

RBIODATA

PROFESSOR P. K. GUPTA,
Honorary Emeritus Professor & INSA Senior Scientist,
Ch. Charan Singh University, Meerut

1. Date of Birth: 14 December, 1936

2. Academic Career:

Degree & year	University/Board	Division/Marks	Distinction	Subject
Ph.D. (1967)	Manitoba	87 %	-	Genetics
M.Sc. (1958)	Agra	I	I Position	Botany
B.Sc. (1956)	Agra	I	-	Biology
Intermediate	U.P.	I	Physics, Chem.	Biology
High School	U.P.	I	Mathematics	Science

3. Teaching Experience (40 years):

University	Period	Position	Courses taught
1. Meerut University	1969 - 1976	Reader	M.Sc./M.Phil., Ph.D.
	1976 - 1997	Professor	M.Sc./M.Phil., Ph.D.
	1997 - 2001	CSIR Emeritus Scientist	
	2002-2003	UGC Emeritus Fellow	M.Sc./M.Phil., Ph.D.
	2003-2006	INSA Senior Scientist	M.Sc./M.Phil., Ph.D.
	2004-todate	Hon. Emeritus Professor	M.Sc./M.Phil., Ph.D.
4. Gorakhpur University	1960-69	Lecturer	B.Sc., M.Sc.
5. Agra University	1958 - 60	Lecturer	B.Sc.

4. Other Academic Assignments

Assignment	Period	Position
1. CIMMYT-BISA, India	2022-Contd	Honorary Fellow
2. "Murdoch's Centre for Crop & Food Innovation, Murdoch University, Murdoch WA 6150, Australia	2022-2024	Honorary research Professor

5. Administrative Experience:

1. Head, Botany Department, DAV College, Muzaffarnagar (1959 - 60).
2. Incharge, Academic Programme, Summer School, Gorakhpur University, Gorakhpur (1969).
3. Incharge, Academic Programme, Summer School, Meerut University, Meerut (1970).
4. Co-ordinator, Teacher's Training Programme, UGC Leadership Project, Meerut University, Meerut (1972).
5. Member, Executive Council, Meerut University, Meerut (1972-89, with some gaps).
6. Head, Department of Agricultural Botany, Meerut University, Meerut (1976 - 1996).
7. Dean, Faculty of Agriculture (additional responsibility), Meerut University, Meerut (1976 - 1996).
8. Convenor, Symposium "Recent Advances in Genetics and Crop Improvement", held at Meerut University, Meerut (Dec. 27 - 29, 1984).

9. Co-ordinator, DST's Contact Programmes on "Crop Biotechnology" held at Ch. Charan Singh University, Meerut (Sep. 2-4, 1996; March 15-28, 1998; March 6-18, 2000).
10. Chairman, Symposium "Genetics and Biotechnology in Crop Improvement", held at Ch. Charan Singh University, Meerut (Feb. 14-16, 1997).
11. Worked as an expert member on bodies of various universities.
12. Worked as Finance Officer, Meerut University (April 29-Dec. 4, 1990).
13. Worked on expert panel of granting agencies (UGC, ICAR, DST, DBT, Government of India).

