

Name : Dr. MANINDER
Designation : Assistant professor
Specialization: Cytogenetics, Taxonomy of angiosperms
Email: maninderdhot84@gmail.com



Education:

M.Sc. Botany (2007, Kurukshetra University, Kurukshetra),
M.Phil. Botany (2008, Kurukshetra University, Kurukshetra),
National Eligibility Test (NET)- December, 2011
Ph.D. (22nd December, 2017 Punjabi University, Patiala)

Title of Ph. D Thesis: Evaluation of cytomorphological diversity in the dicots of Solang Valley (Himachal Pradesh).

Professional Experience:

- Department of Botany, Multani Mal Modi College, Patiala, India (22.10.2018-till date).
- Department of Botany & Environmental Science, SGGSW University, Fatehgarh Sahib, India (11.08.2017-31.05.2018).
- Department of Botany, Arya Kanya Mahavidyalya (Shahabad), Kurukshetra, India (01-11-2007 to 15-03-2009).

Teaching Interests:

- Taxonomy of Angiosperms
- Plant Systematics
- Plant Biotechnology
- Economic Botany
- Anatomy of Angiosperms

List of Papers Published:

1. Vijay Kumar Singhal, **Maninder Kaur**, Himshikha, Puneet Kumar and Raghbir Chand Gupta, “High pollen sterility and 2n Pollen Grains in an asynaptic 4x cytotype (2n=48) of *Solanum nigrum* L.” *Cytologia* (2012) **77 (3)**: 333-342. <http://ugcdskpdf.unipune.ac.in/Journal/uploads/BL/BL100184-A-7.pdf>
2. Vijay Kumar Singhal, Dalvir Kaur, **Maninder Kaur**, Himshikha, Pawan Kumar Rana, Punnet Kumar and Raghbir Chand Gupta “Multiple associations due to structural heterozygosity in the wild plants of *Achillea millefolium* L. from Northwest Himalayas (India)”. *Cytologia* (2014) **79 (2)**: 151-159. https://www.jstage.jst.go.jp/article/cytologia/79/2/79_151/article

3. **Maninder Kaur** and Vijay Kumar Singhal “First report of cytomixis and meiotic abnormalities in *Nepeta govaniensis* from Solang Valley, Kullu District, Himachal Pradesh”. *Cytologia* (2014) **79 (2)**: 227-233. https://www.jstage.jst.go.jp/article/cytologia/79/2/79_227/article-char/en
4. **Maninder Kaur** and Vijay Kumar Singhal “Cytomorphological diversity in some members of family Asteraceae from the ecologically disturbed habitats of Solang valley, Kullu District, Himachal Pradesh”. *Cytologia* (2015) **80 (2)**: 203-222. https://www.jstage.jst.go.jp/article/cytologia/80/2/80_203/article
5. Rohit Kumar, Pawan Kumar Rana, Himshikha, Dalvir Kaur, **Maninder Kaur**, Vijay Kumar Singhal, Raghbir Chand Gupta and Puneet Kumar “Structural heterozygosity and cytomixis driven pollen sterility in *Anemone rivularis* Buch.-Ham. ex DC. from Western Himalayas (India)”. *Caryologia* (2015). **68 (3)**: 246-253. <https://www.tandfonline.com/doi/full/10.1080/00087114.2015.1032615>
6. **Maninder Kaur**, and Vijay Kumar Singhal “Male meiotic study in a newly detected triploid cytotype of *Tussilago farafra* L. (Asteraceae)”. *Cytologia* (2016) **80 (4)**: 441-445. https://www.jstage.jst.go.jp/article/cytologia/80/4/80_441/article
7. **Maninder Kaur**, Himshikha and Vijay Kumar Singhal “Occurrence of syncytes: A possible mechanism owing to the origin of polyploid cytotypes in *Achillea millefolium* L. within Indian Himalayas”. *Cytologia* (2017) **82 (4)**: 375-384. https://www.jstage.jst.go.jp/article/cytologia/82/4/82_MS1925/article
8. Vijay Kumar Singhal, Rohit Kumar, Himshikha, Puneet Kumar, Dalvir Kaur, **Maninder Kaur**, Pawan Kumar Rana, and Raghbir Chand Gupta “A profile of male meiosis, chromosomal variation and chromosomal status in species of *Impatiens* from North-West Himalayas in India”. *Caryologia* (2017) **70 (3)**: 258-269. <https://www.tandfonline.com/doi/full/10.1080/00087114.2017.1344084>
9. **Maninder Kaur** and Vijay Kumar Singhal “First ever record of cytomixis and associated meiotic irregularities resulting into reduced pollen fertility (%age) in *Clematis buchananiana* DC”. *IJSER* (2017) **8(7)**: 364-379. <https://www.ijser.org/researchpaper/First-ever-record-of-cytomixis-and-associated-meiotic-irregularities-resulting-into-reduced-pollen-fertility-age-in-Clematis-buchananiana-DC.pdf>

