



Faculty Details proforma for DU Web-site

Title	Dr.	First Name	Rajesh	Last Name	Tandon	Photograph
Designation	Associate Professor					
Address	Department of Botany University of Delhi Delhi – 110007					
Phone No	Office	-				
	Residence	011-25276589				
	Mobile	09810760111				
Email	<u>rjtnd@rediffmail.com</u>, <u>tandon.raj@gmail.com</u>					
Web-Page	-					
Educational Qualifications						
Degree	Institution			Year		
Ph.D.	University of Delhi			1998		
M.Phil. / M.Tech.	-			-		
PG	Department of Botany, University of Delhi			1992		
UG	Zakir Husain College, University of Delhi			1990		
Any other qualification	-			-		
Career Profile						
<ul style="list-style-type: none">• Associate Professor: Department of Botany, University of Delhi. (July, 2006-)• Reader: Department of Botany, University of Delhi. (July, 2003-June, 2006)• Research Associate: Department of Botany, University of Delhi. (January, 2002-June, 2003)• Lecturer (Ad hoc): Department of Botany, University of Delhi. (October, 1999-January, 2002)• Research Associate: Department of Botany, University of Delhi (December, 1997- October, 1999)						
Administrative Assignments						
Secretary, Garden Committee, University of Delhi (October, 2005- September, 2011)						
Areas of Interest / Specialization						
<ul style="list-style-type: none">• Reproductive Biology of Flowering plants• Developmental Biology						
Subjects Taught						
<ul style="list-style-type: none">• 1999-2002: Plant Ecology, Systematics• 2002-2003: Reproductive biology, Plant Ecology, Systematics• 2003-2005: Reproductive biology, Systematics• 2005-2006: Reproductive biology, Plant Ecology, Systematics• 2006- 2010: Reproductive biology, Ecology						

- 2010 onwards: Reproductive biology

Research Guidance

1. Supervision of Doctoral Thesis (*Awarded*)

1. **Anand Sonkar** (2009). Trees of Delhi.
2. **Vikas Bhardwaj** (2009). Reproductive Biology of Two Native Medicinal Trees of India: *Azadirachta indica* (Meliaceae) and *Aegle marmelos* (Rutaceae).
3. **Renuka Aggrawal** (2011). Genome organization and diversification of allotetraploids finger millet [*Eleusine coracana* (L.) Gaertn.] ($2n = 4x = 36$) and diploid safflower [*Carthamus tinctorius* L.] ($2n = 2x = 24$), and their allied diploid and polyploid taxa: evidences from isolated repeated DNA sequences, FISH, McFISH and GISH, and DNA markers.
4. **Sapna Jain** (2011). DNA fingerprints as useful genetic markers for analysis of genetic diversity, taxa boundaries identification, and phylogenetic relationships in Himalayan *Hippophae* L. germplasm resources.
5. **Rajkumari Sanayama Devi** (2011): Fundamental and applied studies on *in vitro* conservation and cryopreservation of banana (*Musa* ABB cv. Karpura Chakkarakeli).
6. **Priaynka Khanduri** (2013): Reproductive Ecology, Developmental Biology and Phylogenetic Analysis of Some Indian Podostemaceae. (*Thesis Submitted*)

2. Under progress with tentative titles

1. **Yash Mangla**: Reproductive biology of Seabuckthorn.
2. **Vineet**: Reproductive biology of threatened tree species.
3. **Divya Mohanty**: Germline transformation of crop plants. (*Jointly with Dr Atika Chandra, Maitreyi College*)
4. **Chandan Barman**: Reproductive ecology and natural recruitment pattern of threatened tree species.
5. **Anjali Chaudhary** (2012)

3. Supervision of awarded M.Phil. Dissertations

1. **Khoisnam Sarma Devi** (2005) Reproductive biology of a medicinally important legume, *Mucuna pruriens* (L.)
2. **Mayank Gautam** (2007) Phenology and floral biology of *Schleichera oleosa* (lour.) Oken (Sapindaceae)
3. **Shinjinee Sengupta** (2007) Ovule receptivity and seed-set pattern in some legumes
4. **Anjali Chaudhary** (2012) Female gametophyte development and incidence of single fertilization in *Zeylanidium lichenoides* (Podostemaceae).