6. Experience Abroad:

Institution	Status	Period
1. University of Manitoba, Canada	Commonwealth Scholarship	1964-1967
2. Dept. of Ag. Botany Aberystwyth, U. K.	Commonwealth Academic Staff Fellow	1974-1975
3. Univ. of Moscow	Chairman, Plant Cytogenetics Session, XIV, ICG.	1978 (one week)
4. Kyoto, Japan	Attended VI Intern. Wheat Genet. Symp.	1983 (one week)
5. Univ. Colorado, Fort Collins, USA	Invited Lecturer	1983 (one week)
6. CIMMYT, Mexico	Visiting Scientist	1983 (one week)
7. ICARDA, Syria	Visiting Scientist	1985 (one week)
8. Agriculture Canada, Ottawa, Canada	Visiting Scientist and lecture tours in Canadian Universities	1984,85,86,87 (2-4 months each year)
9. Bangkok, Thailand	Attended 5th Intern. SABRAO Congress	1985 (one week)
10. Universities in Australia	Lecture tour and participation in Intern. Triticale Symposium.	1986 (three weeks)
11. Okayama, Japan	Special Lecture and Chairman "Workshop on Wide Crosses" at 5th Intern. Barley Genet. Symp.	1986 (one week)
12. University of Ottawa, Canada	Visiting Professor (NSERC Exchange)	1988 (six months)
13. Toronto, Canada	Attended XVI Intern. Congr. Genet.	1988 (one week)
14. Cambridge, U. K.	Attended 7th Intern. Wheat Genet. Symp.	1988 (one week)
15. TUM, Freising, Germany	DAAD Fellowship (UGC Sponsored)	1991 (three months)
16. United Kingdom (12 Res. Centers)	Royal Society Exchange Programme	July 13 - Aug.9, 1997
17. North America	Attended 6 th ICPMB (Canada), X th ITMI workshop (USA) and visited institutes like NCSU (USA), CIMMYT (Mexico)	May 30- July 28, 2000
18. USA	Participated in X ICPTC&B, Florida; visited NCSU (Raleigh, USA) and Dalhousie University (Halifax, Canada)	June 14-Sept 14, 2002
19. USA	Visited NCSU (Raleigh, USA) and KSU, Manhattan, Kansas (USA)	August, 10 -Dec. 5, 2004
20. USA	Visited NCSU (Raleigh, USA) and University of Texas (Austin, Texas)	August, 18-Oct 22, 2005
21. China	Visited Institutes and universities in Beijing, Shanghai and Hangzhou	August, 5-25, 2007

22. Australia	Participated in 11 th IWGS in Brisbane, & visited universities in Brisbane & Melbourne	August, 23-Sept. 8, 2008
23. USA	Visited NCSU (Raleigh, NC) and WSU (Pullman, WA)	July, 2010
24. China	Participated in (i) 20 th ITMI Conference & (ii) 3 rd International Conference in Plant Molecular Breeding (3 rd ICPMB)	September, 1-10, 2010
25. USA	Participated in Plant and Animal Genome (PAG) XX Conference, San Diego, California	January, 12-19,
26. USA	Visited WSU (Pullman, WA)	January 20-Feb 5, 2012

7. Research Supervision:

1. Successfully supervised about eighty (80) Ph.D. theses.
2. Currently supervising (Jointly with Professor H.S. Balyan and Prof. P.K. Sharma) four Ph.D. students.

8. Research Publications:

Published more than 500 research papers in Indian and foreign journals of repute (see list, appended).

9. Books Written or Edited:

9.1. Books Published in India

1. “*A text Book of Cytology, Genetics and Evolution*” (author, PK Gupta) - Rastogi Publications, Meerut; first published in 1974, 6th edition (2000).
2. “*Cytogenetics of Crop Plants*” (Eds. MS Swaminathan, PK Gupta and U Sinha) - Macmillan India Limited. (Edited volume, 1983).
3. “*A Text Book of Genetics*” (author, PK Gupta) -Rastogi Publications, Meerut; first published in 1985; 5th edition (2018).
4. “*Genetics: Classical to Modern*” (author, PK Gupta) -Rastogi Publications, Meerut; first published in 2005.
5. “*Genetics and Cop Improvement*” (Eds. PK Gupta and JR Bahl) - Rastogi & co., Meerut, India (1986).
6. “*Elements of Biotechnology*” (author, PK Gupta) - Rastogi & Co., Meerut, India, first published in 1994; second dition (2010).
7. “*Molecular Biology and Genetic Engineering*” (author, PK Gupta) -Rastogi Publications, Meerut; first published in 2005.
8. “*Molecular Biology and Biotechnology*” (author, PK Gupta) -Rastogi Publications, Meerut; first published in 2014.
9. “*Cytogenetics*” (author, PK Gupta) - Rastogi & Co., Meerut (First Edition,1995; Second Revised and Enlarged Edition, 2022).
10. “*Genetics and Biotechnology in Crop Improvement*” Proc. Symp. held at Meerut, Feb.14-16, 1997 (Ed, PK Gupta; Assoc Eds., SP Singh, HS Balyan, PC Shama, B. Ramesh), Rastogi & Co., Meerut, India (Released in Dec.1998).
11. “*Cell and Molecular Biology*” (author, PK Gupta), Rastogi & Co., Meerut, India; first published in May 1999; 3rd edition (2014).

