

Curriculum vitae

Subhojit Datta

Current positions: Senior Scientist (Biotechnology)
and In-charge, Biotechnology Unit
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Date of birth: November 25, 1973

Education:

B.Sc. (Ag.)	73%	Agricultural Sciences	Visva Bharati, Santiniketan	1995
M.Sc.	3.4/4	Molecular Biology and Biotechnology	IARI, New Delhi	1997
Ph.D.	3.8/4	Molecular Biology and Biotechnology	IARI, New Delhi	2002

Professional Experience:

Twelve years of professional research experience in molecular biology and biotechnology including **five years as Theme Leader for Biotechnological research** at Indian Institute of Pulses Research, Kanpur. Presently, I lead a team of 25 staffs including scientists, research associates and students working on development of genetic and genomics resources, transgenics development, marker assisted breeding program, and molecular characterization of fungal pathogens.

2012 Jan-present	Visiting scientist (DBT CREST Fellow)	University of California, Davis, USA
2008- Present	Senior Scientist (Biotechnology)	Indian Institute of Pulses Research, Kanpur
2007-Present	Theme Leader, Biotechnology	Indian Institute of Pulses Research
2000-2008	Scientist	Indian Institute of Pulses Research, (ICAR)
2008	BOYSCAST Fellow	University of California, Davis, USA
2004	ICAR HRD Fellow	University of California, Davis, USA
1997-2002	Doctoral Scholar and CSIR Research Fellow	National Research Centre on Plant Biotechnology, IARI, New Delhi
1995-1997	Masters' Scholar and ICAR Research Fellow	National Research Centre on Plant Biotechnology, IARI, New Delhi

Major areas of interest:

- Genomics enabled improvement and molecular breeding of food legumes
- Genetic transformation system and transgenic development including biosafety issues
- Molecular biology of *Fusarium* wilt disease
- Bioinformatics

Publications: Total number **120**

Refereed journals articles (**30**); Book Chapter (9); Research notes (11); Popular articles (5); Technical bulletin (1); Laboratory manual (1); Papers presented in conferences 50 (International 21, National 29); Invited lectures (13).

Selected peer reviewed publications:

1. Kassa MT, Penmetsa RV, Carrasquilla-Garcia N, Sarma BK, **Datta S**, Upadhyaya HD, Varshney RK, von Wettberg EJB and Cook DR. (2012). Genetic patterns of domestication in pigeonpea (*Cajanus cajan* (L.) Millsp.) and wild *Cajanus* relatives. *PLoS ONE* 7(6): e39563. doi:10.1371/journal.pone.0039563.

