# Prof. Siba Prasad Adhikary

I. **Present position and address:**

Professor, Department of Biotechnology,
Visva-Bharati (A Central University)
Santiniketan -731235, Dist. Birbhum, West Bengal, India
Email: adhikarysp@visva-bharati.ac.in, adhikarysp@gmail.com

II. **Past position(s) as Professor and address:**

1. Vice-Chancellor, Fakir Mohan University , Vyasa Vihar (24-05-2014 to 02-08-2017), Balasore-756020, Odisha, India

2. Professor & Head, Department of Biotechnology (09-07-2009 to 23-05-2014), Visva-Bharati, Santiniketan -731235, West Bengal, India **(on lien)**

3. Professor, Department of Botany & Department of Biotechnology, Utkal University, Bhubaneswar 751004, Odisha, India (1-1-2002 to 08-07-2009)

III. **VI. Awards and Distinctions:**

**Awards:**

1. Samanta Chandra Sekhar Award In Life Science for scientific contribution in the state of Odisha, (The highest scientific awarded by Orissa Bigyan Academy), 1999.
2. Dr. B.P. Pal National Environmental Fellowship Award for Biodiversity by the Ministry of Environment and Forests, Govt. of India , 2009
3. Life time achievement Award in Phycology" conferred with a medal and citation by Krishnamurthy Institute of Algology, Chennai, 2011.
4. Prof. Harihar Pattnaik memorial Award in Environmental science, by Orissa Botanical Society at Ravenshaw University, 2012.
5. U.G.C. Research Award during IXth plan, New Delhi, 1999
6. Young Scientist Award by Indian Botanical Society, December 1983.
7. Awarded University gold medal for securing 1st position in 1st class in M.Sc. Botany Examination of Berhampur University, 1976; also secured 1st position in 1st class in B.Sc. Honours examination of Berhampur University, 1974.

**Distinctions:**

**1**. Fellow of the National Academy of Agricultural Sciences(FNAAS)
2. Fellow of Indian Botanical Society (FBS)
3. Fellow of National Environmentalists Association (FNEA)

IV. **Visit to Foreign countries for research:**

1982-1983, Post-doctoral Fellow, supported by DAAD – Germany at the Institute for Microbiology, Albert Ludwigs University, Freiburg i.Br., Germany.

1991-1992, Visiting fellow, supported by J.S.P.S. at the National Institute for Basic Biology, Okazaki, Japan.

October 1996 – December 1996, Visiting Fellow, supported by DAAD at University of Konstanz, Germany.

October 2001 – November 2001,: Visiting Fellow, Supported by DAAD at the Institute for Microbiology and Molecular biology, Justus Leibig University, Giessen, Germany.

September 2006 –INSA-ASCR exchange of scientists visit for 4 weeks at Institute of Botany, Trebon, Czech Republic.

October to December 2006: Visiting Fellow, Supported by DAAD at the Forschungs Zentrum, Juelich, Germany.

May 2006, May 2007 and June 2008: Visit to University of Rome "Tor Vergata", University of Messina, Sicily, and the Department of Agricultural Biotechnology, University of Florence, Italy through a Indo-Italian Collaborative research for two weeks each.

May 16 to June 15, 2008, Visit to Commenius University, Bratislava, Slovak Republic through a Visiting Fellowship of Slovak National Science Programme.

May 19 to June 8, 2011: Visit to Biological Research Centre of the Hungarian Academy of Sciences, Szeged, Hungary though INSA-HAS Exchange of scientists visit.

June 9 to June 17, 2011: Visit to University of Rome, Italy under the MOU between Visva-Bharati and University of Rome for the bilateral project "Biotechnology and nanotechnology of Cultural heritage".

January 21 February 5, 2014: Visit to Mosonmagyarovar, University of West Hungary at though UGC-Indo-Hungary Educational Exchange Program 2013-14.

V. **University Education:**

I. D.Sc.; Utkal University, Bhubaneswar, Odisha, 2000 (1st D.Sc. in Botany of Utkal University by research).Title of D.Sc. thesis " Ecophysiology of cyanobacteria under diverse environmental conditions".

