

Curriculum Vitae

M. Ahmed H. Mesaik, Ph. D.

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PCMD, ICCBS, University of Karachi Pakistan

Educational Qualification

2003, Ph. D. (Microbiology)

Thesis Title “Studies on Some Natural Compounds for their Immunomodulatory Activity”. Department of Microbiology and H.E.J. Research Institute of Chemistry, University of Karachi, Pakistan

1996, M. Phil (Biotechnology)

Thesis Title “PCR Based Diagnosis and Genotyping of Hepatitis C Virus In-Patient with Chronic Liver Disease, from Faisalabad Region”.

Department of Biological Sciences, Quaid-I-Azam University, Islamabad, Pakistan and National Institute for Biotechnology & Genetic Engineering. Faisalabad Pakistan

1994, M. Sc (Clinical Microbiology) and 1993, B. Sc Hons. (Micro, Bio & Physiology)

Shah Abdul Latif University, Khairpur, Pakistan.

Positions:

Assistant Professor (March 2007-up to date)

Dr. Panjwani Center for Molecular Medicinal & Drug Research PCMD, International Center for Chemical Sciences ICCBS), University of Karachi, Karachi 75270 Pakistan

Senior Research Associate (Jan 2004 –May 2006)

PCMD, ICCBS, University of Karachi, Karachi 75270 Pakistan

Research Fellow (May, 1997 - Oct. 2003)

Microbiology Department & H.E.J. Research Institute of Chemistry, International Center for Chemical Sciences, University of Karachi, Karachi-75270, Pakistan.

Junior Research fellow (August 1994 - November 1996)

Department of Biological Sciences Quaid-i-Azam University Islamabad & National Institute for Biotechnology and Genetic Engineering (NIBGE) Faisalabad, Pakistan

Publication

1. Mbaze LM, Lado JA, Wansi JD, Shiao TC, Chiozem DD, **Mesaik MA**, Choudhary MI, Lacaille-Dubois MA, Wandji J, Roy R, Sewald N. (2009). Oxidative burst inhibitory and cytotoxic amides and lignans from the stem bark of *Fagara heitzii* (Rutaceae). *Phytochemistry*. Jul-Aug; 70(11-12):1442-7.
2. Arayne S, Sultana N, Haroon U, **Mesaik MA**. (2009). Synthesis, characterization, antibacterial and anti-inflammatory activities of enoxacin metal complexes. *Bioinorg Chem Appl*. 2009:914105. Aug 2
3. Saeed Arayne M, Sultana N, Haroon U, **Mesaik MA**, Asif M. (2009) Synthesis and biological evaluations of enoxacin carboxamide derivatives. *Arch Pharm Res*. Jul 32 (7):967-74.

