


### Brief Bio-data

Name	<b>Dr. Jhuma Datta</b>
Date of Birth	12 JANUARY 1975
Photo	
Designation	ASSISTANT PROFESOR
Official address/Department	DEPARTMENT OF BIOCHEMISTRY, BCKV – BURDWAN CAMPUS
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Working in BCKV since	26-11-2014
Professional Training	<p><b>Research Experiences:</b>  <b>Post Doctoral Research at University of California, Davis, USA</b> on <i>Genetic network regulating the early symbiotic responses in legumes</i>            Ten years of research experiences in Biochemistry and Molecular Biology at advanced laboratories</p> <p><b>Teaching Experiences:</b>Ten years teaching experience at post graduate level.</p>
National/International recognition/awards	1. Qualified CSIR-UGC NET for JRF and lecturership in Life Sciences(2000). 2. Awarded ICAR JRF in Biochemistry(1998). 3. University Merit Scholarship, Visva Bharati(1993-97). 4. National Scholarship, Govt. India (1990-92).
Patents	
Fellow of the Society	
Research Interests and area of specialization	<p><b>Plant – Microbial intercation</b></p> <p>Formation of symbiotic nodules in legumes requires plant recognition of rhizobial signal molecules termed Nod factors (NF). Over the past decade, numerous plant genes responsible for NF signal perception and transduction have been identified and cloned. Among the encoded proteins are a series of receptor like kinases that perceive and transduce NF perception, ion channels and kinases that modulate and perceive changes to nuclear calcium concentrations, and the transcription factors that reprogram root cell gene expression. Little is known about the early transcriptional networks that activated by NF perception. To elucidate the early transcriptional networks, we performed RNAseq analyses on wild type (A17), nod- mutants (<i>nfp</i> and <i>lyk3</i>), and the nod++ ethylene insensitive mutant (<i>skl</i>). Our analyses revealed several early NF induced transcripts that are upregulated in A17 but not in the <i>nfp</i> ad <i>lyk3</i> mutants. Most of these genes are massively up regulated in the ethylene insensitive mutant <i>skl</i>, consistent with the negative regulation of NF signaling by ethylene. Among the set of early NF-induced genes, we identified several genes that encode putative new signal transduction proteins, including kinases and transcription factors. We have used yeast two-hybrid assays to determine if these putative NF signaling proteins interact with the known symbiotic receptor kinases. We have identified a transcription factor and a novel receptor kinase that interact with the symbiotic receptor kinase DMI2 in yeast. We are co-expressing these genes as FLAG fusions with DMI2:HA to assess their interaction <i>in vivo</i> by co-immunoprecipitation.</p>
Best 10 Publications with NAAS impact score > 5	1. <b>Jhuma Datta</b> and Nand Lal (2013). Genetic variability assessment of <i>Fusarium</i> wilt pathogen races affecting chickpea using molecular markers. <b>Journal of Microbiology, Biotechnology and Food Sciences</b> . 2 (6) 2392-2397. ISSN: 1338-5178.  2. <b>J Datta</b> and N Lal (2013). Genetic diversity of <i>Fusarium</i> wilt races of pigeonpea in major regions of india. <b>African Crop Science Journal</b> . 21(3): 201 – 211. ISSN 1021-9730/2013.

