

CURRICULUM VITAE OF DR. RICHA TANDON

- 1. Name** : DR. RICHA TANDON
2. Father's Name : Late A.K. Tandon
3. Mother's Name : Dr. Pramila Tandon (Principal, R.T.G.D. College,
University of Allahabad)
4. Date of Birth : 24th Nov., 1974
5. Present Address : c/o Dr. Pramila Tandon
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7. Nationality : Indian

8. Educational Qualifications:

Exam Passed	Board/ University	Year	Subjects	% of marks	Division
High School	U.P. Board Allahabad	1989	Hindi, English, Maths, Science, Soc. Science, Biology	63.67	Ist
Intermediate	U.P. Board Allahabad	1991	Hindi, English, Physics, Chemistry, Biology	64.60	Ist
B.Sc.	University of Allahabad	1996	Botany, Zoology, Chemistry	66.81	Ist
M.Sc.	University of Allahabad	1998	Botany	65.77	Ist
D. Phil*.	University of Allahabad	2005	Botany		

***Title of the thesis:** "Studies on reproduction and perennation of Blue-green algae (Chroococcales)".

9. Research Experience: 12 years

10. Field of Research: Blue-green Algae/ Cyanobacteria

11. CSIR-UGC National eligibility test (NET) Qualified in 2000 (F.No.2-40/2000(ii)-EU II dated 17/7/2001)

12. Teaching Experience: 14 years

(a) Working as an adhoc Lecturer at Iswar Sharan Degree College, under self-finance scheme of University of Allahabad, since September 01, 2001 till date.

(b) Started and conducted a certificate add-on course on “Microbial Biofertilizers: Production and its utilization technology”, a vocational programme at UG level under a modified scheme of carrier orientated programme sanctioned by UGC, New Delhi and approved by University of Allahabad.

13. Honorary Fellowship: (i) Fellow of Society of Life Sciences of India (F.S.L.Sc.)

(ii) Fellow of the Indian Botanical Society (F.B.S.)

(iii) Fellow of the Institute of Applied Sciences (F.I.A.Sc.)

14. Minor project entitled “Biodiversity and characterization of Indigenous Non-heterocystous Blue-green algae under culture conditions” has been awarded from UGC, New Delhi (F.No. 8-3(170)/2011(MRP/NRCB dated 26 Dec. 2011)

15. Skills in Microbial Research work:

Collection, isolation, identification and maintenance of cyanobacterial and microgreen algal strains at par with international standard.

Characterization

Biochemical characterization: Estimation of Chlorophyll-a, Total soluble proteins, Total carbohydrates, Ammonia excretion, Carotenoids, Phycobiliproteins, Acetylene Reduction Assay, Lipid profiling etc.

Molecular characterization: Isolation of genomic DNA, Amplification of genomic DNA by Polymerase chain reaction (PCR) with use of markers like RAPD and 16s RNA.

Hands on experience:

* Samples preparation and microscopy of microbial cultures

*Basic research in microbiology like handling of basic microbial equipments

*Laboratory testing and analysis, UV spectrophotometric analysis, GC-FID analysis

PCR analysis

*Gel Electrophoresis

*Gel documentation

*Data analysis, interpretation and preparation of reports for publication

Training organizing skill: Short and long term training on algal Bioresource utilization covering all aspects of collection of samples, isolation, identification and characterization cyanobacteria and microgreen algae.

16. Training/ Workshop: 05

(1) Training Programme of one week on “Blue-green algae and *Azolla* Biofertilizers” held at national Centre for conservation and utilization of blue-green algae, IARI, New Delhi from 17th – 23rd September, 2003 under NATP programme of Team of Excellence – HRD in Biofertilizers.

(2) ‘Interactive workshop on Biofertilizers’ held at Division of Microbiology and Centre for conservation and utilization of Blue-green Algae, IARI, New Delhi, November 5th –6th, 2004.

