

**Abul Hasan Sardar**  
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## **EDUCATION**

### **PhD in Microbiology, 2015**

University of Calcutta, Department of Microbiology, Kolkata, India

### **Master of Science in Microbiology, December, 2004**

University of Kalyani, Kalyani, India

### **Bachelor of Science in Microbiology, January, 2002**

University of Calcutta, Kolkata, India

## **RESEARH EXPERIENCE**

### **Albany Medical Center, USA**

Post Doctoral Fellow

January'2016-September'2016

Supervisor: Prof. Edmund J. Gosselin

Involved in development of recombinant peptide vaccine against deadly BSL-3 pathogen *Francisella tularencis*. In this study a recombinant protein molecule was generated fused with mannose binding protein 2 (MBL-2) and anti-hFcγ receptor. Then the protection efficacy of the vaccine was studied in the murine model using BSL-3 facility.

### **Indian Institute of Chemical Biology, Kolkata, India**

Research Associate

2015

Supervisor: Dr. Syamal Roy

Investigating the microRNA mediated immune regulation of host cell during *Leishmania donovani* infection. In this study first miRNA profiling of the *Leishmania donovani* infected vs. uninfected PECs (peritoneal exudate cells) from BALB/c mice was performed. Several miRNAs were found to be up-regulated among which three miRNAs were selected for further studies i.e. miR-30c, miR-33 and miR-155. We are now exploring how miR-155 regulates IFN-γ-induced autophagy of the parasites through JAK-STAT signaling during *L. donovani* infection in mice model. We are also exploring how miR-30c and miR-33 regulate cholesterol and triglyceride homeostasis.

### **Rajendra Memorial Research Institute of Medical Sciences, India**

Senior Research Fellow

2010 – 2014

Supervisor: Dr. Pradeep Das

Contributed to and led multiple research programs like identification of differentially expressed proteins of *Leishmania donovani* (causative agent of visceral leishmaniasis) under exposure to different stress environments using iTRAQ reagents and subsequent mass spectroscopy, study the mechanism of stress management, functional characterization of two proteins i.e. argininosuccinate synthase and peroxiredoxin by generating knock-out *L. donovani* strain,

Actively engaged in another study to develop DNA based vaccine against VL (under LEISHDNAVAX project funded by European Commission). In this study five Leishmanial antigens were selected to study the T cell immunogenicity in natural infection. A peptide pool array assay was developed to analyze large numbers of peptides with limited numbers of peripheral blood T cells from VL patients. T cells of the donors were tested in enzyme-linked immunospot (ELISpot) assays for interferon-g (IFN-g) producing cells induced by the peptide pools.

### **McGill University, Institute of Parasitology, Macdonald campus, Canada**

Graduate Research Trainee

15<sup>th</sup> November'2011 to 15<sup>th</sup> May'2012

Supervisor: Prof. Armando Jardim

Trained regarding generation of knock-out strain of *L. donovani* for specific gene by means of homologous recombination, characterization of the knock-out *L. donovani* strain in animal models.

### **Rajendra Memorial Research Institute of Medical Sciences, India**

Research Assistant

2008-2010

Supervisor: Dr. Pradeep Das

Contributed in the study for evaluation of rapid diagnostic test for detection visceral leishmaniasis and in the study of anti-leishmanial activity of antimicrobial peptide from sand-fly origin.

### **GRANTS RECEIVED:**

SL. No.	Name of the Funding Agency	Duration (Years)	Funding amounts	Status	Collaboration
1.	DST-SERB	3	18 lakhs 30 thousand	Completed	IICB
2.	DST-West Bengal	5	25 lakhs	Completed	Other Biological Science Departments of Sarsuna College

### **FUTURE RESEARCH PLAN:-**

The triglyceridemia is very alarming factors in several diseases including atherosclerosis and other heart diseases. In patient infected with Visceral Leishmania the Triglyceride and VLDL level increased. Several MicroRNAs are involved to control this increased level of triglycerides and VLDLs. My future study will focus on the mechanism of MicroRNA regulation of Triglycerides and VLDLs in different diseases.

My future research plan also include the study on bioremediation of E-waste, Plastic waste, tannery waste using microbes.

### **TEACHING EXPERINCE:-**

Assistant Professor

2016-till date

Department of Microbiology

Sarsuna College (Affiliated to University of Calcutta)

Kolkata-700061, West Bengal.

