




University Faculty Details Page on DU Web-site*-2015

	First Name	Madan	Last Name	Mohan	Photograph
Designation	Professor				
Department	Plant Molecular Biology				
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Education: Ph.D, LL.B					
Subject	Institution	Year	Details		
B.Sc (Hons) Botany	Hans Raj College, University of Delhi	1973	Thesis topic: Mycology and Plant Pathology		
M.Sc Botany	Hans Raj College, University of Delhi	1975	Subjects: Botany		
Ph.D Botany	University of Delhi	1980	Subjects: Botany		
Post doctoral	University of Toronto, Canada	1983- 86	Subjects: Molecular Biology		
LL.B	University of Delhi	2008	Subject		
Career Profile					
Organisation/Institution	Designation	Duration	Role		
Hindu College, University of Delhi	Lecturer, Reader	1979-94	Teaching and Research		
ICGEB, New Delhi	Scientist Group Leader	1989-1994 1994-2006	Research, Teaching and Administration		
Delhi University South Campus,	Professor	2006-to date	Teaching and Research		
Delhi University South Campus	Director, Centre for Genetically Modified Plants	Jan 2008 to 2013	Teaching and Training		
Delhi University	Dean, Research	Jan 2008 to Jan 2011	Administration and implementation of funds under R & D		
Delhi University	Chairman, IPR Cell and Patent Fund	September 2008 to Jan 2011	Administration and implementation of IPR related issues and Patent fund		
Delhi University	Head, Dept of Plant Mol Biol	Oct 29, 2013- March 14 2014	Administration and management of Dept activities.		

Delhi University	Dean, Faculty of Interdisciplinary Sciences and Chairman, Board of Research studies	Oct 29, 2013- March 12 2014	Administration and management of research activities of the departments under the faculty of Interdisciplinary Sciences
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Research Interests/ Specialization

Genome analysis of plants and insects including gene identification, functional genomics, bioinformatics and comparative genomics.

Developing molecular markers/tags for use in marker-assisted selection in rice

Mapping and Tagging of agronomically important genes using RFLP, RAPD, AFLP, SSR and Bulk segregant analysis in rice

DNA fingerprinting for differentiation of biotypes of insects and classification of insect and plant germ plasm

Using PCR to detect, identify, and monitor various organism, pathogens, parasites, and crop plants

Gene isolation by map-based cloning methods using YAC, Cosmid and cDNA libraries

Physical mapping of YACs, Cosmids, and RFLP markers on to the chromosomes by Fluorescence in situ hybridization (FISH)

Using computers in linkage and co segregation analysis to map monogenic and quantitative trait loci in crop plants

Transformation of plants and issues related to transgenics

Biosafety and IPR issues related to Agricultural Biotechnology

Teaching Experience (Subjects/ Courses Taught)

More than 20 years of undergraduate and post graduate teaching at the University of Delhi, Delhi and at the International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi. Main subject at the post graduate level is Plant Molecular Biology

Supervised a M.Phil student who submitted a thesis entitled “ A Critical Appraisal of Domestic and International laws related to Biosafety of Genetically Modified Plants (GM)” to University of Delhi South Campus, New Delhi-110021, India, 2009

Supervised a Ph.D. student who submitted Ph.D. thesis entitled “DNA Fingerprinting to define the biotypes of rice gall midge (*Orseolia oryzae*, Wood-Mason)” to Utkal University, Bhubneswar, Orissa,

India, 1999

Supervised a Ph.D. student who submitted Ph.D. thesis entitled “ Genetical and Molecular analysis of Gall Midge (*Orseolia oryzae* Wood Mason) Resistance Genes(s) in Rice” to Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chattishgarh, India, 2003

Supervised a Ph.D. student who submitted Ph.D. thesis entitled “ Mapping and tagging of Gall Midge (*Orseolia oryzae* Wood Mason) Resistance Genes(s), Gm8, and development of SCAR for use in MAS and Gene Pyramiding in Rice” to Jawahar Lal Nehru University, New Delhi-110070, India, 2005

Supervised a student for Ph.D degree on a research topic entitled” Development of transgenic lines in rice for male sterility” from University of Delhi (Thesis submitted, 2014)

Supervised a student for Ph.D degree on a research topic entitled “Studies on the phytotherapeutic potential of *calotropis procera* latex fractions in arthritis” from University of Delhi (Thesis submitted, 2014)

Honors & Awards

Member, Research Advisory Council (RCA), Directorate of Rice Research, ICAR, Hyderabad from December 2011-December 2014.