12. “*Cell Biology and Genetics*”. (author, PK Gupta) -Rastogi Publications, Meerut; first published in 1985; 4th edition (2018).
13. “*Biotechnology and Immunology*” (author, PK Gupta)-Rastogi Publications, Meerut; first published in 2013).
14. “*Biomolecules and Cell Biology*” (author, PK Gupta) -Rastogi Publications, Meerut; first published in 2017.
15. “*Cell Biology*” (author, PK Gupta), Rastogi & Co., Meerut, India; first published in May 1999; 3rd edition (2014).
16. “*Molecular Biology*” (author, PK Gupta), Rastogi & Co., Meerut, India; first published in May 1999; 3rd edition (2014).
17. “*Cocepts in Genetics*”, (author, PK Gupta), Rastogi & Co., Meerut, India; first published in May 1999; 3rd edition (2014).
18. “*Elements of Plant Biotechnology*” (author, PK Gupta), Rastogi & Co., Meerut, India; first published in May 1999; 2nd edition (2018).
19. “*Biotechnology and Genomics*”(author, PK Gupta), Rastogi Publications, Meerut, India. (Released in November, 2003).
20. “*Plant Biotechnology*” (author, PK Gupta), Rastogi Publications, Meerut, India (released in 2010)
21. *Animal Biotechnology* (author (PK Gupta), Rastogi Publications, Meerut, India (released in 2017).
22. *Quantitative Genetics* (author, PK Gupta) Rastogi Publications (2020-2021)
23. *Biotechnology, Immunology, Biotechniques & Biostatistics*. Scietific Internationaal (Pvt) Ltd. (Firs Published 2022)
24. *BSc First Year Zoology*. Rastogi Publications (2021-2022)
25. *Molecular Biology, Bioinstrumentation & Biotechniques*. ogi Publications (2022)

9.2. Books published Abroad

1. “*Chromosome Engineering in Plants: Genetics, Breeding, Evolution*”, Part A and Part B. (Eds. PK Gupta and T Tsuchiya). Elsevier Science Publishers (1991).
2. “*Cereal Genomics*” (Editors, PK Gupta & RK Varshney), Kluwer Scientific Publishers, The Netherlands (released in August, 2004)
3. “*Cereal Genomics II*” (Editors, PK Gupta & RK Varshney), Springer, Germany (2013)

10. Research Schemes (completed or in progress):

(a) Research Projects with PK Gupta as Principal Investigator (PI)

1. Completed 2 CSIR projects, on grass genera *Digitaria* and *Setaria*.
2. UGC project “Cytogenetic studies in some pulse Crops” (1979 - 1984).
3. ICAR project “Cytogenetic studies in Triticales” (1980 -1985).
4. ICAR project “Cytogenetic studies in lentil” (1982 - 1987).
5. ICAR project “Cytogenetic studies in chickpea” (1983-1988).
6. ICAR project “Transfer of alien genetic variation for wheat improvement” (1986-1989)
7. UGC project “Cytogenetic studies in lentil, *Lens culinaris* Medik” (1988-92)
8. DBT R&D Project under “Wheat Biotechnology Network” (1995-2000)
9. CSIR Emeritus Scientist Scheme “Allelic polymorphism at ribosomal DNA loci in genera *Triticum* and *Hordeum*” (1997-2000)
10. UGC Emeritus Fellow Scheme (2002-2003)
11. INSA Senior Scientist (2003-2006)
12. INSA Honorary Scientist (2007-2008)
13. NASI Platinum Jubilee Senior Scientist (2009-2014)

14. DBT Project - II “Mobilizing QTL/genes for quality traits into high yielding wheat varieties through marker-assisted selection” Coordination Cell (2009-2014)
15. DBT Project “Cloning and characterization of genes expressed in response to leaf rust infection in bread wheat” (2013-2016)
16. ICAR-NASF Project “Epigenetic Regulation of Host-Pathogen Genetics in Leaf Rust Resistance in Wheat (2016-2020).