10. **Maninder Kaur**, Vijay Kumar Singhal, and Jaswant Singh “Use of some ethnomedicinal herbs by the natives of Solang valley, Kullu District, Himachal Pradesh”. *Int. J. Pharm. Pharmaceut. Sci.* (2017) vol. 9 (9): 222-227. DOI <https://doi.org/10.22159/ijpps.2017v9i9.20664>
11. Vijay Kumar Singhal, Younas Rasheed Tantray, **Maninder Kaur**, Pawan Kumar Rana and Raghbir Chand Gupta “Intraspecific polyploidy (2x, 4x) in *Primula denticulata* Sm from Northwest Himalayas in India”. *Cytologia* (2018) **83** (1): 31-35. <https://pdfs.semanticscholar.org/3189/f78c53d63de0e8d885479a1bfb5cf4e7881e.pdf>
12. Younas Rasheed Tantray, Vijay Kumar Singhal, **Maninder Kaur** and Raghbir Chand Gupta “Cytomorphological comparison in natural intraspecific cytotypes (2x, 4x) in *Brachyactis pubescens* from North West Himalayas”. *Cytologia* (2018) **83** (3): 245-249. https://www.istage.jst.go.jp/article/cytologia/83/3/83_D-18-00003/article-char/en
13. Younas Rasheed Tantray, Vijay Kumar Singhal, **Maninder Kaur** and Raghbir Chand Gupta “Male meiosis and chromosomal status in the genus *Lactuca* L. from Western Himalayas (India)”. *Cytologia* (2018) **83**(3): 311-316. https://www.istage.jst.go.jp/article/cytologia/83/3/83_D-18-00003/article-char/en
14. **Maninder**, Vijay Kumar Singhal “Irregular meiotic behaviour resulted into abnormal sporad formation and low pollen fertility in two accessions of *Caltha palustris*”. *Jour. Emerging Tech. Innov. Res.* (2018) **5** (8): 300-305. <http://www.jetir.org/papers/JETIR1808792.pdf>
15. **Maninder**, Vijay Kumar Singhal “Cytomixis and associated meiotic abnormalities resulted into abnormal sporads and low pollen fertility in *Ranunculus laetus*”. *Jour. Emerging Tech. Innov. Res.* (2018) **5**: (8) 306-311. <http://www.jetir.org/papers/JETIR1808793.pdf>
16. **Maninder**, Vijay Kumar Singhal “First ever record of meiotic chromosome count, cytomixis and associated meiotic irregularities in *Silene gallica* L.” *Jour. Emerging Tech. Innov. Res.* (2018) **5** (8): 327-330. ISSN NO. 2349-5162. <http://www.jetir.org/papers/JETIR1808797.pdf>
17. **Maninder Kaur**, Vijay Kumar Singhal, Younas Rasheed Tantray and Raghbir Chand Gupta “Occurrence of meiotic abnormalities and a new report of tetraploid cytotype (4x) of *Artemisia nilagarica* (C.B. Clarke) Pamp. from Kullu district in Northwest Himalayas” *Taiwania* 2019 **64**(1): 74-79. <https://taiwania.ntu.edu.tw/abstract.php?type=abstract&id=1597>
18. **Maninder Kaur**, Vijay Kumar Singhal, Jaswant Singh “IAPT/IOPB Chromosome data 35/5” *Taxon* 2021 **70**(6): 1402-1411.

