Office: Department of Biotechnology Savitribai Phule Pune University Pune – 411007, Maharashtra, India **Residence:** Flat No. A504, IISER Housing Complex, IISER-Pune, Dr. Homi Bhabha Road, Pashan, Pune, Maharashtra – 411008, India	**Office:** 91-20-25694952 **Mobile:** 91-8378979665 **E-mail:** shilpy.sharma@gmail.com

Curriculum Vitae

SHILPY SHARMA, Ph.D.

(Current as of August 2015)

Personal Details

Full Name: Dr. Shilpy Sharma
Born on: September 16th, 1978
Place of Birth: New Delhi, India
Nationality: Indian
Sex: Female
Marital Status: Married (to Dr. Jeetender Chugh)

Education

- **2001-2007**
  Ph.D. (Biomedical Sciences), Institute of Genomics and Integrative Biology, CSIR, Mall Road, Delhi, India and Dr. B. R. Ambedkar Centre for Biomedical Research, Delhi University North Campus, Delhi; India

  Thesis title : Molecular Studies on Respiratory Disorders
  Supervisor : Dr. Balaram Ghosh

- **1999-2001**
  M.Sc. (Biomedical Sciences) from and Dr. B. R. Ambedkar Centre for Biomedical Research, Delhi University North Campus, Delhi; India with 66% (Aggregate)

- **1996-1999**
  B.Sc. (H) Microbiology from Institute of Home Economics, University of Delhi, Delhi with 60.76% (Aggregate)

- **1995-1996**
  Class XII from CBSE Board with 79.6% (Aggregate) Subjects: Physics, Chemistry, Mathematics, Biology, and English

- **1993-1994**
  Class X from CBSE Board with 75.6% (Aggregate) Subjects: Science, Mathematics, English, Hindi, and Social Science

Professional Experience

- **June 2013 – till date**
  Working as a 'Ramalingaswami Fellow' (Scientist D or Assistant Professor equivalent) at Department of Biotechnology, University of Pune, Pune, Maharashtra, India.

- **Jan 2010 – Feb 2013**
  Worked as a 'Post-Doctoral Fellow' with Prof. Christine E. Canman at Department of Pharmacology, University of Michigan, Ann Arbor, MI, USA.

- **Sep 2008 – Dec 2009** Worked as a 'Post-Doctoral Fellow' with Dr. Robert M. Naclerio and Dr. Jayant M. Pinto at Department of Surgery, The University of Chicago Medical Center, Chicago, IL, USA.

- **Aug 2006 - Sep 2008**
  Worked as a 'Visiting Fellow' with Prof. R. V. Hosur at Department of Chemical Sciences, TIFR, Mumbai, India.

Teaching Experience

Involved in teaching M. Sc. Biotechnology courses for level I and II at Department of Biotechnology, University of Pune, Pune, Maharashtra, India.

- **Winter 2014-15**
  - Semester II: Molecular Biology (4 credits; 20 hours)
  - Semester IV: Genomics and Proteomics (2 credits; 8 hours)
- **Fall 2013**
  - Semester I:
    - Cell Biology (4 credits; 12 hours)
    - Biochemistry (4 credits; 6 hours)
  - Semester III:
    - Fundamentals of Genetic engineering (2 credits; 10 hours)
    - Genetic engineering (4 credits; 20 hours)
    - Advanced Techniques in Biological Chemistry & Molecular Biology (2 credits; 6 hours)
    - Pleuripotent Cell Technologies and Reproduction (2 credits; 4 hours)

Ongoing Funded Projects

- **Department of Biotechnology (DBT) Ramalingaswami fellowship Research Grant**
  Title: Micronutrient Deficiency and Diabetes in the Indian population.
  Duration: 5 years (2013-2018)

Highlighted Research Work

- Serum TGFβ1levels correlate with its specific risk/protective haplotypes in asthma. **Featured as Editor's choice article.** *Nagpal et al. J Aller clin Immunol. 2005; 115: 527-33.*

Publications: Articles in peer-reviewed Journals: Cumulative Impact Factor ~146.5

37. Bhatia P, Raina S, Chugh J and **Sharma S**[$]. miRNAs: Early prognostic biomarkers for Type 2 Diebetes Mellitus? Biomarkers in Medicine. 2015; In press.
([$] Corresponding author)

