

# SUTAPA SAHA

## Contact Information:

Assistant Professor at the Department of Molecular Biology, PRESIDENCY UNIVERSITY,  
86/1 College Street, Kolkata-700073. INDIA.

Phone: +91-33-2219 863;

+91-33-9831103409 (mobile)

E-mail ID: [sutapa.molbio@presiuniv.ac.in](mailto:sutapa.molbio@presiuniv.ac.in) ; [sutapakmail@gmail.com](mailto:sutapakmail@gmail.com)

## Research Interests:

- Molecular mechanisms of genetic/epigenetic regulation in hematopoiesis, leukemogenesis, trans-differentiation or lineage switch, & tumour reversion;
- Mechanism of circadian dysfunction in leukemia;
- Biomedical applications of Proteomics and Biological Mass Spectrometry, etc.

## Education:

- 2006-2012:                **Ph.D.** from Structural Genomics Division, Saha Institute of Nuclear Physics, Kolkata, India.  
Thesis Title - "Proteomic Study in a Hematological Malignancy: B-cell Acute Lymphoblastic Leukemia".
- 2004-2005:                **Post-M.Sc. Associateship** course in Biophysical Sciences, with 76.5% marks from Saha Institute of Nuclear Physics, Kolkata, India.
- 2002-2004:                **M.Sc.** in Biophysics, Molecular Biology and Genetics with 74% marks from University of Calcutta, India.
- 1999-2002:                **B.Sc.** with Physiology (major), Physics and Chemistry (minors), with 63.5% marks from Presidency College, University of Calcutta, India.
- 1998:                        **All India Senior School Certificate Examination** with 67.2% of marks from Central Board of Secondary Education
- 1996:                        **All India Secondary School Examination** with 79.4% of marks from Central Board of Secondary Education

## Research Skills:

### **Proteomics & Mass Spectrometry**

Proficient in **Two-Dimensional Gel Electrophoresis, Liquid Phase Iso-Electric Focussing** or **Free Flow Electrophoresis (FFE)**, **Differential In Gel Electrophoresis (DIGE)** and **MALDI TOF/TOF tandem mass spectrometry**; Experienced in using **PDQuest, DeCyder, Mascot & GPS Explorer** softwares; Familiar with **iTRAQ Technology** for Quantitative Proteomics

### **Multiparametric Flow Cytometry**

Expertise in Immunophenotyping using **Multiparametric Flow Cytometry**, and Fluorescence-activated cell sorting (**FACS**)

### **Protein Purification and Liquid Chromatography**

Competent in protein purification from complex mixtures using affinity chromatography, size exclusion chromatography and ion-exchange chromatography

### **Electron Microscopy**

Familiar with preparation and staining of sample grids for Scanning & Transmission Electron Microscopy (**SEM, TEM**)

### **Cell Culture & Molecular Biology tools**

Thorough practical knowledge of **Mammalian and Bacterial Cell culture**, Immuno-magnetic cell sorting (**MACS**) from Clinical Blood Samples, **Genetic Subtyping of HIV-I using Heteroduplex Mobility Assay**, Polymerase Chain Reaction (**PCR**), **Western Blot**; Familiar with **Quantitative PCR, Microarray technique and Confocal Microscopy**

### **Experimental neuro-muscular physiology with mice and toad**

Experienced in Kymographic recording of muscle twitch, heart beat and intestinal movements of mice and toad

### **Publications:**

- **Fractional precipitation of plasma proteome by ammonium sulphate: case studies in leukemia and thalassemia.**  
S. Saha, S. Halder, D. Bhattacharya, D. Banerjee, A. Chakrabarti, *Journal of Proteomics and Bioinformatics*, 2012, 5, 163-171. (<http://www.omicsonline.org/0974-276X/JPB-05-163.php?aid=7974>)
- **Elevated levels of redox regulators, membrane bound globin chains and cytoskeletal protein fragments in hereditary spherocytosis erythrocyte proteome.**  
S. Saha, R. Ramanathan, S. Basu, D. Banerjee, A. Chakrabarti, *European Journal of Haematology*, 2011, 87, 259-266. (<http://www.ncbi.nlm.nih.gov/pubmed/21575061>)
- **Differential expression of red cell proteins in hemoglobinopathy.**  
A. Chakrabarti, D. Bhattacharya, A. Basu, S. Basu, S. Saha, S. Halder, *Proteomics-Clinical Applications*, 2011, 5, 98-108. (<http://www.ncbi.nlm.nih.gov/pubmed/21246741>)
- **Differential regulation of redox proteins and chaperones in HbE $\beta$ -thalassemia erythrocyte proteome.**  
D. Bhattacharya, S. Saha, S. Basu, S. Chakravarty, A. Chakravarty, D. Banerjee, A. Chakrabarti, *Proteomics-Clinical Applications*, 2010, 4, 480-488. (<http://www.ncbi.nlm.nih.gov/pubmed/21137065>)

