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Dr. S. BISWAS, MSc, PhD

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SUMMARY

- I am providing leadership to the entire R&D team of the current company, which includes the R&D (Mycology and Microbiology) Division, R&D (Entomology) Division, and R&D (Chemistry) Division, developing **Environmentally Sound Technologies** (ESTs), improving and developing products including **Biopesticides, Organics, Microbial Inoculants, Pheromones,** and **Pesticide baits.**
- I have in-depth knowledge in biological sciences (metagenomics, molecular biology, and microbiology) from **more than 11 years of working in industry and academia**; investigating Viruses, Bacteria, Archaea, and fungi; leading to the discovery of more than 430 genera and 50 genes, from unique specimens, for the first time.
- I have received 4 scholarships, fellowships, and grants from the **Georg-August University of Goettingen, Germany; University of Aarhus, Denmark; and the European Commission**. I have gained domain knowledge from more than 10 workshops, and training, and seminars on Genomics, Recombinant DNA Technology, Microbial Resources, and Molecular Biology Techniques in **India, Germany, and France.**

WORK EXPERIENCE

Gaiagen Technologies | Formerly Pest Control (India) Pvt. Ltd. **Bangalore, India**
Lead Scientist August 2019 - present

- Development of improved SOPs for 2 products to reduce usage of raw material and technical product in the production of finished good by 93% and 64%, which translates to a reduction in COGS(cost of goods sold).
- Development of improved SOPs for 2 products to reduce batch failure from more than 30% to less than 1%, which translates to a reduction in COGS.
- Development of improved SOP to bringing back a product from nonconforming formulation to label claim and augmented speed of action of the product in the field by more than 30%.
- Generated proof of concept for in-vitro production of a biological control agent, the active ingredient of a product, which is a new organizational capability; reducing manpower as well as space usage significantly.
- Established and increased our inhouse microbial Culture Collection by 740%.
- Improved the quality of Contract Research delivered to our client refulting in positive feedback and repet client.
- Providing leadership to a team of 26 experianced Lead Scientists, Senior Scientists, Junior Scientists, and Technical Officers; spearheading the scientific research and development for the company.
- Reviewing, integrating, and enhancing processes to match business needs, initiatives, and objectives; covering cross-functional activities; development of training program, user acceptance test, and communication plan for the introduction of new functionalities.
- Acting as the global interface for synergies, best practices sharing and benchmarking.

UVOCORP **Remote**
Freelance Writer November 2018 - May 2019

- Wrote authentic, non-plagiarized papers, and timely delivered customers' orders

Personalized Medicine Institute Pvt Ltd (PMI) **Kolkata, India**
Junior Molecular Biologist January 2018 - July 2018

- Provided leadership in deployment of next-generation sequencing (NGS) technology for the clinical diagnosis of infectious diseases and genetic disorders with a limited budget of $1 million.

- I have presented the company's product and services to KOLs and HCPs during CMEs.
- Developed and validated standard operating procedures (SOPs) for clinical diagnosis of infectious diseases and genetic disorders by deploying Next Generation Sequencing (NGS) technology.
- Developed and validated SOPs for deploying quantitative polymerase chain reaction (qPCR) for clinical diagnosis of infectious diseases and genetic disorders.
- Managed quality of the procedures and safety in the laboratory.

Visva-Bharati University **Santiniketan, India**
Project Fellow June 2009 - August 2010

- Designed scientific experiments for University Grant Commission (UGC), Govt. of India, Major Project, entitled "Exploitation of free-living phosphate solubilizing rhizobia for improvement of soil fertility and promotion of plant growth."
- Isolated and characterized phosphate solubilizing rhizobia; managed documentation and archiving of the findings of the project.

University of Aarhus **Aarhus, Denmark**
Guest Researcher September 2008 - November 2008

- Investigated UV-induced DNA damage in a bacterial isolate from the Arctic.
- Investigated the effect of osmotic stress on the growth of a psychrophilic bacterial isolate from Antarctic cold, dry habitat.
- Developed and validated an easy protocol for ESS (Endonuclease Sensitive Site) Assay.

National Centre for Antarctic & Ocean Research|Visva-Bharati University **India | Antarctica**
Principal Investigator December 2007 - December 2008

- I have defended my own proposal, as a principal investigator, to the Govt. of India; and secured a position in a 61 expeditioner 27th Indian Scientific Expedition to Antarctica with a total budget of $53 million. Project title: "Assessment of Microbial Biodiversity of Antarctic Soil for future application."
- Scientific expeditioner to Antarctica (Schirmacher oasis and Larsemann Hills)
- Managed logistics for the collection of samples from Antarctica, managed documentation and reported the findings of the project to NCAOR.

EDUCATION

Doctor of Philosophy (Ph.D.) in Biology, Georg-August University of Goettingen **Germany, 2016**
Thesis title: *"Prokaryotic Biodiversity of Lonar Meteorite Crater Soda Lake Sediment and Community Dynamics During Microenvironmental pH Homeostasis by Metagenomics."* Doctor of Philosophy with ***cum laude***.

Master of Science (M.Sc) in Botany, Visva-Bharati University **India, 2007**
I have secured **rank 7th** (first class), specialized in Mycology and Plant Pathology from a Central University, directly administered by the Government of India.

Bachelor of Science (B.Sc Honours) in Botany (Life Science), Visva-Bharati University **India, 2005**
I have secured **rank 5th** (first-class) with distinction in Chemistry and Physics as subsidiary subjects from a Central University, directly administered by the Government of India.

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

- International Organisation for Biological Control (**IOBC**)
- Association of Microbiologists of India (**AMI**)
- International Society for Computational Biology(**ISCB**)