II. Ph.D.; Berhampur University, Odisha, 1980 (worked as CSIR JRF&SRF) Title of Ph.D. thesis " Physiological studies on heterotrophic growth of *Westiellopsis prolifica* Janet"

III. Masters degree; Berhampur University, Odisha, 1976; 1st Position in First class in the University; Subject, Botany; Awarded University gold medal.

IV. Bachelors degree; Berhampur University, Odisha, 1974, 1st position in First class Botany (Honours) of the University, Subject: Botany (Hons.),Zoology, Chemistry.

VI. **Areas of specialization/expertise/research and innovation:**

1. Biodiversity and molecular phylogeny of Cyanobacteria and Algae
2. Genomics of cyanobacteria from stressed environments
3. Biodeterioration of stone monuments of India and their conservation
4. Biofertilizers (BGA and Seaweed Liquid Extract) for agriculture
5. Rural based biotechnology for Bioentrepreneurship in organic farming

VII. **Supervision of Awarded Doctoral thesis:**

(24 awarded Ph.D. by Utkal Univ. Odisha, and 3 by Visva-Bharati, Santiniketan, West Bengal = Total: 27). Ph.D. thesis guided at Visva-Bharati as follows:

1.Biotechnological studies on seaweed liquid fertilizer and its application in agriculture productivity (2010-2014), By Debabrata Mohanty; Ph.D. degree Awarded on 17th July 2015.

2.Study of stress tolerant cyanobacteria colonizing stone monuments and characterization of their antioxidant defense system (2010-2014), By Nitin Keshari; Ph.D. degree Awarded on 25th August 2015.

3.Cyanobacterial diversity in biological soil crusts and characterization of their adaptation to water stress (2010-2014), By Dhanesh Kumar; Ph.D. degree Awarded on 25th August 2015.

VIII. **Publications (as on 31st December 2016) :**

1.Publications in peer reviewed journals = 160
2.Genome sequences published in ASM = 5
3.Research papers as chapters in Edited books/ symposium proceedings = 62

**Total Research publications = 227; Number of Books = 5**

**A.Peer reviewed Research papers in Journals in last Five years (2012-2016):**


1.Kumar, D., Kastanek,P. and Adhikary, S.P. Diversity of cyanobacteria in biological crusts on rrid soils of the eastern region of India and their molecular phylogeny. Current Science, 110:1999-200, 2016.

2. Keshari, N., Das, S.K. and Adhikary, S.P. *Schmidleinema santiniketanense* sp. Non. (Cyanobacteria/Cyanoprokaryota) from a building façade in Santiniketan, India. Phytotaxa, 283:181-187, 2016.

3.Keshri,N., Das, S.K. and Adhikary, S.P.*Stigonematagorum* sp. Nov. (Stigonemataceae, Cyanoprokaryota) from a stone monument of Santiniketan, West Bengal, India). Nelumbo (Bulletin of Botanical Survey of India) : 58: 152-156, 2016.

4. Bhakta,S., Das, S.K. and Adhikary, S.P. Algal diversity in the hot springs of Odisha state. Nelumbo (Bulletin of Botanical Survey of India), 58: 157-173, 2016.

5.Adhikary, S.P., Keshari, N., Urzi, C. and DePhilippis, R. Cyanobacteria in biofilms on stone temples of Bhubaneswar, Eastern India. Algological Studies, Stuttgart, 147: 67-93, 2015.

6. Kumar, D. and Adhikary, S.P. Diversity, molecular phylogeny and metabolic activity of cyanobacteria in biological soil crusts from Santiniketan, India. J. Appl. Phycol. 27:339-349, 2015.

7. Keshari, N., Das, S.K. and Adhikary, S.P. Identification of cyanobacterial species with overlapping morphological features by 16S rRNA gene sequencing. European J. Phycol., 1-5, 2015.

