




Faculty Details proforma for DU Web-site

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cc: director@ducc.du.ac.in)

Title	Dr.	First Name	Shailendra	Last Name	Goel	Photograph
Designation		Associate Professor				
Address		Department of Botany University of Delhi Delhi – 110007.				
Phone No Office		011-27662609				
Residence						
Mobile						
Email		shailendragoel@yahoo.com				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
B.Sc.		Meerut University		1990	Subjects: Zoology, Botany, Chemistry	
M.Sc.		Meerut University		1992	Subjects: Botany	
Ph.D.		University of Delhi		1999	Thesis topic: rDNA sequence evolution and molecular phylogeny of <i>Vigna</i> and <i>Phaseolus</i>	
Career Profile						
Organisation / Institution		Designation		Duration		Role
University of Georgia, USA		Postdoctoral research associate		June 2000-Oct 2005		Research
Institut pour la recherche & Developpement (IRD), France		Postdoctoral research associate		Nov 2005- June 2007		Research
North Eastern Hill University (NEHU), India		Reader		June 2007- October 2007		Research and Postgraduate teaching
University of Delhi		Reader		Oct 2007- Oct 2010		Research and Postgraduate teaching
University of Delhi		Associate Professor		Oct 2010 – till date		Research and Postgraduate teaching
Administrative Assignments						
<ol style="list-style-type: none"> 1. Member; Committee of Courses and Studies for Honours, Post-Graduate and Research Studies in Botany, University of Delhi (August 2009-2011). 2. Member; Purchase Committee for up-gradation of teaching infrastructure and instrumentation facilities at the Department of Botany, University of Delhi (2008 – 2011). 3. Member; Radioactive room facility (2011-Onwards) 4. Phospoimager committee (2011-Onwards) 5. Departmental webpage committee (2011-Onwards) 						
Areas of Interest / Specialization						
Molecular Genetics, Molecular Cytogenetics, Molecular markers application, Genomics, genome organization. I am particularly interested in Apomixis and its developmental aspects. I am also trying to develop major research program on						

Safflower improvement. I believe in interdisciplinary work and collaborations are the best way to achieve this goal. I see myself working in collaborations with different people working on different aspects of plant research in future.

Subjects Taught

M.Sc. – Semester system (2009 onwards):
Genetics and Cytogenetics (Core Program)
Bioinformatics and Computational Biology (Optional Program)
Advanced Genetics and Plant Breeding (Optional Program)

Research Guidance

List against each head (If applicable)

1. Supervision of awarded Doctoral Thesis : 1
2. Supervision of Doctoral Thesis, under progress : 6
3. Supervision of awarded M.Phil dissertations : nil
4. Supervision of M.Phil dissertations, under progress: nil

Publications Profile

List against each head (If applicable) (as Illustrated with examples)

Books/Monographs (Authored/Edited)

1. Ozias-Akins P, J.A. Conner, **S. Goel**, Z. Chen, Y. Akiyama and W.W. Hanna. 2002. Genomic structure of the apomixis locus in *Pennisetum*. Proceedings of International Association for Plant Tissue Culture and Biotechnology.
2. **Goel S.**, H.D. Singh and S.N. Raina. 2009. *Cenchrus* : a potential forage crop. Springer WCR (Wild Crop Relatives) Series Volume 2. Wild Relatives of Millets and Forage Grasses.

Research papers published in Refereed/Peer Reviewed Journals

3. Sapinder Bali, Soom Nath Raina, Vishnu Bhat, Ramesh Kumar Agarwal, **S. Goel**. 2013. Development of a set of genomic microsatellite markers (gssrs) in tea (*Camellia* L.) (*Camelliaceae*). **Molecular Breeding (DOI: [10.1007/s11032-013-9902-4](https://doi.org/10.1007/s11032-013-9902-4)).** (Corresponding Author)
4. Tanvir H. Dar, Soom N. Raina and **S. Goel**. 2013. Molecular Analysis of Genomic Changes in Synthetic Autotetraploid *Phlox drummondii* Hook. **Biological Journal of Linnean Society (In Press) (Corresponding author)**
5. Y. Mangla, R. Tandon, **S. Goel** and S.N. Raina. 2013. Structural organization of the gynoecium and pollen tube path in Himalayan sea buckthorn, *Hippophae rhamnoides* (Elaeagnaceae). **AOB Plants 5: plt015.**
6. Mehrotra S., **Goel S.**, S. Sharma, S. N. Raina and V. R. Rajpal. 2013. Sequence Analysis of KpnI Repeat Sequences to Revisit the Phylogeny of the Genus *Carthamus* L. **Applied Biochemistry and Biotechnology 69:1109–1125 (Corresponding author).**
7. S. N. Raina, P. S. Ahuja, R. K. Sharma, S. C. Das, P. Bhardwaj, R. Negi, S. S. Singh, R. K. Sud, R. K. Kalia, V. Pandey, J. Banik, V. Razdan, D. Sehgal, T. H. Dar, A. Kumar, S.