36. Rajendra R, Bhatia P, Justin A, **Sharma S**, Ballav N. *Homogeneously-Alloyed Gold-Silver Nanoparticles as per Feeding Moles*. **J Phys Chem C. 2015; 119(10): 5604-13.**

35. Watanabe S, Pinto JM, Bashir ME, De Tineo M, Suzaki H, Baroody FM, Naclerio RM, **Sharma S**[$]. *Effect of Prednisone on Nasal Symptoms and Peripheral Blood T-cell Function in Chronic Rhinosinusitis*. **Int Forum Allergy Rhinol. 2014; 4(8):609-16.**
([$] Corresponding author)

34. Tian F, **Sharma S**, Zou J, Lin SY, Wang B, Rezvani K, Wang H, Parvin JD, Ludwig T, Canman CE, Zhang D. *BRCA1 promotes the ubiquitination of PCNA and recruitment of translesion polymerases in response to replication blockade*. **Proc Natl Acad Sci U S A. 2013; 110(33): 13558-63.**

33. **Sharma S**, Helchowsky CM, Canman CE. *The roles of DNA polymerase ζ and the Y family DNA polymerases in promoting or preventing genome instability*. **Mutat Res. 2013; 743-44: 97-110.**

32. **Sharma S**, Canman CE. REV1 and DNA polymerase zeta in DNA interstrand crosslink repair. **Environ Mol Mutagen. 2012; 53(9):725-40.**

31. **Sharma S**, Watanabe S, Sivam A, Wang JH, Neuwirth SJ, Perez RI, De Tineo M, Baroody FM, Naclerio RM, and Pinto JM. *Peripheral blood and tissue T regulatory cells in Chronic Rhinosinusitis.* **Am J Rhinol Allergy. 2012; 26(5):371-9.**

30. Kumar A, **Sharma S**, Agrawal A, and Ghosh B. *Association of -1072 G/A polymorphism in the LTC4S gene with asthma in the Indian population*. **Int Arch Allergy Immunol. 2012;159(3):271-277.**

29. **Sharma S**, Shah NA, Joiner A, Roberts KH, and Canman CE. *DNA polymerase zeta is a major determinant of resistance to platinum-based chemotherapeutic agents.* **Mol Pharmacol. 2012; 81(6):778-787.**

28. **Sharma S**,* Hicks JK,* Chute CL, Brennan JR, Ahn JY, Glover TW, Canman CE. *REV1 and Polymerase ζ Facilitate DNA double strand Break Repair*. **Nucleic Acids Res. 2012; 40(2):682-91.**
(***** Both authors contributed equally)

27. Esteitie R,* Emani J,* **Sharma S**, Suskind DL, Baroody FM. *Effect of fluticasone furoate on Interleukin 6 secretion from adenoid tissues in children with obstructive sleep apnea*. **Arch Otolaryngol Head Neck Surg. 2011;137(6):576-582**.
(***** Both authors contributed equally)

26. **Sharma S**, Vasnani R, deTineo M, Du G, Pinto JM, Baroody FM, Naclerio RM. *Recruitment factors which affect the outcome of a seasonal allergic rhinitis trial*. **Allergy and Asthma Proc. 2011; 32(1):55-63.**

25. **Sharma S**, Rathored J, Ghosh B, Sharma SK. *Genetic polymorphisms in TNF genes and tuberculosis in North Indians*. **BMC Infect Dis. 2010;10(1):165.**

24. Kumar D,* Misra JR,* Kumar A, Chugh J, **Sharma S**, Hosur RV. *NMR-derived solution structure of SUMO from Drosophila melanogaster (dSmt3)*. **Proteins: Structure, Function and Bioinformatics. 2009;75 (4):1046-50.**
(***** Both authors contributed equally)

23. Kumar D, Chugh J, **Sharma S**, Hosur RV. *Conserved structural and dynamics features in the denatured states of drosophila SUMO, human SUMO and Ubiquitin proteins: implications to sequence-folding paradigm*. **Proteins: Structure, Function and Bioinformatics. 2009;76(2):387-402.**

22. Chugh J*, **Sharma S***,Kumar D, Hosur RV. *Comparison of NMR structural and dynamics featured of urea and guanidine-denatured states of GED*. **Archives of Biochem Biophys. 2009; 481(2): 169-76.**
(***** Both authors contributed equally)

