




## University Faculty Details Page on DU Web-site

Title	Dr.	First Name	Saurabh	Last Name	Raghuvanshi	Photograph
Designation		Associate Professor				
Department		Department of Plant Molecular Biology				
Address	(Campus)	Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi – 110 021				
	(Residence)	H-4S, 203, NIPGR, Aruna Asaf Ali road, New Delhi-110067				
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Email		<a href="mailto:saurabh@genomeindia.org">saurabh@genomeindia.org</a> ,				
Web-Page		<a href="http://www.genomeindia.org">www.genomeindia.org</a>				
<b>Education</b>						
Subject		Institution		Year		
Ph. D. (Plant Molecular Biology)		Univ. of Delhi South Campus		2001		
M. Sc. (Biochemistry)		Lucknow University		1995		
B. Sc.		Lucknow University		1993		
<b>Career Profile</b>						
Organization / Institution			Designation	Duration	Role	
Department of Plant Molecular Biology, University of Delhi South Campus			Assistant Professor	January 24, 2007 onwards	Teaching and Research	
School of Biotechnology, Guru Gobind Singh Indraprastha University, New Delhi			Assistant Professor	December 31, 2004- January 24, 2007	Teaching and Research	
Indian Initiative for Rice Genome Sequencing (IIRGS, at Department of Plant Molecular Biology, University of Delhi South Campus			Scientist	January 2002- December 30, 2004	Research	
Centre for Plant Molecular Biology, Department of			Scientist	January 2001-	Research	

Plant Molecular Biology, University of Delhi South Campus			December 2001	
<b>Areas of interest (research) / Specialization</b>				
	S. No.	Title of Project		
	1	Profiling of small non-coding regulatory RNAs in Indian rice cultivars		
	2	Development of knowledge based database of rice		
	3	Analysis of the genome and epigenome of indica rice varieties Nagina 22 and IR64		
<b>Subjects Taught</b>				
1. Bioinformatics				
<b>Honors &amp; Awards</b>				
Recipient of <b>NASI-Young scientist Platinum Jubilee Award</b> in Plant sciences, 2006 Citation: For outstanding contribution in the field of Genomics and Bioinformatics				
<b>Research Guidance</b>				
<ol style="list-style-type: none"> <li>1. Supervision of Doctoral Thesis, Submitted : Four</li> <li>2. Supervision of M.Phil dissertations, submitted: One</li> </ol>				
<b>Publications (LAST FIVE YEARS)</b>				
<u>Books / Monographs</u>				
	<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>Co-Author</u>
	2016	Identification of novel miRNAs from drought tolerant rice variety Nagina 22.	Scientific Reports (Accepted).	Roseeta Devi Mutum, Santosh Kumar, Sonia Chhillar Balyan, Shivani Kansal, Saloni Mathur and Saurabh Raghuvanshi.
	2015	Action of multiple intra-QTL genes concerted around a co-localized transcription factor underpins a large effect QTL.	Scientific Reports 5: 15183.	Shalabh Dixit, Akshaya Kumar Biswal, Aye Min, Amelia Henry, Rowena H. Oane, Manish L Raorane , Toshisangba Longkumer, Isaiah M Pabuayon, Sumanth K Mutte, Adithi R Vardarajan, Berta Miro, Ganesan Govindan, Blesilda Albano-Enriquez Mandy Pueffeld, Nese Sreenivasulu, Inez Slamet-Loedin, Kalaipandian Sundarvelpandian, Yuan-Ching Tsai, Saurabh Raghuvanshi, Yue-le C. Hsing, Arvind Kumar, Ajay

