


## Faculty Details proforma for DU Web-site



**PLEASE FILL THIS IN AND Email it to [websiteDU@du.ac.in](mailto:websiteDU@du.ac.in) and  
cc: [director@ducc.du.ac.in](mailto:director@ducc.du.ac.in)**

<b>Title</b>	<b>Dr.</b>	<b>First Name</b>	<b>Surekha</b>	<b>Last Name</b>	<b>Katiyar-Agarwal</b>	<b>Photograph</b>
<b>Designation</b>		Assistant Professor				
<b>Address</b>		Room No. 314 Department of Plant Molecular Biology University of Delhi South Campus Benito Juarez Road New Delhi-110021				
<b>Phone No</b>	<b>Office</b>	011-24113915				
	<b>Residence</b>					
	<b>Mobile</b>	9971963915				
<b>Email</b>		katiyars@south.du.ac.in, katiyarsurekha@gmail.com				
<b>Web-Page</b>		http://pmb.du.ac.in/index.php?page=SKA				
<b>Educational Qualifications</b>						
<b>Degree</b>		<b>Institution</b>			<b>Year</b>	
Ph.D.		Department of Plant Molecular Biology University of Delhi South Campus			2002	
PG (M.Sc.)		Department of Plant Molecular Biology University of Delhi South Campus			1996	
UG (B.Sc.)		University of Delhi			1994	
<b>Career Profile</b>						
1. Assistant Professor		University of Delhi South Campus			July 2007-present	
2. Post-doctoral Research Associate		University of California, Riverside (USA)			Jan 2004-July 2007	
3. Post-doctoral Research Associate		University of Arizona, Tucson (USA)			Sep 2002-Dec 2003	
<b>Administrative Assignments</b>						
<ol style="list-style-type: none"> <li>1. Associated with formulating semester syllabus of M. Sc., M.Phil/Ph. D courses at the Department of Plant Molecular Biology.</li> <li>2. Examination-In-charge of the Department.</li> <li>3. Academic-in-charge of the Department.</li> </ol>						
<b>Areas of Interest / Specialization</b>						
Stress Molecular Biology, Gene regulation mechanisms, Small RNAs.						
<b>Subjects Taught</b>						
<b>Course: M. Sc. (Plant Molecular Biology and Biotechnology)</b>						
<ol style="list-style-type: none"> <li>1. Recombinant DNA technology: concepts, techniques and applications (PBCC 103)</li> <li>2. Proteomics and Metabolomics (PBCC 203)</li> <li>3. Practical Course (PBCC 105 &amp; PBCC 205)</li> <li>4. Dissertation (PBCC 401)</li> </ol>						
<b>Course: Ph.D (Plant Molecular Biology)</b>						
PMB I: Research Methodology						
PMB II: Advances in Plant Molecular Biology & Biotechnology						
<b>Time-table of the subjects taught during the current semester</b>						
<b>S.No.</b>	<b>Subject</b>	<b>Days</b>	<b>Time</b>	<b>Classroom</b>		
1.	PMB II	MON	5H	112		
2.	PBCC 103	TUES, FRI	4H/WEEK	112/305		