Publications Profile

1 *Research papers published in Refereed/Peer Reviewed Journals*

- Bhardwaj V, **Tandon R.** 2013. Self-incompatibility and post-fertilization maternal regulation causes low fecundity in *Aegle marmelos* (Rutaceae). *Botanical Journal of the Linnean Society* (DOI: 10.1111/boj.12057).
- Mangla Y, **Tandon R,** Goel S, Raina SN. 2013. Structural Organization of Gynoecium and Pollen

Tube Path in Himalayan Seabuckthorn, *Hippophae rhamnoides* (Elaeagnaceae) **AoB Plants. 5: plt015; doi:10.1093/aobpla/plt015**

- Agrawal R, Tsujimoto H, **Tandon R**, Rao S, Raina SN. **2012**. Species-genomic relationships among the tribasic diploid and polyploid *Carthamus* taxa based on physical mapping of active and inactive 18S-5.8S-26S and 5S ribosomal RNA gene families, and the two tandemly repeated DNA sequences. **Gene 521**: 136-144
- **Tandon R***, Bhardwaj I. **2013**. Reproductive Strategies in Orchidaceae. **Journal of the Orchid Society of India. (In Press)**
- Vikas, Singh VK, **Tandon R. 2012**. Polyethylene glycol and polyamines promote pollen germination and tube growth in *Azadirachta indica* (Meliaceae). **International Journal of Plant Reproductive Biology 4(1)**: 23-29.
- Raina SN, Sehgal D, Jain S, Kumar A, Bhat V, Dar TU, Pandey V, Vaishnavi S, Bhargav A, **Tandon R**, Tewari M. **2011**. Diversity and relationships of multipurpose seabuckthorn (*Hippophae* L.) germplasm from the Indian Himalayas as assessed by AFLP and SAMPL markers. **Genetic Resources and Crop Evolution. 59(6)**:1033-1053.
- Mangla Y, **Tandon R. 2011**. Insect facilitate wind pollination in pollen-limited *Crateva adansonii* (Capparaceae). **Australian Journal of Botany 51**:61-69
- Vikas, **Tandon R. 2011**. Reproductive biology of *Azadirachta indica*, a medicinal tree species of arid-zone. **Plant Species Biology 26: 116-123**
- Sengupta S, **Tandon R. 2010**. Assessment of Ovule Receptivity as a Function of Expected Brood Size in Flowering Plants. **International Journal of Plant Reproductive Biology 2(1)**: 51-63.
- Agrawal A, Sanayaima R, **Tandon R**, Tyagi RK. **2010**. Cost-effective *in vitro* conservation of banana using alternatives of gelling agent (isabgol) and carbon source (market sugar). **Acta Physiologiae Plantarum 32**: 703-.
- Tyagi RK, Goswami R, Sanayaima R, Singh R, **Tandon R**, Agrawal A. **2009**. Micropropagation and slow growth *in vitro* conservation of cardamom (*Elettaria cardamomum* Maton). **In Vitro and Cellular Biology-Plant. 45**:721-729
- Love A, **Tandon R**, Banerjee BD, Babu CR. **2009**. DNA damage in natural populations of *Cassia occidentalis* inhabiting fly ash basin of a coal-fired thermal power plant. **Ecotoxicology 18(7)**: 791-801
- Vikas, Gautam M, **Tandon R**, Mohan Ram HY. **2009**. Pollination biology and breeding system of *Oroxylum indicum* in Western Himalaya. **Journal of Tropical Ecology. 25**: 93-96
- Gautam M, Vikas, **Tandon R. 2008**. Sexual system in *Schleichera oleosa* (Lour.) Oken (Sapindaceae). **International Journal of Plant Reproductive Biology 1**: 73-80
- **Tandon R**, Chodhury R, Shivanna KR. **2007**. Cryopreservation of oil palm pollen. **Current Science 92**:182-183
- Sarma K, **Tandon R**, Shivanna KR, Mohan Ram HY. **2007**. Snail-pollination in *Volvulopsis nummularium*. **Current Science 93 (6)**, 826-831

- **Tandon R**, Shivanna KR and Mohan Ram HY. **2003**. Reproductive Biology of *Butea monosperma* (Fabaceae). *Annals of Botany* 92 (11): 715-723.
- **Tandon R**, Shivanna KR and Mohan Ram HY. **2001**. Pollination biology and breeding system of *Acacia senegal*. *Botanical Journal of the Linnaean Society* 135 (3): 251-262.
- **Tandon R**, Manohara T N, Nijalingappa B H M and Shivanna KR. **2001**. Pollination and pollen-pistil interaction in Oil Palm, *Elaeis guineensis*. *Annals of Botany* 87(6): 831-838.
- Rangaswamy NS, Subramanya J, **Tandon R**, Bhuskute SR. **2001**. Microspore Tetrad Analysis – Can either type of microsporangium engender tetrads of all configurations? *Phytomorphology Golden Jubilee Issue*: 573-586.
- **Tandon R**, Manohara TN, Najalingappa BHM and Shivanna KR. **1999**. Polyethylene glycol enhances in vitro germination and tube growth of oil palm pollen. *Indian Journal of Experimental Biology* 37:169-172.
- Mohan Ram HY, **Tandon R**. **1997**. Bamboos and Rattans – From Riches to Rags. Proc. *Indian National Science Academy B63* (3): 245-267.