			Kohli.
2015	Unique miRNOME during anthesis in drought tolerant indica rice var. Nagina 22. (accepted, DOI: 10.1007/s00425-015-2279-3)	<b>Planta</b>	Kansal, S., Mutum, RD., Balyan, SC., Arora, MK., Singh, AK., Mathur, S., Raghuvanshi, S.
2013	Manually curated database of rice proteins.	<b>Nucleic Acids Res.</b> (Database issue).	Gour P, Garg P, Jain R, Joseph SV, Tyagi AK, Raghuvanshi S.
2013	Development, cross-species/genera transferability of novel EST-SSR markers and their utility in revealing population structure and genetic diversity in sugarcane.	<b>Gene.</b>	Singh RK, Jena SN, Khan S, Yadav S, Banarjee N, <b>Raghuvanshi S</b> , Bhardwaj V, Dattamajumder SK, Kapur R, Solomon S, Swapna M, Srivastava S, Tyagi AK.
2013	Evolution of variety-specific regulatory schema for expression of osa-miR408 in indica rice varieties under drought stress	<b>FEBS Journal</b>	Mutum RD, Balyan SC, Kansal S, Agarwal P, Kumar S, Kumar M, <b>Raghuvanshi S.</b>
2012	Massive gene acquisitions in <i>Mycobacterium indicus pranii</i> provide a perspective on mycobacterial evolution.	<b>Nucleic Acids Research</b>	Vikram Saini, Saurabh Raghuvanshi, Jitendra P. Khurana, Niyaz Ahmed, Seyed E. Hasnain, Akhilesh K. Tyagi and Anil K. Tyagi.
2012	New PCR-based sequence-tagged site marker for bacterial blight resistance gene Xa38 of rice.	<b>Mol. Breeding</b>	Bhasin H., Bhatia, D., Raghuvanshi, S., Lore, J. S., Sahi, G. K., Kaur, B., Yogesh Vikal, Y., Singh, K.
2012	The Loci Recommended as Universal Barcodes for Plants on the Basis of Floristic Studies may not work with Congeneric Species as Exemplified by DNA Barcoding of <i>Dendrobium</i> species.	<b>BMC Research Notes</b>	Singh, H. K., Parveen, I., <b>Raghuvanshi, S.</b> and Babbar, S. B.
2011	Whole Genome Sequence of Rifamycin B Producing <i>Amycolatopsis mediterranei</i> S699	<i>Journal of Bacteriology</i>	Mansi Verma, Jaspreet Kaur, Mukesh Kumar, Kirti Kumari, Anjali Saxena, Shailly Anand, Aeshna Nigam, Vydianathan Ravi, <b>Saurabh Raghuvanshi</b> , Paramjit Khurana, Akhilesh Tyagi, Jitendra Khurana, and Rup Lal
2010	Development of EST-based new SSR markers in seabuckthorn	<i>Physiology and Molecular Biology of Plants:</i>	Jain A, Ghangal R, Grover A, <b>Raghuvanshi S</b> , Sharma PC
2009	The water-deficit stress- and red rot -	Functional & Integrative	*Gupta, V., <b>*Raghuvanshi, S.</b> , Gupta, A., Saini, N., Gaur, A.,

	related genes in sugarcane	Genomics. *Equal contribution	Khan, M. S., Gupta, R. S., Singh J., Duttamajumder, S. K., Srivastava, S., Suman, A., Khurana, J. P., Kapur, R., Tyagi, A. K.
2009	Isolation of good quality RNA from a medicinal plant seabuckthorn, rich in secondary metabolites.	Plant Physiology and Biochemistry. (In press)	Ghangal, R., Raghuvanshi, S. and Sharma, P.C.
2009	Polyphasic taxonomic analysis establishes <i>Mycobacterium indicus pranii</i> as a distinct species.	<b>PLoS ONE.</b> 4; (7): e6263.	Vikram Saini, Saurabh Raghuvanshi, Gursaran P. Talwar, Niyaz Ahmed, Jitendra P. Khurana, Seyed E. Hasnain, Akhilesh K. Tyagi, Anil K. Tyagi.
2008	The Rice Annotation Project Database (RAP-DB): 2008 update.	NAR, Database issue: 1028-1033.	The Rice annotation project
2007	Molecular analysis of a leprosy immunotherapeutic bacillus provides insights into mycobacterium evolution	PLoS ONE. 3; 2(10):e968	Ahmed N, Saini V, <b>Raghuvanshi S</b> , Khurana JP, Tyagi AK, Tyagi AK, Hasnain SE
2007	Biolistics-mediated DNA delivery and transient expression of GUS in hypocotyls of <i>Feronia limonia</i> L-A fruit tree	Indian J. Biotech. 6: 504-507	Purohit, S. D., <b>Raghuvanshi, S.</b> and Tyagi, A. K.
2006	Curated genome annotation of <i>Oryza sativa</i> ssp. <i>japonica</i> and comparative genome analysis with <i>Arabidopsis thaliana</i> .	Genome Research, 17: 175-183.	The Rice Annotation project
2005	The sequence of rice chromosomes 11 and 12, rich in disease resistance genes and recent gene duplications	BMC Biology, 3:20.	The Rice Chromosomes 11 and 12 Sequencing Consortia
2005	International Rice Genome Sequencing Consortium Map based sequence of the rice genome	Nature, 436; 793-800.	(Authors from UDSC) <b>S. Raghuvanshi</b> , A. Mohanty, A. K. Bharti, A. Gaur, V. Gupta, D.Kumar, V. Ravi, S. Vij, A. Kapur, Parul Khurana, Paramjit Khurana, J. P. Khurana, A. K. Tyagi.
2004	Sequence analysis of the long arm of rice chromosome 11 for rice-wheat synteny.	Functional & Integrative Genomics, 4; 102-117	Singh NK, <b>Raghuvanshi S</b> , Srivastava SK, Gaur A, Pal AK, Dalal V, Singh A, Ghazi IA, Bhargav A, Yadav M, Dixit A, Batra K, Gaikwad K, Sharma TR, Mohapatra T, Mohanty A, Bharti AK, Kapur A, Gupta V, Kumar D, Vij S, Ravi V, Parul Khurana, Sharma S, McCombie D, Messing J, Wing R, Sasaki T, Paramjit Khurana, Khurana JP, Tyagi AK

