




## Faculty Details proforma for DU Web-site

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cc: [director@ducc.du.ac.in](mailto:director@ducc.du.ac.in)

Title	Dr	First Name	Yashwanti	Last Name	Mudgil	Photograph
Designation		Assistant professor				
Address		Department of Botany, University of Delhi, North Campus, Delhi-110007				
Phone No Office		<b>011-27667573</b>				
Residence						
Mobile						
Email Web-Page		<b>ymudgil@gmail.com</b>				
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		ICGEB, JNU, New Delhi			2002	
M.Sc		M. S. University of Baroda			1996	
B.Sc		Srivenkateswara college, Delhi University			1993	
P.G Diploma: In Biochem. Technology		Srivenkateswara college, Delhi University			1994	
Career Profile						
<p>March, 2010-till date: Assistant Professor, Department of Botany, University of Delhi.            2005-2010: Post-Doctoral Research Associate, Department of Biology, University of North Carolina at Chapel Hill, USA.            2002 -2005: Post-Doctoral Research Associate, Department of Cell &amp; Systems Biology, University of Toronto, Canada.</p>						
Administrative Assignments						
<p>Member Department Research committee 2018 onwards.            Member faculty of Science 2017 onwards.            Coordinator for the monthly meetings of the research scholars and faculty members of the Department of Botany- 2016 onward.            Observer to observe the conduct of Annual/semester examinations, May/June and Nov/Dec 2016.            Member Holi committee Botany Department. 2016 onwards.            Member in-charge Radioactivity room facility. 2011 onwards.            Member Secretary-Bio-Safety Committee North Campus. 2012 onwards.            Student's Grievance committee Botany Department, 2016 onward.            Members of the Project Implementation Group for the DST-FIST-II, 2017.</p>						
Areas of Interest / Specialization						
<ul style="list-style-type: none"> <li>• Signal transduction networks in plant cells.</li> <li>• G protein mediated downstream signaling networks.</li> <li>• Abiotic stress signaling in plants.</li> <li>• Molecular mechanisms of regulation of plant growth and development by hormones.</li> </ul>						
Subjects Taught						

- Recombinant DNA technology and Proteomics
- Contemporary concepts and methods in cell biology
- Immunology
- Ph.D. and M.Phil course work

#### Time table of the subjects taught during the current semester

S.No.	Subject	Days	Time	Classroom
1.	Recombinant DNA Technology and Proteomics			
2.	Contemporary Concepts and Methods in Cell Biology	Tuesday (Theory and Practical)	Theory 8.45 AM-10.35 AM Practical 10.35 AM-4.05 PM	Theory # 207 (New Block) Practical # Lab45
3.	Immunology	Thursday (Practical)	Practical 2.15 PM-5.30 PM	Practical # Lab 22
4.	Dissertation	Thursday Friday Saturday	Thursday 2.15 PM-5.00 PM Friday 2.15 PM-5.00 PM Saturday 8.45 AM-5.00 PM	Room # 203
5.	Ph.D. Coursework GR5: Methods for physiology and biochemistry	GR5: Friday	Friday 2.00 PM-4.00PM	Theory Committee room Practical As per the location of instrument

#### Research Guidance

Currently mentoring 2 Ph.D. students and 2 project JRF, mentoring M.Sc students for dissertation on regular basis for last 8 years.

Phd.D- awarded: 2.

M.Phil-awarded: 1.

#### Publications Profile

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

1. Agarwal A, Fartyal D, **Mudgil Y**, Reddy MK. Genetically Engineered Indica Rice for Drought and Salinity Tolerance and Weed Management. Proceedings of the 4th World Congress on New Technologies (NewTech'18) Madrid, Spain – August 19 – 21, 2018, Paper No. ICBB 106
2. Khatri, N., Singh, S., Hakim, N. and **Mudgil, Y.** (2017). Comparative expression profiling of AtRAD5B and AtNDL1: Hints towards a role in G protein mediated signaling. *Gene Expression Patterns*, 25-26, 167-174.
3. **Mudgil Y\***, Karve A, Teixeira PJ, Jiang K, Tunc-Ozdemir M, Jones AM.(2016). Photosynthate Regulation of the Root System Architecture Mediated by the Heterotrimeric G Protein Complex in Arabidopsis. *Front Plant Sci.* 7:1255. doi: 10.3389/fpls.2016.01255. eCollection 2016.
4. Agarwal A, **Mudgil Y**, Pandey S, Fartyal D, Reddy MK. (2016). Structural modelling and phylogenetic analyses of *PgeIF4A2* (Eukaryotic translation initiation factor) from *Pennisetum glaucum* reveal signature motifs with a role in stress tolerance and development. *Bioinformation.* 12(12):416-419. doi: 10.6026/97320630012416. eCollection 2016.