Member, Research Advisory Council, Jamia Hamdard University, New Delhi from 2011-continuing

Member, Research Council, CIMAP (CSIR), Lucknow from 2007-2010

Elected to the fellowship (**FNA**) of the **Indian National Science Academy**, 2004.

Elected to the **National Academy of Agricultural Sciences (FNAAS)** in 1999.

Awarded **Rafi Ahmed Kidwai Award (1996-98)** for lifetime achievement in Agriculture (Crop improvement and Crop Protection) by Indian Council of Agricultural Research (ICAR), Ministry of Agriculture, Government of India. This award is given once in three years and in addition to citation, also carries a cash award of Rs 1,00,000.

First place award for **highest achievement** in B.Sc (1973) and M.Sc.(1975) examinations in Hans Raj College, Delhi University.

Publications (LAST FIVE YEARS)

Books/ Monographs

1. Kumar V L, Chaudhury P, Ramos M V, **Madan Mohan**, Matos M P V. (2011) Protective effect of proteins derived from the latex of *Calotropis procera* against inflammatory hyperalgesia in monoarthritic rats.
Phytotherapy Research 25:1336-1341
2. Bhattacharjee B, Madan Mohan, Nair S (2010) Transformation of chickpea: effect of genotype, explants, *Agrobacterium*-strain and composition of culture medium.
Biol. Plant. 54: 21-32

Total Publication Profile

1. Kumar V L, Chaudhury P, Ramos M V, **Madan Mohan**, Matos M P V. (2011) Protective effect of proteins derived from the latex of *Calotropis procera* against inflammatory hyperalgesia in monoarthritic rats.
Phytotherapy Research (Accepted)
2. Bhattacharjee B, **Madan Mohan**, Nair S (2010) Transformation of chickpea: effect of genotype, explants, *Agrobacterium*-strain and composition of culture medium.
Biol. Plant. 54: 21-32
3. Kumar A, Jain A, Sahu RK, Shrivastava MN, Nair S, **Madan Mohan** (2005) Genetic analysis of resistance genes for the rice gall midge in two rice genotypes.
Crop Sci 45: 1631-1635
4. Jain A, Ariyadasa R, Kumar A, Srivastava MN, **Madan Mohan**, Nair S (2004) Tagging and mapping of a rice gall midge resistance gene, *Gm8*, and development of SCARs for use in marker-aided-selection (MAS) and gene pyramiding
Theor Appl Genet 109:1377-1384
5. Rajyashri, KR and **Madan Mohan** (2004) Gene pyramiding: A transgenic approach to enhancing resistance durability in plants. In Transgenic Crop Protection: Concepts and Strategies, O. Koul and G. S. Dhaliwal (eds.) pp. 219-260
Science Publishers Inc., Enfield, USA,
6. Harris MO, Stuart JJ, **Madan Mohan**, Nair S, Lamb RJ, Rohfritsch O (2003) Grasses and Gall Midges: Plant Defense and Insect Adaptation
Annu. Rev. Entomol. 48:549-577
7. Sardesai N, Kumar A, Rajyashri KD, Nair S., **Madan Mohan** (2002) Identification and mapping of an AFLP marker linked to *Gm7*, a gall midge resistance gene and its conversion to a SCAR marker for its utility in marker aided selection in rice
Theor Appl Genet 105:691-698
8. Behura SK, Nair S, **Madan Mohan** (2001)
Polymorphisms flanking the *mariner* integration sites in the rice gall midge (*Orseolia oryzae* Wood Mason) genome are biotype specific.
Genome 44:947-954
9. Behera L, Sahu SC, Rajamani S, **Madan Mohan** (2001) Molecular evidence for *Wolbachia* in rice insects.
Curr Sci 81:1299-1300
10. Behura SK, Sahu SC, **Madan Mohan**, Nair S (2001)
Wolbachia in the Asian rice gall midge, *Orseolia oryzae* (Wood-Mason): Corelation between host mitotypes and infection status.
Insect Mol Biol 10:163-171

