

**Name:** Dr. Akshita Dhaliwal

**Designation:** Assistant Professor

**Specialization:** Plant Cytogenetics and Plant Taxonomy

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## **Education**

**M.Sc. Botany** (2004, Kurukshetra University, Kurukshetra),

**Ph.D.** (26 August, 2009, Punjabi University, Patiala)

**Title of Ph. D Thesis:** Exploration of Cytomorphological Diversity in Grasses from Haryana and adjoining Shiwalik Hills.

## **Professional Experience:**

- Assistant Professor in Botany, Department of Botany, M.M. Modi College, Patiala. (11 August, 2018 to till date).
- Assistant Professor in Botany, Department of Agriculture, G.S.S.D.G.S. Khalsa College, Patiala (1 July, 2013 to 9 August, 2018).
- Assistant Professor in Botany and as Head, Department of Agriculture at Dolphin (PG) College of Life Sciences, Chunni Kalan (Fatehgarh Sahib) (1 Nov, 2012 to 30 June, 2013).
- Assistant Professor in Botany at Public College, Samana (Patiala) (20 July, 2011 to 31 Oct, 2012).
- Research Fellow at School of Agricultural Biotechnology, Punjab Agricultural University, (24 May, 2010 – 20 May, 2011).
- Project Fellow (UGC/ASIST) Department of Botany, Punjabi University Patiala (15 June, 2007 – 10 Feb, 2009).

## **Teaching Interests:**

- Cytology and Genetics
- Plant Taxonomy
- Plant Ecology
- Plant Physiology

## Research Interest:

Plant Cytogenetics, Plant Taxonomy and Plant Ecology

## Publications

1. Raghbir Chand Gupta, Rajdeep Singh Dhaliwal and **Akshita Gupta**. Structural hybridity in golden tickseed (*Coreopsis tinctoria* Nutt.). *Ind. J. Bot. Res.* (2008) Vol.4 (1): 161-163.  
[https://drive.google.com/file/d/1-Lw7rl\\_93pHTGAWONBGd2ZsU4EwERK1k/view](https://drive.google.com/file/d/1-Lw7rl_93pHTGAWONBGd2ZsU4EwERK1k/view)
2. **Akshita Gupta**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. Meiotic studies on some populations of *Phalaris minor* Retz. from Haryana and adjoining Shiwalik hills. *Bionature*. (2008) **28** (1): 17-23. ISSN: 0970-9835.  
<http://globalpresshub.com/index.php/BN/article/view/351>
3. Puneet Kumar, Rajdeep Singh Dhaliwal & **Akshita Gupta**. Invasion of Alien Plant Species: A Threat to Native Flora. *Ind. J. Bot. Res.* (2008) **4** (1): 137-142.  
<https://drive.google.com/file/d/1-Yak1l8PB7srxp4bxjAQLac8bKZCyTwa/view>
4. Dhaliwal Rajdeep Singh, Puneet Kumar & **Akshita Gupta**. Phytoremediation: A Scientific Approach to Tackle Pollution. *Ind. J. Multi. Res.* (2008) **4** (1): 45-48.  
<https://drive.google.com/file/d/1-LQQJJYgjb6JBUMVHM5Ls9dkldHcBKR7/view>
5. Raghbir Chand Gupta, Rajdeep Singh Dhaliwal and **Akshita Gupta**. Morpho-cytogenetic studies on autotriploid of *Coreopsis tinctoria* Nutt. *J. Cytol. Genet.* (2008) Vol.10 (NS) **2**: 23-27.  
<https://drive.google.com/file/d/1-ZHA-qSK1YV1yqJpzvYR7Tio1r8bg55P/view>
6. **Akshita Gupta** and Raghbir Chand Gupta. Population Cytogenetics IV. Variability in *Sorghum halepense* (L.) Pers. from Haryana. *Bionature* (2008) **28** (2): 85-89. ISSN: 0970-9835.  
<http://globalpresshub.com/index.php/BN/article/view/395>
7. **Akshita Gupta**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. Genetic diversity in wild oat (*Avena sativa* L.) populations from Haryana (India). *Indian Journal Botanical Research* (2010) **6** (1&2): 69-74.  
[https://drive.google.com/file/d/1-ZTlkOBoq4oamflqS\\_OyKvhk0jXHkxID/view](https://drive.google.com/file/d/1-ZTlkOBoq4oamflqS_OyKvhk0jXHkxID/view)
8. **Akshita Gupta**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. Prevalence of Supernumerary chromosomes in Indian Grasses. *Bionotes* (2010) **12**(2):56.

