

BIO-DATA

Dr. Kalpana Sagar

Assistant Professor
Department of Microbiology
Gurukula Kangri (Deemed to be University)
Haridwar-249404, Uttarakhand
Contact: Mobile- +91-9711019035
Email- kalpana.sagar@gkv.ac.in



Educational Qualification:

- M.Sc. (Molecular Biology and Biotechnology) Tezpur University, Assam
- Ph.D. (Molecular Biology and Biotechnology) Tezpur University, Assam

Specialization:

Metagenomics, soil microbiology, cloning and expression, antibiotics production, recombinant DNA technology, biocatalysis, and enzyme engineering

Employment History:

- Assistant Professor, Department Microbiology, Gurukul Kangri (DU), Haridwar, Uttarakhand *w.e.f.* 01-04-2021 to present.
- Scientist, Genomics Facility, University of Delhi South Campus, New Delhi from February 2020 to March 2021.
- Scientist, Sir Ganga Ram Hospital, New Delhi from August 2019 to January 2020.
- Research Associate, Department of Biochemistry, University of Delhi South Campus, New Delhi from December 2014 to July 2019.

Academic Performance:

1. Research Experience	:	08 Years
2. Teaching Experience	:	1.5 years
3. Publications	:	(see Annexure-I)
A Books		01
B Articles/Chapters in Books		03
C Research/Review papers		08
4. Any honour/award	:	

- Qualified All India Combined Biotechnology Entrance Examination–2005 conducted by J.N.U. New Delhi.
- Qualified GATE-2007 and GATE-2009
- Qualified CSIR-NET-2008

- Received “**Best Poster Award**” in the Annual International Conference of the Indian Network for soil contamination research (INSCR)-2021, New Delhi.

5. Member of professional bodies:

- Indian Network for Soil Contamination Research.
- Association of Microbiologists of India.
- The Indian Science Congress Association

6. Gene sequences submitted to GenBank: (See [Annexure-II](#))

7. Seminar/Workshop/Meeting Organised: (See [Annexure-III](#))

8. Seminar/Conference Attended/Delivered lectures: (See [Annexure-IV](#))

9. Improvement of professional competence: (See [Annexure-V](#))

Ann-I

Publications

A. Books (01)

S. No.	Year	Book
1.	2018	B. K. Konwar and Kalpana Sagar Lipase An industrial enzyme through metagenomics. ISBN No. 978-1-77188-618-5.

B. Book Chapters (03)

S. No.	Year	Book Chapters
1.	2022	Nidhi Handa, Omkar Lal Shrivastava and Kalpana Sagar. Some Slokas of Katyayana Sulbsutra and its Relevance in Present Time. Values and Ethics in shrinking World. ISBN: 978-93-54358-94-4
2.	2015	Kalpana Sagar, Salam Pradeep Singh and B.K.Konwar. The Prospect of Gene Exploitation through Soil Metagenomics. New Dimensions in Microbiology. ISBN: 978-93-85160-84-4.
3.	2014	Kalpana Sagar and B. K. Konwar. Metagenomics for Industrially important Enzymes. Prospect of Microbe and Medicinal Plant Resources. ISBN No. 9789384649-23-4.