21. **Sharma S**, Ghosh B. *Promoter polymorphism in the MS4A2 gene and asthma in the Indian population*. **Int Arch Allergy Immunol. 2009; 149(3): 208-18.**

20. Chugh J*, **Sharma S***, Hosur RV. *Equilibrium Refolding Transitions driven by TFE and by Gdn-HCl dilution are similar in GED: Implications to Sequence - Self-Association Paradigm*. **Biochemistry. 2008; 47(49): 12945-53.**
(***** Both authors contributed equally)

19. Chugh J*, **Sharma S***,Kumar D, Hosur RV. *^{1}H, ^{15}N, ^{13}C resonance assignment of 9.7 M urea-denatured state of the GTPase effector domain (GED) of dynamin*. **Biomol NMR Assign. 2009;3(1):13-6.**
(***** Both authors contributed equally)

18. Chugh J*, **Sharma S***, Dinesh Kumar, Misra JR, Hosur R. *Effect of a single point mutation on the stability, residual structure and dynamics in the denatured state of GED: relevance to self-assembly*. **Biophy Chem. 2008; 137(1): 13-8.**
(***** Both authors contributed equally)

17. Chugh J, **Sharma S**, Hosur RV. *NMR insights into a Mega-Dalton size protein self-assembly*. **Protein Sci. 2008; 17(8): 1319-25. (Accelerated Communication)**

16. Brahmachari SK, …, **Sharma S** et al. *Genetic landscape of the people of India: a canvas for disease gene exploration*. **J Genet. 2008; 87 (1): 3-20.**

15. Sharma M, Batra J, Mabalirajan U, **Sharma S**, Nagarkatti R, Aich J, Sharma SK, Niphadkar PV, Ghosh B. *A genetic variation in Inositol polyphosphate 4 phosphatase A enhances susceptibility to asthma*. **Am J Respir Crit Care Med. 2008; 177:712-9**.

14. **Sharma S**, Ghosh B, Sharma SK. *Association of TNF polymorphisms with Sarcoidosis, its prognosis and TNF-α levels in Asian Indians*. **Clin Exp Immunol. 2008; 151(2):251-9.**

13. Kumar D, Kumar A, Misra JR, Chugh J, **Sharma S**, Hosur RV. *^{1}H, ^{15}N, ^{13}C resonance assignment of the folded and 8 M urea-denatured state of SUMO from Drosophila melanogaster*. **Biomol NMR Assign. 2008; 2(1):13-5**.

12. Chugh J, **Sharma S**, Hosur RV. *Pockets of short range transient order and restricted topological heterogeneity in the guanidine denatured ensemble of GED of Dynamin*. **Biochemistry. 2007; 46:11819-32.**

11. **Sharma S,** Nagpal K, Mabalirajan U, Kumar A, Ghosh B. *Correlation of FCERIB gene haplotypes with histamine release from basophils inatopic asthma*. **J Allergy Clin Immunol. 2006 Oct;118(4):960-3.**

10. **Sharma S,** Sharma A, Kumar S, Sharma SK, Ghosh B. *Association of TNF haplotypes with asthma, serum IgE levels, and correlation with serum TNF-alpha levels*. **Am J Respir Cell Mol Biol. 2006 Oct;35(4):488-95.**

9. Ghosh B, Batra J, **Sharma S**, Kumar A, Sharma M, Chatterjee R, Mabalirajan U. *Genetic components of asthma: current status and future goals*. **Int Review of Asthma 2006; 8 (1):66-88**

8. Brahmachari SK, …, **Sharma S** et al. *The Indian Genome Variation database (IGVdb): a project overview*. **Human Genetics. 2005; 118:1-11.**

7. **Sharma S**, Mann D, Singh TP, Ghosh B. *Lack of association of histamine-N-methyltransferase (HNMT) polymorphisms with asthma in the Indian population*. **J Hum Genet. 2005; 50(12):611-7.**

6. **Sharma S**, Rajan UM, Kumar A, Soni A, Ghosh B. *A novel (TG)n(GA)m repeat polymorphism 254 bp downstream of the mast cell chymase (CMA1) gene is associated with atopic asthma and total serum IgE levels*. **J Hum Genet. 2005;50(6):276-82**.