- <https://drive.google.com/file/d/1-ZiMCtY4m6ASkTncgQTvLIraBGEiLT6B/view>
9. **Akshita**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. A note on high frequency of Polyploidy in Family Gramineae. *Bionotes* (2010) **12**(4): 120-121.  
<https://drive.google.com/file/d/1-ZuBDDIAMT3l0to9zZW6Czk5V1cidpSs/view>
  10. Harpreet Kaur, **Akshita Gupta**, Santosh Kumari and Raghbir Chand Gupta. Meiotic studies in *Poa annua* L. from altitudinal ranges of North India. *Cytologia*. (2010) **75** (3): 313-318.  
[https://www.jstage.jst.go.jp/article/cytologia/75/3/75\\_3\\_313/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/75/3/75_3_313/article/-char/en)
  11. **Akshita**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. Cytological study on three cytotypes of Bermuda grass (*Cynodon dactylon* (L.) Pers.) from Haryana and Shiwalik Hills. *Journal of Basic and Applied Biology* (2011) **5**(1): 7-12.  
[http://www.cbioresearch.in/Journal%205\(12\)%202011/JBAB,%20Vol%205,%20No%201%20&%202%20\(2011\),%20pp.7-12%20Dhaliwal.pdf](http://www.cbioresearch.in/Journal%205(12)%202011/JBAB,%20Vol%205,%20No%201%20&%202%20(2011),%20pp.7-12%20Dhaliwal.pdf)
  12. **Akshita Dhaliwal**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. Cytological Study in Wild oat (*Avena fatua* Linn.) populations from North West India. *Bionature* (2012) **32**(2): 37-42.  
<http://globalpresshub.com/index.php/BN/article/view/550>
  13. Raghbir Chand Gupta, **Akshita Gupta** and Navjot Kaur. Meiotic Studies in Some Members of Tribe Andropogoneae (Poaceae) from Semi Desert Area of North India. *Cytologia* (2017) **82**(2):105-113.  
[https://www.jstage.jst.go.jp/article/cytologia/82/2/82\\_MS1861/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/82/2/82_MS1861/article/-char/en)
  14. Raghbir Chand Gupta, **Akshita Gupta** and Navjot Kaur. Cytological Diversity in Some Members of Tribe Agrostideae and Eragrostae (Poaceae) from Haryana and Adjoining Shiwalik Hills *Cytologia* (2017) **82**(5): 501-505.  
[https://www.jstage.jst.go.jp/article/cytologia/82/5/82\\_MS1979/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/82/5/82_MS1979/article/-char/en)
  15. **Akshita Dhaliwal**, Navjot Kaur and Raghbir Chand Gupta. Cytology of Some Grasses from Haryana and Shiwalik Hills. *Cytologia* (2018) **83**(1): 22-30.  
[https://www.jstage.jst.go.jp/article/cytologia/83/1/83\\_D-17-00011/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/83/1/83_D-17-00011/article/-char/en)
  16. **Akshita Dhaliwal**, Rajdeep Singh Dhaliwal, Navjot Kaur and Raghbir Chand Gupta. Cytomorphological Study in Genus *Cenchrus* L.: An Important Medicinal Plant from

North India (Family: Poaceae). *Cytologia* (2018) **83**(1): 45-52.

[https://www.jstage.jst.go.jp/article/cytologia/83/1/83\\_D-17-00024/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/83/1/83_D-17-00024/article/-char/en)

17. Raghbir Chand Gupta, **Akshita Dhaliwal** and Navjot Kaur. Cytological Study in Some Members of Tribe Paniceae (Poaceae) from Haryana and Adjoining Shiwalik Hills. *Cytologia* (2018) **83**(1): 73-79.

[https://www.jstage.jst.go.jp/article/cytologia/83/1/83\\_D17-00020/article/-char/en](https://www.jstage.jst.go.jp/article/cytologia/83/1/83_D17-00020/article/-char/en)

### **Book/Book chapter**

1. Rajdeep Singh Dhaliwal and **Akshita Dhaliwal**. 2012. (In Punjabi) “Jeev Vibhinta De Hot Spots”. In Vatavaran Samasyava. Publ. Lok Geet Prakashan, Chandigarh. Pp. 89-98. ISBN: 978-93-5068-098-8.
2. Rajdeep Singh Dhaliwal and **Akshita Dhaliwal**. 2016. Study on Economically Important Grasses of Tribe: Andropogoneae (Family: Poaceae). In proceeding National Conference on “Recent Trends in Environment, Science and Technology” March 11, 2016. Pp 197-199. ISBN: 978-93-84935-82-5.
3. **Akshita Dhaliwal**, Rajdeep Singh Dhaliwal and Raghbir Chand Gupta. 2018. Cytological study on two species of *Cymbopogon* Spreng.: A Grass with Medicinal Importance. In book *Emerging Trends and Challenges in Bio-sciences* Publ. Daya Publishing House, New Delhi. Pp. 73-77. ISBN: 978-93-5124-988-7.