### **AREA OF TEACHING INTEREST:**

**General Microbiology, Molecular Biology, Recombinant DNA technology, Biochemistry and Biophysical Chemistry.**

### **TECHNICAL SKILLS**

**Immunology:** Handling mice models (C57BL/6 and BALB/c) and different macrophage cell lines (J774, THP-1), ELISA, ELISPOT, working with PBMCs.

**Microscopy:** Fluorescence microscopy; Phase contrast microscopy.

**Molecular Biology:** Microarray; Vector construction and cloning of gene; Isolation DNA and RNA from protozoa and other types of cells; Plasmid DNA isolation; Transformation of bacteria; Expression of recombinant protein; Site-directed mutagenesis, generation of knock-out strains, Western blot; Northern Blot; Southern Blot; PCR; Semiquantitative PCR; Realtime PCR; DNA sequencing using automated DNA sequencer; Transfection by electroporation in Bacteria and Protozoa and other commonly used Molecular Biology techniques.

**Biochemistry:** Protein isolation and purification, 2-D Gel Electrophoresis, Quantitative proteomics (Mass Spectroscopy, large scale proteome data analysis), Enzyme assay, HPLC, FPLC, SDS and native polyacrylamide gel electrophoresis.

**Spectroscopy:** Ultraviolet, fluorescence, visible absorption; Spectrofluorimetry.

### **List of Peer Reviewed Scholarly Publications (with latest impact factor and citation):**

1. **A. H. Sardar**, S. Kumar, A. Kumar, B. Purkait, S. Das, A. Sen, M. Kumar, K. K. Sinha, D. Singh, A. Equbal, V. Ali, P. Das. Proteome changes associated with *Leishmania donovani* adaptation to oxidative and nitrosative stress. *Journal of Proteomics*. 81 (2013) 185-189. **Impact factor-3.986, Citation-40.**
2. **A. H. Sardar**, S. Das, S. Agnihorti, M. Kumar, A. K. Ghosh, K. Abhishek, A. Kumar, B. Purkait, M.Y. Ansari, P. Das. Spinigerin induces apoptotic like cell death in a caspase independent manner in *Leishmania donovani*. *Experimental Parasitology*. 135 (2013) 715–725. **Impact factor-1.789, Citation-20.**
3. A. K. Ghosh, **A. H. Sardar**, A. Mandal, S. Saini, K. Abhishek, A. Kumar, B. Purkait, R. Singh, S. Das, R. Mukhopadhyay, S. Roy and P. Das. Metabolic reconfiguration of the central glucose metabolism: a crucial strategy of *Leishmania donovani* for its survival during oxidative stress”, *FASEB J*. **29**, (2015) doi: 10.1096/fj.14-258624. **Impact factor-5.299, Citation-19.**
4. K. Abhishek, **A. H. Sardar**, S. Das, A. Kumar, A. K. Ghosh, R. Singh, S. Saini, A. Mandal, S. Verma, A. Kumar, B. Purkait, M. R. Dikhit and P. Das. Phosphorylation of translation initiation factor 2 alpha in *Leishmaniadonovani* under stress is necessary for parasite survival. *Molecular and Cellular Biology*, 2016, doi:10.1128/MCB.00344-16. **Impact factor-4.427, Citation-6.**
5. A. K. Ghosh, S. Saini, S. Das, A. Mandal, **A. H. Sardar**, M. Y. Ansari, K. Abhishek, A. Kumar, R. Singh, S. Verma, A. Equbal, V. Ali, P. Das. Glucose-6-phosphate dehydrogenase and Trypanothione reductase interaction protects *Leishmania donovani* from metalloid mediated oxidative Stress. *Free Radical Biology and Medicine*, 106 (2017) 10–23. **Impact factor-5.784, Citation-3.**
6. B. Purkait, A. Kumar, N. Nandi, **A. H. Sardar**, S. Das, S. Kumar, K. Pandey, V. N. Ravidas, M. Kumar, T. De, D. Singh and P. Das. Mechanism of Amphotericin B resistance in clinical isolates of *Leishmania donovani*. *Antimicrobial Agents and Chemotherapy*. 56 (2) (2012) 1031-41. **Impact factor-4.415, Citation-154.**