3.	PBCC203	WEDNES	2H/WEEK	112/305
4.	PMB I	MON	4H	112
<b>Research Guidance</b>				
<ol style="list-style-type: none"> <li>1. <i>Supervision of awarded Doctoral Thesis: 02</i></li> <li>2. <i>Supervision of Doctoral Thesis, under progress: 02</i></li> <li>3. <i>Supervision of awarded M.Phil dissertations: None</i> <i>Supervision of M.Phil dissertations, under progress: None</i></li> </ol>				
<b>Publications Profile</b>				
<b><i>Research papers published in Refereed/Peer Reviewed Journals</i></b>				
<ol style="list-style-type: none"> <li>1. Sasi JM, Kumar CV, Mani B, Bhardwaj AR, Agarwal M, <b>Katiyar-Agarwal S.</b> (2019). Identification and characterization of miRNAs during flag leaf senescence in rice by high-throughput sequencing. <i>Plant Physiol. Rep.</i> 24(1):1-14.</li> <li>2. Pandey, R., Bhardwaj, A.R., Agarwal, M., <b>Katiyar-Agarwal, S.</b> (2017). Discovery of small RNAs in wheat: a survey. <i>Indian J. Plant Physiol.</i> 22: 411–421.</li> <li>3. McLoughlin F, Basha E, Fowler ME, Kim M, Bordowitz, <b>Katiyar-Agarwal S</b>, Vierling E. 2016. Class I and II small heat-shock proteins protect protein translation factors during heat stress. <i>Plant Physiol.</i> 172(2):1221-1236.</li> <li>4. Mani B, Agarwal M, <b>Katiyar-Agarwal S.</b> 2015. Comprehensive expression profiling of rice tetraspanin genes reveals diverse roles during development and abiotic stress. <i>Front. Plant Sci.</i> 6:1088.</li> <li>5. Bhardwaj AR, Joshi G, Kukreja B, Malik V, Arora P, Pandey R, Shukla RN, Bankar KG, <b>Katiyar-Agarwal S</b>, Goel S, Jagannath A, Kumar A, Agarwal M. <b>2015.</b> Global insights into high temperature and drought stress regulated genes by RNA-Seq in economically important oilseed crop <i>Brassica juncea</i>. <i>BMC Plant Biol.</i> 15:9.</li> <li>6. Pandey R, Joshi G, Bhardwaj AR, Agarwal, <b>Katiyar-Agarwal S.</b> 2014. A comprehensive genome-wide study on tissue-specific and abiotic stress-specific miRNAs in <i>Triticum aestivum</i>. <i>PLoS ONE</i> 9(4):e95800.</li> <li>7. Kohli D, Joshi G, Deokar AA, Bhardwaj AR, Agarwal M, <b>Katiyar-Agarwal S</b>, Srinivasan R, Jain PK. <b>2014.</b> Identification and characterization of wilt and salt stress-responsive microRNAs in chickpea through high-throughput sequencing. <i>PLoS ONE</i> Oct 8: 9(10):e108851. doi: 10.1371/journal.pone.0108851</li> <li>8. Bhardwaj AR, Joshi G, Pandey R, Kukreja B, Goel S, Jagannath A, Kumar A, <b>Katiyar-Agarwal S</b>, Agarwal M. 2014. A genome-wide perspective of miRNAome in response to high temperature, salinity and drought stresses in <i>Brassica juncea</i> (Czern) L. <i>PLoS ONE</i> 9(3): e92456.</li> <li>9. Lakhota N, Joshi G, Bhardwaj AR, <b>Katiyar-Agarwal S</b>, Agarwal M, Jagannath A, Goel S, Kumar A. 2014. Identification and characterization of miRNAome in root, stem, leaf and tuber developmental stages of potato (<i>Solanum tuberosum</i> L.) by high-throughput sequencing. <i>BMC Plant Biology</i> 14:6.</li> <li>10. Zhang X, Zhao H, Gao S, Wang WC, <b>Katiyar-Agarwal S</b>, Huang HD, Raikhel N, Jin H. 2011. Arabidopsis Argonaute 2 Regulates Innate Immunity via miRNA393(*)-Mediated Silencing of a Golgi-Localized SNARE Gene, MEMB12. <i>Molecular Cell</i> 42(3):356-66.</li> <li>11. <b>Katiyar-Agarwal S*</b> and Jin H*. 2010. Role of small RNAs in host-microbe interactions. <i>Annual Review of Phytopathology</i> 28:225-246. * corresponding author</li> <li>12. <b>Katiyar-Agarwal S</b>, Gao S, Vivian-Smith A and Jin H. 2007. A novel class of bacteria-induced small RNAs in Arabidopsis. <i>Genes and Development</i> 21:3123-3134.</li> <li>13. <b>Katiyar-Agarwal S</b> and Jin H. 2007. Discovery and detection of small RNAs in response to pathogen infection in plants. <i>Methods in Enzymology</i> 427:215-227.</li> <li>14. Verslues PE, Batelli G, Grillo S, Agius F, Kim YS, Zhu J, Agarwal M, <b>Katiyar-Agarwal S</b>, Zhu JK. 2007. Interaction of SOS2 with nucleoside diphosphate kinase 2 and catalases reveals a point of connection between salt stress and H<sub>2</sub>O<sub>2</sub> signaling in Arabidopsis thaliana. <i>Mol. Cell. Biol.</i> 27:7771-7780.</li> <li>15. <b>Katiyar-Agarwal S</b>, Morgan R, Dahlbeck D, Borsani O, Villegas A, Zhu J-K, Staskawicz B and Jin H. 2006. A Pathogen-Inducible Endogenous siRNA In Plant Immunity. <i>Proc. Natl. Acad. Sci. USA</i> 103 (47):18002-18007.</li> </ol>				