8.Mohanty, D. and Adhikary, S.P. Study on the salinity gradient of Chilika lake before and after opening of the new mouth to sea and its impact on seaweed diversity. Ind. J. Geo-Marine Science, 44:1176-1180, 2015.

9.Das, S.K., Adhikary, S.P. and Kovacik, L. New distributional record of three coccal green algae (Chlorococcales,Chlorophyceae) from the alpine lakes of Eastern Himalayas., India. Nelumbo (Bull. Bot. Survey, India), 56: 286-290, 2014.

10.Mishra, S., Bhargava, P. , Adhikary, S.P., Pradeep, A. and Rai, L.C. Weighted morpohology: a new approach towards phylogenetic assessment of Nostocales (Cyanobacteria). Protoplasma (Springer) DOI 10. 1007/s00709-014-0629-9, 2014.

11.Keshri, N. and Adhikary, S.P. Diversity of cyanobacteria on stone monuments and building facades of India and their phylogenetic analysis. International Biodeterioration and Biodegradation. 90:45-51, 2014.

12.Jena, M., Bock, C., Behera, C., Adhikary, S.P. and Krienitz, L. Strain survey on three continents confirms the polyphyly of the genus *Pediastrum* (Hydrodictyaceae, Chlorophyceae), Fottea, Olomouc, 14: 63-76, 2014.

13.Sethi, S.K. and Adhikary, S.P. Growth response of region specific Rhizobium strains isolated from *Arachis hypogeal and Vigna radiata* to different environmental variables. African Journal of Biotechnology. 13: 3496-3504, 2014.

14. Bhakta, S. and Adhikary, S.P. Algal diversity in the streams and waterfalls of eastern and north-eastern region of India. Nelumbo (Bulletin of Botanical Survey of India), 56:1-47, 2014.

15.Kumar, D., Keshri, N. Das, S.K., Bhakta, S. and Adhikary, S.P. Algal diversity in different habitats of Santiniketan, West Bengal. J. Bot. Soc. Bengal 68: 47-57, 2014.

16.Das, S.K. and Adhikary, S.P. Freshwater algae of Cherrapunjee and Mawsynram, the wettest places on earth. Phykos (Phycological Society of India), 44:29-43, 2014.

17. Mohanty, D. and Adhikary, S.P. Assessment of changes in the algal diversity of Chilika lagoon after opening of new mouth to Bay of Bengal. J. Water Resource Protection, 5:611-623, 2013.

18.Keshari, N. and Adhikary, S.P. Characterization of cyanobacteria isolated from biofilmson stone monuments at Santiniketan, India. Biofouling 29: 525-536, 2013.

19.Rath, J., Mandal,S. and Adhikary,S.P. Ecophysiology of the estuarine cyanobacteria *Lyngbya aestuarri* to varying salinity *in vivo.* Acta Physiol. Plant. DOI 10.1007/s 1738-013-1422-7, 2013.

20. Bhakta, S. and Adhikary, S.P. Two new Taxa of *Ecballocystopsis* (Chlorophyta) from eastern India. Nelumbo (Bulletin of Botanical Bot. Survey of India), 55:1-4, 2013.

21. Sethi, S.K., Samad, L.K. and Adhikary, S.P. Cyanobacteria and microalgae in biological crusts on soil and sub-aerial habitats of eastern and north eastern region of India. Phykos, 42: 1-9, 2012.

22. Rossi, F., Micheletti, E., Bruno, L., Adhikary,S.P. , Albertano, P. and DePhilippis, R. Characteristics and role of exocellular polysaccharides produced by five cyanbobacteria isolated from phototrophic biofilms growing on stone monuments. Biofouling, 28: 215-224, 2012.

23. Sahu, J.K. and Adhikary, S.P. Phylogenetic analysis of two stigonematalean cyanobacteria based on 16S rRNA sequence. Phykos, 42:59-64, 2012.

124 Das, S.K. and Adhikary, S.P. Freshwater algae of Nagaland. J. Ind. Bot. Soc. 91:99-123, 2012.

25. Das, S. K. and Adhikary, S.P. Diversity of freshwater algae in Arunanchal Pradesh and their distribution in different altitudes. J. Ind. Bot. Soc. 91:160-182, 2012.