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### Articles

1. Balyan, S C., Mutum, R D., Kansal, S., Kumar, S., Mathur, S. and **Raghuvanshi, S. (2014)** Insights into the small RNA mediated networks in response to abiotic stress in plants. In: Elucidation of Abiotic Stress Signaling in Plants: A Functional Genomic Perspective, Springer Science+Business Media (in press).
2. **Saurabh Raghuvanshi**, Meenu Kapoor\*, Shashi Tyagi\*\*, Sanjay Kapoor, Paramjit Khurana, Jitendra Khurana and Akhilesh Tyagi **(2009)** Rice genomics moves ahead. **Mol. Breeding (In press)**.
3. Shubha Vij, Vikrant Gupta, Dibyendu Kumar, Ravi Vydianathan, **Saurabh Raghuvanshi**, Paramjit Khurana, Jitendra P. Khurana, and Akhilesh K. Tyagi **(2006)**. Decoding the rice genome. **Bioassays 28; 421-432**.
4. Tyagi, A. K., Khurana, J. P., Khurana, P., **Raghuvanshi, S.**, Gaur, A., Kapur, A., Gupta, V., Kumar, D., Ravi, V., Vij, S., Khurana, P., Sharma, S., **(2004)**. Analysis of structure and function of rice genome. **Journal of Genetics, 83; 101-121**.
5. Tyagi, A.K., Khurana, J., Sharma, A.K., Mohanty, A., Dhingra, A. **Raghuvanshi, S.** and Gaur, T., **(2001)**. Mechanism of regulation of gene expression for chloroplast proteins. In: Sopory, S.K., Oelmuller, R. and Maheshwari, S.C., (eds), Proceedings, 'Signal Transduction in Plants: Current Advances', Kluwer academic/Plenum Publishers, Netherlands. pp. 297-307.
6. Tyagi, A.K., Khurana, J., Sharma, A.K., Mohanty, A., Dhingra, A. **Raghuvanshi, S.**, Mukhopadhyaya, A., Gupta, V., Anand, S., Kathuria, H., Bhushan, S., Thakur, J. and Kumar, D **(2003)**. Organ-specific gene expression and genetic transformation for improvement of rice. In: **Advances in Rice Genetics. Supplement to Rice Genetics IV**. IRRI, Manila. pp552-555.
7. Tyagi, A.K., Dhingra, A. and **Raghuvanshi, S. (2000)**. Light-regulated expression of photosynthesis-related genes. In: Yunus M, Pathre U and Mohanty P (eds), Probing Photosynthesis: Mechanism, Regulation and Adaptation pp 324-341, Taylor and Francis Publishers Ltd., London.
8. Tyagi, A.K., Sharma, A.K., Grover, M., Mohanty, A., Dhingra, A. and **Raghuvanshi, S.**, Bajaj S., and Maheshwari, S.C., **(1998)**. Investigations on expression and engineering of genes in rice. In: Gupta, P.K. (eds), Genetics and Biotechnology in Crop Improvement pp 169-181, Rastogi Publishers Ltd., India.

### Conference /meetings Presentations

1. Delivered lecture entitled '**Integrated approach to understand rice as a 'Molecular system'**' at the **10th International Symposium on Rice Functional Genomics'** in **Chiang Mai, Thailand** from November 26-29, 2012.
2. Delivered lecture entitled '**Journey towards Systems Biology of Rice'** at the Department of Horticulture and Landscape Architecture, **Washington State University, Pullman, USA** on April 10, 2012.