16. **Katiyar-Agarwal S**, Zhu J, Kim K, Agarwal M, Fu X, Huang A and Zhu J-K. 2006. The plasma membrane Na<sup>+</sup>/H<sup>+</sup> antiporter SOS1 interacts with RCD1 and functions in oxidative stress tolerance in Arabidopsis. *Proc Natl Acad Sci. USA* 103(49):18816-21
17. Verslues, PE, Agarwal M, **Katiyar-Agarwal S**, Zhu J and Zhu J-K. 2006. Methods and concepts in quantifying resistance to drought, salt and freezing, abiotic stresses that affect plant water status. *Plant J.* 45: 523-539.
18. **Katiyar-Agarwal S**, Verslues P, Zhu J-K. 2005. Plant nutrition for food security, human health and environmental protection. In: Mechanisms of salt tolerance in plants. Eds. C.J. Li et. al. pp. 44-45
19. **Katiyar-Agarwal S**, Agarwal M and Anil Grover. 2003. Heat tolerant basmati rice engineered by overexpression of Hsp101 gene. *Plant Mol. Biol.* 51:677-686.
20. Agarwal M, Sahi C, **Katiyar-Agarwal S**, Agarwal S, Young T, Gallie DR, Sharma V, Ganesan K and Grover A. 2003. Molecular characterization of rice *hsp101*: complementation of yeast *hsp104* mutation by disaggregation of protein granules and differential expression in indica and japonica rice types. *Plant Mol. Biol.* 51:543-553.
21. Agarwal M, **Katiyar-Agarwal S** and Anil Grover. 2003. Plant Hsp100 proteins: structure, function and regulation. *Plant Sci* 163: 397-40.
22. **Katiyar-Agarwal S**, Kapoor A and Grover A. 2002. Binary cloning vectors for efficient genetic transformation of rice. *Curr. Sci.* 82(7): 873-876.
23. Agarwal M, **Katiyar-Agarwal S**, Sahi C, Gallie DR and Grover A. 2001. *Arabidopsis thaliana* Hsp100 proteins: kith and kin. *Cell Stress and Chaperones* 6(3): 219-224.
24. Grover A, Aggarwal PK, Kapoor A, **Katiyar-Agarwal S**, Agarwal M. 2002. Addressing abiotic stresses in agriculture through transgenic technology. *Curr. Sci.* 84(3): 355-367.
25. **Katiyar-Agarwal S**, Agarwal M, Gallie DR and Grover A. 2001. Search for the cellular functions of plant Hsp100/Clp family proteins. *Crit. Rev. Plant Sci.* 20(3): 277-295.
26. Grover A, Kapoor A, **Katiyar-Agarwal S**, Agarwal M, Sahi C, Jain P, Kotak S, Agrawal S, Dubey H. 2001. Experimentations in biology of plant abiotic stress responses. *Proc Indian Natn Sci Acad* B67 (5): 189-214.
27. Grover A, Kapoor A, Satya Lakshmi O, Agarwal S, Sahi C, **Katiyar-Agarwal S**, Agarwal M and Dubey H. 2001. Understanding molecular alphabets of the plant abiotic stress responses. *Curr. Sci.* 80: 206-216.
28. Grover A, **Katiyar-Agarwal S**, Agarwal M, Sahi C, Satya Lakshmi O, Dubey H, Agarwal S and Kapoor A. 2000. Production of Abiotic stress tolerant transgenic rice plants. *Proc Third International Rice Genetics Symposium. International Rice Research Institute, Manila, Philippines* (in press).
29. Grover A, Agarwal M, **Katiyar-Agarwal S**, Sahi C and Agarwal S. 2000. Production of high temperature tolerant transgenic plants through manipulation of photosynthetic membrane lipids. *Curr. Sci.* 79: 557-559.
30. Grover A, Kapoor A, Sahi C, Agarwal S, **Katiyar-Agarwal S**, Agarwal M and Dubey H. 2000. Abiotic stress responsive genes and promoters in plants. *Proceedings Andhra Pradesh Netherlands project workshop "Biotechnological interventions for abiotic stress management in rainfed crops"*, Central Research Institute for Dryland Agriculture, Hyderabad, pp. 1-39.
31. **Katiyar-Agarwal S**, Agarwal M and Grover A. 1999. Emerging trends in agricultural biotechnology research: use of abiotic stress-induced promoter to drive expression of a stress resistance gene in the transgenic system leads to high level stress tolerance associated with minimal negative effects on growth. *Curr. Sci.* 77: 1577-1579.
32. Grover A, Pareek A, Singla SL, Minhas, D, **Katiyar S**, Ghawana S, Dubey H, Agarwal M, Rao GU, Rathee J and Grover, A. 1998. Engineering crops for tolerance against abiotic stresses through gene manipulation. *Curr. Sci.* 75: 689-696.