5. Nagpal K***, Sharma S*,** B-Rao C, Nahid S, Niphadkar PV, Sharma SK, Ghosh B. *TGFbeta1 haplotypes and asthma in Indian populations*. **J Allergy Clin Immunol. 2005;115(3):527-33**.
(***** Both authors contributed equally)

4. Batra J, Sharma M, Chatterjee R, **Sharma S**, Mabalirajan U, Ghosh B. *CCR5 Delta32 deletion and atopic asthma in India*. **Thorax. 2005;60(1):85.**

3. **Sharma S**, Ghosh B. *Association of an intragenic microsatellite marker in the CC16 gene with asthma in the Indian population.* **J Hum Genet. 2004;49(12):677-83**.

2. **Sharma S**, Nagarkatti R, B-Rao C, Niphadkar PV, Vijayan V, Sharma SK, Ghosh B. *A_16_C haplotype in the FcepsilonRIbeta gene confers a higher risk for atopic asthma in the Indian population*. **Clin Genet. 2004;66(5):417-25.**

1. Ghosh B, **Sharma S**, Nagarkatti R. *Genetics of asthma: current research paving the way for development of personalized drugs*. **Indian J Med Res. 2003;117:185-97**.

Patents

- Ghosh B, **Sharma S** and Nagpal K. Genetic variants of human Transforming Growth Factor Beta1 (TGFβ1) haplotypes and prediction of susceptibility for immunological disorders. Filed in **India** (No.233755) granted on 6-4-2009.

- Ghosh B, **Sharma S** and Nagpal K. Genetic variants of human Transforming Growth Factor Beta1 (TGFβ1) haplotypes and prediction of susceptibility for immunological disorders. Filed in **South Africa** (No. 2005/4795) granted on dated 26-4-2006.

Awards & Recognitions

- Awarded "**PhD Guide recognition**" from Pune University, with effect from11th Nov 2013 till 10th Nov 2021 for guiding PhD and M.Phil (research-based) students.

- Awarded "**Ramalingaswami Re-entry Fellowship**" of the Department of Biotechnology for the year 2012-2013, April 2013, India.

- **"2009 Strategic Training in Allergy Research (ST*AR) Program Award"** from the American Academy of Allergy, Asthma and Immunology, March 2009, Washington DC, USA.

- Received "**Travel Award**" for attending "National Symposium on Biophysics: Trends in Biomedical Research (IBS 2007)", February 2007, New Delhi, India.

- Awarded "**G. P. Talwar Young Scientist Award**" by "Indian Immunological Society" for the year 2005.

- Qualified **All India CSIR-UGC Junior Research Fellowship** Examination, 2001 (Council for Scientific and Industrial Research, Ministry of Human Resource Development, Government of India).

- Awarded **CSIR-Catch them Young fellowship** for the year 2000-2001 during the second year of M.Sc. at ACBR, Delhi University.

- Awarded **CSIR-Catch them Young fellowship** for the year 1999-2000 during the first year of M.Sc. at ACBR, Delhi University.

Conferences and Meetings

- Gorka Alkorta-Aranburu, **Shilpy Sharma**, Robert M. Naclerio, Carole Ober, Jayant M. Pinto. **European Chemoreception Research Organization, Augyst 26-29, 2013, Leuven – Belgium**. **(CHEMICAL SENSES 39 (1), 87-87)** Presenter: Jayant M. Pinto

- **Hands-on Workshop on Proteomics, March 12-16, 2013; Institute of Genomics and Integrative Biology (IGIB), Delhi.**

- **Genomeet 2013 – Vitamin B12 and One carbon metabolism in Health and Disease, March 8-10, 2013; Institute of Genomics and Integrative Biology (IGIB), Delhi.**

- **Shilpy Sharma** and Christine E. Canman. REV1, DNA polymerase ζ and the fanconi anemia proteins FANCD2 and FANCI function together during repair. **American Association for Cancer Research (AACR) Annual Meeting, March 31 - April 4, 2012, Chicago, Illinois. (Poster)**

- So Watanabe, X Jiang, **Shilpy Sharma**, J Lane, Marcella DeTineo, T Muninopasa, Mohamed Bashir, Nedra Joyner, Fuad M. Baroody, Robert M. Naclerio, Jayant M. Pinto. Vitamin D Modulates Immune Defense Molecules in Patients with Chronic Rhinosinusitis. American Academy of Allergy Asthma and Immunology (AAAAI) Annual Meeting, March 2012, Orlando, Florida. (**J Allergy Clin Immunol. 2012; 129(2): AB44**) Presenter: So Watanabe