- (3) Attended the “Interactive workshop on Biotechnology” jointly organized by The National Academy of Sciences, India (NASI) & Department of Biochemistry, University of Allahabad (UOA) on May 09-10, 2010 at Allahabad.
- (4) Attended the workshop on “Characterization techniques in Nanotechnology” jointly organized by The National Academy of Sciences, India (NASI) & Department of Nanotechnology, University of Allahabad (UOA) on Feb 12-13, 2011 at Allahabad.
- (5) Training course of 15 days on “Algal Bioresources Utilization” held at Institute of Bioresources and sustainable development (IBSD), an autonomous Institute under the DBT, Govt. of India, Imphal, on Jul. 7-21, 2013.

17. Participation and paper presentation in National and international Seminar: 20

- (1) Attended the Seventieth annual session of the National Academy of Sciences, India, held at the Allahabad University, Allahabad, November 3rd –6th, 2000.
- (2) National Symposium on “Science and Ethics of Environmental Care and Sustainability”. Organized by Dr. SPM Govt. Degree College, University of Allahabad, October 11th –13th, 2002.
- (3) XXVI Annual Conference of Indian Botanical Society and National Symposium on “Plant Biology and biodiversity in changing environment” held at department of Botany, Jamia Hamdard, New Delhi, December 29th –31st, 2003.
- (4) National Symposium on “Biology and Biodiversity of Freshwater algae” held at center for Advanced Study in the Botany, Guindy Campus, University of Madras, Chennai, September 8th –9th, 2004.
- (5) National symposium on “Biodiversity, conservation and sustainable utilization of bio-resources” held at ISDC, Allahabad, March 17th –18th, 2005.
- (6) Symposium on “Advancement and Scope in biotechnology” organized by the National Academy of Sciences, India, on National Technology day, May 11th, 2006.
- (7) National symposium on “Biodiversity assessment, conservation & Ecoplanning” held at ISDC, Allahabad, January 11th –12th, 2007.
- (8) National symposium on “Recent advances in microbial biofertilizers, production and utilization technology” held at ISDC, Allahabad, December 13th –14th, 2007.
- (9) National symposium on “Sustainable Management of Potable water” organized by the Institute of Applied Sciences, Allahabad on March 29th -30th, 2008.
- (10) Seventy-eight annual session of the National Academy of Science and symposium on “Novel –Approaches for Bio-medical Research” organized by the Panjab University, Chandigarh, November 21th -23rd, 2008.
- (11) Thirty –first All India Botanical Conference and International Symposium on Plant Biology and Environment: Changing Scenario” organized by the Allahabad University, Allahabad, December 17th -19th, 2008.
- (12) National symposium on “Phycology in India: Basic to Applied” held at Department of Botany, Punjabi University, Patiala, February 12-13, 2009.
- (13) Seventy-nine annual session of the National Academy of Science and symposium on “Science and Technology and the Young (Career, Creativity, Excitement) organized by University of Kolkata in collaboration with Ramkrishna Mission Institute of Culture, Kolkata, December, 14th -16th, 2009.
- (14) National symposium on “Health and Sanitation: Rural Perspective” organized by the Institute of Applied Sciences, Allahabad February 06th –07th, 2010.

- (15) National symposium on “Food security in changing climate” held at Department of Botany, ISDC, Allahabad, February 20th –21th, 2010.
- (16) 80th annual session of the National Academy of Science and symposium on “Climate change-research, awareness and capacity buiding” organized by Jaipur National University, Jaipur, December 2nd -4th, 2010.
- (17) National symposium on “Recent researches in Physical and Biological sciences” organized by the KNI of Physical and Social Sciences, Sultanpur with NASI, Allahabad, Febuary 14th –15th, 2011.
- (18) National symposium on “Microbes and Human Health” organized by Department of Botany, Ramkrishna Mahavidyalaya, Kailashahar, North Tripura, March 18th –19th, 2011.
- (19) National seminar on “Advanced Biology: Emerging trends in Biological galaxy” organized by Department of Zoology, CMPDC, Allahabad, (A constituent college of University of Allahabad), October 6th –7th, 2012.
- (20) National symposium on “Fundamental and Applied phycology” held at Department of Botany, Punjabi University, Patiala, March 25-26, 2013.
- (21) National conference on “Frontiers in Algology and Algal Biotechnology” held at Visva-Bharati University, Shantiniketan. Nov. 15th-17th, 2013.