11. Sardesai N, Rajyashri KR, Behura SK, Nair S, **Madan Mohan** (2001) Genetic, physiological and molecular interactions of rice and its major dipteran pest, gall midge
Plant Cell, Tissue and Organ Culture 64:115-131
12. Behura SK, Sahu SC, Nair S, Madan Mohan (2000)
An AFLP marker that differentiates biotypes of the Indian gall midge (*Orseolia oryzae*, Wood-Mason) is linked to sex and avirulence
Mol Gen Genet 263: 328-334
13. Behura SK., Sahu, SC, Rajamani S., Ambika Devi, Mago R, Nair S, **Madan Mohan** (1999)
Differentiation of Asian rice gall midge, *Orseolia oryzae* (Wood-Mason), biotypes by sequence characterised amplified regions.
Insect Mol Biol 8: 391-397
14. Mago R, Nair S, **Madan Mohan** (1999) Resistance gene analogues in rice: cloning, sequencing and mapping.
Theor Appl Genet 99: 50-57
15. Nair NV, Nair S, Sreenivasan, TV **Madan Mohan** (1999)
Analysis of genetic diversity and phylogeny in *Saccharum* and related genera using RAPD markers.
Genet Res & Crop Evo 46: 73-79
16. Rajyashri KR, Nair S, Ohmido N, Fukui K, Kurata N, Sasaki T,
Madan Mohan (1998)
Isolation and FISH mapping of Yeast Artificial Chromosomes (YACs) encompassing an allele of the *Gm2* gene for gall midge resistance in rice.
Theor Appl Genet 97: 507-514
17. **Madan Mohan**, Sathyanarayanan PV, Kumar A, Srivastava MN,
Nair S (1997)
Molecular mapping of a resistance specific PCR-based marker linked to a gall midge resistance gene (*Gm4t*), in rice.
Theor Appl Genet 95: 777-782
18. **Madan Mohan**, Nair S, Bhagwat A, Krisna TG, Yano M, Bhatia CR, Sasaki T (1997)
Genome mapping, molecular markers and marker-assisted selection in crop plants.
Mol Breed 3: 87:103
19. Reddy AR, Scheffler B, Madhuri G, Srivastava MN, Kumar A, Sathyanarayanan, PV, Nair S, **Madan Mohan** (1996)
Chalcone synthase in rice (*Oryza sativa* L.): Detection of the CHS protein in seedlings and molecular mapping of the *chs* locus.
Plant Mol Biol 32:735-743
20. Nair S, Kumar A, Srivastava MN, **Madan Mohan** (1996)
PCR-based DNA markers linked to a gall midge resistance gene, *Gm4t*, has potential for marker aided selection in rice.
Theor Appl Genet 92:660-665
21. Nair S, Prasada Rao U, Bennett J, **Madan Mohan** (1995)
Detection of a highly heterozygous locus in recombinant inbred lines of rice and its possible

involvement in heterosis.

Theor Appl Genet 91:978-986

22. Nair S, Bentur JS, Prasada Rao U, **Madan Mohan** (1995)
DNA markers tightly linked to a gall midge resistance gene (*Gm2*) are potentially useful for marker-aided selection in rice breeding.
Theor Appl Genet 91:68-73
23. **Madan Mohan**, Nair S, Bentur JS, Prasada Rao U, Bennett J (1994) RFLP and RAPD mapping of the rice *Gm2* gene that confers resistance to biotype 1 of gall midge (*Orseolia oryzae*)
Theor Appl Genet 87:782-788.
24. Williams MNV, Pande N, Nair S, **Madan Mohan**, Bennett J (1991) Restriction fragment length polymorphism analysis of polymerase chain reaction products amplified from mapped loci of rice (*Oryza sativa* L.) genomic DNA.
Theor Appl Genet 82:489-498
25. Meyer RJ, Hintz WEA, **Madan Mohan**, Robison M, Anderson JB, Horgen PA (1988) Homology of *Agaricus* mitochondrial plasmids with mitochondrial DNA.
Genome 30:710-716.
26. Hintz WE, **Madan Mohan**, Anderson JB, Horgen PA (1985)
The mitochondrial DNAs of *Agaricus*. Heterogeneity in *A. bitorquis* and homogeneity in *A. brunnescens*.
Curr Genet 9:127-132.
27. **Madan Mohan**, Meyer RJ, Anderson JB, Horgen PA (1984)
Plasmid-like DNAs in the commercially important mushroom genus *Agaricus*.
Curr Genet 8:615-619.
28. Mukherji KG, Bhattacharjee M, **Madan Mohan** (1982)
Ecology of the Indian Endogonaceae.
J Appl Bot 56: 121-131.
29. Mukherji KG, **Madan Mohan**, Bawa J (1980)
Fungi of Delhi. XXXII. A homothallic strain of *Syncephalastrum racemosum* Cohn ex Schroeter.
Proc Indian Natn Sci Acad B 46:387-388.
30. **Madan Mohan**, Mukherji KG (1979)
Seed-borne fungi II. Three new records and a new species of *Curvularia*.
Proc Indian Natn Sci Acad, B 56:147-149.
31. Mukherji KG, **Madan Mohan**, Mohammed Ali GI (1979)
Seed borne fungi: Some new records.
Acta Botanica Indica 7:87-89.
32. **Madan Mohan**, Mukherji KG (1978)
Abnormal conidium development in *Alternaria tenuissima*.
Indian Phytopath 31:247-248.