(b) Research Projects with PK Gupta as Co-Principal Investigator (Co-PI)

1. DST R&D project “Cytotaxonomical studies of the genus *Oryza* L.” (with Dr B Ramesh)
2. NATP-ICAR project “Marker assisted selection for quality traits in bread wheat” (with Professor HS Balyan; 2000-2003)
3. DBT Project “Microsatellites in wheat genomics” (with Professor HS Balyan; 2002-2005)
4. DAE-BRNS Project “Physical mapping of SSRs of chromosomes 1A, 2A and 3A of Bread wheat” (with Professor HS Balyan; 2003-2006)
5. DBT Project “Use of molecular marker technology in wheat quality breeding” (with Professor HS Balyan; 2004-2009)
6. DST Project “Physical mapping of simple sequence repeats (SSRs) in bread wheat” (with Professor HS Balyan; 2006-2009)
7. DBT project: “Development of molecular markers and molecular maps for QTL analysis in jute” (2006-2009)
8. DBT Project - I “Mobilizing QTL/genes for quality traits into high yielding wheat varieties through marker-assisted selection” (with Professor HS Balyan; 2009-2014)
9. Project “Creation of bioinformatics infrastructure facility (BIF for promotion of biology teaching through bioinformatics (BTBI) Scheme of BTISnet)” (with Professor HS Balyan; 2012-2017)
10. Project “Discovery, Annotation, Validation and Characterization of SNPs in Wheat (*Triticum aestivum* L.) and Haplotype Structure Determination using Next Generation Sequencing Data” (with Professor HS Balyan; 2012-2015)
11. DBT Project “Genetic Mapping of Resistance to Stem Rot Disease in Jute” (with Professor HS Balyan; 2012-2015)

10. Symposia Attended:

10.1 International Symposia:

1. Second General Congress of SABRAO, New Delhi (Feb. 20 - 28, 1973).
2. International Seminar on “Chromosome in Evolution“, Calcutta, India (Oct, 3 - 7, 1976).
3. 5th International Wheat Genetics Symposia, New Delhi (1978),
4. 6th International Wheat Genetics Symposia, Kyoto (1983)
5. 7th International Wheat Genetics Symposia, Cambridge (1988).
6. International Conference on Cytogenetics and Crop improvement, Varanasi (March 3 - 6, 1978).
7. XIV International Congress of Genetics, Moscow (1978),
8. XV International Congress of Genetics, New Delhi (1983),
9. XVI International Congress of Genetics, Toronto (1988).
10. International SABRAO Congress, Bangkok, (Nov. 25 - 29, 1985)
11. International Triticale Symposium - Sydney, Australia (Feb. 2 - 8, 1986)
12. International Barley Genetics Symposium - Okayama, Japan (Oct. 6 -11,1986)
13. 5th International Congress on Plant Molecular Biology, Quebec, Canada (June 18-24, 2000)
14. ITMI Workshop, University of Delaware, USA: (June 14-16, 2000)
15. 10th International Cong of PTC&B, Orlando, Florida, USA (June 23-28, 2002)
16. Plant Genomics in China VIII, Shanghai, China (August 16-18, 2007)

17. Third International Conference on Quantitative Genetics (ICQG3), Hangzhou, China (August 19-24, 2007)
18. 11th International Wheat genetics Symposium (IWGS), Brisbane, Australia (Aug. 24-29, 2008)
19. 20th ITMI & 2nd WGC Workshop Held in Beijing, China (September 1-9, 2010)
20. Conference on Development and Use of Molecular Markers for Crop Improvement, New Delhi (October, 29-31, 2011)
21. NSF-BREAD Project entitled “An Alternate Dwarfing Gene System to Improve Abiotic Stress Tolerance in Cereals” Visit to WSU, Pullman with Professor Kulvinder Gill. (Jan, 2012)

Besides these several other International Symposia organised in India were attended.

10.2 National Symposia:

A large number of national symposia were attended (too many to be listed).

10.3 Special Status at International Symposia:

1. Chairman, “Plant Cytogenetics” session of the “XIV ICG” in Moscow in 1978.
2. Key note speaker, First International Triticale Symposium held in Sydney in 1986.
3. Modulator & Workshop Chairman, 5th Intern. Barley Genet. Symposium, Okayama, in 1986.
4. Sole Panelist from India at the “Generation Challenge Programme (GCP) Workshop: Application of Genomics in Wheat Breeding” held during 11th International Wheat genetics Symposium (IWGS) held at Brisbane, Australia (August 25, 2008).