- Bali, V. Bhat, S. Sharma, B. M. Prasanna, **S. Goel**, M. S. Negi, P. Vijayan, S. B. Tripathi, B. Bera, A. K. A. Mandal, R. R. Kumar, D. Vijayan, S. Ramkumar, B. R. Chowdhury, S. S. Mandi. 2012. Genetic structure and diversity of India hybrid tea. **Genetic Resources and Crop Evolution**. Volume 59(7): 1527-1541
8. **Goel S***, Akiyama, Y.*, J. A. Conner, W. W. Hanna, H. Yamada-Akiyama and P. Ozias-Akins. 2011. Evolution of the apomixis transmitting chromosome in *Pennisetum*. **BMC Evolutionary Biology** 11:289 (*Shared First Author).
 9. Singh M, **S. Goel**, R.B. Meeley, C. Dantec, H. Parrinello, C. Michaud, O. Leblanc and D. Grimanelli. 2011. Production of viable gametes without meiosis in maize deficient for an ARGONAUTE protein. **The Plant Cell**. 23: 443-458
 10. Conner JA, **S. Goel**, G. Gunawan, M.M. Cordonnier-Pratt, V. E. Johnson, C. Liang, H. Wang, L. H. Pratt, J. E. Mullet, J. DeBarry, L. Yang, J. L. Bennetzen, P. E. Klein, and Peggy Ozias-Akins. 2008. Sequence Analysis of Bacterial Artificial Chromosome Clones from the Apospory-Specific Genomic Region of *Pennisetum* and *Cenchrus*. **Plant Physiology**. 147: 1396-1411.
 11. **Goel S***, Y. Akiyama*, Z Chen, W. W. Hanna and P Ozias-Akins 2006. Molecular cytology confirmed that *Pennisetum squamulatum* is an octaploid plant ($2n = 8x = 56$) **Journal of Heredity** 97(5):521-524. (Co first author)
 12. **Goel S.**, Z. Chen, Y. Akiyama, J.A. Conner, M. Basu, G. Gualtieri, W.W. Hanna and Ozias-Akins P. 2006. Comparative physical mapping of the apospory-specific genomic region in two apomictic grasses: *Pennisetum squamulatum* and *Cenchrus ciliaris*. **Genetics** 173: 389-400.
 13. Akiyama, Y., J.A. Conner, **S. Goel**, D.T. Morishige, J.E. Mullet, W.W. Hanna, and P. Ozias-Akins. 2004. High-resolution physical mapping in *Pennisetum squamulatum* reveals extensive chromosomal heteromorphism of the genomic region associated with apomixis. **Plant Physiol**. 134:1733-1741.
 14. **Goel, S***, Z. Chen*, J.A. Conner, Y. Akiyama, W.W. Hanna, and P. Ozias-Akins. 2003. Physical evidence that a single hemizygous chromosomal region is sufficient to confer aposporous embryo sac formation in *Pennisetum squamulatum* and *Cenchrus ciliaris*. **Genetics** 163:1069-1082. (*Co first author)
 15. **Goel, S.**, S.N. Raina and Y. Ogihara. 2002. Molecular evolution and phylogenetic implications of internal transcribed spacer sequences of nuclear ribosomal DNA in *Phaseolus-Vigna* complex. **Molecular Phylogenetics and Evolution** 22(1): 1-19.
 16. Raina, S.N., Y. Mukai, K. Kawaguchi, **S. Goel**, A. Jain. 2001. Physical mapping of 18S-5.8S-26S and 5S ribosomal gene families in three important vetches (*Vicia* species) and their allied taxa constituting three species complexes. **Theor. Appl. Gene.**103:839-845.
 17. Rani, V., K.P. Singh, B. Shiran, S. Nandy, **S. Goel**, R. Devarumath, H.L. Sreenath and S.N. Raina. 2000. Evidence for new nuclear and mitochondrial genome organisations among high frequency somatic embryogenesis-derived-plants of allotetraploid *Coffea arabica* L. (Rubiaceae). **Plant Cell Reports** 19:1013-1020