- **Shilpy Sharma** and Christine E. Canman. REV1, DNA Polymerase ζ and the Fanconi anemia protein FANCD2 function together during DNA repair. **23rd Annual Cancer Center Research Fall Symposium, November 12, 2011, University of Michigan, Michigan. (Poster)**

- **Shilpy Sharma** and Christine E. Canman. REV1, DNA Polymerase ζ and the Fanconi anemia protein FANCD2 function together during DNA repair. **13th Annual Midwest DNA Repair Symposium, May 2011, University of Toledo, Toledo. (Poster)**

- Caroline A. Motika, **Shilpy Sharma**, Lucille A. Lester, Carole Ober. Sex-Specific Rise in Asthma Prevalence in a U.S. Farming Population. American Thoracic Society Meeting, May 2011, Denver, Colorado. (**Am J Respir Crit Care Med. 2011; 183: A4754**) Presenter: Caroline A. Motika

- So Watanabe, **Shilpy Sharma**, Mohamed E. Bashir, Marcella DeTineo, Fuad M. Baroody, Jayant M. Pinto, Robert M. Naclerio. Systemic corticosteroids reduce peripheral blood regulatory T cells in Chronic Rhinosinusitis (CRS): A controlled trial. **American Academy of Allergy Asthma and Immunology (AAAAI) Annual Meeting, March 2011, San Francisco, California**. (**J Allergy Clin Immunol. 2011; 127(2): AB122**) Presenter: So Watanabe

- **Shilpy Sharma**, J. Kevin Hicks, Colleen L. Chute, Julia R. Brennan, Thomas G. Glover and Christine E. Canman. REV1, DNA Polymerase ζ and the FANCD2 protein cooperate to promote homologous recombination repair. **Keystone Symposium on DNA Replication and Recombination, Feb 27 - Mar 4, 2011, Keystone Resort in Keystone, Colorado. (NOT ATTENDED)**

- Shilpy Sharma, J. Kevin Hicks, Colleen L. Chute, Julia R. Brennan, Thomas G. Glover and **Christine E. Canman**. REV1, DNA Polymerase ζ and the FANCD2 protein cooperate to promote homologous recombination repair. **Gordon Research conference on DNA Repair, February 2011, Ventura, California. Presenter:** Christine E. Canman

- **Shilpy Sharma**, J. Kevin Hicks, Colleen L. Chute, Julia R. Brennan, Thomas G. Glover and Christine E. Canman. *A role for DNA polymerase Zeta (ζ) in repairing DNA double stranded breaks*. **22nd Annual Cancer Center Research Fall Symposium, November 2010, University of Michigan, Michigan. (Poster)**

- J. Kevin Hicks, Colleen L. Chute, **Shilpy Sharma**, Julia R. Brennan, Thomas G. Glover and Christine E. Canman. *A role for DNA polymerase Zeta (ζ) in repairing DNA double stranded breaks.* **12th Annual Midwest DNA Repair Symposium, May 2010, Louisville. (Poster** and Oral: Speaker Christine E. Canman received the best oral presentation award**)**

- **Shilpy Sharma**, Anita Sivam, S. James Neuwirth, Rossane Perez, Marcella De Tineo, Fuad Baroody, Robert Naclerio, and Jayant M. Pinto. The Percentages of Peripheral Blood CD4+ CD25+ FoxP3+ T regulatory (Treg) Cells are Lower in Subjects with Chronic Rhinosinusitis Compared to Healthy Controls. American Academy of Allergy Asthma and Immunology (AAAAI) Annual Meeting, February 2010, New Orleans. (**J Allergy Clin Immunol. 2010; 125(2): AB62**) **(Oral)**

- Fuad M. Baroody, **Shilpy Sharma**, Raj Vasnani, Marcella De Tineo, Jayant M. Pinto and Robert M. Naclerio. Recruitment Factors Which Affect the Outcome of a Seasonal Allergic Rhinitis Trial. American Academy of Allergy Asthma and Immunology (AAAAI) Annual Meeting, February 2010, New Orleans. (**J Allergy Clin Immunol. 2010; 125(2): AB102**) **(Poster)**