### **Conference / Seminars**

#### **A) Resource Person / Invited Lectures:**

Chaired a technical session on the theme “**Agriculture & Food Production System**” and acted as Judge in Poster Presentation Session in 19<sup>th</sup> APG International Conference on Sustainable Agriculture, Food Security and Environment at GSSDGS Khalsa College, Patiala from on 2-3 Nov, 2018.

#### **B) Paper presented:**

1. Research Paper entitled “**Cytological studies in some grasses from Haryana**” in Tenth All India Conference on Cytology and Genetics held at Visakhapatnam from 8<sup>th</sup>-10<sup>th</sup> December, 2005.

2. Research Paper entitled **“Chromosomal diversity in some grasses from Haryana”** at National Symposium on Germplasm Evaluation: Present Trends held at Botany Department, Punjabi University Patiala from 23rd -25th January, 2006.
3. Research Paper entitled **“Cytogenetical studies in some Aneuploids of *Coreopsis tinctoria* Nutt.”** at 9<sup>th</sup> Punjab Science Congress held at Guru Nanak Dental College, Sunam from 7<sup>th</sup>-9<sup>th</sup> February, 2006.
4. Research Paper entitled **“Meiotic abnormalities in different populations of *Phalaris minor* from Haryana and adjoining Shiwalik Hills”** at National Symposium on Plant Cytogenetics: Recent trends held at Department of Botany, Punjabi University, Patiala from 15<sup>th</sup>-16<sup>th</sup> February, 2008.
5. Research Paper entitled **“Cytological study in wild oat (*Avena sativa* L.) population from North West India”** at 12<sup>th</sup> Punjab Science Congress held at PAU, Ludhiana from 7<sup>th</sup>-9<sup>th</sup> February, 2009.
6. Research Poster entitled **“Anthropogenic Impact on Climate Change and Ecosystems”** at National Conference on Environmental Degradation and its impact on Mankind held at Punjabi University, Patiala from 19<sup>th</sup>- 20<sup>th</sup> Nov, 2010.
7. Research Paper entitled **“Presence of Apomixis in Grass Family: Need for Molecular Analysis”** at UGC sponsored National Conference on Recent Trends in Biotechnology held at DAV College, Amritsar on 1<sup>st</sup> Sep, 2010.
8. Research Poster entitled **“Chromosomal diversity in Bermuda grass (*Cynodon dactylon* (L.) Pers.) with in different environmental conditions”** at International Conference on Environmental Challenges: A Global Concern held at Kanya Maha Vidyalaya, Jalandhar from 15<sup>th</sup>- 16<sup>th</sup> Oct, 2010.
9. Research Poster entitled **“Molecular mapping of QTL’s for heat tolerance components from cultivated and wild wheat germplasm”** at International Conference on: “Preparing Agriculture for Climate Change” organized by Crop Improvement Society of India at PAU, Ludhiana, from 6<sup>th</sup>-8<sup>th</sup> February, 2011.
10. Research Paper entitled **“Ecological Importance, Genetic Diversity and Utilization of Grasses in India”** at National Seminar on ‘Ecological Crisis’ at

Department of Distance Education, Punjabi University, Patiala from 8<sup>th</sup>-9<sup>th</sup> September, 2011.