C. Research/Review Articles

S. No.	Year	Research paper/review Paper published	Impact Factor
1	2021	Arun Sharma, Kalpana Sagar , Neeraj kumar Chauhan, Balaji Venkataraman, Nidhi Gupta, Tanu Priya Sosain, Nikhil Bhalla, Ramandeep Singh and Amita Gupta. HigB1 Toxin in <i>Mycobacterium tuberculosis</i> Is Upregulated During Stress and Required to Establish Infection in Guinea Pigs. <i>Front Microbiol.</i> 2021 Nov 30;12:748890. doi: 10.3389/fmicb.2021.748890. PMID: 34917044; PMCID: PMC8669151	6.06
2	2020	Kalpana Sagar and B.K.Konwar, Construction of a metagenomic DNA library for a novel lipase from the bakery soil of Assam, India. <i>International Journal of Research and Analytical Reviews</i> , 7 (1), 2020, 148-151.	
3	2017	RanjanaVerma, SK Samdarshi, Kalpana Sagar , BK Konwar. Nanostructured bi-phasic TiO ₂ nanoparticles grown on reduced graphene oxide with high visible light photocatalytic detoxification. <i>Materials Chemistry and Physics</i> 186, 2017, 202-211.	4.77
4	2014	Kalpana Sagar , SP Singh, KK Goutam, BK Konwar. Assessment of five soil DNA extraction methods and a rapid laboratory-developed method for quality soil DNA extraction for 16S rDNA-based amplification and library construction. <i>Journal of Microbiological Methods.</i> 97, 2014, 68-73.	2.61
5	2013	Kalpana Sagar , Y Bashir, M M Phukan, BK Konwar. Isolation of Lipolytic Bacteria From Waste Contaminated Soil: A Study With Regard To Process Optimization For Lipase. <i>Int J Sci& Tech Res.</i> 2 (10), 2013, 214-218.	
6	2013	Salam Pradeep Singh, Kalpana Sagar , B K Konwar. Strategy in metagenomic DNA isolation and computational studies of humic acid. <i>Curr Res in Microbiol and Biotechnol</i> , 1 (1), 2013 9-11.	
7	2013	Sujata Pramanik, RocktotpalKonwarh, Kalpana Sagar , Bolin K. Konwar, Niranjana Karak.2013. Bio-degradable vegetable oil based hyperbranched poly(ester amide) as an advanced surface coating material. <i>Progress in Organic Coatings</i> 76 (2013) 689– 697.	6.2
8	2013	Sujata Pramanik, Kalpana Sagar , Bolin Kumar Konwar, NiranjanaKarak. 2012. Synthesis, characterization and properties of a castor oil modified biodegradable poly	6.2

	(ester amide) resin. <i>Progress in Organic Coatings</i> 75 (4), 2012, 569–578.	
--	---	--

Ann-II

Gene Sequences submitted to GenBank (NCBI)

S. No.	Bacterial Species/Origin	Accession No.	Gene length (bp)	Authors
1	Uncultured bacterium	KF743145	891 bp	K. Sagar and B.K.Konwar
2	<i>Bacillus</i> sp.	KF514427	406	K. Sagar and B.K.Konwar
3	<i>Bacillus</i> sp.	KF493767	1404	K. Sagar and B.K.Konwar
4	Uncultured bacterium	KF493768	1252	K. Sagar and B.K.Konwar
5	<i>Bacillus</i> sp.	KF493769	802	K. Sagar and B.K.Konwar
6	<i>Enterobacter</i> sp.	KF514428	1146	K. Sagar and B.K.Konwar

Ann-III

Seminar/Workshop/Meeting Organised

S. No.	Name of the seminars/conferences	Date and place	Name of Organizing Secretary / Convener
1.	Nutritious and Beneficial Herbal Products Formulations and Preparations	06-05-2022 to 10-05-2022, Department of Botany and Microbiology, Gurukul Kangri (DU), Haridwar, U.K.	Member of Organizing Committee
2.	Hands-on Workshop on Basics in Application of Computational Biology	14-09-2021 to 16-09-2021, Department of Botany and Microbiology, Gurukul Kangri (DU), Haridwar, U.K.	Co-ordinator
3.	National Workshop on Genome Informatics	15-07-2015 to 18-07-2015, Microarray Center, University of Delhi South Campus, New Delhi	Organizer

Seminar/ Conference Attended/ Delivered Lectures

1. Presented Poster in 6th Annual International Conference on INSCR on **Microbes in Sustainable Development**, 15-18 November 2021, Delhi University, New Delhi.
2. Presented Poster in International conference on **Recent Advances Biotechnology**, December 12-15, 2014, IIT-Delhi, India.
3. Presented Poster in International Conference on **Health, Environment and Industrial Biotechnology**, Nov 21-23, 2013, Motilal Nehru National Institute of Technology, Allahabad, U.P, India.
4. Presented Poster in **the Association of Microbiologists of India**, Nov 17-20, 2013, Maharishi Dayanand University, Rohtak, Haryana, India.
5. Abstract in 3rd International Conference on **Environmental, Biomedical and Biotechnology ICEBB 2013**, August, 24-25, Singapore.
6. Presented Paper in National Seminar on **Recent Advances in Microbial Biotechnology and Molecular Evolution**, March 01-04, 2013, Tezpur University, Assam, India.
7. Presented Poster in National Conference on **Chemistry, Chemical Technology and Society (NCCCTS- 2011)**, November 11- 12, 2011. Tezpur University, Assam, India.
8. Presented Poster in International Conference on **Microorganisms in Environmental Management and Biotechnology**, July 1-3, 2011, Barkatullah University, Bhopal, M.P, India.
9. Presented Paper in National Seminar on **Medicinal Plant and Microbe Diversity and their Pharmaceuticals**, December 19-21, 2010. Tezpur University, Assam, India.
10. Presented Paper in International conference on **Climate Change and Bioresources, (ICCCB-2010)**, February, 9-12, 2010, Bharathidasan University, Tiruchirappalli, Tamilnadu, India.