11. Invited Lectures Delivered in Foreign Universities

Invited lectures were delivered in several universities including the following:

1. University of Guelph (1984, 2000)
2. York University, Toronto (1985)
3. University of Melbourne (1986)
4. University of Adelaide (1986)
5. Agriculture Canada, Ottawa (1984, 85, 86)
6. IPK, Gatersleben (1991)
7. CIMMYT, Mexico (2000)
8. Colorado State University, Fort Collins, USA (1983)
9. Kansas State University, USA (2004)
10. University of Texas, Austin, USA (2005)

12. Memberships of Scientific Bodies:

12.1 National Bodies:

1. Indian Society of Genetics and Plant Breeding
2. Indian Society of Cytology and Genetics
3. The Horticultural Society of India
4. Society for Plant Physiology and Biochemistry, India
5. International Society of Plant Morphologists
6. National Academy of Sciences, Allahabad
7. Indian Science Congress Association, Kolkata
8. The Crop Improvement Society of India, Ludhiana
9. Society for Advancement of Botany, Meerut
10. Association for Cell and Chromosome Research, Calcutta
11. Indian Botanical Society, Meerut
12. Indian Society for Nuclear Techniques in Agriculture and Biology
13. Indian Association for Angiosperm Taxonomy

12.2. International Bodies:

1. International Association of Plant Taxonomy (IAPT)
2. Genetic Society of America (GSA)
3. The American Genetic Association (AGA).
4. American Association for Advancement of Science

13. Editorial Assignments in Research Journals:

1. Member, Editorial Board, Indian Journal of Genetics & Plant Breeding
2. Member, Editorial Board, Proceedings, Indian National Science Academy (INSA)
3. Member, Editorial Board, Proceedings, National Academy of Sciences, India (NASI)
4. Associate Editor, International Journal of Plant Genomics (IJPG),
5. Associate Editor, Euphytica

7. Fellowships of Societies:

1. Fellow, Indian National Science Academy (FNA).
2. Fellow, Indian Academy of Sciences (FASc).
3. Fellow, National Academy of Sciences, India (FNASc).
4. Fellow, National Academy of Agricultural Sciences, India (FNAAS).
5. Fellow, Indian Society of Genetics and Plant Breeding (FIGS)
6. Fellow, Indian Botanical Society (FBS)
7. Fellow, Indian Society of Cytology and Genetics (FISCG).
8. Fellow, Indian Association for Angiosperm Taxonomy (FIAAT)

8. Awards and Honours:

1. Association of Biotechnology Led Enterprises (ABLE) Award for “Excellence in Agricultural Research” (February 19, 2013)
2. The “Outstanding Researcher” Award by Society for the Promotion of Plant Science Research, Jaipur National University, Jaipur, India (November 30, 2013)
3. Birbal Sahni Gold Medal, Indian Botanical Society (2004)
4. Vishwavidyalaya Gaurav, Meerut University (Awarded on Teachers Day, September 5, 2003)

9. Main Areas of Research:

1. Cytogenetic studies in cereals and pulse crops.
2. Production and study of intergeneric and interspecific hybrids involving wheat and barley and study of genetic control of meiotic chromosome pairing in the hybrids.
3. Cytogenetic studies in several genera of Gramineae, Leguminosae and Compositae.
4. Induced mutations in wheat, triticale, mungbean, garden pea, Italian millet, triticale, etc.
5. DNA estimations in *Crotalaria* spp. and *Lolium* hybrids.
6. Crop improvement programme in pulses and cereals.
7. Molecular Biology: Ribosomal DNA in barley, repeat sequences in barley and synthesis of genome specific probe in oats; Genetic engineering of storage proteins in oats; screening of genomic libraries for gene isolation, sequencing of DNA fragments.
8. Population Genetics: Use of molecular markers for study of fitness and adaptation in barley populations in Israel (in collaboration with E. Nevo of Israel).
9. Crop Biotechnology: Gene tagging and genetic diversity analysis using a variety of molecular markers (RFLP, RAPD, SSR, AFLP, SAMPL, SNP, etc.), construction of molecular genetic and physical maps, QTL analysis, marker-assisted selection, crop genomics, etc.
10. Association (GWAS and candidate gene-based) and interval mapping for important agronomic traits in wheat.

11. Bioinformatics: *In silico* development of markers (SSRs and SNPs); *In silico* analysis of molecular markers and DNA sequences; *In silico* prediction of some useful gene and their functional validation in wheat.

