i) Proteomics in a Nutshell. (ii) Conventional & Advance Chromatographic Methods for Protein Purification, National Center for Proteomics, University of Karachi, Pakistan – 2013
- Workshop on Tools in Structural Biology, International Center for Chemical Biological Sciences (ICCBS), University of Karachi, Pakistan – 2013
- University of Agriculture Faisalabad, Pakistan- 2012
- MDLC Workshop, PCMD, HEJ Research Institute of Chemistry, University of Karachi, Pakistan-2012
- Bryant University, Smithfield, Rhode Island, USA -2012
- Brown University, Providence, Rhode Island, USA – 2011
- Rhode Island College, Providence, Rhode Island, USA - 2011
- H.E.J. Research Institute of Chemistry, University of Karachi, Pakistan - 2009
- Agriculture University, Tandojam, Pakistan – 2009

- Workshop on 2D Electrophoresis in Proteomics, National Center for Proteomics, University of Karachi, Pakistan - 2009

Peer-reviewed Publications:

Sherwani ZA, SS Tariq, M Mushtaq, AR Siddiqui, M Nur-e-Alam, **A Ahmed**, Z Ul-Haq (2024). Predicting FFAR4 agonists using structure-based machine learning approach based on molecular fingerprints. *Scientific Reports* 14 (1), 9398 (2024) | <https://doi.org/10.1038/s41598-024-60056-z>

Muhammad H, M Nur-e-Alam, **A Ahmed**, Z Ul-Haq (2024). Highly efficient hole transporting pyrimidine-based dyes for photovoltaic applications: A DFT/TD-DFT study. *Journal of Physics and Chemistry of Solids* 195(2024)112272. <https://doi.org/10.1016/j.jpcs.2024.112272>

Akhtar U, Y Khurshid, B El-Aarag, B Syed, IA Khan, K Parang, **A Ahmed**. 2024. Proteomic characterization and cytotoxic potential of proteins from *Cuscuta (Cuscuta epithymum (L.))* crude herbal product against MCF-7 human breast cancer cell line. *BMC Complementary Medicine and Therapies* (2024) 24:195, May 20, 2024. <https://doi.org/10.1186/s12906-024-04495-1>

Komal Zia, MNur-e-Alam, **A Ahmed**, Z Ul-Haq. 2024. Taming the cytokine storm: small molecule inhibitors targeting IL-6/IL-6 α receptor. *J. Molecular Diversity* 17 February 2024. <https://doi.org/10.1007/s11030-023-10805-5>

Sajjad H, M Shafiq, A. R. Siddiqui, M Sardar, M Mushtaq, S Shafeeq, M Nur-e-Alam, **A Ahmed**, Z Ul-Haq. 2024. Uncovering PPAR- γ agonists: An integrated computational approach driven by machine learning. *J. Molecular Graphics and Modelling*. 24 February 2024. <https://doi.org/10.1016/j.jmglm.2024.108742>

Sajjad Haider, M Mushtaq, M Nur-e-Alam, **A Ahmed**, Z. Ul-Haq. 2023. Identification of novel small molecule inhibitors for solute carrier SGLT1; a computational exploration. *Journal of Biomolecular Structure and Dynamics* 19 Oct 2023. <https://doi.org/10.1080/07391102.2023.2270708>

Haneef K, A. Salim, Z. Hashim, A. Ilyas, B. Syed, B., **A. Ahmed**, S. Zarina, S. 2023. Chemical hypoxic preconditioning improves survival and proliferation of mesenchymal stem cells. *Applied Biochemistry and Biotechnology*, September 2023. <https://doi.org/10.1007/s12010-023-04743-z>

Mushtaq M, S Usmani, A Jabeen, M Nur-e-Alam, S. Ahmed, **A Ahmed**, Zaheer Ul-Haq. 2023. Identification of potent anti-immunogenic agents through virtual screening, 3D-QSAR studies, and in vitro experiments. *Molecular Diversity* August 2023. <https://doi.org/10.1007/s11030-023-10709-4>

Siddiqui H, A Tul-Wahab, **A Ahmed**, M I Choudhary. (2023) Structural and Functional Analysis of Urease Accessory Protein E from Vancomycin-resistance *Staphylococcus aureus* MU50 strain. *Protein Peptide Letter*. Aug 2023. <https://doi.org/10.2174/0929866530666230801163340>