19. **Maninder**, Vijay Kumar Singhal, “Meiotic behavior of a B-chromosome in *Artemisia salsoloides* Willd.: an important ethnomedicinal species of India” *The Nucleus* 2023. DOI: 10.1007/s 13237-023-00432-8.

BOOKS PUBLISHED-

- **Maninder**. “Environmental Education”. Twentyfirst Century Publications, Patiala. 2022. ISBN: 978-93-90953-82-0

List of Conferences Attended:

- Participated in 2-days National conference on the theme ‘**Advanced and emerging materials for technological applications- AEMTA 2024**’ and orally presented a paper entitled “**Use of *Vitis vinifera* in Phytocosmetics as a valuable raw material: A Review**” held on March 15-16, 2024 **organized by Saint Longowal Institute of Engineering and Technology.**
- Participated in 2-days National conference on the theme ‘**5th National Interdisciplinary Research Meet-2024**’ and orally presented a paper entitled “**CYTOMORPHOLOGICAL ACCOUNT ON TWO SPECIES OF GENUS *BERBERIS* SCORED FROM SOLANG VALLEY, KULLU DISTRICT, HIMACHAL PRADESH**” held on March 28-29, 2024 **organized by Sri Guru Granth Sahib World University, Fatehgarh Sahib.**
- Participated in 2-days National conference on the theme ‘**11th National conference on Recent Advances in Chemical, Biological and Environmental Sciences (RACES, 2023)**’ and orally presented a paper entitled “**Male meiotic behaviour and associated chromosomal irregularities in the Genus *Clematis* from N-W Himalayas**” held on April 12-13, 2023 **organized by Multani Mal Modi College, Patiala**
- Participated in 2-days National conference on the theme ‘**4th Research Scholar Meet-2023 conference on ‘Evolving trends and challenges in multidisciplinary research**’ and orally presented a paper entitled “**A compiled account on male meiotic studies and associated chromosomal irregularities in members of family Solanaceae collected from Solang Valley, Kullu district, Himachal Pradesh**” held on March 16-17, 2023 **organized by Sri Guru Granth Sahib World University, Fatehgarh Sahib.**
- Participated in three days International conference on the theme “**The growth of biological sciences in 21st Century**” and orally presented a paper entitled “**A report on intraspecific**

chromosomal diversity found in species of Solang Valley, kullu District, Himachal Pradesh” held on March 2-4, 2023 organized by Faculty of Life Sciences, Punjabi University, Patiala.

- **Participated in one day National webinar on the theme “Role of wetlands in biodiversity conservation” held on May 21, 2021 organized by Patel Memorial National College, Rajpura**
- **Participated in one day National webinar on the theme “Hind di Chadar: Sri Guru TeghBahadur” held on August 26, 2020 organized by Sri Guru TeghBahadur National Integration Chair, Punjabi University, Patiala.**
- **Participated in one day National webinar on the theme ‘The Social and Religious Context of the Martyrdom of Sri Guru TeghBahadur Ji’ held on July 16, 2020 organized by the Department of NSS, NCC, BSG, Multani Mal Modi College, Patiala.**
- **Participated in one day National webinar entitled “Nanotechnology: A multidisciplinary Technology of 21st Century” July 10, 2020 organized by Department of Physics, S. D. College, Barnala.**
- **Participated in one day National webinar entitled “National Capability Enhancement Conference: Education for Meaningful Life Part-3” held on July 2, 2020 organized by Punjab Commerce and Management Association.**
- **Participated in one day National webinar entitled “Role of host induced gene silencing (HIGS) in crop improvement” July 02, 2020 organized by Department of Botany, Punjabi University, Patiala.**
- **Participated in Online quiz on Brain Exerciser entitled “Phytomedicinal therapy” held during 22-28th June, 2020 organized by Department of Botany and Microbiology, St. Aloysius’ College (Autonomous College), Jabalpur (M.P.).**
- **Participated in one day National webinar entitled “Use of E-Resources in Agricultural Libraries” held on June 12, 2020 organized by University of Agricultural Sciences, Dharwad.**