10. Membership/Chairman of Committees

1. Member RC, National Botanical Research Institute, Lucknow, UP. India. (2007-09; 2010-2016).
2. Chairman, "Biotechnology Expert Committee on AICP" Under Grand Challenge Programme of DBT, Govt. of India.
3. Member RCGM, Department of Biotechnology, Govt. of India.
4. Chairman, Sub-Committee for "Revision of Guidelines for Field Trials of GM Crops".

List of Publications

P. K. Gupta, Department of Genetics and Plant Breeding, CCS University, Meerut, India.

1. Gupta, P.K. (1963). Meiotic studies in some members of the tribe paniceae. *Curr. Sci.* 32. 180-181.
2. Roy, R.P., A.P. Singh and P.K.Gupta (1965). A new chromosome race in *Heteropogon contortus*. *Curr. Sci.* 34. 190.
3. Gupta, P.K. (1968). Homoeology of a rye (*Secale cereale* var. Dakold) chromosome. *Wheat Inform. Serv.* 27. 13-15.
4. Gupta, P.K. (1968). Observation on degree of apospory in three member's of Audropogoneae. *Curr. Sci.* 37. 295-296.
5. Gupta, P.K. (1969). On the substituting ability of individual alien chromosomes in common wheat. *Wheat Inform. Serv.* 28: 7-9.
6. Gupta, P.K. (1969). Studies on transmission of rye substitution gametes in common wheat. *Indian J.Genet.* 29: 163-172.
7. Gupta, P.K. (1969). Cytology of monosomic rye (*Secale cereale* L.) substitutions in wheat (*Triticum aestivum* L.) with reference to univalent behaviour. *Cytologia* 34: 586-592.
8. Gupta, P.K. (1969). Common grasses of Gorakhpur. *Indian Forester* 95: 324-329.
9. Gupta, P.K. (1969). In "IOPB Chromosome Number Reports XX" *Taxon* 18: 213-221.
10. Gupta, P.K. (1969). Cytological investigations in some Indian Compositae. *Cytologia* 34: 429-438.
11. Gupta, P.K. (1969). Apomixis in *Bothriochloa pertusa* (L.) A. Camus. *Port. Acta. Biol.* 11: 279-287.
12. Gupta, P.K. and A.K. Srivastava (1969). Cytological studies in the genus *Digitaria* Rich. *Genet Iber.* 21: 11-15.
13. Gupta, P.K. and A.K. Srivastava (1969). Ecotypic differentiation in *Eleusine indica* (L.) Gaertn. *Curr. Sci.* 38: 373-374.
14. Gupta, P.K., R.P. Roy and A.P. Singh (1969). Aposporous apomixis: Seasonal variation in tetraploid *Dichanthium annulatum* (Forssk.) Stapf. *Port. Acta Biol.* 11: 253-260.
15. Gupta, P.K. (1970). Variability in the morphology of rye (*Secale cereale*) chromosome when placed in wheat (*Triticum aestivum*) background. *Phyton (Austria)* 4: 9-13.
16. Gupta, P.K. and A.K. Srivastava (1970). Natural triploidy in *Cynodon dactylon* (L.) Pers. *Caryologia* 23: 29-35.