	<ol style="list-style-type: none"> <li>3. <b>J Datta</b> and N Lal (2012). Application of molecular markers for genetic discrimination of <i>Fusarium</i> wilt pathogen races affecting chickpea and pigeonpea in major regions of India. <i>Cellular &amp; Molecular Biology</i> 58 (1) 55-65. ISSN : 1165-158X.</li> <li>4. Nand Lal and <b>Jhuma Datta</b> (2012). Progress and perspectives in characterization of genetic diversity in plant pathogenic <i>Fusarium</i>. <i>Plant Archives</i> 12 (1): 557-568. ISSN : 0972-5210.</li> <li>5. <b>J Datta</b> and N Lal (2012). Temporal and spatial changes in phenolic compounds in response to <i>Fusarium</i> wilt in chickpea and pigeonpea. <i>Cellular &amp; Molecular Biology</i> 58 (1) 96-102. ISSN : 1165-158X.</li> <li>6. <b>Jhuma Datta</b> and Nand Lal (2011). Genetic Differentiation in <i>Cicer arietinum</i> L. and <i>Cajanus cajan</i> L. Millspaugh using SSR and ISSR Marker Systems. <i>Advanced Bio Tech</i>, 11 (5): 39-44. ISSN : 0973-0109.</li> <li>7. <b>J Datta</b> and N Lal (2011). Characterization of genetic diversity in <i>Cicer arietinum</i> L. and <i>Cajanus cajan</i> L. Millspaugh using random amplified polymorphic DNA and simple sequence repeat markers. <i>Genomics and Quantitative Genetics</i>, 3 : 30 – 41. ISSN : 2157-9903.</li> <li>8. <b>J Datta</b>, Nand Lal, M Kaashyap and P P Gupta (2010). Efficiency of Three PCR based Marker Systems for Detecting DNA Polymorphism in <i>Cicer arietinum</i> L and <i>Cajanus cajan</i> L Millspaugh. <i>Genetic Engineering and Biotechnology Journal</i>. Vol. 5. 1-15. ISSN : 2150-3516.</li> <li>9. <b>Jhuma Datta</b> and Sashi Madan (2006). Changes in carbohydrate content in grains of wheat cultivars at different developmental stages. <i>Indian J. Agril. Biochem.</i> 19 (1) 25-27. ISSN : 0974-4479.</li> <li>10. <b>Jhuma Mukherjee</b>, Sashi Madan and Mohd. Yonus (2003). Carbohydrate and protein content in developing grains of wheat cultivars. <i>J. Food Sci. Technol.</i> 40 (2) 219-221. ISSN : 0975-8402.</li> </ol>
Books or Chapter in Books	<b>Jhuma Datta</b> and Subhojit Datta (2008). Molecular Recognition by plant lectins. In: <i>Development in Physiology, Biochemistry and Molecular Biology of Plants</i> . (Eds. Bandana Bose and A Hemantarajan). Pp. 157-173.
Variety Release etc.	
Courses teaching	
Research Projects/ supports	
Number of Seminar/ symposium attended	<p><b>Seminar/ symposium attended:</b></p> <ol style="list-style-type: none"> <li>1. XXI Plant and Animal Genome Conference, San Diego, USA, January 12-16, 2013.</li> <li>2. Symbiosis Workshop May 19-20, 2012, Yosemite, California, USA.</li> <li>3. National Conference on “Scope and Application of Microbes in Agriculture and Environment”, February 19-21, 2007, CSJM University, Kanpur.</li> <li>4. National Symposium on Legumes for Ecological Sustainability: Emerging Challenges and Opportunities. November 3-5, 2007, IIPR, Kanpur</li> <li>5. International Conference on Post harvest technology and Value addition in cereals, Pulses and Oilseeds”, November 27-30, 2006, CSAUA&amp;T, Kanpur</li> <li>6. National seminar on “Recent Emerging Trends in Plant Sciences”, December 11-12, 2004, DAV College, Kanpur.</li> <li>7. Indian Science Congress held at Lucknow in January 2002.</li> <li>8. "BIOHORIZON-2000", National Students Symposium on Biochemical Engineering and Biotechnology at IIT, Delhi in February, 2000</li> <li>9. National Symposium on Biotechnology for Sustainable Agriculture at Pantnagar in April 2000</li> <li>10. Regional seminar on Sustainability and Environment at Sriniketan in April 2000.</li> </ol>
Laboratory strength, you work in	
Number of scholars, you are supervising	<b>Supervision of M. Sc research work:</b> I have supervised the project research work of nine (9) M. Sc. Biochemistry students.