Aldakhil, T., S.O. Alshammari, B. Siraj, B. Al-Aarag, S. Zarina, D. Salehi, **A. Ahmed**. 2023. The structural characterization and bioactivity assessment of non-specific lipid transfer protein 1 (nsLTP1) from caraway

(*Carum carvi*) seeds. BMC Complementary Medicine and Therapies (2023) 23:254.
<https://doi.org/10.1186/s12906-023-04083-9>

Tanveer, F., A. Ilyas, B. Syed, Z. Hashim, **A. Ahmed**, Z. Zarina. **2023**. Differential protein Expression in Response to Varlitinib Treatment in Oral Cancer Cell Line: an In Vitro Therapeutic Approach. Applied Biochemistry and Biotechnology. <https://doi.org/10.1007/s12010-023-04642-3>

Syed, N., A. Ilyas, B. Syed, **A. Ahmed**, S. Zarina, Z. Hashim. **2022**. Novel Synergistic Combination of Pamidronate and Temozolomide for Breast Cancer Therapeutics. (E-Pub Ahead of Print) Current Cancer Drug Targets 13 October 2022. <https://doi.org/10.2174/1568009622666220921103201>

Saud O. Alshammari, T. Aldakhil, Q.A. Alshammari, D. Salehi, **A. Ahmed**. **2022**. Cytotoxic Activity of Non-specific Lipid Transfer Protein (nsLTP1) from Ajwain (*Trachyspermum ammi*) Seeds. BMC Complementary Medicine and Therapies (2022) 22:135. <https://doi.org/10.1186/s12906-022-03616-y>

Fazal, Yumna., M. Zohaib, B., Syed, S.H. Ansari, Z. Hashim, **A. Ahmed**, S. Zarina. **2022**. Prenatal diagnosis of maternal serum from mothers carrying thalassemic fetus. Pediatrics International 64,e14999 <https://doi.org/10.1111/ped.14999> .

Usman, M., A. Ilyas, B. Syed, Z. Hashim, **A. Ahmed**, S. Zarina. **2021**. Serum HSP90-Alpha and Oral Squamous Cell Carcinoma: A Prospective Biomarker. Protein Peptide Letters 2021 Jun 16. doi.org/10.2174/0929866528666210616112539

Megeressa, M., B. Siraj, S. Zarina, **A. Ahmed**. **2020**. Structural Characterization and *in vitro* Lipid Binding Studies of Nonspecific Lipid Transfer Protein 1 (nsLTP1) from Fennel (*Foeniculum vulgare*) Seeds. Scientific Reports-Nature. 10: 21243. doi.org/10.1038/s41598-020-77278-6

Khurshid, Y., B. Syed, B. S.U. Simjee, O. Beg, **A. Ahmed**. **2020**. Antiproliferative and Apoptotic Effects of Proteins from Black Seeds (*Nigella sativa*) on Human Breast MCF-7 Cancer Cell line. BMC Complementary. Med. Therapies. 20, 5:1-11 doi.org/10.1186/s12906-019-2804-1

Nazeer, M., N., H. Waheed, S. Y. Ali, M. Iqbal Choudhary, Z. Ul-Haq, **A. Ahmed**. **2019**. Purification and Characterization of a Nonspecific Lipid Transfer Protein 1 (nsLTP1) from Ajwain (*Trachyspermum ammi*) seeds. Scientific Reports-Nature. 9:4148. doi.org/10.1038/s41598-019-40574-x

Waheed, H., S.K. Doman, **A. Ahmed**. **2018**. Partial Amino Acid Sequence of Leaf-nosed Viper (*Eristicophis macmahonii*) Snake Hemoglobin. J. Animal & Plant. Sci. 28(6): 1622-1628. <http://www.thejaps.org.pk/docs/v-28-06/11.pdf>

Munir, I., S. Ajmal, M.R. Shah, **A. Ahmed**, A. Hameed, and S.A. Ali. **2017**. Protein drug nano-conjugates: Finding the alternative proteins as drug carrier. Int. J. Biol. Macromolecules. [dx.doi.org/10.1016/j.ijbiomac.2017.03.095](https://doi.org/10.1016/j.ijbiomac.2017.03.095)