26. Das, S.K. and Adhikary, S.P. Algal diversity in the reservoirs of Odisha state, India. Indian Hydrobiology, 15:17-41, 2012.

27. Bhakta, S. and Adhikary, S.P. Algal diversity in two major rivers of eastern India and phycological assessment of their pollution. The Ecoscan, Special issue, vol.I:7-14, 2012.

28. Mohanty, D., Adhikary, S.P. and Chattopadhyay, G.N. Seaweed liquid fertilizer (SLF) and its role in agricultural productivity. The Ecoscan; Special issue, Vol.III:147-155, 2013.

29. Adhikary, S.P. and M. Jena. Algal diversity of Kaziranga national park and Majuli rover island hot spots of Assam. Nelumbo (Bull. Bot. Survey India); 54:1-22, 2012.

30. Sethi, S.K. and Adhikary, S.P. Cost effective pilot scale production of biofertilizer using *Rhizobium* and *Azotobacter*. African J. Biotechnology, 11:13490-13493, 2012.

31. Rath, J., Mandal, S. and Adhikary, S.P. Salinity induced synthesis of UV-screening compound scytonemin in the cyanobacterium *Lyngbya aestuarii*. J. Photochem. Photobiol. B. Biology, 115:5-8, 2012.

**B. Genome sequences: (Genome announcements)**

1. Draft Genome Sequence of *Scytonema millei* VB511283 isolated from eastern India (genomeA00009-15, ASM: 3, 2015) by Sen,D., Mathu, C., Singh, D., Sanghi, N., Ghorai,A., Mishra,G., Madduluri,M., Adhikary, S. and Tripathy, S.
2. Draft Genome Sequence of cyanobacterium *Hassallia byssoidea* VB12170 that is isolated from monuments of India (genomeA00064-15, ASM: 3, 2015) by Singh, D., Mathu,C., Panda, A., Sen,D., Bhattacharyya,S., Adhikary, S. and Tripathy, S.
3. Draft Genome Sequence of *Tolypothrix boutellei* strain VB521301 (genomeA00001-15, ASM) by Mathu, C., Singh, D.,Bhan,S., Das,S., Gupta, A., Adhikary, S. and Tripathy, S.
4. Draft Genome sequence of bioactive producing cyanobacteria *Tolypothrix campylonemoides* strain VB511288 (genomeA00226-15, ASM) by Das, S., Singh, D., Madduluri, M., Mathu, C., Gupta, A., Adhikary, S. and Tripathy, S.
5. Deciphering genomes of hydrophobic cyanobacterium *Scytonema tolypothrichoides*. strain VB 61278 (genomeA00228-15, ASM) by Das, A., Panda, A., Singh, D. , Mathu, C., Mishra, G., Bhan,S. , Adhikary, S. and Tripathy, S.

**C. Books and Monographs (Authored):**

1. J. Rath and S. P.Adhikary: Algal Flora of Chilika lake, Daya Publications, New Delhi, 206 p, 2005 (ISBN 81-7035-351-3).
2. S. P. Adhikary: Blue green algae- survival strategies under diverse environments, Pointer Publishes, Jaipur, Rajastan, India, 201 p.,2006 (ISBN 81-7132-441-X).
3. H.D. Kumar and S. P. Adhikary: Environmental Engineering. India Tech Publishing Company Pvt. Ltd. New Delhi, 497 p, 2006.
4. S.P. Adhikary, M. Jena,M. and J. Rath, Soil and Freshwater algae from coastal region of Orissa state, India. Bibliotheca Phycologica, Vol.115, J. Cramer, in der Gebruder Brontraeger Verlagsbuchhandlung, Stuttgart, Germany, 166 p, 2009.
5. S.K. Das and S.P. Adhikary: Freshwater algae of Eastern India, Astral Publications, New Delhi, 453 p, 2014 (ISBN9789351302001-International Edition).