33. Kavita Rani, **Madan Mohan**, Mukherji KG (1978)
Studies on seed-borne fungi I. Establishment of three pathogens on sorghum seeds.
Seed Res 6:38-42.
34. **Madan Mohan**, Mukherji KG (1978)
Some biologically active extracellular products of blue-green algae.
Phykos 18:73-82
35. **Madan Mohan**, Mukherji KG (1978)
Harmful seed-borne fungi.
School Science 16:39-43
36. **Madan Mohan**, Mukherji KG (1978)
Seed microflora and some important diseases of Cauliflower and Cabbage.
Seeds & Farms 4:19-31
37. **Madan Mohan**, Mukherji KG, Kavita Rani (1978 a)
Diseases of Sorghum.
Seeds & Farms 4:23-30
38. **Madan Mohan**, Mukherji KG, Kavita Rani (1978 b)
Diseases of Bajra.
Seeds & Farms 4:35-38
39. **Madan Mohan** (1977)
Microbial pollution and public health.
In: **Current trends in Indian Environment**. Eds.: Deshbandhu and E.Chauhan. Today and Tomorrow's Publications, New Delhi, pp. 113-124.

Abstracts

1. Sardesai N, Kumar A, Nair S, **Madan Mohan** (2000) Tagging of *Gm7* gene using Amplified Fragment Length Polymorphism. Presented at 2nd RCM meeting at IAEA/FAO from October 2-6, 2000, Vienna, Austria
2. Reddy AR, Scheffler B, Srivastava MN, Kumar A, Sathyanarayanan, PV, Nair S, **Madan Mohan** (1996) Chalcone synthase (*chs*) in rice (*Oryza sativa* L.): Expression and molecular mapping. Plant Genome IV. January 14-18, 1996. San Diego, USA
3. Nair S, **Madan Mohan**, Bentur JS, Prasada Rao, U (1994) Allele- specific PCR for a gall midge resistance gene in rice. 4th. International Congress of Plant Molecular Biology, June 19-24, Amsterdam, The Netherlands
4. Nair S, **Madan Mohan**, Bentur JS, Prasada Rao, U (1994) Towards marker-aided selection of a gall midge resistance gene in rice. 7th Meeting of the International Program on Rice Biotechnology, May 16-20, Bali, Indonesia.
5. Bennett J, William M, **Madan Mohan**, Nair S (1990) Molecular approaches to the enhancement of insect resistance in rice. International Symposium on Rice Research –

New Frontiers. 15 - 18 November 1990, Hyderabad, India.

6. Meyer R J, **Madan Mohan**, Anderson JB, Horgen PA (1985) Analysis of plasmids in *Agaricus*. 36th Annual AIBS meeting, University of Florida, Gainesville Florida, USA.
7. Horgen PA, **Madan Mohan**, Meyer RJ, Anderson JB (1985) Plasmid like DNAs in mushroom. First Canadian Plant Molecular Biology Workshop. University of Guelph, Guelph, Ontario, Canada
8. Horgen PA, **Madan Mohan**, Meyer RJ, Anderson JB (1985) Plasmid like DNAs in mushrooms. UCLA Symposia on Molecular and Cellular Biology, Keystone, Colorado, USA.
9. Meyer RJ, **Madan Mohan**, JB Anderson, Horgen PA (1984) Molecular cloning of plasmid like DNAs of *Agaricus bitorquis*. Mycological Society of America Meeting, 1984. University of Colorado at Fort Collins, USA.
10. **Madan Mohan**, Mukherji KG (1983) Seed-borne Fungi. III Influence of Moisture Content of Cauliflower seeds on its mycoflora and germination. National Crucifer Improvement Conference. US Department of Agriculture, The University of Arizona. Tucson, Arizona, USA.

