

CURRICULUM VITAE

Shabir Ahmad Mir (PhD), Assistant Professor, Department of Medical Laboratories, Majmaah University, Al-Majmaah, Saudi Arabia

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PERSONAL DETAILS

Name----- Shabir Ahmad Mir
Date of Birth-----25 March 1983
Nationality-----Indian
Marital Status-----Married
Gender-----Male
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ACADEMIC QUALIFICATIONS

- 2013** PhD (Biochemistry, Post Graduate Institute of Medical Education and Research, Chandigarh, India) on:
“Immunobiological role of non-classically secreted N-formylated mycobacterial peptides/proteins in experimental tuberculosis”
- 2006** MSc (Biochemistry), University of Kashmir, Jammu & Kashmir, India.
- 2003** BSc (Biochemistry), University of Kashmir, Jammu & Kashmir, India.

RESEARCH INTERESTS AND SPECIALIZATION

1. Molecular biology
2. Proteomics
3. Infectious diseases
4. Structural Biology
5. Immunology
6. Nanotechnology
7. Microbiology

PEER REVIEWED RESEARCH PUBLICATIONS

1. Mir BA, **Mir SA**, Khazir J, Tonfack LB, Cowan DA, Vyas D, Koul S. (2015) Cold stress affects antioxidative response and accumulation of medicinally important withanolides in *Withania somnifera* (L.) Dunal, *Industrial Crops and Products* (In press), doi: 10.1016/j.indcrop.2015.06.012
2. Wani SM, **Mir SA**, Sharma S. (2015) Dual Role of Inflammation in Prognosis and Prevention of Tuberculosis, *Journal of Clinical and Cellular Immunology* 6: 298.(doi: 10.4172/2155-9899.1000298)
3. **Mir SA**, Verma I, Sharma S. (2014) Immunotherapeutic potential of recombinant ESAT-6 protein in mouse model of experimental tuberculosis, *Immunology letters* 158, 88– 94.
4. **Mir SA**, Sharma S. (2014) Immunotherapeutic potential of N-formylated peptides of ESAT-6 and glutamine synthetase in experimental tuberculosis, *International Immunopharmacology* 18, 298-303.
5. Mir BA, **Mir SA**, Koul S. (2014) In vitro propagation and withaferin A production in *Withania ashwagandha*, a rare medicinal plant of India, *Physiology and Molecular Biology of Plants* 20, 357-64.
6. **Mir SA**, Sharma S. (2013) Role of MHC class Ib molecule, H2-M3 in host immunity against tuberculosis, *Vaccine* 31, 3818– 3825.
7. **Mir SA**, Sharma S. (2013) Cloning, expression and N-terminal formylation of ESAT-6 of *Mycobacterium tuberculosis* H37Rv, *Protein Expression and Purification* 92, 223–229.

8. Khazir J, Mir BA, **Mir SA**, Cowan D. (2013) Natural products as lead compounds in drug discovery, *Journal of Asian Natural Products Research* **15**, 764–788.

RESEARCH/TEACHING EXPERIENCE

From April 2016: Assistant Professor, Department of Medical Laboratories, Majmaah University, KSA

Sep. 2015 to Mar. 2016: DS Kothari Postdoctoral Fellow in Center of Research for Development (CORD), University of Kashmir, Srinagar-190006, India

Mar. to Aug. 2015: Visiting Scientist at CSIR-Pretoria, South Africa.

Feb. to Apr. 2015: Part-time Teaching Assistant in Biochemistry Department at University of Pretoria.

Sep. 2014 – Aug. 2015- Postdoctoral Fellow in Department of Biochemistry, University of Pretoria, South Africa.

23rd April to 18th September 2014: Lecturer (contractual) in Department of Biochemistry, University of Kashmir, Srinagar, India.

2nd Sep. to 31st Dec. 2013- Lecturer (contractual) in Department of Clinical Biochemistry, University of Kashmir, Srinagar, India.

2007 to 2013- Six years research experience during PhD under the supervision of Prof. Sadhna Sharma.

- Immunobiological role of non-classically secreted N-formylated mycobacterial peptides/proteins in experimental tuberculosis
- Development of Sustained release antimycobacterial drug delivery system(s) against multidrug resistant tuberculosis employing PLG nanotechnology
- Mycobacterial peptide deformylase as a possible target for new generation antibacterial agents for experimental tuberculosis.

2006 to 2007- pre-PhD research experience as Junior Research Fellow in CSIR funded project on “Development of sustained release antimycobacterial drug delivery system(s) against multidrug resistant tuberculosis employing PLG nanotechnology” under Prof. Sadhna Sharma.

2005 to 2006- One year training during MSc “Isolation and dehematation of alpha and beta subunits of adult human hemoglobin” Biochemistry department, University of Kashmir, India.

