**Smarajit Polley, Ph.D.**

Wellcome Trust DBT India Alliance Intermediate Fellow

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**Education:**

2001 – 2008 Ph. D. in Biophysics and Structural Biology 2008, Indian Institute of Chemical Biology, India.

1998 - 2000 MS in Biochemistry, University of Calcutta, India

1995 – 1998 BS with Honors in Chemistry, University of Calcutta, India

**Research Experience:**

2008 – 2016 Dept. of Chemistry and Biochemistry, University of California San Diego, La Jolla, California, USA.

Laboratory of Genetics, The Salk Institute for Biological Studies, La Jolla, California, USA.

Structural and Functional Studies on Inhibitor of kappa-B Kinases (IKK).

Major techniques involved: X-ray Crystallography, cryo-EM and cellular biochemistry.

2001 – 2008 Doctoral Research in the laboratory of Prof. Siddhartha Roy

Structural and Biophysical studies on Protein-protein and RNA-Protein interactiions and role of phosphorylation on those interactions.

Major techniques involved: NMR and Flurescence Spectroscopy, Protein and Peptide Chemistry, Biochemistry.

**Awards:**

2015 Wellcome Trust DBT India Alliance Intermediate Fellowship.

2015 Ramalingswami Re-entry Fellowship (Declined to accept WTDBT Fellowship)

2012 Travel award and oral presentation at Keystone Symposium on “NF-kB Signaling and Biology: From Bench to Bedside”, Whistler, Canada

2003 – 2008 Senior research fellowship by the Council of Scientific and Industrial Research.

2001 – 2003 Junior research fellowship by the Council of Scientific and Industrial Research.

2000 Qualified **N**ational **E**ligibility **T**est conducted jointly by the Council of Scientific and Industrial Research and University Grants Commission, Government of India in 2000 and awarded fellowship to carry out Ph.D.

2000 Qualified in Graduate Aptitude Test in Engineering conducted by the Indian Institute of Technology, Kharagpur.

**Research Grant Applications:**

2015 Wellcome Trust DBT India Alliance Intermediate Fellowship. Project title:“*Understanding the Biochemical and Structural Basis of Signaling Modularity of Kinases in Their Biological Context”. (Funded)*

2015 Rmalingaswami Re-entry Fellowship. Project Title: “*Understanding the Biochemical and Structural Basis of Signaling Modularity of Inhibitor of kappa-B Kinases (IKK) in Their Functional Context* ”. *(Funded)*

**Talks and Presentations:**

2016 Invited lecture at “Modern Trends in Microbiology' held at the Department of Microiology, St. Xavier's College, Kolkata.

2016 Research presentation at the IISER-Trivandrum.

2016 Invited lecture at the Maulana Abul Kalam Azad University of Technology.

2015 Invited lecture at the Institute of Quantitative and Computaitonal Biosciences, UCLA.

2014 Keystone Symposium on “The NF-kappaB System in Health and Disease”, Keystone, Colorado, USA (Poster presentation)

2012 Keystone Symposium on “NF-kB Signaling and Biology: From Bench to Bedside”, Whistler, Canada (Oral and poster presentation)

2006 ASBMB Annual Meeting 2006 at San Francisco, USA (Poster presentation).

2003 1st RNA Group Meeting, IISc-Bangalore, India: **Oral** presentation on NMR-spectoscopic studies on leader RNA of Chandipura Virus.

**Workshop and Symposium**:

2016 The 1st Course on Cryo Electron Microscopy and 3 Dimensional Image Processing of Macromolecular Assemblies and Cellular Tomography, IISER-Trivandrum, Trivandrum, India.

2016 International Symposium on Chemical Biology and Drug Discovery, Chemical Biology Society of India, Kolkata, India.

2016 Life Sciences Symposium, Presidency College, Kolkata, India.

2016 10th Annual Symposium on Biological Complexity: Synthetic Biology, Salk Institute, La Jolla, USA.

2015 Quantitative Proteomics Approaches to Study Host-Pathogen Relationships, The San Diego Center for System Biology, La Jolla, USA.

2014 Posttranslational Regulation of Cell Signaling, Salk Institute, La Jolla, USA.

2013 2nd Annual Waitt Advanced Biophotonics Center Symposium, Salk Institute, La Jolla, USA.

2013 Genetic Mechanisms of Functional Aging Stress and Immunity Symposium, Sanford-Burnham Medical Research Institute, La Jolla, USA.

2006 Workshop on biomolecular NMR, Tata Institute of Fundamental Research, Mumbai, India.

2006 10th Transcription Assembly meeting, Kolkata, India.

2004 2nd RNA Group Meeting, Kolkata, India.

2004 International Symposium on NMR, Drug Design and Boiinformatics-NMRS-2004, Kolkata, India

**Meetings Organized**

2016 Jt. Convener, 19th Transcription Assembly Meeting (Transcription Assembly 2016) held in Bose Institute in November 2016.

**Research Publications**

1. Smarajit Polley, Dario Oliveira Passos, De-Bin Huang, Maria Carmen Mulero, Anup Mazumder, Tapan Biswas, Inder M Verma, Dmitry Lyumkis, Gourisankar Ghosh. *Structural Basis for the Activation of IKK1/.* **Cell Reports.** 2016 Nov 15;17(8):1907-1914.
2. Arunava Roy\*, Prasenjit Chakraborty\*, **Smarajit Polley**\*, Dhrubajyoti Chattopadhyay and Siddhartha Roy. *A peptide targeted against phosphoprotein and leader RNA interaction inhibits growth of Chandipura virus – an emerging rhabdovirus.* **Antiviral Research.** 2013 Nov; 100(2):346-55. *(\* equal contribution)*
3. **Smarajit Polley**\*, De-Bin Huang\*, Arthur V Hauenstein\*, Amanda J Fusco, Xiangyang Zhong, Don Vu, Barbel Schröfelbauer, Youngchang Kim, Alexander Hoffmann, Inder M Verma, Gourishankar Ghosh, Tom Huxford. *A structural basis for IKK2 activation via oligomerization-dependent trans auto-phosphorylation***. PLoS Biology.** 2013 Jun 11; 11(6): e1001581. *(\* equal contribution)*
4. Barbel Schröfelbauer, **Smarajit Polley**, Marcelo Behar, Gourishankar Ghosh, Alexander Hoffmann*. NEMO ensures signaling specificity of the pleiotropic IKKβ by directing its kinase activity toward IκBα.* **Molecular Cell.** 2012 Jul 13; 47(1): 111-21.
5. **Smarajit Polley,** Soumi Guha, Sanchari Kar, Neeladrisekhar Roy, Kazuyasu Sakaguchi, Yoshiro Chuman, Venkatesh Swaminathan, Tapas Kundu, Siddhartha Roy.Differential Recognition of Phosphorylated Transactivation Domains of p53 by Different p300 Domains**. Journal of Molecular Biology** 2008 Feb 8; 376(1): 8-12.
6. Soumen Basak**,** **Smarajit Polley**, Mausumi Basu, Dhrubajyoti Chattopadhyay and Siddhartha Roy. Monomer and Dimer of Chandipura Virus Unphosphorylated P-protein Binds Leader RNA Differently: Implications for viral RNA synthesis. **Journal of Molecular Biology.** 2004 Jun 18; 339 (5):1089-101.

**Review Articles:**

1. Soumen Basak, Arindam Mondal, **Smarajit Polley**, Subhradip Mukhopadyay and Dhrubajyoti Chattopadhyay; Reviewing Chandipura: A vesiculovirus in human epidemics. **Bioscience Reports**, 27(4-5): 275-98, Oct 2007.