7. A. Kumar, S. Das, B. Purkait, **A. H. Sardar**, A. K. Ghosh, M. R. Dikshit, K. Abhishek. Ascorbate Peroxidase: a key molecule regulating the Amphotericin B resistance in clinical isolates of *Leishmania donovani*. *Antimicrobial Agents and Chemotherapy*. 58(10) (2014) 6172-6184. **Impact factor-4.415, Citation-18.**
8. B. Purkait, R. Sing, K. Wasnik, S. Das, A. Kumar, M. Paine, M. R. Dikshit, **A. H. Sardar**, A. K. Ghosh and P. Das. Up-regulation of Silent Information Regulator 2 is associated with Amphotericin B resistance in clinical isolates of *Leishmania donovani*. *J Antimicrob Chemother*, 2015, doi:10.1093/jac/dku534. **Impact factor-4.919, Citation-17.**
9. A. Equbal, S. S. Suman, S. Anwar, K. P. Singh, A. Zaidi, **A. H. Sardar**, P. Das and Vahab Ali. Stage-Dependent Expression and Up-Regulation of Trypanothione Synthetase in Amphotericin B Resistant *Leishmania donovani*". *PLoS ONE* 9(6): e97600, 2014 doi:10.1371/journal.pone.0097600. **Impact factor-4.411, Citation-13.**
10. A. Mandal, S. Das, S. Roy, A. K. Ghosh, **A. H. Sardar**, S. Verma, S. Saini, R. Singh, K. Abhishek, A. Kumar, C. Mandal, P. Das. Deprivation of L-Arginine Induces Oxidative Stress Mediated Apoptosis in *Leishmania donovani* Promastigotes: Contribution of the Polyamine Pathway. *PLoSNTD*. 2016, doi.org/10.1371/journal.pntd.0004373. **Impact factor-4.45, Citation-14.**
11. S. Kumar, R. Banerjee, N. Nandi, **A. H. Sardar** and P. Das. Anokis Potential of *Entameba histolytica* Secretary Proteins Cysteine proteases: Evidence of Contact independent Host Cell Death. *Microbial Pathogenesis*. 52 (1) (2012) 69-76. **Impact factor-1.795, Citation-5.**
12. D. Singh, K. Pandey, V. N. R. Das, S. Das, N. Verma, A. Ranjan, S. C. Lal, R. K. Topno, S. K. Singh, R. B. Verma, A. Kumar, **A. H. Sardar**, B. Purkait and P. Das. Evaluation of rk-39 strip test using urine for diagnosis of Visceral Leishmaniasis in an endemic region of India. *Am. J. Trop. Med. Hyg.* 88(2) (2013) 222-226. **Impact factor-2.740, Citation-17.**
13. Das S, **Sardar AH** , Abhishek K , Kumar A , Rabidas VN , Das P . Cathelicidin augments VDR-dependent anti-leishmanial immune response in Indian Post-Kala-Azar Dermal Leishmaniasis. *International Immuno-pharmacology*. 50:130-138. (2017) doi: 10.1016/j.intimp.2017.06.010. **Impact factor-3.118 , Citation-0.**
14. F. Jamal, P. Shivam, S. Kumari, M. K. Singh, **A. H. Sardar**, Pushpanjali, S. Murugesan, S. Narayan, A.K. Gupta, K. Pandey, V. N. R. Das, V. Ali, S. Bimal, P. Das, S. K. Singh. Identification of *Leishmania donovani* antigen in circulating immune complexes of visceral leishmaniasis subjects for diagnosis. *PLoS ONE*. (2017) 12(8):e0182474. <https://doi.org/10.1371/journal.pone.0182474>. **Impact factor- 4.411, Citation-5.**
15. Abhishek K, Kumar A, **Sardar AH**, Vijayakumar S, Dikhit MR, Kumar A, Kumar V, Das S, Das P. Differential translational regulation of host exosomal proteins play key role in immunomodulation in antimony resistance in Visceral Leishmaniasis: A proteomic profiling study. *Acta Trop*. 2022 Feb;226:106268. doi: 10.1016/j.actatropica.2021.106268. **Impact facor-3.222. Citation-0.**
16. Datta, S., Chauhan, D. A., Ranjan, A., Tuli, H. S., Dhama, K., **Sardar, A. H.**, & Jindal, T. (2022). Plastic Waste in India: overview, impact, and measures to mitigate: Review. *Journal of Experimental Biology and Agricultural Sciences*, 10(3), 456–473. [https://doi.org/10.18006/2022.10\(3\).456.473](https://doi.org/10.18006/2022.10(3).456.473). **Impact facor-0.46, Citation-0.**

