

Prof(Dr) Saranga Ranjan Patgiri

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Date of birth: 01.03.1960



Professor of Microbiology, RSBSC, Assam Royal Global University.

- Former Professor of Botany and Dean, School of Life Sciences, Cotton University
- PhD with 36 years of teaching , 20 years of research experience, 15 research papers, 4 research projects.
- Author of Cotton College Plantarum (Illustrated Documentation of the seeded plants of Cotton campus) published by Cotton College Publication Board.
- Developed a National Level Module named, 'Microorganisms- Let us observe and learn' catalyzed and supported by RVPSP, DST, Govt. of India and collaborated by ASTEC.

ACADEMICS

Teaching Experience :

1. Under Graduate: 36 years
2. Post Graduate: 35 years

Research Experience :

20 years

Recognized Research Guide of Cotton University

4 Research scholars are pursuing PhD works

Experience of Academic and Office Administration :

13 years

Experience of Academic Extension work :

Approx. 30 years

Experience as Examiner at different Universities:

Gauhati university, Manipur University,

Viswa Bharati University, USTM, Royal Global University. Thesis Examiner of Assam

Agricultural University, Madras University.

Educational Qualification:

Exam	Year	Subject	Board/University
HSLC	1975	–	SEBA
PU	1977	–	Gauhati University
B.Sc	1979	Botany (Hons)	Gauhati University
M.Sc	1981	Botany	Gauhati University
M.Phil	1994	Microbiology	Gauhati University
Ph.D	2007	Microbiology	Gauhati University

Specialization:

Microbiology (Soil and Environmental Microbiology).

Refresher Courses completed: 5

1. RC from 2-30 Dec. 1991 at Lucknow University.
2. RC from 8-28 Nov. 1995 at Gauhati University.
3. RC from 25 Sep.- 14 Oct., 2000 at Himachal Pradesh University.
4. RC from 28 Oct.-19 Nov., 2004 at North Eastern Hill University.
5. Short Term Course from 3rd December to 9th December, 2012 at Gauhati University.

Faculty Development Programmes/ Course completed:

1. Teacher's Training Programme in Bio-informatics for College Teachers held at DOEACC Centre, Guwahati, Ministry of Communication & Information Technology, Govt. of India from 20th June to 28th June, 2007.
2. FDP on Entrepreneurship from 13.2.2008 to 29.2.2008 held at Indian Institute of Entrepreneurship.
3. DBT sponsored short term course on Application of Molecular Tools for Crop Improvement conducted by the Department of Biotechnology, IIT Guwahati from 16th to 21st November, 2009.

Research Projects completed:

Completed 4 following major/minor Research Projects as Co-PI and as PI

1. Screening of free-living nitrogen fixing microorganisms having cellulolytic/xylanolytic activities.
Funding agency : DST, Govt. of India
Duration : 1993-1997
2. Exploiting Vesicular – Arbuscular Mycorrhizal Fungi for revegetation of land degraded by shifting cultivation in N.E Region of India.
Funding Agency: Ministry of Env. & Forest, Govt. of India
Duration: 2000-2003
3. Revegetation of Land degraded by shifting cultivation in Karbi Anglong District of Assam using Vesicular Arbuscular Mycorrhizae and plant growth promoting Rhizo-microorganisms.
Funding agency : DST, Govt. of India
Duration: 2007-2009
4. Process Development of Bamboo Shoot Fermentation.
Funding agency: ASTEC
Duration: 2013-2015

Research Publications:

1. Cellulolytic *Azospirillum*; Adv.Pl.Sci., Vol. 9(2); 45-52; 1997.
2. Widespread occurrence of *Azospirillum* sp. In N.E. region of India; Adv. Pl-Sc., Vol.10(2); 189-194; 1997.
3. Cellulolytic nitrogen fixing bacteria; J.Adv. Pl.Sc. Vol 2; 17-23; 2000.
4. Antifungal screening of *Ageratum conyzoides* leaf extract of *Fusarium* sp., J.Adv.Pl.Sc; Vol-2; 93-96; 2000.
5. Studies on the Antifungal properties of extracts of *Ricinus communis* ; J.Adv. Pl.Sc.; Vol-I;69-71; 1997.
6. Cellulose degrading free living nitrogen fixing bacteria; Three decades of research in Biofertilizers and Organic farming in N.E India; 91-98; 2000.
7. Impact of shifting cultivation on the occurrence of VAM fungi; J.Adv.Pl.Sci: Vol-3; 59-65; 2001.
8. Associative influence of *Azospirillum lipoferum* and *Azospirillum brasilense* inoculation on rice (*Oryza sativa*) crop. Adv. Plant Science; 15 (11); 171-175; 2002.
9. Studies on the leaf surface myco-flora of *Pogostemon cabin* (Patchouli): RJCC; Vol.3; 89-92; 2005.
10. Microbiological status of soil degraded by shifting cultivation; Current trends of Research in Science and Technology; 121-123: 2007.
11. Antifungal screening of Rhizome Extracts of *Alpinia officinarum*; Curr trends; 193-195; vol-8; 2007.
12. Evaluation of in-vitro antifungal activity of *Clerodendrum viscosum*(Lin) leaf extracts against *Fusarium oxysporium*; Proceedings of 53rd Annual Technical Session, Assam Sc. Soc.; Vol-9; 59-62; 2008.
13. Comparative efficacy of different Arbuscular Mycorrhizal fungal species on the growth of som (*Persea bombycina*) in the degraded land of Karbi Anglong Dist. of Assam: Proceedings of; Assam.....Society: Vol-9; 80-83; 2008.
14. Diversity Of Macrofungi Of Sreegram Reserve Forest Of Dhubri District, Assam, India; Proceedings of 59th Annual Technical Session of Assam Science Society; 2015.
15. Study on The Wild Mushroom Of Dhubri District Of Assam; Research Journal of Contemporary Concerns; Vol. 10; 112-116; 2016.
16. Review of landfill studies on physic-chemical characters, associated microflora and their dynamics; Eco. Env. & Cons. 28(January Suppl. Issue):2022; pp.(S340-S344).
17. Denaturing Gradient Gel Electrophoresis (DGGE) Analysis Indicating Increased Microbial Diversity in Landfill Area Near Conserved Wetland; Nature Environment and Pollution Technology; Vol.22; pp. 1003-1007; 2023.

Other Academic activities in different fields of Science

Books Published

- 'Vrikshya Vaidyam' – A book depicting an illustrated compilation work of medicinal plants of Sector I to Sector III of Guwahati Refinery area

- Jibavijnayan for National Open School
- Jibavijnayan Uchattar Madhyamik Pratham Barsik
- Jibavijnayan Uchattar Madhyamik Ditiya Barsik
- Laboratory Manuals for Mobile Science Laboratory under Rashtriya Madhyamik Siksha Abhijan, Assam.
- Cotton College Plantarum (Illustrated Documentation of the seeded plants of Cotton campus) published by Cotton College Publication Board in 2016.

Book Chapters/Articles Published:

- Book Chapter Published in Viswakos: Bijnan, Vol.II, (Page 987-991)
- Book Chapter published in the book titled State of Environment of Assam, 2004, Published by ASTEC.
- Book Chapter on 'Microorganisms' of Science text book of Asom Jatiya Vidyalaya.
- Bigyan Abhidhan (Science dictionary)- Life Science Part, Published by Ashok Publication. (2015)
- Articles published in ENVIS of ASTEC.
- Other articles on different topics published in different magazines and souvenir numbering about 12.

Development of National level Module/ Kit on Microbiology:

- Developed a National Level Module named, 'Microorganisms- Let us observe and learn' in 2005 under the leadership of Dr R.N.Bhattacharjya which was finally approved by a two day national brainstorming session attended by 40 renowned microbiologists of India . The module was catalyzed and supported by RVPSP, DST, Govt. of India and collaborated by ASTEC.
- Production of a CD ROM and Manual on Microbiological experiments. It is a part of the microbiology module.
- The Module was developed to create awareness among school children as well as general people of the country about the most important component of our biodiversity, the 'microorganisms' and to remove the negative thinking on the microorganisms that prevailed in our present society.
- The Module has already been adopted by Assam Science Technology and Environment Council (ASTEC) as training module for the Aryabhata Science Centers of all 219 blocks of Assam.
- The Module has been demonstrated in 8 states of India through a number of national, regional and state level workshops sponsored by the Department of Science and Technology, Govt. of India under my direct supervision and participation.

Participation in International Seminars/Conference:

1. Delivered plenary lecture as Plenary Speaker in the International conference on Advances in Plant sciences held on 18th to 22nd November, 2014 at Kuching, Sarawak, Malaysia.
2. Chaired a technical session in the International Conference on Harnessing Natural Resources for Sustainable Development: Global Trends held from 29th – 31st January, 2014 in Guwahati.
3. Delivered a lecture as Invited Speaker and chaired a technical session in the International conference on "Biotechnology for Better Tomorrow" held from 22nd-23rd February, 2020 at Maldives National University, Male, Maldives.