18. Rout, G.R., P. Das, **S. Goel** and S.N. Raina. 1998. Determination of genetic stability of micro propagated plants of ginger using Random Amplified Polymorphic DNA (RAPD) markers. **Bot. Bulletin Academia Sinica** 39:23-27.

Research papers published in Academic Journals other than Refereed/Peer Reviewed Journals

Nil

Research papers published in Refereed/Peer Reviewed Conferences

1. Heisnam D. Singh, Gopal Joshi, Ankur R. Bhardwaj , Surekha Katiyar-Agarwal , Manu Agarwal , Arun Jagannath, Peggy Ozias-Akins ,Wayne W. Hanna, Shailendra Goel. 2012. Profiling of smRNAs unique to apomictic addition lines in *Pennisetum glaucum*. International Plant and Animal Genome Conference XX, 14-18 January, San Diego, CA, USA.
2. Akiyama Y, Goel S, Conner JA, Hanna WW, Yamada-Akiyama H, Ozias-Akins P 2012. The evolution of the apospory-specific genomic region (ASGR) - carrier chromosome in *Pennisetum*. Breeding Science 14 Ex. issue 1, P.258. in Utsunomiya, Japan (Poster)
3. Mipeshwaree Devi Asem, Shailendra Goel and Arvind K. Misra. 2011. Generation of silver stained TE-AFLP markers and assessment of primer combinations in tea for efficient fingerprinting analysis. International Conference on New Horizons in Biotechnology (NHBT-2011), NIIST, Trivandrum, November 21-24.
4. S. Bali, S. N. Raina , V. Bhat, **S. Goel**, R. K. Aggarwal. 2011. Isolation of microsatellites from tea (*Camellia sinensis* L.) kuntze using enrichment protocol. 11th ADNAT conference, CCMB, Hyderabad, India
5. Kamal Das, T. H. Dar, S. Bali, G. Joshi, R. Tandon and **S. Goel**. 2011. Isolation of sex specific DNA marker by Representational Difference Analysis (RDA). National conference on seabuckthorn, NCBST, IARI, Delhi, India
6. Tanvir H. Dar, **S. Goel**, S.N. Raina 2011. Genomic changes in synthetic autotetraploid in *Phlox drummondii* Hook. 11th ADNAT conference, CCMB, Hyderabad, India
7. Ozias-Akins P., J.A. Conner, **S. Goel**, Y. Akiyama , M.M. Cordonnier-Pratt , C. Liang , L. H. Pratt, W. W. Hanna 2005. Physical and functional characteristics of the genomic region associated with apomixis in *Pennisetum*. Plant and Animal Genome XIII Conference, San Diego, California, USA.
8. Raina S.N., **S. Goel**. 2004. Qualitative and Quantitative Monitoring of Gene expression patterns among micro propagated plants of tea Clones by differential screening of randomly amplified cDNAs using RAPD Primers. World Congress on In Vitro Biology

(Society for in vitro biology). San Francisco, California, USA.