Workshop Attended/Participated

1. Participated in National Workshop on **Bacterial Genome Identification, sequencing and characterization**, April, 20, 2022, Genomics Facility, University of Delhi South Campus, New Delhi.
2. Participated in **Advanced Training Course on TB Research in BSL-3 and Protocols**, April, 20, 2022, Genomics Facility, University of Delhi South Campus, New Delhi.
3. Participated in National Symposium on **Genome Biology and Big Data Bioinformatics**, March 29th, 2016, organized at University of Delhi South Campus, New Delhi.
4. Participated in 5th **National Science Day Symposium**, February, 27-28, 2015, at University of Delhi South Campus, New Delhi.
5. Participated in National Workshop on **Use and Awareness of e-Resources** organized by Central Library, May, 25, 2013, Tezpur University, Assam.
6. Participated in Short Term Training on **Microbial Diversity & Gene Prospecting Through Metagenomics**. 16th January to 5th February, 2013 at Kerala Agricultural University, Thrissur, Kerala, India.
7. Participated in Workshop on **Tools of Proteomics**. June 21-22, 2012 at Tezpur University, Assam, India.
8. Participated in National Workshop on **Protein 3D Structure Modeling**. November, 23-26, 2011 at BIF, Tezpur University, Assam, India.
9. Participated in **CME in Immunology**. October, 28-29, 2011 at Tezpur University, Assam.

10. Participated in Workshop on **Biostatistics for Healthcare**. July 26-28, 2011 at DBT Nodal Cell, Tezpur University, Assam, India.
11. Participated in National Workshop on **Nuclear and Atomic Techniques Based Pure and Applied Sciences** (NATPAS-2011). February, 01-03, 2011 at Tezpur University, Assam, India.
12. Participated in Workshop on **Intellectual Property Rights Sensitization** (IPRSW-2010). 23rd December, 2010 at Tezpur University, Tezpur, Assam, India.
13. Participated in Winter School on "**Gene cloning and Expression in Bacteria**" 16th September-1st October, 2010, held at UGC-NRCBS, Madurai Kamaraj University, Madurai, Tamilnadu, India.
14. Participated in **Biotech Industrial Training Programme** 2008-09, November 17th, 2008 to May, 16th 2009, BCIL, New Delhi, India.

Ann-V

Improvement of professional competence

Details of Refresher Course/Orientation Course / Faculty Development programme/ Induction Programme attended

Sr. No.	Name / Nature of the course	Institution and place	Dates/Period	Total duration of the course (in weeks/days)
1	Faculty Development Programme	Mahatma Hansraj Faculty Development Center, Delhi University, New Delhi	25/07/22 to 30/07/22	One Week
2	Induction Programme	GK (DU), Haridwar, U.K.	05/04/22 to 13/04/22	9 Days
3	Faculty Development Programme	Maulana Abul Kalam Azad University of Technology, West Bengal	07/02/22 to 11/02/22	5 Days
4	Advanced Training Course on TB	University of Delhi South Campus, New Delhi	26/10/21 to 01/10/21	One Week
5	National Faculty Development Programme	Shri Lal Bahadur Shastri National Sanskrit University, New Delhi	13/09/21 to 17/09/21	One week
6	Faculty Development Programme	Tezpur University, Assam	03/08/21 to 02/09/21	4 Weeks
7	Refresher Course	Teaching Learning Center, Ramanujan College, University of Delhi, New Delhi	11/05/21 to 25/05/21	2 Weeks