Master Resource Person at National Level Workshop/Seminar as follows:

1. National Brainstorming workshop on development of a Module for Study of Microorganisms held in Guwahati on 7-9 November, 2005.
2. National Orientation Workshop on 'Microorganisms: Let us observe and Learn' held in Guwahati on May 3-5, 2007.
3. National Teachers' Science Conference held in Dehradun on 22-25 September, 2007.
4. National Workshop on Enrichment of Resource Material to promote popularization of Science and Technology Education held in Delhi University on 9th January, 2010. The workshop was organized by Central Institute of Education (CIE), Delhi University.

Master Resource Person at Regional Level Workshop/Seminar as follows:

1. North Eastern Regional Orientation Workshop on Microorganisms held in Guwahati on June 12-14, 2008. The workshop was catalyzed and supported by RVPSP, DST, Govt. of India and collaborated by ASTEC.
2. Regional Orientation Workshop on Microorganisms held at Raipur, Chhattisgarh on Dec. 15-17, 2008. The workshop was organized by Pt. Ravi-Shankar Shukla University, Raipur in collaboration with Chhattisgarh Council of Science & Technology.
3. 1st NE Regional Workshop on Low Cost/ No Cost Science Teaching Learning Aids held at Pichala, North Lakhimpur on 23-27 March, 2008. The Workshop was organized by Assam Science Society and supported by RVPSP, DST, Govt. of India.
4. 2nd NE Regional Workshop on Low Cost/ No Cost Science Teaching Learning Aids held at Bongaigaon, on 20 July, 2008. The Workshop was organized by Assam Science Society and supported by RVPSP, DST, Govt. of India.
5. 3rd NE Regional Workshop on Low Cost/ No Cost Science Teaching Learning Aids held at Hailakandi of Barak Valley on 28 January, 2009. The Workshop was organized by Assam Science Society and supported by RVPSP, DST, Govt. of India.
6. Zonal Level Nature Study Camp held in Guwahati on 2-4 Feb, 2001 and organized by ASTEC.

Master Resource Person at State Level Training cum Orientation Programmes/ Brainstorming session as follows:

1. Training Programme for the co-ordinators of Aryabhata Science Centre.
2. Training Programme for the HS School Demonstrators held at Biswanath College on 12-13 Nov. 2008. Training programme was organized by Assam Higher Secondary Education Council.
3. Brainstorming session on a 6-month certificate course in science communication conducted by N E Foundation for Education and Research held on 7-8 Jan. 2006 and catalyzed by DST, Govt. of India.
4. Science Teachers' workshop of Microorganisms held in Amity International School, Saket, New Delhi on 25th -27th August, 2009. The workshop was organized by Millennium Education, New Delhi for the teachers of the State of Delhi and it was sponsored and catalyzed by the DST, Govt. of India.
5. Science Teachers' workshop on Microorganisms held in Biswabharati Public School, Noida, Uttar Pradesh on 28th -29th August, 2009. The workshop was organized by Millennium Education Foundation, New Delhi for the teachers of the State of Uttar Pradesh and it was sponsored and catalyzed by the DST, Govt. of India.
6. Entrepreneurship Development Awareness camp held in the department of Botany, Cotton college on 5th November, 2009. The workshop was organized by Indian Institute of Entrepreneurship in association of the Botany department, Cotton college.
7. State Level Orientation Workshop on 'Microorganisms: Let us Observe and Learn' held in the Department of Botany, Cotton College from 9th – 11th Nov., 2009. The workshop was organized by the Botanical Hobby Centre, Cotton College in collaboration with the ASTEC. The workshop was catalyzed by the DST, Govt. of India.
8. Vocational Training Programme for School children of class x passed of Assam, Meghalaya and Tripura on Bioresources and Biotechnology as part of Government of India's countrywide awareness campaign on bioresources and Biotechnology held during 13-15th May, 2010 in Guwahati. The programme was organized and sponsored by The Energy and Resources Institute (TERI).
9. Workshop on Science Teachers Training Programme held Regional Science Centre during 17- 20th March, 2010 organized by Assam Science Technology and Environment Council.
10. Residential Training Programme for Science & Mathematics Facilitators on 4th Sept. 2010 at Silpagram, Guwahati which was organized by ASTEC.
11. State Level Teachers' Training Workshop for Aryabhata Science Centres of Assam held from 3 September to 10 September, 2011 in Cotton College, organized by ASTEC and Botany Dept., Cotton College and supported by DST, Govt. of Assam.
12. State Level Teachers' Training cum Orientation Workshop at Pachhunga University College, Aizawl, Mizoram, organized by the Mizoram Council of science, Technology and Environment on 7-9 November, 2012.
13. State Level Teachers Orientation Workshop at NEHU, Shillong, Organized by the State Council of Science, Technology & Environment, Meghalaya on 4-6 July, 2012.
14. State level workshop 'Fun with Microbes' at Dehradun, Uttarakhand on 13 – 15 February, 2014, sponsored by the DST, Govt. of India.
15. State level workshop at Shoolini University, Solan, Himachal Pradesh on 21 – 23 March, 2014 sponsored by the DST, Govt. of India.