5. Khatri N, **Mudgil Y** (2015), Hypothesis: NDL proteins function in stress responses by regulating microtubule organization. *Front Plant Sci.* 6:947. doi: 10.3389/fpls.2015.00947. eCollection 2015.
6. Singh BN, **Mudgil Y**, John R, Achary VM, Tripathy MK, Sopory SK, Reddy MK, Kaul T (2015), Cell cycle stage-specific differential expression of topoisomerase I in tobacco BY-2 cells and its ectopic overexpression and knockdown unravels its crucial role in plant morphogenesis and development. *Plant Sci.* vol.240:182-92. doi: 10.1016/j.plantsci.2015.09.016. Epub 2015 Sep 25.
7. **Mudgil Y\***, Ghawana S and Jones AM (2013). N-MYC DOWN-REGULATED-LIKE Proteins Regulate Meristem Initiation by Modulating Auxin Transport and *MAX2* Expression. *PLoS ONE*, 8(11): e7863/ doi: 10.131 \***corresponding author.**
8. Klopffleisch K, Phan N, Augustin K, Bayne RS, Booker KS, Botella JR, Carpita NC, Carr T, Chen JG, Cooke TR, Frick-Cheng A, Friedman EJ, Fulk B, Hahn MG, Jiang K, Jorda L, Kruppe L, Liu C, Lorek J, McCann MC, Molina A, Moriyama EN, Mukhtar MS, **Mudgil Y**, Pattathil S, Schwarz J, Seta S, Tan M, Temp U, Trusov Y, Urano D, Welter B, Yang J, Panstruga R, Uhrig JF, Jones AM (2011) Arabidopsis G-protein interactome reveals connections to cell wall carbohydrates and morphogenesis. *Molecular systems Biology*, 7:532. doi: 10.1038/msb.2011.66.
9. **Mudgil Y\*** and Jones AM (2010) NDR proteins: lessons learned from Arabidopsis and animal cells prompt a testable hypothesis. *Plant Signaling & Behavior*, Vol. 5: issue 8 1-2, Aug 2010. \***corresponding author**
10. **Mudgil Y**, Uhrig J, Zhou J, Temple B, Jones AM (2009) Arabidopsis N-MYC DOWN-REGULATED-LIKE1, a Novel Sugar Regulated Downstream Effector of G $\beta$  $\gamma$ -Mediated Auxin Transport in the Root. *Plant Cell* 21: 3591-609.
11. Chen Z, Noir S, Kwaaitaal M, Hartmann HA, Wu MJ, **Mudgil Y**, Sukumar P, Muday G, Panstruga R, Jones AM (2009) Two Seven-transmembrane Domain MILDEW RESISTANCE LOCUS O Proteins Cofunction in Arabidopsis Root Thigmomorphogenesis. *Plant Cell*, 21: 1972-1991.
12. **Samuel MA\***, **Mudgil Y\***, Salt JN, Ramachandran S, Chilelli A, Goring DR (2008) Interactions between the S-Domain receptor kinases and AtPUB-ARM E3 ubiquitin ligases suggest a conserved signaling pathway in *Arabidopsis*. *Plant Physiology*. 147: 2084-95. \***these authors contributed equally to this article**
13. **Mudgil Y**, Shiu SH, Stone SL, Salt JN and Goring DR. (2004) Large Complement of the Predicted Arabidopsis ARM Repeat Proteins Are Members of the U-Box E3 Ubiquitin Ligase Family. *Plant Physiology* 134: 59-66.
14. B.N. Singh, **Mudgil Y**, Sopory SK and Reddy MK (2003) Molecular characterization of a nuclear topoisomerase II from *Nicotiana tabacum* that functionally complements a temperature-sensitive topoisomerase II yeast mutant. *Plant Molecular Biology* 52: 1063-76. .
15. Tuteja N, Reddy MK, **Mudgil Y**, Yadav BS, Chandok MR, Sopory SK (2003) Pea DNA topoisomerase I is phosphorylated and stimulated by casein kinase 2 and protein kinase C. *Plant Physiology* 132: 2108-15.
16. **Mudgil Y**, B.N. Singh, Upadhyaya KC, Sopory SK and Reddy MK (2002) Cloning and characterization of a cell cycle-regulated gene encoding topoisomerase I from *Nicotiana tabacum* that is inducible by light, low temperature and abscisic acid. *Molecular Genetics and Genomics*. 267:380-90.
17. Reddy MK, Nair S, Singh BN, **Mudgil Y**, Tewari KK and Sopory SK. (2001) Cloning and Expression of a nuclear encoded plastid specific 33 kDa ribonucleoprotein gene (33 RNP) from pea that is light stimulated. *Gene* 263: 179-187.
18. Reddy MK, Nair S, Tewari KK **Mudgil Y**, Yadav BS and Sopory SK. (1999) Cloning and characterization of a cDNA Encoding Topoisomerase II in Pea and analysis of its expression in relation to cell proliferation. *Plant Molecular Biology* 41:125-137.

19. Jasrai YT, **Mudgil Y**, A.Remakantham and Kannan VR. (1999) Direct shoot regeneration from cultured leaves of *PASSIFLORA CAERULEA L.* and field performance of regenerated plants. *Phytomorphology* 49:289-293.