2. Singh NK, Gupta DK, Jayaswal PK, Mahato AK, Dutta S, Singh S, Bhutani S, Dogra V, Singh BP, Kumawat G, Pal JK, Pandit A, Singh A, Rawal H, Kumar A, Rama Prashat G, Khare A, Yadav R, Raje RS, Singh MN, **Datta S**, Fakrudin B, Wanjari KB, Kansal R, Dash PK, Jain PK, Bhattacharya R, Gaikwad K, Mohapatra T, Srinivasan R, Sharma TR. (2012). The first draft of the pigeonpea genome sequence. *Journal of Plant Biochemistry And Biotechnology*. 21. 98-112.
3. **Datta S**, Kaashyap M, Singh P, Gupta PP, Anjum KT, Mahfooz S and Gupta S. (2012). Conservation of microsatellite regions across legume genera enhances marker repertoire and genetic diversity study in phaseolus genotypes. *Plant Breeding*. 131: 307-311.
4. Dutta S, Kumawat G, Singh BP, Gupta DK, Singh S, Dogra V, Gaikwad K, Sharma TR, Raje RS, Bandhopadhyaya T, **Datta S**, Singh MN, Fakrudin B, Kulwal P, Varshney RK, Cook DR and Singh NK. (2011). Development of EST-SSR markers by deep transcriptome sequencing in pigeonpea (*Cajanus Cajan* [L.] Millspaugh). *BMC Plant Biology*. 11:17 doi:10.1186/1471-2229-11-17.
5. Nayak SN, Zhu H, Varghese N, **Datta S**, Choi HK, Horres R, Jüngling R, Singh J, Kavi Kishor PB, Sivaramakrishnan S, Hoisington DA, Kahl G, Winter P, Cook DR and Varshney RK. (2010). Integration of novel SSR and gene-based marker loci in the chickpea genetic map and establishment of new anchor points with *Medicago truncatula* genome. *Theoretical and Applied Genetics*, 120: 1415-1441.
6. Varshney RK, Penmetsa RV, Dutta S, Kulwal PL, Saxena RK, **Datta S**, Sharma TR, Rosen B, Carrasquilla-Garcia N, Farmer AD, Dubey A, Saxena KB, Gao J, Fakrudin B, Singh MN, Singh BP, Wanjari KB, Yuan M, Srivastava MK, Kilian A, Upadhyaya HD, Mallikarjuna N, Town CD, Bruening GE, He G, May GD, McCombie R, Jackson SA, Singh NK and Cook DR. (2009). Pigeonpea genomics initiative: an international effort to improve crop productivity of pigeonpea (*Cajanus cajan* L.) *Molecular Breeding*. 26 (3): 393-408.
7. **Datta S**, Kaashyap M and Kumar S. (2010). Amplification of chickpea SSR primers in *Cajanus* species and their validity in diversity analysis. *Plant Breeding*. 129 (3): 334-340.
8. **Datta S**, Tiwari S, Kaashyap M., Gupta P P, Choudhary P R., Kumari J, and Kumar S (2011). Genetic similarity analysis in lentil using cross- genera legume sequence tagged microsatellite site markers. *Crop Science*. 51: 1-11. Doi.10.2135/cropsci2010.12.0743.
9. Kumar S, Gupta S, Hena, **Datta S**, Singh B and Singh BB (2012). Inheritance of protruded stigma in black gram. *Crop Science*. 52: 57-63.
10. **Datta S**, Mahfooz S, Singh P, Choudhary AK, Singh F and Kumar S. (2010). Cross-genera amplification of informative microsatellite markers from common bean and lentil for the assessment of genetic diversity in pigeonpea. *Physiology and Molecular Biology of Plants*. 16

Service to Research Societies:

Editor: Journal of Food Legumes

Reviewer: Molecular Breeding, Plant Breeding, Genetic Resources and Crop Evolution, Plant Genetic Resources-Characterization and Evaluation, Journal of Integrative Biology, Canadian Journal of Microbiology, Journal of Plant Biochemistry and Biotechnology, Plant Omics Journal, Journal of Environmental Biology and Indian Journal of Agricultural Biochemistry.

Grant Reviewer and Technical Consultancy:

Department of Biotechnology (DBT), Govt. of India; All India Council of Technical Education (AICTE); Ministry of Micro Small and Medium Enterprises (MSME), Govt. of India; Uttar Pradesh Council of Science and Technology (UPCST), Govt. of Uttar Pradesh; Uttar Pradesh Council of Agricultural Research (UPCAR), Govt. of Uttar Pradesh.

Important Committees:

- Member Secretary, Institutional Bio-safety Committee (IBSC), IIPR, Kanpur;
- Member Secretary, Academic Committee, IIPR, Kanpur;
- Member, Human Resource Development Committee, IIPR, Kanpur;
- Member, Technical Committee, IIPR, Kanpur;
- Nodal officer, Capacity Building Training Program in Biotechnology.