- Participated in three days National webinar series on the theme ‘**Contemporary Prospects in Biological Sciences**’ held from **June 10-12, 2020** organized by the **Department of Biotechnology, Srinivasan College of Arts & Sciences, Perambalur.**
- Participated in one day National webinar on the theme ‘**DNA Fingerprinting and its Applications in Genetic Testing**’ held on **June 8, 2020** organized by the **Department of Zoology, V.O. Chidambaram College, Tamilnadu, India.**
- Participated in one day National webinar on “**Awareness about Cancer: Symptoms, Diagnosis, Treatment**” held on **June 6, 2020** organized by **Department of Physiotherapy, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab, India.**
- Participated in one day National webinar entitled “**Role of Science and Technology during Covid-19 pandemic**” held on **June 6, 2020** organized by **Dayanand College, Hisar.**
- Participated in three days National webinar series on the topic “**Webinar series on Biodiversity: Governance, Management and Awareness**” held from **June 5 to June 7, 2020** organized by **School of Inspirational living, India and Conservation Research and Nature Education Society, India.**
- Participated in one day National webinar on “**Relevance of Scientific values in fighting the pandemic Covid-19**” held on **June 5, 2020** organized by **Department of Chemistry, S.S. Khanna Girls Degree College, Prayagraj.**
- Participated in one day National webinar on **World Environment Day, 2020** held on **June 5, 2020** organized by **Department of Botany and Environmental Sciences, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab, India.**
- Participated in one day National webinar on the theme “**Crosstalk between Ethnobotany and Immunology: A fight against Covid 19**” held on **June 5, 2020** organized by the **Department of Botany and Physiology in association with the IQAC, Prabhat Kumar College, Contal, West Bengal, India.**
- Participated in one day National webinar on “**Bioprospecting of Medicinal Plants: Challenges and Opportunities**” held from **June 3, 2020** organized by **Department of Botany, V.O. Chidambaram College, Thoothukudi.**

- Participated in one day national webinar entitled “**New opportunities in medicinal plants sectors for farmers and entrepreneurs**” May 24, 2020 organized by Department of Life sciences Mansarovar Global University, Sehore, Madhya Pradesh, India.
- Published a book chapter entitled “**Cytomixis and other associated meiotic irregularities recorded in Tetraploid Marsh Marigold (*CalthaPalustris*) Accession scored from Kullu District, Himachal Pradesh**” in the *Proceedings of 3rd National Conference on Innovation in Bioscience and Technology (NCIBT-2020)*.
- Participated in 10th National conference on recent advances in chemical and environmental sciences (Races-2019) and presented a poster entitled “**A cytomorphological account on some members of family Asteraceae from geographically isolated and ecologically distrurbed habitats of Solang Valley, Kullu District, Himachal Pradesh**” April 11-12, 2019.
- Participated in National conference on Research in Plant Sciences for Sustainable development and presented a seminar entitled on “**Evaluation of cytomorphological diversity in family Asteraceae from Solang Valley, Kullu District (Himachal Pradesh)**” March 16-17, 2018.
- Participated in 9th National conference on recent advances in chemical, biological, and environmental sciences (Races-2018) and presented a poster entitled “**First ever record of meiotic irregularities resulting into reduced pollen fertility in *Clematis buchananiana***” February 9-10, 2018.
- Participated in National Botanical conference and presented a poster entitled “**Abnormal spindle activity and chromatin stickiness induced pollen sterility in *Artemisia nilagirica* from Northwest Himalayas**” September 15-17, 2017.
- Participated in National conference on basic and applied researches in plants and microbes and presented a poster entitled “**Multiple associations of chromosomes due to structural heterozygosity in the wild accessions of *Achillea millefolium* L. from Solang Valley, Kullu District, Himachal Pradesh.**” November 03-05, 2016.
- Participated in 18th Punjab Science Congress (2015) and presented a poster entitled “**First Ever Report of Triploid Meiotic Chromosome Counts in a Well Known Medicinal Herb *Tussilago farfara* L.**” February 07-09, 2015.
- Attended National Symposium on “Emerging Trends In Botanical Sciences (2014) and presented a poster entitled “**First Ever Report of an Octoploid Cytotype (2n=64) in *Taraxacum officinale***” organized by Department of Botany, Punjabi University, Patiala from February 17-18, 2014.
- Participated in 17th Punjab Science Congress and presented a poster entitled “**First Report of Cytomixis and Meiotic Abnormalities in *Nepeta govaniana* From Solang Valley, Kullu District, Himachal Pradesh**” from 15-17th February, 2014.
- Attended National conference on “Exploring Basic and Applied Sciences for Next Generation Frontiers” (EBAS-2014) and presented a poster entitled “**Use of Exploration of Ethnobotanical and Morphogenetical Diversity in the Flowering Plants of Solang Valley**” from 14-15 November.
- Attended National level conference on “Exploring Basic and Applied Sciences for Next Generation Frontiers” (EBAS-2014) and presented a poster entitled “**Cell Fusion Mediated Occurrence of Tetraploid and Hexaploid Syncytes in the Diploid Population of *Achillea millefolium* L. from 14-15 November**”