Conference Presentations

1. Chaudhary P, Madan Mohan, Ramos M V , Kumar VL (2010) Anti-arthritis activity of Calotropis procera latex proteins. Presented at International Conference on "Pharmacology and Translational Research", Hyderabad, on December 13-16, 2010.
2. Mohanty A, Nair S, **Madan Mohan** (2002) Identification of a putative Gall Midge resistance gene using computational tools. Presented at 3rd Mini-Network meeting on Rice Gall Midge at Indira Gandhi Agricultural University, Raipur 492 012, Chhattisgarh, India from October 22-24, 2002.
3. **Madan Mohan**, Suresh Nair (2002) Molecular mapping of gall midge resistant genes in rice. Presented at 3rd RCM meeting of IAEA/FAO at Krakow, Poland from June 10-14, 2002.
4. **Madan Mohan** (2002) Identification and mapping of an AFLP marker linked to *Gm7*, a gall midge resistance gene and its conversion to a SCAR marker for its utility in marker-aided selection in rice. Presented at 2nd Mini-Network meeting on Rice Gall Midge at Indira Gandhi Agricultural University, Raipur 492 012, Chhattisgarh, India from January 23-25, 2002
5. **Madan Mohan**, Nair, S. (2000): Molecular markers in rice for enhancing gall midge resistance. Presented at the XXI International congress of Entomology at Iguassu Falls, Brazil, August 20-26, 2000
6. **Madan Mohan** (2000) Mapping, tagging and marker assisted selection of gall midge resistance genes in rice. Presented at First Mini-Network meeting on Rice Gall Midge at Central Rice Research Institute (CRRI), Cuttack, India from March 14-15, 2000
7. **Madan Mohan**, Nair S. (1999): Mapping, tagging, marker-assisted selection and map-based

gene cloning of gall midge resistance gene (*Gm2*) in rice. Presented at the first FAO/IAEA Research Coordination Meeting on “Molecular Characterization of mutated genes controlling important traits for Seed Crops” at Vienna, Austria, October 4-8, 1999.

8. Rajyashri KR, Nair S, **Madan Mohan** (1999): Transformation of TN1 with cosmids spanning the region encompassing the gall midge resistance gene *Gm2*. Presented at the general meeting of the International Program on Rice Biotechnology held at Phuket, Thailand, September 20-24, 1999.
9. Behura SK, Kar B, Sahu SC, Nair S, **Madan Mohan** (1999): An AFLP marker putatively linked to the avirulence gene in the rice gall midge. Presented at the general meeting of the International Program on Rice Biotechnology held at Phuket, Thailand, September 20-24, 1999.
10. Rajyashri KR, Nair S, **Madan Mohan** (1998): A cosmid contig covering *Gm2*, a gene conferring resistance to gall midge, a dipteran pest of rice. Presented at 18th International Congress of Genetics held at Beijing, China, August 10-15, 1998
11. Rajyashri KR, Mago R, Nair S, **Madan Mohan** (1998): YAC and BAC contigs in the region of *Gm2* gene, a gene conferring resistance to gall midge, an insect pest of rice. Presented at the 4th Asia Pacific conference of Agricultural Biotechnology held at Darwin, Australia, July 13-16, 1998.
12. Rajyashri KR, Mago R, Nair S, **Madan Mohan**, Kurata N, Sasaki T (1997): Isolation of gall midge resistance gene, *Gm2*, in rice. Presented at the 5th International congress of Plant Molecular Biology Meeting held at Singapore, September 21-27, 1997.
13. Mago R, Rajyashri KR, Nair S, **Madan Mohan**, Kurata N, Sasaki T (1997): Map-based cloning of gall midge resistance gene *Gm2* in rice. Presented at the Rockefeller Rice Biotechnology Meeting held at Malacca, Malaysia, September 14-19, 1997.
14. Sahu SC, Behura SK, Nair S, **Madan Mohan** (1997): Molecular studies on biotypes of the rice gall midge. Presented at the Rockefeller Rice Biotechnology Meeting held at Malacca, Malaysia, September 14-19, 1997.
15. **Madan Mohan** (1997): Molecular aspects of Insect resistance in rice. Presented at Third Agricultural Science Congress, March 12-15, Punjab Agricultural University, Ludhiana, Punjab, India.
16. Oghiakhe S, Behura SK, Sahu SC, Ambika Devi, Nair S, **Madan Mohan** (1997): Molecular approaches for identification and characterization of Indian biotypes of Asian rice gall midge, *Orseolia oryzae*. Presented at Third Agricultural Science Congress, March 12-15, Punjab Agricultural University, Ludhiana, Punjab, India.
17. **Madan Mohan**, Nair S (1996): Molecular studies on insect resistance genes. Presented at the 5th National Rice Biotechnology Network meeting, November 13-16, New Delhi, India.
18. Malik P, Sathyanarayanan PV, Toyonaga R, Kurata N, Katayose Y, Nair N, Sasaki T, **Madan Mohan** (1996): YAC-PCR: A strategy to develop PCR-based markers from Yeast Artificial Chromosomes. Presented at the 5th National Rice Biotechnology Network meeting, November 13-16, 1996, New Delhi, India.