Meetings Organized:

- Co-organizer, Indo-US Science and Technology Forum sponsored meeting on ‘Application of Genomic Tools for Improvement of Chickpea, Pigeonpea and Peanut’ at ICRISAT, India jointly with Prof. Doug Cook, D Hoisington, R K Varsheny and S Chakrabarty
- Co-convenor of special meeting on ‘chickpea genomics’ at International Conference on Grain Legumes (2009) at IIPR Kanpur
- Represented India at International Legume Genomics Congress at Asilomar, USA (2006)
- Rapporteur of scientific sessions at several important conferences

Honors and awards information:

- BOYSCAST Fellowship, Department of Science and Technology, Govt. of India (2008)
- Young Scientist Award, Indian Science Congress Association (2002)
- ICAR Overseas HRD Fellowship (2004)
- Jawaharlal Nehru Memorial Fellowship of Nehru Memorial Trust, New Delhi (2000)
- Fellowship, Indian Society of Pulses Research and Development, Kanpur, India (2009)
- Recognition Award, IIPR for the International Project on “Pigeonpea Genomics” (2007)
- Gold Medal and Best Paper at Award International Conference on Plant Genomics and Biotechnology, IGAU, Raipur (2005)
- Best Paper Award at BIOHORIZON at Indian Institute of Technology, Delhi (2000).

Professional collaborators:

- Douglas R Cook; Director CAES Genomics Facility and Professor Plant Pathology, UC Davis (chickpea and pigeonpea genomics, SNP and COS marker development, capacity building)
- Fred J. Muehlbauer, USDA-ARS, WSU Pullman (Chickpea and lentil molecular breeding)
- George Bruening, Director, CEPRAP and Professor, Plant Pathology, UC Davis (BAC library, RGA markers and genetic mapping in *Vigna*)
- Christopher D Town, JC Venter Institute, Maryland (SNP genotyping, BAC fingerprinting)
- Andrew Farmer, National Centre for Genome Research, Santa Fe (Bioinformatics analysis, Illumina and SOLEXA protocol designing)
- Rajeev K Varshney, ICRISAT (markers development, mapping in chickpea and pigeonpea)
- Pooran Gaur, ICRISAT (chickpea mapping and molecular breeding)
- Kiran K Sharma, ICRISAT (transgenic development)
- NK Singh, Professor and BP Pal chair, NRCPB (genotyping, transcriptomics and mapping)
- PA Kumar, Director, NRCPB (gene constructs for genetic transformation)
- Srinivasan, Principal Scientist, NRCPB (chickpea genomics).

Resource Generation

In addition to 10 ICAR core funded projects at IIPR, I have brought several major funding to the institute which has helped to develop several cutting edge facilities at IIPR, Kanpur. In the last five years, I have **attracted funds of nearly 3 million USD** under several externally funded research programs.

Ongoing projects:

- Functional genomics in chickpea (2005-2012); ICAR NPTC- \$ 2,09,906.

- Deployment of molecular markers in chickpea breeding for developing superior cultivars with enhanced disease resistance; DBT-\$ 7,40,511.
- Pigeonpea Genomics Initiative (2006-2012) ;US-Indo Agricultural Knowledge initiative (AKI) - \$ 4,65,116.
- Understanding Plant -Nematode Interactions using RNAi (2008-2012); NAIP-\$ 2,03,354.
- Outreach project on *Phytophthora*, *Fusarium* and *Ralstonia* diseases (2008-2012); WILTNET-\$ 1,32,221.
- Transgenics in chickpea and pigeonpea for resistance to pod borer (2005-2012); ICAR NPTC - \$2,16,534.

Completed projects:

- Mapping and tagging of *Fusarium* wilt resistance gene(s) in chickpea; ICAR-\$2,13,457.
- Gene pyramiding for *Fusarium* wilt resistance in chickpea (2006-2009); ICAR-\$ 7,60,465.
- Mapping and tagging of *Fusarium* wilt resistance gene(s) in pigeonpea (2006-2009); ICAR-\$2,03,075.
- Development of genotypes of pigeonpea resistant to pod borer through biotechnological tools (2001-2003); UPCAR- \$41,860.
- Network project on wilt of crops (2005-2009); WILTNET, ICAR- \$39,883.
- Isolation of novel insecticidal compounds and their genes from seeds of legumes (2003-2009); ICAR-\$ 2,60,465.