Waheed, H., H. Freedman, S.F. Moin, S. Zarina, and **A. Ahmed**. **2016**. The primary structure of β I chains of hemoglobin from snake Sindhi krait (*Bungarus sindanus sindanus*). Protein J. 35: 193-201. [doi: 10.1007/s10930-016-9661-2](https://doi.org/10.1007/s10930-016-9661-2)

Atta, A., A. Amber, Z. Hashim, **A. Ahmed**, and S. Zarina. **2014**. Lactate Dehydrogenase like crystalline: A potential protective shield for Indian spiny-tailed lizard (*Uromastix hardwickii*) lens against environmental stress. Protein J. 33:128- 134. [doi:10.1007/s10930-014-9543-4](https://doi.org/10.1007/s10930-014-9543-4)

Guo, L., I. Panderi, D.D. Yan, K. Szulak, Y. Li, Y. Chen, H. Ma, D.B. Niesen, N. Seeram, **A. Ahmed**, B. Yan, D. Pantazatos, and W. Lu. **2013**. A comparative study of hollow copper sulfide nanoparticles and hollow gold nanospheres on degradability and toxicity. ACS Nano 7(10):8780-8793. [doi: 10.1021/nl403202w](https://doi.org/10.1021/nl403202w)

Kalkunte, S., S. Neubeck, W. E. Norris, S. Cheng, S. Kostadinov, D.V. Hoang, **A. Ahmed**, F. Von Eggeling, Z. Shaikh, J. F. Padbury, G. Berg, U. Markert, and S. Sharma. **2013**. Transthyretin Is Dysregulated in pre-eclampsia, and its native form prevents the onset of disease in a preclinical mouse model. The American J. Pathology 183(5): 1425-1436. [doi: 10.1016/j.ajpath.2013.07.022](https://doi.org/10.1016/j.ajpath.2013.07.022).

Yao, L., S. J. Danniels, A. Moshnikova, S. Kunznetsov, **A. Ahmed**, D.M. Engelman, Y.K. Reshetnyak, and O.A. Andreev. **2013**. pHLIP peptide targets nanogold particles to tumors. PNAS, 110 (2) 465-470. doi.org/10.1073/pnas.1219665110

Musharraf, S.G., S. Muhammad, A. J. Siddiqui, N. Haq, and **A. Ahmed**. **2012**. Quantitative analysis of some important metals and metalloids in tobacco products by inductively coupled plasma-mass spectrometry (ICP-MS). Chemistry Central Journal 6 (1), 56-68.

Pouyani, T., V. Ronfard, P.G. Scott, C.M. Dodd, **A. Ahmed**, R.L. Gallo, and N.L. Parenteau. **2009**. De novo synthesis of human dermis in vitro in the absence of a three-dimensional scaffold. In Vitro Cell. Dev. Biol- Animal 45: 430-441.

Schroeder, S., H. Waetzig, and **A. Ahmed**. **2009**. Comparison of sensitivity of Odyssey Infrared Scanner and various other scanners (Application Note, Li-COR Inc. <http://biosupport.licor.com.support>)

Schroeder, S., A. Brandmueller, Xi. Deng, **A. Ahmed**, and H. Waetzig **2009**. Improving precision in gel electrophoresis by step wisely decreasing variance components. J. Pharmaceuti. & Biomed. Analysis 50, 320-327.

Li Liya, L .S. Adams, S. Chen, C. Killian, **A. Ahmed**, and N.P. Seeram. **2009**. Eugenia jambolana Lam. Berry extract inhibits growth and induces apoptosis of human breast cancer but not non-tumorigenic breast cells. J. Agric. Food. Chem 57, 826-831.

Pabla, D, F. Akhlaghi, **A. Ahmed**, and H. Zia. **2008**. Development and validation of an inductively coupled plasma mass spectrometry method for quantification of levothyroxine in dissolution studies. Rapid Commun. Mass Spectrom. 22: 993-996.

Ahmed, A., P. Kandola, G. Ziada, and N. Parenteau .**2001**. Purification and partial amino acid sequence of proteins from human epidermal keratinocyte conditioned medium. J. Protein Chem., 20: 273 – 278.