3. Delivered an invited lecture entitled 'Drought regulated miRNAs in *indica* rice: a comparative profile' at the **11<sup>th</sup> International Symposium of Rice Functional Genomics** held in New Delhi, India from November 20-23, 2013.
4. Delivered an invited lecture on "Whole genome annotation strategies: recent trends" at a workshop on bioinformatics at the Department of Biochemical Engineering and Biotechnology, **Indian Institute of Technology**, New Delhi, 2012.
5. Delivered an invited lecture on "Annotation of the rice genome" at a workshop on bioinformatics at the Supercomputing facility, **Indian Institute of Technology**, New Delhi, 2012.
6. Delivered an invited lecture on "Whole genome annotation strategies: recent trends" at a workshop on bioinformatics at the Supercomputing facility, **Indian Institute of Technology**, New Delhi, 2011.
7. Delivered an invited lecture on "Towards system biology of rice" at Department of Plant Molecular Biology, **University of Delhi south Campus**, New Delhi, 2011.
8. Delivered an invited lecture on "Exploring miRNA world with NGS" at **National Institute for Plant Genomics Research (NIPGR)**, New Delhi, 2011.
9. Delivered an invited lecture on "Bioinformatics...the essentials" at **Shivaji college, University of Delhi**, New Delhi, 2011.
10. Delivered an invited lecture on "Whole genome annotation strategies: recent trends" at **Indian Institute of Technology**, New Delhi, 2010.
11. Delivered an invited lecture on "Bioinformatics...the essentials" at **Gargi college, University of Delhi**, New Delhi, 2010.
12. Delivered an invited lecture on "Analysis of high throughput genome sequence data" at **Indian Institute of Technology**, New Delhi, 2009.
13. Delivered an invited lecture on "Analysis of high throughput genome sequence data" at **National Institute for Plant Genomics Research (NIPGR)**, New Delhi, New Delhi, 2009.
14. International Conference on '**Frontiers of interface between Statistics and Sciences**' (Dec. 2009), Hyderabad University. **Towards systems biology of rice: a biologist's perspective.**
15. Delivered an invited lecture 'Genome annotation strategies: Advances' at the meeting

entitled “Frontiers in Bioinformatics and Biotechnology” held in January, 2008 at **Kakatiya University, Warangal**

16. Delivered an invited lecture on “Analysis of high throughput genome sequence data” at Department of Botany, **University of Delhi**, New Delhi, 2007.
17. Delivered an invited lecture “Basics of Bioinformatics” at **Zakhir Hussain College**, New Delhi, 2007.
18. Delivered an invited lecture at the National workshop on “Biological Databases and Data mining” at **Banasthali University**, Rajasthan, 2007.
19. Delivered an invited lecture ‘Bioinformatics: Essentials’ at Department of Botany, **Gargi College**, New Delhi, 2007.
20. Delivered an invited lecture ‘Computational aspects of Genome sequencing and annotation’ at the meeting entitled “Perspectives and current Trends in Bioinformatics” held in September, 2007 at **CCMB, Hyderabad**.
21. **Tomato Genome Annotation Meeting** (Oct 23-25, 2006). Invited to participate in discussion to formulate a strategy to annotate the whole genome of Tomato. The meeting was held at the Flanders Interuniversity Institute of Biotechnology, Ghent, Belgium. Experience and strategies followed in RAP1 and RAP2 were discussed.
22. **2nd Rice Annotation Project** (RAP2, February 1-3, 2006): Invited to participate as an annotator representing India. The meeting was held in Tsukuba, Japan to validate and update the annotation of around 6,000 rice genes. The annotation jamboree was attended by annotators from all major international databases such as GenBank, EMBL, EBI, DDBJ and Gramene. (<http://rapdb.lab.nig.ac.jp/>)
23. **1<sup>ST</sup> Rice Annotation Project** (RAP1, December 13-18, 2004): Invited to participate as an annotator representing India. The workshop was held in Tsukuba, Japan for validation of the annotation of around 16,000 rice genes. The annotation jamboree was attended by annotators from all major international databases such as GenBank, EMBL, EBI, DDBJ and Gramene. (<http://rapdb.lab.nig.ac.jp/>).
24. **Annual meeting of International Rice Genome Sequencing Project (IRGSP**, February 3, 2004): **Represented India** and presented the progress of ‘**Indian Initiative for Rice Genome Sequencing**’ at the annual meeting of **IRGSP in Tsukuba, Japan**. Proceedings available at <http://rgp.dna.affrc.go.jp/IRGSP/bnl/Tsukuba04.html>.
25. **Workshop on Genome Finishing Strategies** (February 1-2, 2004): Attended the workshop on Finishing Strategies and quality assessment of the rice genome sequencing at **STAFF (Society for Techno-innovation of Agriculture, Forestry and Fisheries) institute Tsukuba, Japan**.
26. **Training on finishing strategies in rice genome** (May 1 – June 30, 2003): Two months training in the lab of Dr. Dick McCombie, **Cold Spring Harbor Labs, New York, USA**, aimed at learning new finishing techniques being used to complete rice genome.

#### Research Projects

S. No.	Title of Project	Funding Agency	Amount	Date of sanction and Duration
1	Profiling of small non-coding regulatory RNAs in Indian rice cultivars	DBT	85.0 lakhs	March 20, 2012 – 2015

	2	Development of knowledge based database of rice	DBT	135.9 lakhs	August 20, 2009-2013
	3	Analysis of genome and epigenome of indica rice varieties N22 and IR64	DBT	197.87 lakhs	Sep. 27, 2011-16