19. Oghiakhe S, Nair S, Malik P, **Madan Mohan** (1996): Molecular approaches for identification and characterization of different biotypes of the Asian rice gall midge, *Orseolia oryzae* Wood Mason (Diptera-Cecidomyiidae). Presented at the 5th National Rice Biotechnology Network meeting, November 13-16, 1996, New Delhi, India.
20. Behura SK, Sahu SC, Nair S, **Madan Mohan** (1996): PCR based markers differentiate various biotypes of the Indian rice gall midge. Presented at the 5th National Rice Biotechnology Network meeting, November 13-16, 1996, New Delhi, India.
21. Nair S, Kumar A, Srivastava MN, **Madan Mohan** (1995): Molecular tagging of a resistance gene (*Gm4t*) in rice that confers resistance to gall midge biotypes. Presented at the Third International Rice genetics symposium, Oct 16-20, 1995, Manila, Philippines.
22. Shenoy VV, Bentur JS, Rao UP, Reddy VV, Sarma NP, Nair S, **Madan Mohan**, Siddiq EA (1995): Rice gall midge resistance gene Gm3(t) tagged and mapped by bulked segregant analysis. Presented at the Third International Rice genetics symposium, Oct 16-20, 1995, Manila, Philippines.
23. Nair S, **Madan Mohan** (1995): Use of molecular markers for detecting heterozygosity and for tagging gall midge resistance genes in rice. Presented at the 4th annual meeting of national rice biotechnology network. July 4-6, 1995 at Pune, India
24. Nair S, LTL Oanh, kumar A, Srivastava MN, **Madan Mohan** (1995): Molecular tagging of a resistance gene in rice that confers resistance to gall midge biotype 4. Plant Genome III, January 15-19, 1995, San Diego, USA.
25. **Madan Mohan**, Nair S, Bentur JS, Prasada Rao U (1994): Development of molecular markers for gall midge resistance gene in rice. 4th International Workshop on Rice Molecular Biology, August 1-2, Tokyo, Japan.
26. Nair S, **Madan Mohan**, Bentur JS, Prasada Rao U (1994): Towards marker-aided selection of gall midge resistance gene (*Gm2*) in rice. Presented at the Second Asia-Pacific Conference on Agricultural Biotechnology held at M.S. Swaminathan Foundation at Madras, India, March 6-11 1994.
27. **Madan Mohan**, Nair S, Bennett J (1993): Mapping of rice gene for resistance to biotype 1 of gall midge (*Orseolia oryzae*) by RFLP and RAPD analyses. Presented at the Rockefeller Rice Biotechnology Meeting held at Chiang Mai, Thailand, February 2-5, 1993.
28. **Madan Mohan**, Nair S, Williams M, Bennett J (1991): Insect resistance in rice - RFLP mapping and transgenic approaches. Presented at the Rockefeller Rice Biotechnology Meeting held at Tucson, Arizona, USA, October 2-5, 1991
29. **Madan Mohan**, Nair S, Bennett J (1990): RFLP of indica rice varieties differing in Insect resistance. Presented at Rockefeller Rice Biotechnology program and International rice genetics congress held at IRRI, Los Banos, Manila, Philippines, May 9-18, 1990.
30. **Madan Mohan**, Nair S, Williams M, Pande N, Reddy S, Bachvarova R, Bennett J (1990): Prospects for enhancing stress resistance in rice through

RFLP, the Polymerase Chain Reaction and Transformation. Presented at International Symposium on Molecular and Genetic approaches to Plant Stress. New, Delhi, INDIA, Feb 14-17, 1990.

31. Nair S, **Madan Mohan**, Pande N, Williams M, Bachvarova R, Bennett J (1990) Detection of Genetic polymorphism in rice (*Oryza sativa* L.) using southern hybridization and the polymerase chain reaction (PCR). Presented at International Symposium on Molecular and Genetic approaches to Plant Stress. New Delhi, INDIA, Feb 14-17, 1990.
32. **Madan Mohan**, Anderson JB, Horgen PA (1988) Mitochondrial plasmids in *Agaricus bitorquis*. XVIth International Congress of Genetics, Toronto, Ontario, Canada.
33. **Madan Mohan**, Meyer RJ, Hintz W, Anderson JB, Horgen PA (1985) Plasmid-like DNAs in the commercially important mushroom genus *Agaricus*. First International Congress of Plant Molecular Biology, Savannah, Georgia, USA.
34. **Madan Mohan**, Meyer RJ, Anderson JB, Horgen PA (1985) Plasmid-like DNAs in the commercially important mushroom genus *Agaricus*. 28th Annual meeting of Canadian Federation of Biological Societies, University of Toronto, Toronto, Ontario, CANADA.
35. **Madan Mohan**, Meyer RJ, Anderson JB, Horgen PA (1984) Evidence of three distinct plasmid-like DNA components in the mitochondria of *Agaricus*. 35th Annual AIBS meeting, University of Colorado, Fort Collins, USA.
36. **Madan Mohan**, Anderson JB, Horgen PA. (1983) Plasmid-like DNAs in the commercially important mushroom genus *Agaricus*. XVth International Congress of Genetics, New Delhi, India.