4. **Mesaik MA, Azizuddin, Murad S, Khan KM, Tareen RB, Ahmed A, Atta-ur-Rahman, Choudhary MI. (2009)** Isolation and immunomodulatory properties of a flavonoid, casticin from *Vitex agnus-castus*. *Phytother Res.* May 13.
5. **Ahmad A, Khan RA, Mesaik MA. (2009)** Anti inflammatory effect of natural honey on bovine thrombin-induced oxidative burst in phagocytes. *Phytother Res.* 13;23 (6):801-808.
6. **Ozlem Demirkiran, M. A. Mesaik, Ahmed Abbaskhan, M. I. Choudhary (2009)** Benzophenone Constituents of *Hypericum Thasium*: The Immuno-Suppressive Principle of Plant Extract. *Phytochemistry* 70, 244–249.
7. **Ahmad A., M. K. Azim, M. A. Mesaik, Nazimuddin and R. A. Khan (2008).** Natural Honey Modulates Physiological Glycemic Response Compared to Stimulated Honey and D-Glucose. *Journal of Food Science* 73 (7), pp. H165-H167
8. **Koko W. S., M. A. Mesaik, S. Yousaf, M. Galal, M. I. Choudhary (2008).** In Vitro Immunomodulating Properties of Selected Sudanese Medicinal Plants *J. Ethnopharmacol.* 118 (1), 26–34.
9. **Sajjad Hussain, Mark Slevin , M. A. Mesaik , M. I. Choudhary , Abdul H Elostta , Sabine Matou , Nessar Ahmed , David West and John Gaffney (2008).** Cheiradone: a vascular endothelial cell growth factor receptor antagonist. *BMC Cell Biology* 9, art. no. 7
10. **Mesaik M. A., M. Kamran Azim, S. Mohiuddin (2008).** Honey Modulates Oxidative burst of Professional Phagocytes. *Phytother Res.* 22 (10) 1404-8.
11. **Wansi J. D., M. A. Mesaik, D. D. Chiozem, K. P. Devkota, Marie-Christine Lallemand, M. I. Choudhary, J. Wandji, Z. T. Fomum, N. Sewald (2008).** Immunomodulatory and cytotoxic Indoloquinazoline and Furoquinoline Alkaloids from *Oricia suaveolens*. *J. Natural Products* 71 (11) pp 1942-1945
12. **M. K. Azim, Humera Perveen, M. A. Mesaik, S. U. Simjee (2007).** Antinociceptive activity of natural honey in thermal-nociception models in mice *Phytother Res.* 21, 194-197.
13. **S. A. Saeed, J. D. Connor, Imran, J. Quadri, S. Tasneem, S. Ahmed, M. A. Mesaik, M. Iqbal Choudhary (2007).** Inhibitors of Phosphatidylinositide 3-Kinase: Effects on Reactive Oxygen Species and Platelet Aggregation. *Pharmacological Reports (Pol. J. Pharmacol)* 59, 238-243.
14. **M. A. Mesaik, M. I. Choudhary, M. Yusuf, S. Murad, Z. Ismaeil, N- R. Abdullah, Atta-ur-Rahman, and A. Ahmad (2006).** Biological and Molecular Docking Studies on Coagulin-H: Human IL-2 Natural Inhibitor *Mol. Immunol.* 43, 1855-1863.
15. **M. I. Choudhary, S. Shahnaz, S. Parveen, A. Khalid, M. A. Mesaik, S. A. Majeed Ayatollahi, Atta-ur-Rahman (2006).** New Cholinesterase-Inhibiting Triterpenoid Alkaloids from *Buxus hyrcana* *Chemistry & Biodiversity* 3 (9): 1039-52
16. **Yeskaliyeva, B., M. A. Mesaik, Abbaskhan A., A. Kulsoom, G. Sh. Burasheva, Zh. A. Abilov, M. Iqbal Choudhary, Atta-ur-Rahman (2006).** Bioactive flavonoids and saponins from *Climacoptera obtusifolia*. *Phytochemistry* 67 (21), 2392 - 2397.
17. **Atta-ur-Rahman, A. Khalid, N. Sultana, M. N. Ghayur, M. A. Mesaik, M. R. Khan, A. H. Gilani, and M. I. Choudhary (2006).** New Natural Cholinesterase Inhibiting and Calcium Channels Blocking Quinoline Alkaloids, *J. Enzym. Inhib. Med. Chem* 21, 703-710
18. **M. A. Mesaik, S. Rahat, K. M. Khan, M. I. Choudhary, S. Murad, Z. Ismaeil, Atta-ur-Rahman & A. Ahmad (2005).** Immunomodulatory Properties of Synthetic Imidazolone Derivatives. *Letters in Drug Design and Discovery* 2 (6): 490-496.
19. **M. A. Mesaik, S. Rahat, Khan, K. M., M. I. Choudhary, S. Murad, Z. Ismaeil, Atta-ur-Rahman & A. Ahmad (2004).** Immunomodulatory Properties of Synthetic Oxazolone Derivatives. *Bioorg. Med. Chem.* 12: 2049–2057

20. **Saeed. S. A and M. A. Mesaik (2005).** New Vistas in the therapeutic uses of stem cells (Review). *J. Med. Sci.* 5 (4) 350-357.
21. **S. A. Qasmi, S. Aqeel, M. A. Mesaik, S. I. Alam & A. Ahmad (2000).** Detection of Hepatitis B Virus in Normal Individuals of Karachi. *JCPSP* 10, 467-469.
22. **A. Ahmad, N. Saeed, T. Abbas, M. A. Mesaik, F. A. Ansari, S. M. Khalid & L. Lubbad (1999).** Antibody profile against Newcastle disease in the vaccinated and unvaccinated birds. *Pak. J. Pharmacol.* 16, 1-7.

Patent:

Use of coagulin-H or derivatives thereof as immunosuppressive agents (USA Patent Filed) since August 2006.

Projects:

1. "Discovery of Immunomodulatory Natural Products and Understanding The Molecular Basis of Their Activity". Funded by Higher Education commission Pakistan (2007).
2. "Discovery of Anti-inflammatory Natural and Synthetic Compounds through Inhibition of Interleukins (IL)-1 and -4 ". Funded by ISESCO/COMSTech (2007)

Manuscript Reviewer:

Inflammation Research

Pakistan Journal of Pharmaceutical Sciences

Journal of Basic and Applied Sciences

Teaching Experience:

Mainly involved in the teaching of Molecular Immunology and Microbiology courses taught at Dr. Panjwani Centre for Molecular Medicine and Drug Research, ICCBS University of Karachi since 2006.