Adachi, Y., T.D. Copeland, C. Takahashi, T. Nosaka, **A. Ahmed**, S. Oroszlan, and M. Hatanaka. **1992**. Phosphorylation of the Rex protein of human T-cell leukemia virus type 1. *J. Biol. Chem.* 267: 21977-21981.

Ahmed, A., M. Jahan, and G. Braunitzer. **1992**. Carnivora: The primary structure of the major hemoglobin component from adult European lynx (*Lynx lynx*, Felidae) *J. Protein Chem.*, 11: 39-43.

Jahan, M., **A. Ahmed**, F. Trillmich, and G. Braunitzer. **1991**. Carnivora: The complete primary structure of the marine carnivora Galapagos fur seal (*Arctocephalus galapagoensis*, Otariidae) hemoglobins. *J. Protein Chem.*, 10: 257-263.

Ahmed, A., M. Jahan, G. Braunitzer. **1990**. Carnivora: The primary structure hemoglobin from adult coati (*Nasua nasua*, procyonidae) *J. Protein Chem.*, 9: 23-29.

Ahmed, A., M. Jahan, G. Braunitzer. **1990**. The amino acid sequence of the adult European mink (*Mustela lutreola*, Mustelidae) hemoglobins. *Z. Naturforsch.* 45c: 223-228.

Ahmed, A., M. Jahan, G. Braunitzer, H. Pechlaner. **1989**. Carnivora: The amino acid sequence of the adult European polecat (*Mustela putorius*, Mustelidae) hemoglobin. *Z. Naturforsch.* 44b: 817-824.

Ahmed, A., M. Jahan, G. Braunitzer, C. Edelbluth, and W. Herold. 1989. Hemoglobin Andrew-Minneapolis b144 (HC1 Lys/Asn) in a German family from Berlin. *Hemoglobin.* 13: 189-192.

Jahan, M., **A. Ahmed**, G. Braunitzer, and R. Goeltenboth. **1989**. The amino acid sequence of the adult Sumatran tiger (*Panthera tigris*, Carnivora) hemoglobins. *Biol. Chem. Hoppe-Seylar.* 370: 27-33.

Ahmed, A., A. Abbasi, G. Braunitzer, and Z.H. Zaidi. **1988**. A case of Hb-E b-thalassemia in a Pakistani family. *J. Pak. Med. Assoc.* 38: 301-303.

Ahmed, A., M. Jahan, G. Braunitzer, and R. Goeltenboth. **1987**. Carnivora: The primary structure of the major and minor hemoglobin components of adult north Persian leopard (*Panthera pardus sexicolor*). *Z. Naturforsch.* 43b: 1341-1346

Jahan, M., **A. Ahmed**, G. Braunitzer, Z.H. Zaidi, and R. Goeltenboth. **1987**. Carnivora: The primary structure of adult lion (*Panthera leo*) hemoglobins. *Z. Naturforsch.* 42b: 1465-1470.

Ahmed, A., M. Jahan, Z.H. Zaidi, G. Braunitzer, and R. Goeltenboth. **1987**. The primary structure of hemoglobins of the adult jaguar (*Panthera onco*, Carnivora). *Biol. Chem. Hoppe-Seyler* 368: 1385-1390.

Ahmed, A., S. Naqvi, S., S. Ehasanullah, and Z.H. Zaidi. **1986**. Abnormal hemoglobin Hb- Karachi. An a-chain abnormality at position 5 Ala/Pro. *J. Pak. Med. Assoc.* 36: 206-208.

Naqvi, S., **A. Ahmed**, and Z.H. Zaidi. **1986**. Hemoglobinopathies in Pakistan. In: *New Trends in Natural Product Chemistry*, (Atta-ur- Rahman and P.W.Le Quesne, eds.), Elsevier Science Publisher B.V., Amsterdam, Vol. 26: pp. 651-660

Poster / Oral Presentations:

Undergraduate and Capstone Students Posters

Kadambri Ayithi, Basir Syed, Jonathan Boules, Van Do, Minh Nguyen, **Aftab Ahmed**. Purification and Characterization of Black Seeds (*Nigella sativa*) proteins by Edman sequencing and mass spectrometry. Protein Society 36th Annual Symposium July 7-10, 2022, San Francisco, California.