9. Conner J.A., **S. Goel**, G. Gunawan, M.M. Cordonnier-Pratt, C. Liang, W. Haiming, L Pratt, J.E. Mullet, W.W. Hanna and P. Ozias-Akins 2004. Aligning physical and functional maps of a genomic region spanning the apomixis locus by exploiting model cereal genomics. Plant Biology conference, Orlando, Florida, USA
10. **Goel S.**, J.A. Conner, Y. Akiyama, W.W. Hanna, and P. Ozias-Akins. 2004. Integrating genetic and physical maps: an approach to define the size of apospory specific genomic region in *Pennisetum* and *Cenchrus*. Plant and Animal Genome XII Conference, San Diego, California, USA.
11. Ozias-Akins P., **S. Goel**, A. Yukio, G. Gualtieri, J.A. Conner, J.E. Mullet, W.W. Hanna. 2003. Characterization of the genomic region transmitting apomixis in *Pennisetum* and *Cenchrus*. Plant and Animal Genome XI Conference, San Diego, California, USA.
12. Ozias-Akins P., W.W. Hanna, Z. Chen, J.A. Conner, **S. Goel**, Y. Akiyama. 2002. Molecular cytogenetic characterization of Apomictic Introgression lines of Millet. ASA-CSSA-SSSA Annual Meetings.
13. **Goel S.**, J.A. Conner, Y. Akiyama, W.W. Hanna, and Ozias-Akins P 2002. Physical localization of the apospory specific genomic region in *Pennisetum squamulatum* and *Cenchrus ciliaris*. (Poster) Plant and Animal Genome X Conference, San Diego, California, USA.
14. Ozias-Akins P., J.A. Conner, **S. Goel**, Z. Chen, Y. Akiyama and W.W. Hanna.2002. Architecture of the apomixes locus in *Pennisetum/Cenchrus*. (Abstract) Plant and Animal Genome X Conference, San Diego, California, USA.
15. Ozias-Akins P., D. Roche, J.A. Conner, Z. Chen, **S. Goel** and W.W. Hanna 2001. (Abstract) Comparative physical mapping of the apospory locus in two grass species. International Apomixes Conference, Italy.
16. Ozias-Akins P, D. Roche, J.A. Conner, Z. Chen, **S. Goel** and W.W. Hanna 2001. Apomixes in *Pennisetum*. (Abstract) Plant and Animal Genome IX Conference, San Diego, California, USA.
17. **Goel S** and S.N. Raina 1999. Nucleotide sequences of 18S-25S spacer regions: A valuable source of evidence of molecular evolution. (Abstract) (Lead lecture) National Seminar on Plant Genetic Diversity: Evaluation and Conservation, Chandigarh, India.

Research papers published in Conferences/Seminar other than Refereed/Peer Reviewed Conferences

1. Goel S. and I. Siddiqi 2012. Recent progress in Apomixis research. In: International dialogue on designer rice for future: perceptions and prospects, ICRISAT, Patancheru,

AP, India.

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

Nil

Patents

Nil

Conference Organization/ Presentations (in the last three years)

List against each head(If applicable)

1. Organization of a Conference : nil
2. Participation as Paper/Poster Presenter : 7

Research Projects (Major Grants/Research Collaboration)

1. **Project Coordinator in DST-PURSE grant on “Genetic and Genomic approaches for improvement of the oilseed crop, *Carthamus tinctorius* (Safflower)”.** (On going)
2. **PI in DRDO funded project “Towards the Biodiesel in *Jatropha curcas*”** (completed on June 2011)
3. **PI in DBT funded project “Profiling of small RNAs unique to Apomictic addition lines in *Pennisetum glaucum* through Subtractive small RNA library”** (On going)
4. **Co-PI DBT funded project “Molecular markers and descriptor development in Tea”** (Completed Mar 2009)
5. **PI in DBT funded project “Isolation of sex linked genes and gender specific markers in *Hippophae rhamnoids*”** (Completed on Dec 2012)
6. **PI in UGC funded project “Improvement of *Jatropha curcas* biodiesel stability through transgenic approach”** (On going)
7. **PI in DBT funded project “Whole genome and transcriptome changes as a consequence of allo and auto polyploidy in *Vigna L.*”**(On going)

Awards and Distinctions

1. University Grant Commission (India) National Research Fellowship holder 1993-1998
2. GATE (conducted by India Institute of Technology or IIT, India) Qualified (12th National Rank) 1993
3. Visiting Research Fellowship, Kihara Institute for Biological Research, Yokohama City University, Japan

Association With Professional Bodies

1. *Editing*
2. *Reviewing*

Molecular Biology Reports (International society of plant molecular biologist/ ISPMB)

Journal of Horticulture and Forestry (Academic Journals)

Plant Cell Reports (Springer)

Iranian Journal of Biotechnology

Indian Journal of Bitechology

3. *Advisory*
4. *Committees and Boards*
5. *Memberships*

Life Member, International Society of Plant Morphologists, Department of Botany, University of Delhi, Delhi – 110007.

Life Member, ADNAT (Association for the promotion of DNA finger printing and associated DNA technologies), Hyderabad.

6. *Office Bearer*

Other Activities

Two summer trainees for 2012-2013

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.