Member of Academic Bodies:

- Life member of Assam Science Society
- Life member of Botanical Society of Assam
- Life member of DNA Society of India
- Life member of the Association of Microbiologists of India
- Fellow Botanical Society of Assam.

Experiences of Academic & Office Administration / Members of Statutory bodies:

- Dean, Life Sciences, Cotton University till retirement.
- Registrar, Cotton University (as i/c)
- Academic Registrar, Cotton University. (as i/c)
- Head, Department of Botany, Cotton University. (a full term)
- Head, Department of Molecular Biology and Biotechnology till retirement.
- Played key role in the establishment of the Biotechnology Department in 2008 and since then I have been heading and nurturing the department as Head, developing it to a full-fledged independent PG department.
- Coordinator, IQAC, Cotton College since 2013 till Cotton College secured A++ with CGPA 7.67 in 2016.
- Member, Cotton University Court.
- Ex Member, Cotton College State University Executive Council
- Ex Member, Cotton College State University Academic Council
- Ex Member, Cotton University Academic Council
- Convener of the Publication Board, Cotton College.
- Convener/member of a number of committees of the college/university like Technical Committee, Heritage Committee, UGC committee etc.

Organizational Activity/ Extension Works:

1. Asstt. General Secretary, Assam Science Society for the Period 1987-1988.
2. Joint Secretary, Assam Science Society for the Period of 2003-2005.
3. General Secretary, Assam Science Society for the period of 2005-2007.
4. Assam Science society is the oldest and one of the largest Scientific Voluntary Organization in India having at least 100 branches spread all over the state of Assam. Being Asst-Secretary, Joint Secretary and finally General Secretary of the society I gained experiences of running day to day office works, project preparation and project implementation works. As General Secretary of the Society I gained experiences of dealing with various departments of Govt. of India mainly DST, MOEF, MHRD etc. Experiences were also gained of dealing with S&T Dept. Govt. of Assam DST, Refineries, Pollution Control Board, ASTEC, Forest Dept., various research laboratories, universities, IIT and other educational institutions.
5. Represented Assam as State Co-ordinator in the 14th National Children's Science Congress 2006 held at Sikkim Manipal Institute of Technology, Majitar, Sikkim.
6. Acted as Joint Convenor, Academic Committee of the 12th National Children's Science Congress – 2004 held in Guwahati.
7. Acted as Chief Co-ordinator, of the DST, Govt. of India sponsored project on Development of Low Cost/ No Cost Science Teaching Learning Aid for sec-level. Already 3 regional level workshops were being completed covering the states like Assam, Arunachal Pradesh, Meghalaya, Mizoram and Manipur.
8. Ex member of the State Advisory body of the DBT's Natural-resources Awareness Club (DNA club) of The Energy and Resources Institute (TERI).
9. Present Editor of "Udvidbijyan Patrika" popular Science Magazine of the Botanical Society of Assam.

Experience of holding National Children Science Congress:

Gained experiences of taking full responsibility of holding NCSC in District level and State level for the period of 2005-2007 as General Secretary, Assam Science Society (State Coordinating Agency for that period).

Experience in the field of Environment Related Projects:

As Joint Secretary of Assam Science Society for two years and as General Secretary of the same society for another 2 years, I have good experiences of implementation of the following two mega environment related projects in N.E India.

1. National Environment Awareness Campaign (NEAC) of MOEF, Govt. of India.
2. 'Orientation of Environmental Education in the Schools of NE India' of MHRD, Govt. of India.

Experience to implement rural based projects:

- 1) Development of Scientific Piggeries in Kamrup Dist. sponsored by DST, Govt. of India through Assam Science Society.

Some other selected assignments:

- 1) Acted as Subject Expert for Teacher selection process of APSC.
 - 2) Acted as Adviser for selection of candidates for central govt. post at Staff Selection Commission, Govt. of India.
 - 3) Acted as V.C.(GU) Nominee in the selection committee meeting for the post of Lecturer in Botany for different colleges.
 - 4) Acted as a member in the Interview Board for selection of project scientist of ASTEC.
 - 5) Acting as a member of the State Advisory Board of Wildlife, Govt. of Assam.
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Prof(Dr) Saranga Ranjan Patgiri *MPhil, PhD*
Professor of Microbiology, Assam Royal Global University