17. Datta, S., Chauhan, A., Ranjan, A., **Sardar, A. H.**, Tuli, H. S., Ramniwas, S., Shahwan, M., & Jindal, T. (2023). Assessing the Migration of BPA and Phthalic Acid from Take-out Food Containers: Implications for Health and Environmental Sustainability in India. *Journal of Experimental Biology and Agricultural Sciences*, 11(6), 964–975. [https://doi.org/10.18006/2023.11\(6\).964.975](https://doi.org/10.18006/2023.11(6).964.975). **Impact factor-0.46, Citation-0.**

18. Datta, S., Chauhan, A., Ranjan, A., **Sardar, A. H.**, Tuli, H. S., Ramniwas, S., Shahwan, M., Sharma, U., Jindal, T. (2024). A Comparative Review of Bisphenol A Sources, Environmental Levels, Migration, and Health Impacts in India and Global Context. *Nature Environment and Pollution Technology*. 23(2), 1-15. **Impact factor-0.28, Citation-0.**

### **BOOKS EDITED:**

1. **Futuristic Trends in Biotechnology, Volume 3, Book 14, 2024, IIP Series.**

### **BOOK CHAPTER PUBLISHED:**

1. **A. H. Sardar**, S. Das and P. Das. Development of antimicrobial peptide based anti-leishmanial agents: current understandings and future perspective. 5<sup>th</sup> Microbiology Book Series titled "The Battle Against Microbial Pathogens: Basic Science, Technological Advances and Educational Programs". 2015, Formatex Research Center.

2. Abhishek Chatterjee and **Abul Hasan Sardar**. (2024). Bioremediation of heavy metals in tannery effluents. *Futuristic Trends in Biotechnology*. IIP Series, Volume 3, Book 14, Part 2, Chapter 10, 271- 285. e-ISBN: 978-93-6252-531-4.

### **ABSTRACTS PUBLISHED IN PROCEEDINGS/SYMPOSIA**

1. **Abul Hasan Sardar** and Pradeep Das. Genetic Manipulation of *Leishmania donovani* to Explore the Involvement of Peroxiredoxin in Oxidative Stress Management for Its Survival Inside Host. 2<sup>nd</sup> Regional Science & Technology Congress (Southern Region), 14-15<sup>th</sup> Dec'2017, University of Kalyani, Kalyani, West Benga and 25<sup>th</sup> West Bengal State Science and technology Congress 28<sup>th</sup> Feb to 1<sup>st</sup> March' 2018, Science City, Kolkata.

2. **Abul Hasan Sardar** and Pradeep Das. Genetic Manipulation of *Leishmania donovani* to Explore the Involvement of Peroxiredoxin in Oxidative Stress Management for Its Survival Inside Host. International seminar on Frontiers in Biological Sciences (FIBS), 30<sup>th</sup> Jan'2018, St. Xavier's College, Kolkata.

3. **A. H. Sardar**, K. Abhishek and P. Das. Genetic Manipulation of *Leishmania donovani* to Explore the Involvement of Peroxiredoxin in Oxidative Stress Management. National Symposium on Oxidative Stress in Health and Disease. 30-31<sup>st</sup> March' 2017. Department of Biochemistry & Biophysics, University of Kalyani, Kalyani, West Bengal.

4. **A. H. Sardar**, S. Kumar, A. Jardim, P. Das et. al. "iTRAQ chemistry explore the proteome changes associated *Leishmania donovani* promastigote adaptation to oxidative and nitrosative stress at the 81<sup>st</sup> Annual Symposium of Society for Biological Chemist (SBC-2012), 8-11 Nov'2012, Kolkata, India.

5. **A. H. Sardar**, S. Kumar, A. Kumar, A. Jardim, P Das et. al. "Proteome changes associated *Leishmania donovani* promastigote adaptation to oxidative and nitrosative stress" at the 4<sup>th</sup> Annual Symposium of Canadian National Proteomics Network, April 23-25, 2012, Toronto, Canada.