John Lee, Lauren Chin, Kristine Nguyen, Saud Alshammari, Basir Syed, **Aftab Ahmed**. Heparin affinity protein profiling of Ajwain (*Trachyspermum ammi*) seeds. ASHP-2021 Midyear 2021, Dec 5-9 (Virtual).

Eileen Hsiao, Janice Yoo, Mahshid Amini, Basir Syed, and **Aftab Ahmed**. Proteomic evaluation of Marshmallow (*Althaea officinalis*) seeds. Western Pharmacy Exchange (WPE)-2020, CphA online in May 2020. <https://cpha.com/wp-content/uploads/2020/05/Proteomic-Evaluation-of-Marshmallow-Althaea-officinalis-Seeds.pdf>

Ly H, Estaphnous D, Hassanzadeh A, **Ahmed A**, and Lam J. Evaluation of anti-cancer effects of bitter melon (*Momordica charantia*). ASHP-2019 Midyear Meeting, Dec 7-12, 2019, Las Vegas, Nevada.

An Le, Jerika Lam, and **Aftab Ahmed**, Preliminary studies on the extraction and purification of proteins from bitter melon (*Momordica charantia*) fruit and over-the-counter bitter melon capsules. ASHP-2018 Midyear meeting Dec 4-5, 2018, Anaheim, California

An Le, An Tran, Nguyen Phuong, Long Lo, Nicole Sakamoto, Ester Min, Kristy Nishikawa, Jerika Lam, and **Aftab Ahmed**. Preliminary Studies on the Extraction and Purification of Proteins from Bitter Melon (*Momordica charantia*), AAASPD-AACP Symposium, June 13, 2018, Pomona, California

Graduate Students Posters

Taran Harris, Basir Syed, **Aftab Ahmed**. Extraction and Characterization of Hemp Seeds (*Cannabis sativa*) proteins by QTOF LC/MS/MS. Cannabis Science Conference, September 20-21, 2023, Providence, RI.

Taran Harris, Basir Syed, **Aftab Ahmed**. Extraction and Characterization of Hemp Seeds (*Cannabis sativa*) proteins by QTOF LC/MS/MS. ACS Fall 2023, August 13-17, San Francisco, CA.

Taran Harris, Johnathan Boules, Basir Syed, **Aftab Ahmed**. Extraction and Characterization of Black Seeds (*Nigella sativa*) Proteins by ESI QTOF LC/MS/MS. Abstract 1359. J. Biol. Chem. (2023) 299(3S). BMB Annual Meeting, ASBMB, Seattle, Washington. March 25-28, 2023. <https://doi.org/10.1016/j.jbc.2023.103209>

Mekdes Megeressa, Van Do, and **Aftab Ahmed**. Cytotoxic activity of proteins extracted from fennel (*Foeniculum vulgare*) seeds against human cancer cell lines. Experimental Biology, 2020 online conference April 4-7, The FASEB Journal 34(S1) 2020. <https://doi.org/10.1096/fasebj.2020.34.s1.06422>

Yamna Khurshid, Maria Saeed, Jerika Lam, Shabana U Simjee, Zaheer-Ul-Haq, and **Aftab Ahmed**. Molecular Characterization and Cytotoxic Activity of McTI, a Novel Cystine-Knot Inhibitor from bitter melon (*Momordica charantia*). ABRF-2020, Feb 29-March 3, Palm Spring, California. J. Biomol. Tech 31(Suppl); S28 (2020). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7424638/>

Umaima Akhtar, Mekdes Megressa, Basir Syed, Kekavous Parang and **Aftab Ahmed**. Proteomic and cytotoxic characterization of proteins from Cuscuta (Dodder) tendrils. 33rd Annual Protein Society Symposium, June 30-July 3, 2019. Seattle, Washington

Mahshid Amini, Basir Syed, and **Aftab Ahmed**. Proteomics Evaluation of Marshmallow (*Althaea officinalis*) Seeds. CUSP Research Day, May 10, 2019. Irvine, California.

