

curriculum vitae



Dr. phil. nat. Syed H Mir

Graduate Biochemist

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Date of Birth: 03.01.1974

Place of Birth: Srinagar, J&K, India

Marital status: married

Children: Daughter 08Y, Son 01Y

Academic Qualifications

PhD degree, 2002-2007

Johann Wolfgang von Goethe University
Frankfurt, Germany

Topic: Generation of recombinant antibodies against membrane proteins by phage display

Grade: "*magna cum laude*" for thesis

"*summa cum laude*" for presentation and examination.

<http://publikationen.ub.uni-frankfurt.de/oai/container/index/docId/149>

Master's degree, MSc., 1997-1999,

Specialization: Biochemistry,
Hamdard University, New Delhi, India

Grade: 1st, 70% marks, and Rank 3rd in the batch of 20 students.

Courses attended

Phage display of peptides and proteins at Cold Spring Harbor Laboratory, New York, USA. From Nov.7th to 21st, 2004.

Job & Academic: *Timeline*

Year	Degree/job	Institute
04/2016 - today	Assist. Professor	Department of Clinical Biochemistry, University of Kashmir, India
2012 -2015	Scientist / PDF	Institute of Biochemistry and Molecular Biology, University of Freiburg, Germany.
07/2006 - 09/2012	Lecturer	Department of Clinical Biochemistry, University of Kashmir, Srinagar, India
07/2002 - 08/2007	Ph.D	Max-Planck Institute for Biophysics, Frankfurt, Germany
12/1999 - 06/2002	CSIR-JRF (Junior Research Fellow)	Biochemistry, All India Institute of Medical Sciences (AIIMS), New Delhi, India
1997-1999	M.Sc	Biochemistry, Hamdard University, New Delhi, India
1993-1996	B.Sc.	Lucknow Christian Degree College, India
1991-1993	Sr. School (12 th)	Lucknow Christian Inter College, India
1980-1990	Sec. School (10 th)	Board of School Education, Srinagar, Kashmir, India

Fellowships & Awards

- **Junior Research Fellowship (JRF):** For qualifying all India National Eligibility Test (NET) examination held on June 25th, 2000, conducted by University Grants Commission (UGC) and Council of Science & Industrial Research (CSIR), Govt. of India. Availed till June 2002.
- **Max-Planck Gesellschaft PhD Fellowship.** July 2002 till July 2006.
- **Visiting Research Fellowship,** University of Leeds, Leeds, UK, Jan.2009 till March-2009.
- **BOSS Postdoctoral Fellowship,** Centre for Biological Signalling Studies under Excellence Initiative of German universities), Sept. 2012 till March 2016.
- **NPG-Travel Grant Award,** for participation in the Gordon Conference, “*Annual Gordon Research Conference of Ligand Recognition and Molecular Gating*”, 2010.

Selected publications

- **Mir SH.,** Escher C., Kao WC., Birth D., Wirth C. and Hunte C., Antibody fragment assisted crystallization of membrane proteins. *Methods in Enzymology*, Vol. 557: 201-218, May 2015.
- Fippel A., **Mir SH.,** Lentjes C., Wirth C. and Hunte C., Effect of antibody binding on the transport properties of the Na⁺/H⁺ Antiporter NhaA from *Salmonella typhimurium*. Poster/presentation at EBEC 2014. Abstract, volume 1837 of *Biochimica et Biophysica Acta (BBA) - Bioenergetics*, July 2014.
- Fippel A., **Mir SH.,** Lentjes C., Wirth C. and Hunte C., Towards structural and functional characterization of Na⁺/H⁺ antiporter variants. Poster/presentation at EBEC 2016, Abstract, volume 1857 of *Biochimica et Biophysica Acta (BBA) - Bioenergetics*, August 2016.

Invited talks

- **10th Annual Phage Display Meeting at 4th Annual PEGSUMMIT,** Boston. USA on 28th April 2008. Title: Co-crystallization with antibody fragments generated by phage display.
- **28th Rhine-Knee Regional Meeting on Biocrystallography,** Mont Saint-Odile, Alsace, France, Sept. 24th to 26th, 2014. Title: Generation of avian antibodies against membrane proteins. Why & How?

Poster presentations

- “Development of recombinant avian monoclonal antibodies against membrane proteins” at the **2010 Annual Gordon Research Conference of Ligand Recognition and Molecular Gating**, Barga, Italy, April 17th to 23rd, 2010.
- “Generating antibodies against membrane proteins by phage display” at the **International Symposium ‘Nanoscale Membrane Organization’**, Schluchsee, Germany from October 24-25, 2013.
- “Generating antibodies against membrane proteins by phage display” at the **International Symposium ‘Signalling and Sorting’**, Freiburg/Breisgau, Germany from April 10 to 12, 2013.

Research experience with phage display

1. PhD Research Fellow at MPI Frankfurt, (4 years)

Project Title: "Generation of recombinant antibodies against membrane proteins by phage display".

Job highlights

- Biopanning of commercially available scFv-phage library against membrane proteins and selection of specific binders.
- Optimization of selection strategies against native epitopes of multipass membrane proteins.
- Generation of phage-scFv antibody libraries from immunized chicken against transport proteins, and selection of high affinity binders suitable for co-crystallization of target membrane proteins.

2. Post-doc Research Fellow at University of Freiburg, (3 years)

Project Title: "Generation and optimization of avian recombinant antibodies for biochemical & structural studies of difficult membrane proteins".

Job highlights

- Generation, Biopanning and optimization of avian scFv-phage and Fab-phage display libraries against selected membrane proteins and selection of specific binders.
- Generation and optimization of chicken-human chimeric Fabs for usage as co-crystallization chaperones.
- Optimization of expression, production and purification of scFv and Fab proteins.
- Designing and organizing antibody development projects in the group.
- Guiding and mentoring master's and other students in phage display projects.

Language skills

English: Fluent writing and speaking
German: Moderate
Urdu: Fluent writing and speaking
Kashmiri: Mother Language.

Hobbies

Cycling and hiking, Driving, Travelling, Cooking

References:

- 1. Prof. Dr. Hartmut Michel,**
Director, Max-Planck Institute Of Biophysics,
Frankfurt am Main, Germany.
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- 2. Prof. Dr. Carola Hunte,**
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- 3. Prof. Dr. M Afzal Zargar**
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- 5. Dr. Marc Boehm**
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