6. **A. H. Sardar**, S. Kumar, K. K. Sinha, D. Singh, P. Das et. al. "Proteome profiling explores metabolic changes to adapt *Leishmania donovani* on exposure to oxidative and nitrosative stress" at the 4<sup>th</sup> Bihar Vigyan Congress at Indira Gandhi Planetarium, 2011, Patna, India.

7. **A. H. Sardar**, S. Kumar, K. K. Sinha, D. Singh, P. Das et. al. *Leishmania donovani* argininosuccinate synthase is an active enzyme, partially protects parasite from oxidative stress. National Seminar-2013 at NIPER-Hajipur, Patna.

### **Gene Sequences Submitted in NCBI**

1. *Leishmania donovani* oleate desaturase mRNA, partial cds, Kumar, M., Sinha, K., **Sardar, A. H.** and Das, P. (ACCESSION HM454284).
2. *Leishmania donovani* NAD-dependent histone deacetylase silent information regulator 2 (Sir2RP) mRNA, complete cds. Purkait, B. Kumar, A. **Sardar, A. H.** Das, S. Kumar, M. and Das,P. (ACCESSION JN621326),
2. *Leishmania donovani* thioredoxin mRNA, complete cds., Purkait, B. Kumar, A. **Sardar, A. H.** Das, S. Kumar, M. and Das,P. (ACCESSION JQ796816).
3. *Leishmania donovani* ascorbate peroxidase (APx) mRNA, complete cds., Kumar, A. Purkait, B. **Sardar, A. H.** Das, S. Kumar, M. and Das, P. (ACCESSION JN802370).

### **RESEARCH SYMPOSIA ATTENDED**

1. 22<sup>nd</sup> Awaji International Forum on Infection and Immunity, 17<sup>th</sup> to 19<sup>th</sup> Sep'2024, Kyoto, Japan.
2. 17<sup>th</sup> Awaji International Forum on Infection and Immunity, 4<sup>th</sup> to 7<sup>th</sup> Sep'2018, Awaji Island, Japan.
3. 16<sup>th</sup> Awaji International Forum on Infection and Immunity, 5<sup>th</sup> to 8<sup>th</sup> Sep'2017, Awaji Island, Japan.
4. 2<sup>nd</sup> Regional Science & Technology Congress (Southern Region), 14-15<sup>th</sup> Dec'2017, Organized by Department of Higher Education, Science and Technology and Biotechnology, Govt. of West Bengal, University of Kalyani, Kalyani, West Bengal.
5. National Symposium on Oxidative Stress in Health and Disease. 30-31<sup>st</sup> March' 2017, Department of Biochemistry & Biophysics, University of Kalyani, Kalyani, West Bengal.
6. 81<sup>st</sup> Annual Symposium of Society for Biological Chemist (SBC-2012), 8-11 Nov'2012, Kolkata, India.
7. 4<sup>th</sup> Annual Symposium of Canadian National Proteomics Network, April 23-25, 2012, Toronto, Canada.
8. 4<sup>th</sup> Bihar Vigyan Congress at Indira Gandhi Planetarium, 2011, Patna, India.

### **CONFERENCE/SYMPOSIA ORGANISED:**

**1. International Seminar and Poster Competition Organised by Department of Microbiology, Sarsuna College in association with Microbiologists Society, India on "How to combat COVID-19" and "Microbiologist: How we can help!!!" Online mode on 14<sup>th</sup> February'2021.**

### **WORKSHOP/ COURSE ATTENDED:**

1. Wellcome Genome Campus Advanced Course "Next Generation Sequencing Bioinformatics" 1-5, February 2021 (Bandar Sunway, Malaysia) VIRTUAL.
2. "Drinking Water Quality Monitoring and Analysis- Physico-chemical, Microbiological and Molecular Aspects" on September 25-27, 2023 at CSIR-NEERI, Kolkata Zonal Centre (KZC).