Oral Presentations:

1. **Naturally Isolated Compounds are Good Drug Targets for Immune System Disorders.** Invited talk delivered at Faculty of Pharmacy UKM Kuala Lumpur Malaysia 2nd February 2009.
2. **Immunomodulation as Tools to Control Inflammation and other Immune Disorders** 2nd International Symposium and workshop-cum-training course on Molecular Medicine and Drug Research Held at [Karachi, Pakistan](#) Jan 12-15, 2009
3. **How well we are protected from invaders: Role of The Immune System. Lecture-1** on the 1st International Workshop on Molecular Pharmacology and Immunology held at [Khartoum, Sudan](#) on 4th July 2008
4. **Emerging Drug Discovery Targets for Immune System Disorders. Lecture-2** on the 1st International Workshop on Molecular Pharmacology and Immunology held at [Khartoum, Sudan](#) on 5th July 2008.
5. **Methods to Detect Anti-inflammatory and immunomodulating Agents Using Cell Based Assays. Lecture-3** on the 1st International Workshop on Molecular Pharmacology and Immunology held at [Khartoum, Sudan](#) on 6th July 2008.

6. **Emerging Immunosuppressive Drug Targets for Immune System Disorders.** The 8th Scientific Conference on Endemic and Emerging Diseases: New Trends in Diagnosis and Control. Khartoum Sudan **21-23 August, 2007.**
7. **NADPH Oxidase and Myeloperoxidase Dependant ROI Inhibitory Activity of Natural Honey.** International Conference on Immunology 2007. **Shanghi, China July 12-17 2007.**
8. **Coagulin-H: New Natural Immunosuppressive Lead.** The 12th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS XII). Padang, Indonesia 13-18 November 2006.
9. **New Leads for anti-allergy and anti-inflammatory Drugs through Effective screening Strategy.** 10th International Symposium on Natural Product Chemistry, **International Center for Chemical Sciences, Karachi-75270, Pakistan Jan 6-9 2006.**
10. **Discovery of natural compounds with immunomodulatory Potentials.** 8th Biennial National Conference of Pakistan Society for Biochemistry and Molecular biology (PSBMB). **March 7-9, 2005 Karachi Pakistan.**
11. **Coagulin-H: Potent Immunosuppressive candidate and Human IL-2 Novel Natural Inhibitor.** 5th International Biennial Conference of Microbiology “Molecular Mechanism of Host-Pathogen interactions. **Jan 10-15, 2005 Karachi Pakistan.**
12. **Immunomodulatory Properties of Synthetic Oxazolone and Imidazolone Derivatives.** 4th International & 14th national Chemistry Conference. **May 16-18, 2004 Lahore Pakistan.**
13. **Jerne Plaque Assay.** 2nd National Workshop on Bioassay Techniques **HEJ Research Institute of Chemistry, Aug 26-28, 1999. Karachi Pakistan.**

Poster Presentation

1. **M. A. Mesaik**, M. I. Choudhary, M. Yusuf, S. Murad, Z. Ismaeil, N- R. Abdullah Atta-ur-Rahman, and A. Ahmad Biological and Molecular Docking Studies on Coagulin-H: Human IL-2 Natural Inhibitor. KOSEF-JSPS Asian Science Seminar Held at **IVI Seoul Korea October 24th-27th 2004.**
2. **M A. Mesaik**, Azizuddin, M. Zahid, S. Shahnaz, S. Raziullah, S. Murad, A. Ahmad, M I. Choudhary, V. Ahmad and Atta-ur-Rahman. “Phagocytic activity of some natural compounds” International Workshop on Traditional / Complementary Medicine. Held at Kuala Lumpur, **Malaysia 13-15 November, 2000.**
3. **M A. Mesaik**, M I. Choudhary, F Mofo, S. Malik, A. Ahmad and Atta-ur-Rahman. “Enhanced Immune Response to BSA by immunization with adjuvant compound”. 6th international symposium protein structure function relationship University of Karachi, Karachi 75270, **Pakistan (1999).**
4. T. Abbas, **M A. Mesaik**, L. Lubbad and A. Ahmad “Efficacy of the Newcastle Disease vaccine in the chicks” The 2nd One day Seminar on Herbs. Medicine and Therapeutics (Naturophtomedicine: It’s future perspective in Pakistan). **Pakistan Society of Pharmacognosy 27 November (1999).**
5. **M. A. Mesaik**. M. Iqbal Choudhary, Shaqufta Rahat, Aqeel Ahmad, and Atta-ur-Rahman. “New Immunostimulating Compounds”. 9th National Chemistry Conference University of Karachi, Karachi 75270, **Pakistan 6-8 December 1998.**
6. K. F. Khattak. W. A. Shah, S. M. Baiq, **M A. Mesaik** and J. A. Qureshi. “Characterization and Diagnosis of hepatitis C virus by PCR/DNA based test in the patients from Faisalabad city”. Third Annual national Symposium, Aqa Khan University, Karachi **Pakistan. 20-22 September 1996.**