Saud Alshammari, Yamna Khurshid, Hang Ma, Navindra P. Seeram, and **Aftab Ahmed**. Characterization of Biologically Active Proteins from Red Maple (*Acer rubrum*) Leaves. Oral presentation at 257th National Meeting of American Chemical Society (ACS) March 31-April 4, 2019, Orlando, Florida.

Mekdes Megeressa, Yamna Khurshid, and **Aftab Ahmed**. Characterization and cytotoxic activity of Non-Specific Lipid Transfer Protein (ns-LTP) from Fennel (*Foeniculum vulgare*) seeds. ABRF2019 Annual Meeting, March 23-26, 2019, San Antonio, Texas

Yamna Khurshid, Basir Syed, Jerika Lam, Shabana U. Simjee, and **Aftab Ahmed**. Purification, Characterization, and cytotoxic activity of peptides and proteins from bitter melon (*Momordica charantia*) seeds. ABRF2019 Annual Meeting, March 23-26, 2019, San Antonio, Texas

Mahshid Amini, Yamna Khurshid, Mekdes Megeressa, Sherif Elshahawi, and **Aftab Ahmed**. Purification and characterization of proteins and peptides from Marshmallow (*Althaea officinalis*) seeds. ABRF2019 Annual Meeting, March 23-26, 2019, San Antonio, Texas

Ayman Bawazeer, Rukhsana Lalani, and **Aftab Ahmed**. N-terminal Amino Acid Sequence of α A and α D Chains of Snake Sindhi Krait (*Bungarus sindanus sindanus*) Hemoglobin. ABRF Annual Meeting April 22-25, 2018, Myrtle Beach, South Carolina.

Yamna Khurshid, Obaid Beg, Shabana U Simjee, and **Aftab Ahmed**. Ant-proliferative and Apoptotic Effects of Proteins from *Nigella sativa* on Human Breast Cancer Cell Line. ABRF Annual Meeting April 22-25, 2018, Myrtle Beach, South Carolina.

Taibah Aldakhil and **Aftab Ahmed**. 2D-LC Approach in the purification and characterization of proteins from Fenugreek (*Trigonella foenum-graecum*) Seeds. The Protein Society 32nd Annual Symposium, July 9-12, 2018, Boston, Massachusetts.

Nazeer, M., H. Waheed, R. Lalani, M.I. Choudhary, and **A. Ahmed**. Characterization & molecular modeling of non-specific lipid transfer protein (ns-LTP) from Ajwain (*Trachyspermum ammi*) seeds. ABRF2017 meeting, March 25-28, San Diego, California

Lalani, R., C. Aziz, U.T. Sankpal, R. Basha, and **A. Ahmed**. Preliminary data on the primary structure and biological studies of lipid transfer protein (LTP) from Fennel (*Foeniculum vulgare*) seeds. ABRF-2017 meeting, March 25-28, San Diego, California.

Doman, S., R. Lalani, H. Faraz, M. Nazeer, M.I. Choudhary, and **A. Ahmed**. Isolation & purification of proteins from turmeric root (*Curcuma longa*) by multidimensional chromatography. ABRF 2016 meeting, February 20-23, Ft. Lauderdale, Florida.

Aziz, C., S. Doman, R. Lalani, and **A. Ahmed**. Isolation and purification of proteins from *Aloe vera* leaves. ABRF-2016 meeting, February 20-23, Ft. Lauderdale, Florida.

Ahmed, A., S. Doman, and H. Faraz. Purification and partial characterization of snake Leaf-nosed Viper (*Eristicophis macmahonii*) hemoglobin. ABRF-2015 meeting, March 28-31, 2015. St. Louis, Missouri.

Perry, T., K. Andrews., A. Sadaf, A. Wahab., M.I. Choudhary, and **A. Ahmed**. Amino acid sequence of a 25kD water soluble protein from ginger root (*Zingiber officinale*). RI-INBRE SURP meeting, August 1, 2014, Kingston, Rhode Island.

Sandoval, A.H., S. Surti, F. Hashmi, A. Wahab, M.I. Choudhary, and **A. Ahmed**. Isolation and Purification of Water-Soluble Proteins from Ginger Root (*Zingiber officinale*). RI-INBRE SURP Meeting, August 2, 2013, Kingston, Rhode Island.