### **WORKSHOP ORGANISED:**

**1. A National Level Hands on Training cum Workshop On "Basic Molecular Biology Application" Central Research Laboratory For Biological Sciences (Supported by BOOST programme, Department of Higher Education Science & Technology and Biotechnology, Govt. of West Bengal) at Sarsuna College, In association with Microbiologists Society, India from 26<sup>th</sup>- 29<sup>th</sup> April' 2023.**

## **PROFESSIONAL DEVELOPMENT:**

- i) Completed Orientation Programme organized by UGC-HRDC, Jadavpur University at their 72nd Orientation programme at Saltlake campus 6<sup>th</sup> February to 6<sup>th</sup> March'2019.
- ii) Completed UGC sponsored Interdisciplinary Refresher Course in Life Sciences, organized by UGC-HRDC, University of Calcutta and Department of Botany, University of Calcutta 4<sup>th</sup> to 17<sup>th</sup> January, 2020
- iii) Completed UGC sponsored Interdisciplinary Refresher Course in Life Sciences, organized by UGC-HRDC, University of Kerala, 4<sup>th</sup> to 17<sup>th</sup> October, 2023

## **AWARDS/HONORS**

### **SERB, DST, GOVT. OF INDIA**

**Teachers Associateship for Research Excellence (TARE)** 2018-2021  
DST-SERB, INDIA

**The National Best Teacher Award in Microbiology** 2020  
Microbiologists Society, India

**Research Excellence Award** 2020  
Institute of Scholars, Bangalore, India

### **Albany Medical Center, Albany, New York, USA**

Post Doctoral Fellow (NIH Grant) 2016

### **McGill University, Institute of Parasitology, Macdonald campus, Canada**

Canadian Commonwealth Fellow 2011-2012

### **Rajendra Memorial Research Institute of Medical Sciences, India**

Senior Research Fellow  
(Intramural Project, funded by Indian Council of Medical Research) 2012-2014

Senior Research Fellow  
(LEISHDNAVAX project, Funded by European Commission) 2010-2012

### **Travel Bursary**

22<sup>nd</sup> Awaji International Forum on Infection and Immunity 2024  
17<sup>th</sup> Awaji International Forum on Infection and Immunity 2018  
16<sup>th</sup> Awaji International Forum on Infection and Immunity 2017  
Canadian National Proteomics Travel Award 2012

## **Outstanding paper Award**

2<sup>nd</sup> Regional Science & Technology Congress (Southern Region), 14-15<sup>th</sup> Dec'2017, 2017  
Organized by Department of Higher Education,  
Science and Technology and Biotechnology, Govt. of West Bengal  
University of Kalyani, Kalyani, West Bengal.

## **M.Sc. Dissertation Project Supervision:**

**1. Supervised the M.Sc. dissertation project entitled “Study of metal reducing bacteria isolated from tannery effluent” by Mr. Krishanu Biswas, M.Sc. (Microbiology), Vijaygarh Jyotish Ray College, 17<sup>th</sup> July'2023 to 18<sup>th</sup> September'2023 at the Central Laboratory for Biological Sciences, Sarsuna College.**

**2. Supervised the M.Sc. dissertation project entitled “Isolation and characterization of chromium reducing bacteria from tannery effluent” by Mr. Shuvronil Choudhuri, M.Sc. (Microbiology), Vijaygarh Jyotish Ray College, 17<sup>th</sup> July'2023 to 18<sup>th</sup> September'2023 at the Central Laboratory for Biological Sciences, Sarsuna College.**

**3. Supervised the M.Sc. dissertation project entitled “Study the sulphate reducing bacteria from tannery effluent” by Mr. Suraj Murmu, M.Sc. (Microbiology), Vijaygarh Jyotish Ray College, 17<sup>th</sup> July'2023 to 18<sup>th</sup> September'2023 at the Central Laboratory for Biological Sciences, Sarsuna College.**

## **Ph. D Guidance/ Supervision:**

a) Co-Supervisor for PhD Studies (awarded on 2024) of Mr. Sugata Dutta, under Amity Institute Environmental Sciences, Amity University Campus, Sector-125, Noida-201313.

b) Co-Supervisor for PhD Studies (ongoing) of Mrs. Sanchayita Basu, under TRIPURA UNIVERSITY, TRIPURA-799022.

## **MEMBERSHIPS:**

- a) Life Member of Microbiologists Society, India.
- b) Life member of Institute of Scholars, India.
- c) Annual Member of “The Indian Science Congress Association” for the year 2017-2018.
- d) Annual Member of the “Association of Microbiologists of India” for the year 2017-2018.
- e) Student member of the “Canadian National Proteomics Networks” for the year 2012

## **OTHER NOTABLE ACTIVITIES:**

i) Bursar, Sarsuna College

(ii) Academic Coordinator of BOOST Programme (Biotechnology Based Opportunities Offered to Science and Technology Departments, Department of Science & Technology and Biotechnology, Govt. of West Bengal)