Public Service/ University Service/ Consulting Activity

I was Dean (Research) from 2008-2011 and Chairman, IPR Cell and Patent Fund from 2008-2011 at the University of Delhi. I was also Head, Department of Plant Molecular Biology (From Oct 29, 2013 to March 12, 2014) and Dean and Chairman, Board of Research studies, Faculty of Interdisciplinary Sciences From Oct 29, 2013 to March 12, 2014), University of Delhi South Campus.

Research Net Working capabilities

I was coordinating a Mini Network on Rice Gall Midge research activities in India since 1999. This was being financially supported by the Rockefeller Foundation, USA. I have organized four meetings so far; one at Central rice Research Institute (CRRI), Cuttack, Orissa in March 2000; Two at Indira Gandhi Agricultural University, Raipur, Chattishgarh in January 2002 and October 2002 and One at the Directorate of Rice Research (DRR), Hyderabad in December 2003.

International consultancy and Reviews

Worked as a **consultant** to Agricultural Biotechnology Centre, University of Peradeniya, Kandy, Sri Lanka from December 8-25, 2003. I also organized a workshop on Plant Transformation. This was funded by Asian Development Bank (ADB), Philippines.

Worked as a **consultant** to Department of Export Agriculture, Government of Sri Lanka from September 1-5, 2003 on behalf of International Atomic Energy Agency (IAEA), Vienna, Austria on Molecular marker techniques in export crops.

Worked as a consultant to Department of Export Agriculture, Government of Sri Lanka from December 6-14, 2002 on behalf of International Atomic Energy Agency (IAEA), Vienna, Austria on Molecular marker techniques in export crops.

Worked as a **consultant** in the capacity of a **Course Director** with **IAEA/FAO** from July 2001 to November 2001, in Vienna/Sibersdorf, Austria. Consultation was to organize an Inter-regional workshop on “Mutant Germplasm characterization using molecular markers”.

Reviewed an International project (Australian) on “**Overcoming production constraints to Sorghum in rainfed environments in India and Australia**”. Participating organizations in the project included Queensland Department of Primary Industries, CSIRO, Australian Centre for International Agricultural Research, ICRISAT, Grains Research and Development Corporation (GRDC), Australia and Indian Council of Agricultural Research (ICAR), India

I have also reviewed **Rockefeller Foundation’s projects** on Rice Biotechnology in **Southeast Asia** (Vietnam, Philippines, Indonesia, Malaysia and Thailand) from September 6-19, 1999

I was involved in organizing an **International Symposium on "Molecular and Genetic Approaches to Plant Stress"**, New Delhi, February 14-17, 1990.

I have organized an **International Workshop on `RFLP in Plant Breeding'** at the International Centre for Genetic Engineering and Biotechnology, New Delhi, from February 4 -22, 1991. It was cosponsored by UNIDO and the Rockefeller Foundation.

I was also involved in organizing an **International Workshop on "Gene Isolation and Analysis for Crop Improvement"** at the International centre for Genetic Engineering and Biotechnology, New Delhi, from February 3-21, 1992. It was cosponsored by UNIDO and the Rockefeller Foundation.

I have organized an **International workshop on “Genomics and Crop Improvement”** at the International Centre for Genetic Engineering and Biotechnology, New Delhi from November 17-28, 2003.

Organized an **International Meeting on “Breeding Rice: Progress and Strategies for the future”** from July 16-17, 2007 at the University of Delhi South Campus, New Delhi-110021, India

Projects (Major Grants/ Collaborations)

Rockefeller Biotechnology Career Fellowship Grant (US\$ 40,000)- 3 years (three months every year) to work on "Map-based gene cloning of gall midge resistance gene/s in rice" with Rice Genome Group at National Institute of Agrobiological Resources, Tsukuba, Japan

Rockefeller Grant (US\$ 225,000) to work on Mapping and Tagging of gall midge resistance genes in rice for 3 years from April 1, 1995 to March 31, 1999

Rockefeller Grant (US\$ 75,000) to work on Marker-assisted selection of gall midge resistance

genes in rice for 3 years from June 1, 1998 to May 31, 2001

Rockefeller Grant (US\$ 135,000) to work on Mapping and Tagging of gall midge resistance genes in rice for 2 years from September 1999 to August 2001

Rockefeller Grant (US\$ 98,900) to work on Marker-assisted selection in breeding for stress tolerance in rice for 2 years from December 1, 2001 to November 2003.