- **Shilpy Sharma**, Anita Sivam, Marcella De Tineo, Fuad M. Baroody, Robert M. Naclerio, and Jayant M. Pinto. *Lower Peripheral Blood T regulatory (Treg) Cells in Subjects with Chronic Rhinosinusitis Compared to Healthy Controls.* **Autumn Immunology Conference Workshop, November 2009, Chicago. (oral and poster)**

- **Shilpy Sharma**, Anita Sivam, Robert M. Naclerio, Carole Ober and Jayant M. Pinto. *Genetic and immunologic approaches to understanding Chronic Rhinosinusitis in humans.* **1st Annual NorthShore-University of Chicago Joint Symposium, November 2009, Chicago. (Poster)**

- **Shilpy Sharma**, Amit Sharma and Balaram Ghosh. TGFβ1 gene variants and atopic asthma in the Indian population. American Academy of Allergy Asthma and Immunology (AAAAI) Annual Meeting, March 2009, Washington DC. (J Allergy Clin Immunol. 2009; 123(2): S164). **(Poster)**

- Jeetender Chugh, Dinesh Kumar, **Shilpy Sharma**, Jyoti Ranjan Misra, and Ramakrishna V. Hosur. *Dynamics perturbations caused by single point mutations in the GED of Dynamin influence its association characteristics.* **Special symposium on Advanced MR applications and 14th NMRS meeting, January 2008, New Delhi. (Poster)**

- Jeetender Chugh, Dinesh Kumar, **Shilpy Sharma**, Rohit Mittal and Ramakrishna V. Hosur. *Single Point Mutations in the GED of Dynamin Cause Dynamic Perturbations Leading to Changes in its Association Characteristics.* **National Symposium on Biophysics: Trends in Biomedical Research (IBS 2007), February 2007, New Delhi. (Oral)**

- **Shilpy Sharma,** Kamalpreet Nagpal, Chandrika B Rao, Sanober Nahid, Pramod V.Niphadkar; Surendra K Sharma and B. Ghosh. *Novel Risk and Protective haplotypes in the TGFβ1 gene and Asthma.* **32nd Indian Immunological Society Conference, November 2005, Chandigarh. (Oral)**

- **Shilpy Sharma,** Rana Nagarkatti, Chandrika B-Rao, Pramod V. Niphadkar, V Vijayan, Surendra K. Sharma and Balaram Ghosh. *A_16_C Haplotype in FcεRIβ gene Confers Higher Risk for Atopic Asthma in Indian Population.* **31th Indian Immunological Society Conference, December 2004, Chennai. (Oral)**

- **Shilpy Sharma** and Balaram Ghosh. *Association of an intragenic microsatellite marker in CC16 gene with asthma in Indian population*. **International conference on Chemistry Biology Interphase Synergistic New Frontiers, November 2004. (Poster)**

- **Shilpy Sharma ,** Kamalpreet Nagpal, Chandrika B Rao, Sanober Nahid, Pramod V.Niphadkar; Surendra K Sharma and B. Ghosh. *Transforming Growth factor Beta-1 (TGFβ-1) Haplotype and Asthma in Indian Population.* **2nd National Biotech Conference, October 2004. (Oral)**

- Jyotsna Batra, Mamta Sharma, Rajshekhar Chatterjee, **Shilpy Sharma,** U Mabalirajan and Balaram Ghosh, *Role of CCR5Δ32 mutation in asthma predisposition.* **2nd National Biotech Conference, October 2004. Presenter:** Jyotsna Batra

- **Shilpy Sharma**, Rana Nagarkatti, C. B-Rao, P. V. Niphadkar, S. K. Sharma, V. K. Vijayan and Balaram Ghosh**.** *Genetic Association of FcεRIβ And Bronchial Asthma In Indian Population*. **10th FAOBMB Congress, December 2003, Bangalore. (Poster)**

- Rajshekhar Chatterjee, **Shilpy Sharma**, Jyotsna Batra**,** P.V.Niphadkar, Sangeeta Goswami, Brajen Lahkar, N.N.Dutta and Balaram Ghosh. *Interleukin-10 as a candidate gene for atopic asthma in Indian population.* **30th Indian Immunological Society Conference, November 2003, Lucknow, India. Presenter:** Rajshekhar Chatterjee