#### **Book chapters**

1. **Mudgil Y.(2011) Auxin Transport and Lateral Root Formation: Knowing the Process at the Root Level.** Trivedi, P.C. and Sopory, S.K (Ed). *Current trends in Plant Biology*, 35-45. ISBN:817910303X
2. **Khatri N, Katiyar A, Mudgil Y (2012) Role of G Protein Signaling Components in Plant Stress Management.** In: Girdhar K. Pandey (Ed) Stress-Mediated Signaling in Plants I . *Plant Stress* 6 (Special Issue 1), 1-9. ISSN:1749-0359.
3. **Singh S, Khatri N, Katiyar A, Mudgil Y (2015) Molecular approaches in deciphering abiotic stress signaling mechanisms in plants.** In: Girdhar K. Pandey (Ed) Elucidation of Abiotic Stress Signaling in Plants. A Functional Genomic. ISBN:978-1-4939-2211-6.
4. **Katiyar A and Mudgil Y (2016) Protein-Protein Interactions: Basic Tools towards Finding Cell's Functional Organisation.** The Botanica, 66:45-11, ISSN 0045-2629.
5. **Khatri N and Mudgil Y (2017) Salinity Stress: "OMICS" Approaches.** In Zargar, SM and Rai, V.(Eds.) Plant Omics and Crop Breeding. ISBN:13:978-1-77, 188-455-6.

#### **Publications in the Last one year**

1. Agarwal A, Fartyal D, **Mudgil Y**, Reddy MK. Genetically Engineered Indica Rice for Drought and Salinity Tolerance and Weed Management. Proceedings of the 4th World Congress on New Technologies (NewTech'18) Madrid, Spain .August 19-21, 2018, Paper No. ICBB 106.

#### **Conference Organization/ Presentations (in the last three years)**

1. **Mudgil, Y.** (2019) Understanding Molecular Basis of Plant Stress Mechanisms in the Light of Modern Optical Technologies. Date: 12-14 May 2019, Invited talk at Optical society of America-Agri-Photonics Incubator: Advanced Spectroscopy in Precision Agriculture, Washington, DC USA
2. **Mudgil, Y.** (2018). Current insights in regulation of meristem organization. Date: 27<sup>th</sup> April 2018, Invited talk as a resource person at Department of Botany, Savitribai Phule Pune University
3. **Arpana Katiyar and Yashwanti Mudgil** (2019) Role of AtN-MYC Down regulated Like interactome in abiotic stress responses. India EMBO symposium on "Sensing and signalling in plant stress response" New Delhi India, April 15-17, 2019 Poster presentation.
4. **Sanjeela Punia, Diksha Bhola and Yashwanti Mudgil** (2017) Identification of N-Myc Downregulated Like Mediated Stress Signaling Networks in *Arabidopsis*. International conference on plant developmental biology and 3rd national *Arabidopsis* meeting. December 12-16th, NISER, Bhubaneswar, India, 2017.
5. **Nisha Khatri, Arpana Katiyar and Yashwanti Mudgil** (2016) N-MYC DOWNREGULATED-LIKE (NDL) Mediated Signaling Networks in *Arabidopsis*. National Conference on "Plant Science Research: Looking beyond 21st Century for Environmental and Agricultural Revolution", Department of Botany, University of Delhi, February 5-7, 2016 Poster presentation.

#### **Research Projects (Major Grants/Research Collaboration)**

1. **Major Research grant :DST-SERB (Period: 2017-2020)**
2. **Major Research grant : DBT (Period: 2018-2021)**

Awards and Distinctions
<ul style="list-style-type: none"> <li>• Awarded Department of Biotechnology, Govt. of India, Cutting-edge Research Enhancement and Scientific Training award, DBT-CREST award 2011-2012.</li> <li>• Recipient of scholarship from Department of Biotechnology, Government of INDIA (1994-1996).</li> <li>• Recipient of Fellowship University grant commission, Government of INDIA</li> <li>• Junior Research Fellowship (1996-1998) and</li> <li>• Senior Research Fellowship (1998-2001).</li> <li>• Recipient of Dr Manasi Ram Memorial Award for best poster: "Cloning, Characterization and Expression of Topoisomerase I from tobacco" in XXIV All India Cell Biology Conference (2000).</li> </ul>
Association With Professional Bodies
<p><i>Memberships</i></p> <p>The Indian Science Congress Association (Life member)</p> <p>Delhi University Botanical Society (Life member)</p>
Other Activities
<p>Workshop: Effective Mentoring in the Research Laboratory, University of North Carolina at Chapel Hill, 30-01-2013- 6-03-2013.</p> <p>Judge at Antheia: The botanical Society at Miranda House (2-3<sup>rd</sup> March 2016)</p> <p>Orientation programme (OR-91) at CPDHE, University of Delhi, from 21-09-2017 to 19-12-2017.</p> <p>Refresher Course in Life Sciences at CPDHE, University of Delhi, from 17-7-2018 to 6-8-2018.</p> <p>Refresher Course Life Sciences at CPDHE, University of Delhi, from 28-06-2019 to 11-07-2019.</p> <p>Assistant editor : Phytomorphology (An international Journal of Plant Sciences: ISSN 0031-9449)</p>

Signature of Faculty Member