- Participated National Symposium on Plant Cytogenetics: New Approaches (2012) and presented a poster on the topic **“Unreduced and Sterile Pollen Grains in an Asynaptic 4x Cytotype (2n=48) Of *Solanum nigrum* L.”** organized by Department of Botany, Punjabi University, Patiala from 23-24 February, 2012.
- Participated in UGC sponsored regional seminar on **“Environmental Imbalances-Causes and Cure”** on 8th December, 2007).

Wokshops and Training courses:

- Completed workshop on **“Basic Molecular Biology Techniques”**, held at Sophisticated Instrumentation Centre (SIC), (Under DBT-IPLS Project), Punjabi University, Patiala-147002 from 11-14th August 2014.
- Attended faculty development program on emerging Issues and challenges in Higher Education at Multani Mal Modi College, Patiala (17-22nd July, 2019).
- Participated in 7 days National workshop on the theme **“NAAC: Revised accreditation framework- Issues and Challanges”** held from 16-21 May, 2021 organized by Internal Quality Assurance Cell, Sant Darbara Singh College of Education in collaboration with Sanatan Dharma College, Hoshiarpur.
- Participated in 7 days virtual National level capacity building programme on **“Integration of pedagogy and technology in teaching learning”** held from 13-19 July, 2021 organized by Multani Mal Modi College Patiala in collaboration with Council for Teacher Education foundation.
- Participated in 7 days Faculty development programme on ‘Research methodology’ held from 12-01-2022 to 19-01-2022 July, 2021 organized by Multani Mal Modi College, Patiala.
- Completed 4-week Faculty Induction/Orientaion Programme ‘Faculty in Universities/ Colleges/ Institutes of Higher Education’ held from 21-11-2022 to 20-12-2022 organized by Teaching Learning Centre, Ramanujan College, University of Delhi.
- Attended and participated in Open House Discussion in Symposium entitled ‘ NEP 2020-POLICY PRAXIS’ held ON MAY 8, 2023 organized by IQAC, Multani Mal Modi College, Patiala in collaboration with the council for teacher Education Foundation (CTEF)-Punjab and Chandigarh Chapter.
- Completed the NEP 2020 Orientation & Sensitization Programme under **“ Malaviya Mission Teacher Training Programme”** of University Grant Commission Organized by Punjabi University, Patiala held from 16-25 January, 2024.

- **Participated in national Level Faculty Development Programme on “Emerging Trends in Plant Sciences” from March 4-11, 2024 organized by the Department of Botany, Bishop Haber College, Tiruchirappalli, Tamil Nadu.**

E resources developed

www.manudhot.wordpress.com

Awards and scholarships:

- ✓ Achieved Haryana State Merit Scholarship at Post Graduation level.
- ✓ Achieved Maulana Azad National Fellowship For Minorities 2011-12 for persuasion of Ph.D. degree.

(Dr. Maninder)