ICAR/NATP/CGP grant (Rs 18 lakhs) for three years beginning 2002 on “Tagging and mapping of *Gm8* gene for gall midge (*Orseolia oryzae*) resistance using molecular marker technology”.

Department of Biotechnology, Govt of India, funded project (Rs 83,62,200) on “Gene Pyramiding Using Marker-Assisted Selection (MAS) in Rice” for five years beginning June 2005.

NMITLI Grant (Rs 2,75,40,000) from CSIR, Govt of India, entitled “Development of a transgenic pollination control system and identification of heterotic pools in rice for production of high yielding hybrids” from April 2008-2011

NMITLI Grant (bridging grant of Rs 1,08,49,900) from CSIR, Govt of India, entitled “Development of a transgenic pollination control system and identification of heterotic pools in rice for production of high yielding hybrids” from April 2011-2012

Other Details

Patents

Commercialization of the technology

1. A patent entitled “SCAR primers for use in Marker-assisted selection of rice varieties susceptible to attack by gall midge biotypes, method for preparing the same and a method for screening rice varieties” was filed in India on October 17, 2001. Indian Application number 1065/Del/2001..**GRANTED**

PCT Application filed (PCT/IN02/00212) in 2002. Title of invention: Fine mapping and application of DNA markers linked to a gall midge resistance gene, for marker-aided selection in rice. Private Seed industry (JK Seeds) has licensed this technology for exclusive use in India for one time payment of **US Dollars, 20,000**.

The following patents have been filed in September 2003 and the details are as follows:

2. A patent entitled “Molecular markers for DNA fingerprinting nutrient rich finger millet varieties” has been filed in 2003 in India. Indian Application Number 1221/del/2003

3. A patent entitled “Molecular markers for mapping and tagging *Gm8* gene, and their application in marker-assisted selection (MAS) of gall midge resistant/susceptible phenotypes” has been filed in 2003 in India. Indian Application Number 1220/del/2003

4. A patent entitled “A highly efficient and reproducible Plant regeneration system for Chickpea (*Cicer arietinum* L.)” has been filed in 2004 in India. Indian Application Number 1602/del/2004

5. A patent entitled “SCAR primers for use in Marker-assisted selection of rice varieties susceptible to attack by gall midge biotypes, method for preparing the same and a method for screening rice varieties” was filed in USA on April 19, 2004. US Patent No 10/493,001

6. A patent entitled “Salt-tolerant rice (*Oryza sativa*) plants that tolerate high concentration of salt (150 mM) and method for production thereof” was filed in March 2005. Indian Application Number 1341/del/2005

7. A patent entitled “Salt-tolerant chickpea (*Cicer arietinum* L.) plants that tolerate high concentration of salt (600 mM) and method for production thereof” was filed in March 2005. Indian Application Number 1342/del/2005

- **Additions since 2009**

1. Attended a Programme on “Harnessing Intellectual Property for Strategic Competitive and Collaborative Advantage” from July 17-19, 2009 at **Indian Institute of Management (IIM), Ahmedabad, India**

Publications

1. Kumar V L, Chaudhury P, Ramos M V, **Madan Mohan**, Matos M P V. (2011) Protective effect of proteins derived from the latex of *Calotropis procera* against inflammatory hyperalgesia in monoarthritic rats. **Phytotherapy Research (Accepted)**
2. Bhattacharjee B, **Madan Mohan**, Nair S (2010) Transformation of chickpea: effect of genotype, explants, Agrobacterium-strain and composition of culture medium. **Biol. Plant. 54: 21-32**

International Patents at WIPO

1. Jain, A; Nair, Suresh; **Madan Mohan** & Kumar Arvind, Srivastava M, N: Molecular markers for mapping and tagging of *Gm8* gene in rice. Pub. No: WO/2005/056833
2. Sardesai N, Kumar, A, Nair S, **Madan Mohan**: Fine mapping and application of DNA markers linked to Gall Midge resistance gene for marker aided selection in rice. Pub No. WO/2003/033736