- **Oxidative crosslinking, spectrin and membrane interactions of hemoglobin mixtures in HbEbeta-thalassemia.**  
A. Chakrabarti, P. Datta, D. Bhattacharya, S. Basu, **S. Saha**, *Hematology*, 2008, 13, 361-368.  
(<http://www.ncbi.nlm.nih.gov/pubmed/19055866>)
- **Porous red cell ultrastructure and loss of membrane asymmetry in a novel case of hemolytic anemia.**  
D. Banerjee, **S. Saha**, S. Basu, A. Chakrabarti, *European Journal of Haematology*, 2008, 81, 399-402.  
(<http://www.ncbi.nlm.nih.gov/pubmed/18778368>)
- **‘Salting-out’ the hidden plasma proteome.**  
**S. Saha**, A. Chakrabarti, *Proceedings of the 11th ISMAS Triennial International Conference on Mass Spectrometry*, Hyderabad, 2009, IT-5, 65-70.
- **Enunciating de-regulations of malignant B-lymphoblast proteome in B-cell acute lymphoblastic leukemia and insights to prognostic stratification.**  
**S.Saha**, S. Banerjee, D. Banerjee, S. Chandra, A. Chakrabarti, *article communicated*.

#### **Presentation and Participation in Seminars and workshops:**

- Poster presentation on ‘De-regulations of Malignant B-lymphoblast Proteome in B-cell Acute Lymphoblastic Leukemia: Insights to Prognostic Stratification’ at the **HUPO (Human Proteome Organization) 11<sup>th</sup> Annual World Congress**, Hynes Convention Centre, Boston, Massachusetts, USA, September 9-13, 2012.
- Poster presentation on ‘Enunciating de-regulations of CD19+ cell proteome and interactome in B-cell acute lymphoblastic leukemia’ at the **International Conference on Omics meets Disease**, Saha Institute of Nuclear Physics, Kolkata, December 15-18, 2011.
- Paper presentation on ‘Proteomics of CD19+ cells in pre B-ALL’ at the **International Symposium on Modern Biology in 21<sup>st</sup> century**, Department of Biophysics & Molecular Biology, University of Calcutta, Kolkata, December 7-8, 2010.
- Participated in **PS(I) Seminar** on ‘Indian Proteomics: Users perspective’, Saha Institute of Nuclear Physics, Kolkata, July 2-3, 2010.
- Oral presentation on ‘Proteomics of CD19+ B cells in pre B-ALL’ and Poster presentation on ‘Identification of disease regulated blood plasma proteins in B-ALL’ at the **5th AOHUPO Congress, 14th ADNAT Convention & 1st PSI Conference of New Perspectives in Proteome Research**, Centre for Cellular & Molecular Biology, Hyderabad, February 21-25, 2010.
- Poster presentation on ‘Clinical Proteomics in Blood Disorders’ at the **International Symposium on Complex Diseases: Approaches to Gene Identification and Therapeutic Management**, Saha Institute of Nuclear Physics, Kolkata, September 25-26, 2008.
- Oral presentation on ‘Proteomics in the study of hematological malignancies’ at **CME 2007 Scientific Meet on Haemato-Oncology**, Netaji Subhash Chandra Bose Cancer Research Institute, Taj Bengal, Kolkata, September 8-9, 2007.
- Attended a 5-days **Workshop on iTRAQ Technology for Quantitative Proteomics**, conducted by scientists from Applied Biosystems-USA at the Centre for Cell and Molecular Biology, Hyderabad, India, August 27-29, 2007

- Oral presentation on ‘Proteomics in the study of hematological malignancies’ at the **47th Annual Conference of the Indian Society of Haematology & Transfusion Medicine**, Guwahati Medical College, Guwahati, November 24-26, 2006.

### **Academic Honors / Fellowships:**

- Selected as **Junior Research Fellow** in Biophysical Sciences Group, **Saha Institute of Nuclear Physics**, Kolkata, India in 2004.
- Qualified in **National Eligibility Test (NET)**, India, as UGC-JRF in 2003 and as CSIR-JRF in 2004; secured place among **top 20% awardees in Life Sciences** both times.

### **Personal Information:**

Date of Birth: 12<sup>th</sup> February 1981.  
Nationality: Indian.  
Languages known: English, Hindi and Bengali  
Hobbies: Sports & Fitness, Drawing & Painting, Photography, Music.

### **References:**

- **Prof. Abhijit Chakrabarti**  
Structural Genomics Division, Saha Institute of Nuclear Physics,  
1/AF, Bidhannagar, Kolkata- 700064, India  
E-mail ID: abhijit.chakrabarti@saha.ac.in Phone: +91 33 9831055624  
([http://www.saha.ac.in/sg/www/home\\_ac.html](http://www.saha.ac.in/sg/www/home_ac.html))
- **Prof. Subrata Banerjee**  
Structural Genomics Division, Saha Institute of Nuclear Physics,  
1/AF, Bidhannagar, Kolkata- 700064, India  
E-mail ID: subrata.banerjee@saha.ac.in Phone: +91 33 9830053408  
([http://www.saha.ac.in/sg/www/home\\_sb.html](http://www.saha.ac.in/sg/www/home_sb.html))
- **Prof. Chanchal DasGupta**  
Department of Biophysics, Molecular Biology & Genetics, University of Calcutta,  
92, APC Road, Kolkata - 700 009, India  
Email: chanchaldg2000@yahoo.com Phone: +91 33 9007889857  
(<http://www.iiserkol.ac.in/component/sobipro/?pid=54&sid=137:Chanchal-DasGupta&Itemid=538>)