HONOURS AND AWARDS

- **2015-** Awarded Dr DS Kothari Postdoctoral Fellowship by UGC, New Delhi
- **2014-** The Target Selection Team at **Global Medical Discovery** identified our recent publication “Cloning, expression and N-terminal formylation of ESAT-6 of Mycobacterium tuberculosis H37Rv” as a Key Scientific Article contributing to excellence in biomedical research.
- **2013-** The **LeadDiscovery's** Target Selection Team identified our publication “Role of MHC class Ib molecule, H2-M3 in host immunity against tuberculosis” as being of especial interest to the drug development sector and has been listed in their DailyUpdates of the channel “**Infectious Diseases**”.
- **2012 to 2013-** Recipient of **Senior Research Fellowship** from Indian Council of Medical Research (ICMR), New Delhi.
- **2009 to 2011-**Recipient of **Junior Research Fellowship** from Indian Council of Medical Research (ICMR), New Delhi.
- **2008-** Passed **ICMR–JRF** examination, a prestigious national level examination in Medical sciences.
- **2007-** Qualified national level **PhD entrance test** at Postgraduate Institute of Medical Education & Research, Chandigarh, India.
- **2006 to 2007-** Recipient of **Junior Research Fellowship** in CSIR funded project entitled “Development of Sustained release antimycobacterial drug delivery system(s) against multidrug resistant tuberculosis employing PLG nanotechnology.”
- **2005-** Passed prestigious **CSIR-UGC NET (LS)** examination in life Sciences.

CONFERENCES /SYMPOSIA

- Participated in 11th **Jammu and Kashmir Science Congress (JKSC)** 2015 held at **University of Kashmir**.

- Poster presentation in Biochemistry Symposium-2015 at **University of Pretoria, South Africa**.
- Attended the EMBO Global Exchange Lecture Course *Frontiers in innate immunity and drug discovery* from 6–11 July 2015 in **Johannesburg, South Africa**
- Attended Mini-workshop on *Synchrotron Radiation and Synchrotron-based Spectroscopies 2015* organized by University of Johannesburg, **South Africa**.
- Attended international conference on *Cellular and Molecular mechanisms of Disease processes 2014* organized by Department of Biotechnology, University of Kashmir, India.
- Poster presentation in 9th **Jammu and Kashmir Science Congress (JKSC) 2013** held at University of Kashmir.
- Golden Jubilee Celebrations CME-2012 on *Molecular Diagnosis of Genetic Diseases* organized by Department of Biochemistry, PGIMER, Chandigarh.
- Symposium on *Advanced Techniques in Basic Research: Tools of 21st century* (May, 2010) organized by Association of Basic Medical Scientists, PGIMER, Chandigarh, India.
- Attended *Chandigarh Science Congress* (CHASCON-2008), organized by Punjab University, Chandigarh, India

SEMINARS PRESENTATIONS

- Post translational modifications.
- The prion protein family: Diversity, rivalry, and dysfunction.
- High-fat diets cause insulin resistance despite an increase in muscle mitochondria.
- Multifunctional deadenylase complexes diversify mRNA control.
- The role of oxygen availability in embryonic development and stem cell function.
- Membrane proteomics of phagosomes suggests a connection to autophagy.
- A microRNA regulatory mechanism of osteoblast differentiation.
- MiR-150 promotes gastric cancer proliferation by negatively regulating the pro-apoptotic gene EGR2.
- Autophagy and metabolism.
- The dynamic nature of autophagy in cancer

LABORATORY SKILLS AND TECHNICAL EXPERTISE

Biochemical Techniques:

DNA, RNA and protein purification and estimation, thin layer chromatography, gel filtration chromatography, affinity chromatography, paper chromatography, UV-Vis. spectroscopic techniques, biochemical identification of mycobacterial strains.

Culturing Techniques:

Culturing and maintenance of pathogenic and non-pathogenic cultures strains, plating methods, bacterial transformation and staining techniques such as Gram positive, negative and Acid Fast staining.

Molecular biology techniques:

Plasmid isolation, isolation of genomic DNA from human blood, BLAST search for designing primers, polymerase chain reaction (conventional and reverse-transcriptase), cloning techniques, agarose gel electrophoresis, gel extraction and PCR product purification, restriction enzyme digestion and preparation of competent cells.

Proteomics:

SDS-PAGE, 2D-PAGE, western blotting, silver staining of proteins, mass spectrometry, MALDI-TOF

Immunological techniques:

ELISA (indirect, sandwich and peptide) and FACS, microscopy (light, inverted, fluorescence and scanning electron), cytotoxic T cell assay, estimation of various cytokines and chemokines, immunization of mice

Cell culture techniques

Isolation and primary culture of peripheral blood mononuclear cells, splenocytes, neutrophils and peritoneal macrophages.

Microbiological techniques:

Agar plate preparation, Colony Forming Units (CFU) enumeration, preparation of microbial cultures and use of laminar flow

Animal Work:

Handling of experimental animals (mice, guinea pigs, rabbits), Immunization techniques, Infection of mice through various routes, blood collection techniques and dissection of mice. Collection and processing of different tissue and isolation of cells (splenocytes, neutrophils and peritoneal macrophages).

JOURNAL/BOOK REVIEWER

- Reviewer of **BMC Immunology**
- Editor of SM(Science medicine) Group Open Access eBook “**Recent Trends in Immunology**”

ACADEMIC REFERENCES

1. **Professor Wolf-Dieter Schubert**
Department of Biochemistry,
University of Pretoria, Hatfield 0028, South Africa.
E.mail: Wolf-Dieter.Schubert@up.ac.za
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2. **Professor Sadhna Sharma**
Department of Biochemistry,
Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh-160012, India
E.mail: sadhnash2001@hotmail.com
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3. **Professor Indu Verma**
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