18. Member of Scientific Societies: 07

- (1) Society of Life Sciences, Life member
- (2) Association of Microbiologists of India, Life member
- (3) Indian Science Congress Association, Life member
- (4) Botanical Society of India, Life member
- (5) Institute of Applied Sciences, Life member
- (6) The Biotech Research Society, Life member
- (7) National Academy of Sciences, Member

Publications of Dr. Richa Tandon

Publications: 33 (Full Papers: 27 including 05 International; 06 Book Chapters)

2015

International

1. **Richa Tandon**, Sarika Kesarwani and G.L. Tiwari (2015): Baeocytes and pseudo-filamentous stages of *Pleurocapsa concharum* Hansgirg (Cyanobacteria, Pleurocapsales) in culture. *Nova Hedwigia* (**Accepted**). ISSN: 1438-9134, 0029-5035 (**Impact factor: 1.5**)
2. Sarika Kesarwani, **Richa Tandon** and G.L. Tiwari (2015): Frequently encountered morpho-species of *Oscillatoria* Vaucher (cyanoprokaryota) from india. *JIBS*, **94 (1 & 2)**: 40-51, ISSN: 0019-4468.

International

3. Arti mishra, **Richa Tandon**, Sarika Kesarwani, Rashmi Singh and G.L. Tiwari (2015): Emerging applications of cyanobacterial ultraviolet protecting compound scytonemin. *Journal of Applied Phycology*, **27**: 1045-1051, ISSN: 09218971, 15735176. (**Impact factor: 2.33**), DOI 10.1007/s10811-014-0399-y.
4. Sarika Kesarwani, **Richa Tandon** and G.L. Tiwari (2015): The genus *Oscillatoria* Vaucher (Cyanoprokaryota) from India. *Phykos*, **45 (1)**: 18-29, ISSN: 0554-1182.

2014

5. **Richa Tandon**, Rama Kant, O.N. Tiwari and G.L. Tiwari (2014): On growth, reproduction and perennation of *Pleurocapsa aurantiaca* Geitler, Hyellaceae, Cyanoprokaryota. *Phykos*, **44 (2)**: 12-16, ISSN: 0554-1182.
6. Rama Kant, **Richa Tandon** and G.L. Tiwari (2014): Morpho-taxonomy of the family Merismopediaceae Chroococcales Cyanoprokaryota. *Bionature*, **34 (1)**: 1-8, ISSN: 0970-9835.
7. **Richa Tandon**, Rama Kant, V.K. Dwivedi and G.L. Tiwari (2014): Morphological distinction of *Cyanodermatium* (Hydrococcaceae) and *Radaisia* (Hyellaceae) of Chroococcales (Cyanoprokaryota). *Proceedings, National Academy of Sciences*, **84 B (III)**: 481-486, ISSN: 0369-8211. DOI 10.1007/s40011-014-0305-z.

2012

8. **Richa Tandon**, V.K. Dwivedi, Rama Kant and G.L. Tiwari (2012): On the morphology of a rare coccoid cyanoprokaryote, *Chamaecalyx Swirenkoi*, Chroococcales from India. *JIBS*, **91** (4): 422-426, ISSN: 0019-4468.

2010

International

9. V.K. Dwivedi, **Richa Tandon** and G.L. Tiwari (2010): Polymorphic stages of the fresh water blue-green alga, *Gomphoshaeria aponina*. *Algae*, **25** (3): 115-120, ISSN: 1226-2617.