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

1. Raxwal V, **Katiyar-Agarwal S**, Agarwal M. 2012. Structural and Functional Diversity of Plant Heat Shock Factors. In: Pandey G. K. (Guest Ed.). *Plant Stress: Stress mediated signaling in plants*. Global Science Books Japan, pp898-96.
2. Bhardwaj, A.K., Pandey, R., Agarwal, M., **Katiyar-Agarwal, S.** 2012. Northern Blot Analysis for Expression Profiling of mRNAs and Small RNAs. In: Jin H. and Gassmann W. (Eds.) *RNA Abundance Analysis: Methods and Protocols, Methods in Molecular Biology*, vol. 883, DOI 10.1007/978-1-61779-839-9\_2, Springer Science+Business Media New York 2012.

3. Pandey, R., Bhardwaj, A.K., <b>Katiyar-Agarwal, S.</b> 2012. Endogenous Small RNAs and Antibacterial Resistance in Plants. In: R. Sunkar (Ed.) <i>MicroRNAs in Plant Development and Stress Responses, Signaling and Communication in Plants</i> 15, DOI 10.1007/978-3-642-27384-1_12, Springer-Verlag Berlin Heidelberg.
<b>Publications in the Last one year</b>
<ul style="list-style-type: none"> <li>• Sasi JM, Kumar CV, Mani B, Bhardwaj AR, Agarwal M, <b>Katiyar-Agarwal S.</b> (2019). Identification and characterization of miRNAs during flag leaf senescence in rice by high-throughput sequencing. <i>Plant Physiol. Rep.</i> 24(1):1-14.</li> </ul>
<b>Conference Organization/ Presentations (in the last three years)</b>
<p><i>Presentations</i></p> <ol style="list-style-type: none"> <li>1. Delivered lecture on ‘Tetraspanins as Dynamic Regulators of Cellular Signaling’ at National Symposium on From Genes to network: recent trends in cell signaling’ organized by Amity Institute of Integrative Sciences and Health &amp; Amity Institute of Biotechnology’ at Amity University, Gurgaon, Haryana, India from December 14-15, <b>2018</b>.</li> <li>2. Delivered lecture on ‘Tetraspanin family of proteins: new regulators of development and abiotic stress response in rice’ at ‘3<sup>rd</sup> International Plant Physiology Congress’ organized by Indian Society of Plant Physiology at JNU, New Delhi from December 11-14, <b>2015</b>.</li> <li>3. Delivered lecture on ‘Endogenous small RNAs: Tiny regulators of abiotic and biotic stress responses in plants’ at ‘Theoretical and Practical course on MicroRNAs in Plant Development and Stress’ organized by ICGEB, New Delhi, India from November 16-27, <b>2015</b>.</li> <li>4. Delivered lecture on ‘Discovery and Characterization of miRNAs in Plants’ at Workshop cum Hands-on-Training on ‘Computational identification of microRNA (miRNA) for biotic &amp; abiotic stress tolerance in cereals’ organized by Department of Genetics &amp; Plant Breeding, Ch. Charan Singh University, Meerut, India from January 12-14, <b>2015</b>.</li> <li>5. Delivered lecture on ‘The Small RNA World of Plants’ at Refresher course in Life-Sciences/Biological Sciences/Bio-informatics organized by CPDHE (Centre for Professional Development in Higher Education (University of Delhi) &amp; FIAS (Faculty of Interdisciplinary and Applied Sciences (University of Delhi South Campus) at University of Delhi South Campus on February 25-March 16, <b>2013</b>.</li> <li>6. Delivered lecture on ‘Next Generation Sequencing for Discovery of Plant miRNAs in Abiotic Stress’ at First regional workshop on sequencing experimental design and quantitative genomics organized at University of Delhi South Campus on February 25-26, <b>2011</b>.</li> <li>7. Delivered lecture on “Endogenous small RNAs” at UGC-SAP symposium organized by Department of Plant Molecular Biology, University of Delhi, South Campus on March 18, <b>2009</b>.</li> <li>8. Delivered lecture on “Endogenous small non-coding RNAs: key players in plant defense” at UGC-SAP symposium organized by Department of Genetics, University of Delhi, South Campus on October 25, <b>2008</b>.</li> <li>9. Oral presentation “Towards production of high temperature tolerant transgenic crops”, National Convention on Transgenic Rapeseed-Mustard: An Assessment, New Delhi, India, January 16-17, <b>2002</b>.</li> </ol> <p><i>Posters</i></p> <ol style="list-style-type: none"> <li>1. Stress-induced alternative splicing of Arabidopsis HSFA 1e. Presented at <b>EMBO symposium “Sensing and signaling in plant stress response”</b> at New Delhi, India (April 15-17, 2019). Cheeni VijayaKumar, Manu Agarwal M, Surekha Katiyar Agarwal.</li> <li>2. Heat Shock Transcription Factors (HSFs): Possible Regulators of Senescence in Rice. Presented at <b>International Conference on Plant Genetics and Genomics “Next Gen Crops for Sustainable Agriculture</b> at Chandigarh, India "(July 19- 20, 2018). Jyothish Madambikattil Sasi, Balaji M, Manu Agarwal and Surekha Katiyar Agarwal.</li> <li>3. Unravelling the transcriptome of rice coleoptile senescence. Presented at <b>International Symposium on Plant Systematics: Priorities and Challenges &amp; XXVII Annual conference of Indian Association for Angiosperm Taxonomy</b> at Department of Botany, University of Delhi, India (November 10-12, 2017). Jyothish Madambikattil Sasi, Manu Agarwal, Surekha Katiyar Agarwal.</li> </ol>
<b>Research Projects (Major Grants/Research Collaboration)</b>