2. Other publications (Edited works, Book reviews, Festschrift volumes, etc.)

- **Tandon R**, Shivanna KR, Mohan Ram HY. **2010**. Reproductive biology of some gum producing Indian desert plants. In Ramawat KG (ed.) *Biology and Biotechnology of Desert Plants*. Springer Verlag.
- Khanduri P, **Tandon R**, Uniyal P, Sehgal A, Mohan Ram H.Y. **2009**. Floral Morphology of Podostemaceae: a conspectus. In Y. Vimla (ed.) *Flower: Retrospect and Prospect*. SR Scientific Publication, Delhi.
- **Tandon R** and Mohan Ram HY. **2009**. The saga of pollination biology. In (eds.) Darwin Bicentenary Commemoration Volume. National Academy of Sciences India, Allahabad
- Vikas, Sarma K., **Tandon R**. **2006**. Plant Reproductive Biology and Conservation of Bioresources, In: Prithipal Singh (ed.) *Biodiversity, Conservation, and Systematics*, Scientific Publishers (India) Jodhpur. 151-162.
- **Tandon R**, Gupta P, Sunnichan VG, Shivanna KR, Mohan Ram HY. **2005**. Reproductive Biology of Some Indian Trees of Economic Importance. In: Chaturvedi SN, Singh KP. (eds.) *Plant Reproductive and Molecular Biology*. Avishkar Publishers, Jaipur.

Conference Organization/ Presentations (in the last three years)

1. Organization of a Conference

- Organizing Secretary, National Workshop on Reproductive Biology of Flowering Plants for their Conservation and Improvement. April 27-29, 2012, Department of Botany, University of Delhi.

2. Participation as Paper/Poster Presenter

- National Workshop on Reproductive Biology of Flowering Plants for their Conservation and Improvement.

- Second Global Congress on *Plant Reproductive Biology (PRB-2012)*, University of Pécs, Hungary, 15th-18th April, 2012.
- National Conference on *Orchids in India: Diversity, Characterization and Resource Development for Community Livelihood & Orchid Show*. Orchid Society of India, National Academy of Sciences, Allahabad, December 21-23, 2011
- UGC sponsored National Seminar on *Biodiversity- Crisis, Management and Conservation*, East Calcutta Girls' College, Lake Town, Kolkata, December 8-9, 2011.
- Workshop for teachers on *Techniques in Cell Biology*. Daulat Ram College, University of Delhi, October 12-14, 2011
- *First Global Conference on Reproductive Biology*, The Society of Plant Reproductive Biologists, Agra, 22-24 October, 2010.
- National workshop on *Taxonomy, Theory and Practice*, Centre for Environmental Management of Degraded Ecosystem (CEMDE), 3-9 March 2010
- National workshop on *Taxonomy, Ecology and Conservation*, Centre for Environmental Management of Degraded Ecosystem (CEMDE), 29th December -7th January, 2010

Research Projects (Major Grants/Research Collaboration)

- DST: 2002-2005: PI: Reproductive biology of some traditional Indian medicinal plants.
- DBT: 2009-2012: Co-PI: Isolation of sex-linked genes and gender specific DNA markers in *Hippophae rhamnoides*.
- Department of Atomic Energy: 2009-2012: Co-PI: Genetic Transformation of pearl millet with a synthetic homolog of *MEGININ2* gene and evaluation of the transgenic plants for resistance to downy mildew.
- UGC: 2010-2013: PI: Reproductive biology of *Hippophae rhamnoides* and *Hippophae salicifolia*
- DST-Purse Grant: 2009-2012: Project-Coordinator: Developmental biology and phylogenetic analysis of some endemic species of Podostemaceae.
- MoEF: 2010-2014: PI: All India Coordinated Project entitled – Reproductive Biology of RET tree species namely, *Anogeissus sericea*, *Salvadora oleoides*, *Tecomella undulata* and *Wrightia tomentosa* of Rajasthan.
- DBT:2011-2016: (Co-PI): R& D Network Project entitled “Preventing extinction and improving conservation status of threatened plants through application of biotechnological tools”

Awards and Distinctions

- Dr Y.S. Murthy Young Scientist Award (2008) by the Indian Botanical Society.

Association With Professional Bodies

1. Reviewing

- Plant Systematic and Evolution
- Current Science
- Journal of Plant Biochemistry and Biotechnology
- The Palaeobotanist
- Journal of Biosciences
- Indian Journal of Plant genetic resources

- Journal of Reproductive Biology
- South African Journal of Botany

2. Advisory

- Society of Plant Reproductive Biologists

3. Committees and Boards

- Member, Governing Body, Delhi University Library System (2010-2011).
- Member, Purchase Committee for up-gradation of teaching infrastructure and instrumentation facilities at the Department of Botany, University of Delhi (2008 - 2011).
- Member, Program Implementation Group, DST-FIST grant, Department of Botany, Delhi University (2011-2016).

4. Memberships

- Delhi University Botanical Society (Life Member)
- Indian Botanical Society (Life Member)
- Society of Plant Reproductive Biologists (Life Member)
- Orchid Society of India (Life Member)

5. Office Bearer

- Treasurer, Delhi University Botanical Society (June, 2011 -)

Signature of Faculty Member