- **Shilpy Sharma**, Rana Nagarkatti, and Balaram Ghosh**.** *Genetic Association of FcεRIβ And Bronchial Asthma In Indian Population*. **4th Annual symposium on Frontiers in Biomedical Research, April 2003, ACBR, Delhi. (Poster)**

- **Shilpy Sharma,** and Balaram Ghosh. *Use and Disuse of Single Nucleotide Polymorphisms (SNPs)*. **Workshop on SNPs, December 2002, IGIB, Delhi.**

Technical Expertise

- DNA, RNA and protein isolation from mammalian cells; Polymerase chain reaction (PCR) standardization; PCR amplification and product purification; PCR primer design; Allele-specific PCR; DNA Sequencing and analysis; GeneScan; Mini-sequencing (SNaPSHOT^{TM}); iPLEX (Sequenom); Genome-wide scan; RFLP; Semi-quantitative RT-PCR; Real time PCR; Agarose Gel Electophoresis

- Operational knowledge of ABI 3100 & ABI 3130xl sequencer after getting an official training from Genetic Analysis Laboratory, Labindia on 28th to 30th June 2004.

- Biochemical assays (e.g., Histamine release assay from leukocytes); Flow cytometry; Identification of gaps, breaks and radials in metaphase spreads (used for identification of certain diseases like Fanconi anemia in humans).

- Trained in performing iTRAQ experiments, operating LC/MS Orbitrap instrument (from Thermo) and Triple TOF Mass spectrometer (from AB Sciex), analyzing mass spectrometer data using Protein Pilot software.

- Expression and purification of recombinant proteins with affinity tag and ion exchange chromatography from bacterial cells; Plasmid preparation and isolation; Transformation; Cloning; Competent cell preparation; Site-directed Mutagenesis.

- Trained in various biophysical techniques like Circular Dichroism; Fluorescence measurements (Steady-state); Dynamic Light Scattering; Capillary Electrophoresis; Differential Scanning Calorimetry; Isothermal Calorimetry; Size Exclusion Chromatography; 2D and 3D NMR analysis; etc.

- Cell and tissue culture techniques for human transformed cells and lymphocytes; siRNA mediated gene silencing; Transfection; Transduction; Lentiviral production; Fluorescent microscopy; Confocal microscopy, etc.

- Polyacrylamide gel electrophoresis; Protein estimation; Protein purification and characterization; ELISA; Immunohistochemistry; Cytokine and chemokine bead kit assays; Nuclear and cytoplasmic extract preparation; Electrophoretic mobility shift assay (EMSA); Western blotting; Immunoprecipitation; Immunofluorescence.

- Well-versed with the usage of Macintosh / PC based and other softwares such as JMP, DNAStar, Haploview, FBAT, TDT, Sequence Navigator, Genotyper and GeneScan (Sequence analysis, Primer Designing, Sequencing and gel based fragment analysis softwares). I have also used web-based databases for sequence analysis such as BLAST, Entrez (NCBI website) with experience in usage of Internet and Intranets. In-silico tools such as Repeat Masker, Transcription Element Search System, Enhancers and splice site predictions for the functional characterization of genetic variations has always fascinated me for my research.

Other Involvements

- Coordinated the Ph.D. Entrance test (Paper II) for Biotechnology, University of Pune for the year 2013 and 2015. Also, involved as an examiner and paper setter for the same.
- Coordinated the Molecular biology (BT21; M.Sc. Semester III) for M.Sc. Biotechnology programme, Pune University.

Memberships

- Associate Member – American Association for Cancer Research (2011 onwards)

- Lifetime membership – Indian Immunology Society, India (2005 onwards)

Invited Talks

- **'Functional implication of genetic polymorphisms in asthma candidate genes'** at the University of Chicago on April 24, 2008.

- '**NMR insights into a large megadalton-sized protein self-assembly**' at Dr. B.R. Ambedkar Center for Biomedical Research on August 28, 2008.

- **'REV1 and DNA Polymerase ζ maintain genomic stability by promoting DNA repair'** at Center for Excellence in Basic Sciences, Mumbai on June 19, 2012.

Reviewer

- Clinical and Experimental Immunology (2010 onwards)
- International Journal of Genetics and Molecular Biology (2011 onwards)
- International Journal of Advanced Biotechnology & Bioinformatics (2012 onwards)
- Plos One (2015 onwards)