17. Gupta, P.K. and A.K. Srivastava (1970). Breakdown of meiosis in a tetraploid clone from *Dichanthium-Bothriochloa* complex. *Ann. Bot.* 34: 1041-1046.
18. Srivastava, A.K. and P.K. Gupta (1970). Partial asyndesis and polyspory in *Carthamus oxyacantha* L. *Port. Acta. Biol.* 11: 365-372.
19. Gupta, P.K. (1971). Cytological studies in some north Indian grasses. *Genet. Iber.* 23: 183-198.
20. Gupta, P.K. (1971). Homoeologous relationship between wheat and rye chromosomes: Present status. *Genetica* 42: 199-213.
21. Gupta, P.K. and R. Gupta (1971). In "IOPB Chromosome Number Reports". *Taxon* 20: 349-356.
22. Gupta, P.K. and A.K. Srivastava (1971). Formation of restitution nucleus and chromatin migration in a triploid clone of *Cynodon dactylon* (L.) Pers. *J. Indian bot. Soc.* 50: 132-137.
23. Gupta, P.K. and A.K. Srivastava (1971). In "IOPB Chromosome Number Reports". *Taxon* 20: 609-614.
24. Gupta, P.K. and Yashvir (1971). In "IOPB Chromosome Number Reports". *Taxon* 20: 609-614.
25. Gupta, P.K. and Yashvir (1971). Apomixis in *Cenchrus ciliaris*: A preliminary study. *Curr. Sci.* 40: 444-446.
26. Gupta, P.K. (1972). Cytogenetic evolution in the Triticinae: Homoeologous relationships. *Genetica* 43: 504-530.
27. Gupta, P.K. (1972). The homoeologous group 4 in the Triticinae. *Wheat Inform. Serv.* 33-34: 33-34.
28. Gupta, P.K. and A.K. Srivastava (1972). Aberrant meiosis and spindle abnormalities in *Paspalum paspaloides* (Michx.) Scribn. (Gramineae). *Genetica* 43: 76-83.
29. Gupta, P.K. and D.K. Agarwal (1972). Interchange heterozygosity in feverfew (*Chrysanthemum parthenium* Pers.). *Indian J. Hort.* 29: 100-102.
30. Gupta, P.K., D.K. Agarwal and A.K. Srivastava (1972). Further cytological investigations in Indian Compositae. *Cytologia* 37: 581-593.
31. Yashvir and P.K. Gupta (1972). Cytology of some promising triticale strains. *Proc. All India Symp. "Biology of Land Plants"*, June 1972, Meerut pp. 259-265.
32. Gupta, P.K. (1973). Cytogenetic evolution in *Triticum* and related genera. In "Advancing Frontiers in Cytogenetics" *Proc. All India Symp "Cytogenetics in Evolution and Improvement of Plants"*, Oct., 1972, Srinagar. pp. 32-37.
33. Gupta, P.K. and A.K. Srivastava (1973). Meiotic behaviour in some apomictic grasses. In "Advancing Frontiers in Cytogenetics": *Proc. All India Symp. "Cytogenetics in Evolution and Improvement of Plants: Oct., 1972"*, Srinagar. pp. 101-105.

34. Gupta, P.K. and Yashvir (1973). Abnormal meiosis in hexaploid *Setaria verticillata*. *Phyton* 15: 31-36.
35. Gupta, P.K., Yashvir and R.V. Singh (1973). A translocation difference between wheat variety HY-11 and triticales strain ST-69-1. *Wheat Inform. Serv.* 37: 13-14.
36. Gupta, P.K. (1974). Transfer of disease resistance from alien species to wheat. Proc. 2nd Intern SABRAO Congress, 1973, New Delhi. *Indian J. Genet.* 34A: 491-500.
37. Gupta, P.K. and Yashvir (1974-75). Mutagenic effects of individual and combined treatments of gamma rays and EMS in okra (*Abelmoschus esculentus* Moench.). *J. Cytol. Genet.* 9 & 10: 93-97.
38. Gupta, P.K., R.V. Singh and S. Rani (1974). Cytology of some *Digitaria* species. *Cytologia* 39: 499-505.
39. Gupta, P.K. (1975). Cytogenetic evolution in Triticinae: Homoeologous relationships. "Proc. 1st All India Cong. Cytol. Genet.", Oct. 1971, Chandigarh. pp. 326-332.
40. Gupta, P.K. (1975). Cytoplasmic male sterility in self-incompatible *Crotalaria pallida* Ait. *Incompatibility Newsletter.* 5: 13-14.
41. Gupta, P.K. and H. Rees (1975). Tolerance of *Lolium* hybrids to quantitative variation in nuclear DNA. *Nature* 257: 587-588.
42. Gupta, P.K. and S. Rani (1975). Self-incompatibility in *Crotalaria pallida* Ait. *Incompatibility Newsletter* 5: 4-8.
43. Gupta, P.K. and S. Rani (1975). Physiology of pollen tube growth in self incompatible *Crotalaria pallida* Ait. *Incompatibility Newsletter* 5: 9-12.
44. Gupta, P.K. and Yashvir (1975). Induced mutations in foxtail millet (*Setaria italica*). I. Chlorophyll mutations induced by gamma rays, EMS and dES. *Theor. Appl. Genet.* 45: 242-249.
45. Gupta, R. and P.K. Gupta (1975). Induced polyploidy in *Crotalaria* L. I. *C. juncea* and *C. retusa*. *J. Indian bot. Soc.* 54: 175-182.
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