11. Research Paper entitled **“Genetic Diversity in Family Gramineae: A study from North West India”** at National Conference on Impact of Science and Technology on Societal Development at SUS Group of Institutions, Tangori, Mohali: Punjab from 3<sup>rd</sup>-5<sup>th</sup> November, 2011.
12. Research Poster entitled **“Chromosomal Diversity & Abnormal meiotic course in *Cenchrus* species”** at 4<sup>th</sup> International Conference on: Life Science Research for Rural & Agricultural Development (ICLRAD-2011) held at Central Potato Research Station, Patna from 27<sup>th</sup>-29<sup>th</sup> Dec, 2011.
13. Research Paper entitled **“Cytological Analysis of Family Gramineae from Ecologically fragile Shiwalik Hills & adjoining areas”** at 4<sup>th</sup> International Conference on: Life Science Research for Rural & Agricultural Development (ICLRAD-2011) held at Central Potato Research Station, Patna from 27<sup>th</sup>-29<sup>th</sup> Dec, 2011.
14. Research Paper entitled **“Cytological study in Wild Oat (*Avena fatua* Linn.) populations from North West India”** at National Symposium on Plant Cytogenetics: New Approaches held at Department of Botany, Punjabi University, Patiala from 23<sup>rd</sup>-24<sup>th</sup> Feb, 2012.
15. Research Poster entitled **“New chromosome reports for *Setaria verticillata* (L.) P. Beauv. from India”** at National Symposium on Plant Cytogenetics: New Approaches held at Department of Botany, Punjabi University, Patiala from 23<sup>rd</sup>-24<sup>th</sup> Feb, 2012.
16. Research Poster entitled **“Existence of enormous genetic variability in Grass family and need for its conservation”** at National Conference on Plant & Microbial Biodiversity, Present Scenario, Threats & Conservation Strategies held at Department of Botany, Panjab University, Chandigarh from 1<sup>st</sup> -2<sup>nd</sup> March, 2012.
17. Research Paper entitled **“Cytomorphological study in genus *Cenchrus* L. (Family: Poaceae)”** at 17<sup>th</sup> Punjab Science Congress organized by Punjab Technical University, Kapurthala from 14<sup>th</sup> -16<sup>th</sup> Feb, 2014.

18. Research Paper entitled “**Cytological studies in Grasses from Haryana and adjoining Shiwalik Hills: Tribe - Andropogoneae**” during the National Symposium on “Emerging Trends in Botanical Sciences” organized by Department of Botany, Punjabi University, Patiala from 17<sup>th</sup> -18<sup>th</sup> February, 2014.
19. Research Paper entitled “**Chromosomal Diversity in Family Gramineae: A study from North India**” during the National Conference “SCIENCE COLLOQUIUM” Emerging Trends in Basic & Applied Sciences organized by DAV College, Jalandhar (Pb.) from 6<sup>th</sup> -7<sup>th</sup> March, 2014.
20. Research Poster entitled “**New Chromosome report for *Digitaria ciliaris* (Retz.) Koel. From India**” at 17<sup>th</sup> Punjab Science Congress organized by Punjab Technical University, Kapurthala from 14<sup>th</sup> -16<sup>th</sup> Feb, 2014.
21. Research Poster entitled “**Cytological investigations in *Imperata cylindrica* from Haryana, India**” at National Symposium on “Emerging Trends in Botanical Sciences” organized by Department of Botany, Punjabi University, Patiala from 17<sup>th</sup> -18<sup>th</sup> February, 2014.
22. Research Poster entitled “**Chromosomal Diversity in Bermuda grass (*Cynodon dactylon* (L.) Pers.)**” at National Conference on “Perspectives & Trends in Plant Sciences & Biotechnology” organized by Department of Botany, Panjab University, Chandigarh & Society for Plant Research, India from 21<sup>st</sup> -23<sup>rd</sup> February, 2014.
23. Research Poster entitled “**Cytological Investigations in wild oat (*Avena fatua* Linn.) Populations from North India**” at 19<sup>th</sup> Punjab Science Congress organized by SUS Group of Institutions, Tangori, S.A.S. Nagar (Mohali) from February 7-9, 2016.
24. Research Poster entitled “**Cytomorphological study in *Dichanthium annulatum* (forssk.) Stapf.**” at 19<sup>th</sup> Punjab Science Congress organized by SUS Group of Institutions, Tangori, S.A.S. Nagar (Mohali) from February 7-9, 2016.
25. Research Paper entitled “**Cytological investigations in *Dichanthium annulatum* (forssk.) Stapf. From Haryana, India.**” During UGC sponsored National Conference on Recent Developments on Stress Tolerance and Plant

Biotechnology (NCSTPB-2016) organized by Lyallpur Khalsa College, Jalandhar (Pb.) from February 11-12, 2016.