2009

10. **Richa Tandon**, V.K. Dwivedi, Archana Mishra and G.L. Tiwari (2009): Stages of akinete germination look similar to oogamous reproduction in *Cylindrocapsa Reinsch*, Ulotrichales, Chlorophyta. *National Academy Science Letter*, **32** (11&12): 339-343, ISSN: 0250-541X.
11. V.K. Dwivedi, **Richa Tandon**, Rama Kant and G.L. Tiwari (2009): Critical evaluation of the genus *Macrospermum* Komarek 2008, Cyanoprocaryota. *Proceedings, National Academy of Sciences*, **80 B** (IV): 380-386, ISSN: 0369-8211.

2008

12. Rama Kant, **Richa Tandon**, K.R. Singh, Sarika Kesarwani, V.K. Dwivedi and G.L. Tiwari (2008). *Cyanoarbor* Wang, A new report from India and its taxonomic status. *Bionature*, **28** (1): 5-8, ISSN: 0970-9835.
13. Sarika Kesarwani, Vinay Dwivedi, **Richa Tandon** and Rama Kant (2008). A new record of coccoid cyanobacteria genus *Bacularia* Borzi, Cyanoprokaryota from India. *National Academy Science Letter*, **31** (5&6): 187-189, ISSN: 0250-541X.
14. Y.P. Singh, A.K. Tripathi, Rama Kant, **Richa Tandon**, V.K. Dwivedi and G.L. Tiwari (2008). A comparative study on light harvesting pigments in different species of *Nostoc* Voucher, Nostocales, Cyanoprokaryota. *National Academy Science Letter*, **31** (7&8): 211-214, ISSN: 0250-541X.
15. Y.P. Singh, Rama Kant, **Richa Tandon**, V.K. Dwivedi, Rashmi Singh, N.C. Halder and G.L. Tiwari (2008). Distribution pattern of Nostocacean taxa of Allahabad and adjoining areas. *Nat. Jour. Life Sciences*, **5** (1): 43-47, ISSN: 0972-995X.

16. Rama Kant, **Richa Tandon**, K.R. Singh, V.K. Dwivedi and G.L. Tiwari (2008): Growth pattern and new developmental stages in *Chroococcus* 10501 (Chroococcales, cyanobacteria) under culture conditions. *Geophytology (An International Journal)*, **37**: 9-12, ISSN: 0376-5156.

17. Rama Kant, **Richa Tandon**, V.K. Dwivedi, Y.P. Singh, L.L. Kushwaha and G.L. Tiwari (2008). *Symphyonemopsis* Tiwari et Mitra- A link between Scytonemataceae and Mastigocladaceae of Cyanoprokaryota: A Taxonomic revision. *JIBS*, **87 (3&4)**: 153-156, ISSN: 0019-4468.

2007

18. G.L. Tiwari, Rama Kant, O.N. Tiwari, **Richa Tandon** and L.L. Kushwaha (2007). Distribution, diversity and characterization of Cyanobacteria of rice-fields. *Proceedings, National Academy of Sciences*, **77 B (IV)**: 387-402, ISSN: 0369-8211.

2006

19. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2006). On the validity of the genus *Aphanothece* Nägeli, Chroococcales, Cyanoprokaryota. *JIBS*, **85**: 61-65, ISSN: 0019-4468.

20. Rama Kant, **Richa Tandon**, O.N. Tiwari and G.L. Tiwari (2006). Cyanobacteria-Wonder Microbes: Hope for 21st century. *National Academy Science Letter*, **29 (11&12)**: 399-409, ISSN: 0250-541X.

2005

21. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2005). Morphology, growth and perennation in *Aphanothece*, Cyanoprokaryote. *Geophytology (An International Journal)*, **35 (1&2)**: 45-48, ISSN: 0376-5156.

22. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2005). Adaptive mechanism in the developmental stages of an aerophytic Cyanoprokaryote, *Asterocapsa* Chu: A survival factor. *National Academy Science Letter*, **28 (11&12)**: 373-378, ISSN: 0250-541X.

23. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2005). Growth pattern, structure, reproduction and perennation in *Gloeocapsa decorticans* (A.Br.) Richter. *Bionature*, **25 (1&2)**: 153-157, ISSN: 0970-9835.

24. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2005). Growth, reproduction and perennation in *Xenococcus* Thuret, Cyanoprocarvate. *Nat. Jour. Life Sciences*, **2 (1&2)**: 157-160, ISSN: 0972-995X.

2004

25. Rama Kant, O.N. Tiwari, **Richa Tandon**, Pradeep Pandey and G.L. Tiwari (2004). Morphology and taxonomy of cyanobacteria: I. The genus *Aphanothece* (Chroococcales). *Nat. Jour. Life Sciences*, **1 (I)**: 1-10, ISSN: 0972-995X.
26. Rama Kant, O.N. Tiwari, **Richa Tandon** and G.L. Tiwari (2004). Data base physiological characterization of agricultural important unicellular cyanobacteria of rice fields of U.P., India. *Bioinformatics India*, **2 (III)**: 11-16, ISSN: 0972-7655.
27. Rama Kant, O.N. Tiwari, **Richa Tandon**, Rashmi Singh and G.L. Tiwari (2004). Biodiversity and Characterization of Indian Unicellular and colonial Cyanobacteria. *Nat. Jour. Life Sciences*, **1 (II)**: 293-304, ISSN: 0972-995X.

Book Chapters: 06

1. O.N. Tiwari, Rama Kant, **Richa Tandon** and G.L. Tiwari (2004): Biodiversity and characterization of Non-heterocystous Filamentous Cyanobacteria with special reference to the cultural studies. **Chapter in Book** “Microbial Diversity, opportunities and challenges”, edited by S.P. Gautam et al., published by Shree Publishers and distributors, New Delhi. pp. 195-213, ISBN: 81-8329-004-3.
2. G.L. Tiwari, V.K. Dwivedi, **Richa Tandon**, O.N. Tiwari and Rama Kant (2009): Morpho-taxonomy of coccoid cyanobacteria. **Chapter in Book** “Algal Biology and Biotechnology”, edited by J. I. S. Khattar, D.P. Singh & Gurpreet Kaur published by I.K. International publishing House Pvt. Ltd., New Delhi. pp. 1-26. ISBN: 978-93-80026-19-0.
3. **Richa Tandon**, Rashmi Singh, V.K. Dwivedi and G.L. Tiwari (2010): Cyanobacteria as Biofertilizers in rice fields. **Chapter in Book** “Sustainable Management and Conservation of Biodiversity”, edited by B.P. Pandey, Shivesh P. Singh & Rashmi Singh, published by Narendra Publishing House, New Delhi. pp. 1-23, ISBN: 978-93-80428-01-7.
4. **Richa Tandon**, V.K. Dwivedi and G.L. Tiwari (2012): Phycotoxins. **Chapter in Book** “Microbial diversity and functions”, Edited by D.J. Bagyaraj, K.V.B.R. Tilak & H.K.

Kehri, published by New India publishing agency, New Delhi. pp. 603-639, ISBN: 9381450109.

5. Anand Pandey, Rajesh Kumar, Ashutosh Pathak, **Richa Tandon** and Anupam Dixit (2012): An eco-taxonomic study of some lichens of Sikkim and adjoining areas. **Chapter in Book** “Medicinal Plants: Various Perspectives” (eds. Keshri JP and R. Mukhopadhyay) published by Dept. of Botany and Publication Unit of the University of Burdwan. pp. 228-253, ISBN: 81-87259-85-X.
6. G.L.Tiwari, **Richa Tandon**, V.K. Dwivedi, Rama Kant and O.N.Tiwari (2014): Morpho-taxonomy of Oscillatoriales, Cyanophyta (Cyanobacteria). **Chapter in Book** “Current Trends in Life Science” (Eds. D.S. Shukla and D.K. Pandey) published by JBC press, New Delhi. pp. 103-133, ISBN: 978-93-81558-98-0.