<ul style="list-style-type: none"> <li>• Unravelling the interactome of tetraspanin protein, a novel regulator of abiotic stress tolerance in rice. Funding Agency: DST-SERB Duration: 2018-2021</li> <li>• Whole genome and transcriptome changes as a consequence of allo and auto polyploidy in Vigna L. Phase II. Funding Agency: DBT-NER Duration: 2018-2021</li> </ul>
<b>Awards and Distinctions</b>
<ul style="list-style-type: none"> <li>• Awarded Innovative Young Biotechnologist Award (IYBA-2012) by Department of Biotechnology, India.</li> <li>• Awarded Junior Research Fellowship (JRF) by Council of Scientific and Industrial Research (CSIR), New Delhi.</li> <li>• Qualified Graduate Aptitude Test in Engineering, 1996 in Life Science (GATE-96).</li> </ul>
<b>Association With Professional Bodies</b>
<ol style="list-style-type: none"> <li>1. <i>Reviewing</i> Involved in reviewing of research articles of several high impact scientific journals such as BMC Plant Biology, BMC Genomics, Plant Molecular Biology Reporter, PLOS ONE, J of Biosciences, Plant Cell Reports, Protoplasma, Functional &amp; Integrative Genomics.</li> <li>2. <i>Advisory</i></li> <li>3. <i>Committees and Boards</i> <ul style="list-style-type: none"> <li>• Member, BRS, FIAS, UDSC.</li> <li>• Member, DRC, Department of Plant Molecular Biology.</li> <li>• Member, Faculty of Interdisciplinary and Applied Sciences (FIAS)</li> <li>• Nodal teacher, Gender Champion, Department of Plant Molecular Biology</li> <li>• Member, Student Grievance Redressal Committee, Department of Plant Molecular Biology</li> </ul> </li> </ol>
<b>Other Activities</b>

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC or PDF file to be attached as a link on your faculty page.