Organization and Participation in symposium and workshops:

1. 2nd International Symposium and workshop-cum-training course on Molecular Medicine and Drug Research Held at [Karachi, Pakistan](#) Jan 12-15, 2009
2. One-day International Seminar on Boosting Indigenous Research for Sustainable Development in Sudan and Third World Countries Held at [Khartoum Sudan](#), 14th July 2008.
3. 1st International Workshop on Molecular Pharmacology and Immunology held at [Khartoum, Sudan](#) on 4-13 July 2008.
4. One-day International Seminar on Boosting Indigenous Research for Sustainable Development in Sudan and Third World Countries Held at [Khartoum Sudan](#), 14th July 2008.
5. 1st International Symposium and workshop-cum-training course on Molecular Medicine and Drug Research Held at [Karachi& Islamabad, Pakistan](#) Jan 16-30, 2007
6. 2004 KOSEF-JSPS Asian science Seminar on “Development of Mucosal vaccines From Basic Research to Clinical Application Held [Seoul Korea](#), Organized by International Vaccine Institute (IVI), [October 24-27, 2004](#)
7. Molecular and Analytical Techniques in Research and Diagnosis of Reproductive Disorders. Workshop jointly organized by The Aga Khan University and Karolinska Institute, [September 22-25, 2004](#) held at Aga Khan University Karachi [Pakistan](#).
8. HEJERIC-TOKTEN Workshop on Animal Cell Culture [December 23rd 2002 – January 3rd 2003 Karachi Pakistan. \(Participation and Organization\).](#)
9. HEJERIC-TOKTEN Workshop on Use of Radioisotopes in Life Sciences. [March 14th, 2000 Karachi Pakistan.](#)
10. HEJERIC-TOKTEN Workshop on Immunoassay for Detection of Biomolecules. [March 13th, 2000 Karachi Pakistan.](#)
11. HEJERIC-TOKTEN Workshop on Cellular and Molecular Mechanism of Programmed Cell Death (Apoptosis). [Feb 28th-March 4th, 2000 Karachi Pakistan.](#)
12. 2nd National Workshop on Bioassay Techniques [26-28 Aug 1999 Karachi Pakistan \(Lecture presentation and practical demonstration\).](#)
13. Clinical Trial in Herbal Medicine Research (post conference workshop), held on [September 27th, 2001 Kuala Lumpur, Malaysia](#)
14. Course and Workshop on “Signal Transduction in cancer: Immunological Basis, immunotherapy and role of Diet”. [12th Feb-3rd March 1998 Karachi Pakistan.](#)
15. 3rd international symposium on genetic engineering and biotechnology (Industrial & Environmental Biotechnology) [24-28 Feb 1998 Karachi Pakistan.](#)
16. 7th international symposium on natural product chemistry. [28th Dec 1997-2nd Jan 1998, Karachi Pakistan.](#)

Current Research Activities:

Currently, five students are working for their M. Phil. / Ph. D. degrees in the following areas:

1. **Almas jabeen**, M. Phil/Ph. D. program in Molecular Medicine. (Since January 2006).
Project title: Studies on the suppression of inflammatory Arthritis at molecular level by natural and synthetic inhibitors of TNF- α and IL-1 β .
2. **Samreen Fazal**, M. Phil/Ph. D. program in Molecular Medicine. (Since November 2006).
Project title: Studies on Natural and synthetic compounds as apoptosis inducers and their potential as an antileukemic agent.
3. **Samreen Soomro**, M. Phil/Ph. D. program in Molecular Medicine. (Since November 2006).

Project title: Identification of new natural/synthetic anti inflammatory molecules that modulate reactive oxygen and nitrogen species activities

4. **Omer M. Abdalla**, M. Phil/Ph. D. program in Molecular Medicine. (Since July 2007).

Project title: Immunomodulatory effects of natural compounds on cells that mediate the immune response: Role in graft rejection prevention.

5. **Ahmed Shukralla**, M. Phil/Ph. D. program in Molecular Medicine. (Since July 2007).

Project title: Discovery of anti inflammatory agents: new IL-4 selective natural inhibitors.