Doman, S., H. Faraz, M.I. Choudhary, and **A. Ahmed**. Purification and Partial Characterization of Snake Leaf-Nosed Viper (*Eristicophis macmahonii*) Hemoglobin RI-INBRE SURP Meeting, July 30, 2012, Kingston, Rhode Island.

Yao, L., S. Kuznetsov, B. Healy-Rossi, **A. Ahmed**, D. Engelman, Y.K. Reshetnyak, O.A. Andreev. Targeted Delivery of Gold Nanoparticles to Tumors. July 28, 2011.

Friedman, H., H. Faraz, M.I. Choudhary, and **A. Ahmed**. Amino Acid Sequence of Snake Hemoglobin β II Chain from Sindhi Krait (*Bungarus sindanus sindanus*). RI-INBRE SURP Meeting, July 29, 2011, Kingston, Rhode Island.

Schroeder, S., H. Zhang, H., E.S. Yeung, L. Jaensch, C. Zabel, **A. Ahmed**, and H. Waetzig. Protein detection using gel electrophoresis: Precision and sensitivity. DPhG Symposium, October 10-11, 2008, Bonn, Germany.

Schroeder, S., H. Waetzig, and **A. Ahmed**. Comparison of Coomassie-stained Protein Gels Detection by Infrared, Fluorescence and Visible light Densitometry. ABRF-2008 Annual Meeting, February 9-12, Salt Lake City, Utah.

Madhavan, B., **A. Ahmed**, L. Xiaoning, D. Sens, and Z. A. Shaikh. Changes in Protein Levels in Rat Kidney Tubular Epithelial Cells Exposed to Cadmium. Society of Toxicology, North-East Chapter Meeting October 26, 2007. Groton, Connecticut.

Souphanthavong, S, N. Nous, and **A. Ahmed**. Toxic-proteomics of Cadmium: Multi-dimensional strategies for analysis of rat liver proteins. RI-INBRE SURP Meeting, August 11, 2006. Kingston, Rhode Island.

Fengting, L., **A. Ahmed**, and B. Cho. Electrophoretic Mobility Shift Assay on the Formation of Klenow Fragment-exo-/fluoroaminofluorene-modified Template-primer Complexes using IRDye-700-labeled Oligodeoxynucleotides 230TH ACS Fall Meeting, August 28-Sept 1, 2005, Washington, D.C.

Ahmed, A., P. Kandola, G. Ziada, and N.L. Parenteau. Fractionation of proteins and peptides from human keratinocyte conditioned medium by FPLC and HPLC. 21st International Symposium on the Separation of Proteins, Peptides & Polynucleotides, November 2001, Delray Beach, Florida, USA

Pouyani, T., V. Ronford, E. Doherty, J. Gaffney, **A. Ahmed**, P. Scott, C. Dodd, R. Gallo, and N. Parenteau. Maturation in culture of an In Vitro produced human dermal matrix. Society of Investigative Dermatology, May 2001, Washington. DC, USA.

Ahmed, A., P. Kandola, G. Ziada, and N.L. Parenteau. Purification and N-terminal amino acid sequence of proteins from human keratinocyte conditioned medium. 14th. Annual Symposium of the Protein Society, August 5-9, 2000, Los Angeles, California, USA

Ronfard, V., T. Pouyani, T. Bachrach, K. Billiar, **A. Ahmed**, J. Laning, and N.L. Parenteau. "De novo matrix production and regulation by human fibroblast in vitro. The First Symposium of the International Society of Matrix Biology, June 14-17, 2000, Philadelphia, Pennsylvania, USA.

Govignon, E J, M. Murphy, J. Potzka, J. Crews, K. Biliar, **A. Ahmed**, and V. Ronford. Development of a serum-free human cell-derived extracellular matrix. 10th Annual Meeting of the European Tissue Repair Society. May 24-27, 2000, Brussels. Belgium.

Kamal D. P., A.G. Gulwadi, P. Stabila, P. Ferland, **A. Ahmed**, L. Xu, H. Zhao, S. Bruhn, B. Frydel, B. Devaux, M.R. Hoane, M.D. Lindner, H. Phillips, and W. Tao. Neuroprotection by recombinant neurturin (NTN) delivered by encapsulated genetically engineered fibroblast cells. Society for Neuroscience 1998, Los Angeles, California, USA.