26. Research Paper entitled “**Meiotic Studies in some Populations of *Setaria verticillata* (L.) P. Beauv. From Shiwalik Hills**” During UGC sponsored National Conference on Recent Developments on Stress Tolerance and Plant Biotechnology (NCSTPB-2016) organized by Lyallpur Khalsa College, Jalandhar (Pb.) from February 11-12, 2016.
27. Research Paper entitled “**Study on Economically Important Grasses of Tribe: Andropogoneae (Family: Poaceae)**” during National Conference on “Recent Trends in Environment, Science and Technology” RTEST-2016 organized by University School of Sciences, Rayat Bahra University on March 11, 2016.
28. Research Paper entitled “**Cytology of a medicinal important grass: *Vetiveria zizanioides* (L.) Nash.**” during National Conference on ‘**Basic and Applied Researches in Plants and Microbes**’ organized by Department of Botany, Punjabi University, Patiala from 3 - 5 November, 2016.
29. Research Paper entitled “**Cytological studies on some species of Tribe- Paniceae (Family- Poaceae)**” during National Conference on Biodiversity and Sustainable Utilization of Plant Resources organised by Department of Botany, Kurukshetra University, Kurukshetra from February 17-18, 2017.
30. Research Paper entitled “**Prevalence of Supernumerary Chromosomes in Indian Grasses**” in XXXX All India Botanical Conference and National Symposium on “Evaluation and Conservation of Plant Germplasm” at Department of Botany, Punjabi University, Patiala from 15-17<sup>th</sup> September, 2017.
31. Research Paper entitled “**Cytomorphological Study in Genus *Sorghum Moench.* (Family: Poaceae)**” in XXXX All India Botanical Conference and National Symposium on “Evaluation and Conservation of Plant Germplasm” at Department of Botany, Punjabi University, Patiala from 15-17<sup>th</sup> September, 2017.
32. Research Paper entitled “**Cytological Diversity in Some Members Of Tribe Agrostideae And Eragrosteae (Poaceae) From Haryana And Adjoining Shiwalik Hills**” in RACES 2018 UGC sponsored 9<sup>th</sup> National Conference on



Recent Advances In Chemical, Biological & Environmental Sciences at Multani Mal Modi College, Patiala from 9-10<sup>th</sup> February, 2018.

33. Research Paper entitled **“Polyploidy: An Evolutionary Phenomenon in Family Poaceae”** in *One Day National Seminar* on “Emerging Trends and Challenges in Biosciences” at G M N (P.G.) College, Ambala Cantt on 10 March, 2018.
34. Research Paper entitled **“Impact of Growth Regulators on Growth and Yield of Potato”** in *One Day National Seminar* on “Emerging Trends and Challenges in Biosciences” at G M N (P.G.) College, Ambala Cantt on 10 March, 2018.
35. Research Paper entitled **“Cytology of some Grasses from Haryana and adjoining Shiwalik Hills”** in National Conference on “Research In Plant Sciences for Sustainable Development” at Department of Botany and Environmental Science, Sri Guru Granth Sahib World University, Fatehgarh Sahib on 16-17 March, 2018.
36. Research Paper entitled **“Effect of Dehaulming on Potato Seed Production”** in National Conference on “Research In Plant Sciences for Sustainable Development” at Department of Botany and Environmental Science, Sri Guru Granth Sahib World University, Fatehgarh Sahib on 16-17 March, 2018.
37. Research Paper entitled **“Vetiveria Zizanoides (L.) Nash: An Important Medicinal and Aromatic Grass for Soil and Water Conservation”** at 19<sup>th</sup> APG International Conference on Sustainable Agriculture, Food Security and Environment held at GSSDGS Khalsa College, Patiala from 2<sup>nd</sup> -3<sup>rd</sup> Nov, 2018.
38. Research Paper entitled **“Cytological Variability In Sorghum halepense (L.) Pers. Populations from Haryana”** in UGC sponsored 10<sup>th</sup> National Conference on Recent Advances in Chemical & Environmental Sciences RACES-2019 at Multani Mal Modi College, Patiala from on 11-12 April, 2019.

### **C) Attended**

1. **8<sup>th</sup> Punjab Science Congress** organized by Punjab Academy of Sciences held at Department of Zoology, Punjabi University Patiala from 7<sup>th</sup>-9<sup>th</sup> February, 2005.

2. **National Symposium** on “**Researches in Fungal Biology: Emerging trends**” organized by Department of Botany, Punjabi University, Patiala from 30<sup>th</sup> – 31<sup>st</sup> January, 2007.
3. **National Seminar** on “**Scaling new zeniths in Biosciences**” held at H.M.V. College Jalandhar on 26<sup>th</sup> November, 2009.
4. Attended UGC sponsored **National Seminar** on “**Emerging Trends in Medical Biotechnology (ETMB-2010)**” held at Doaba College, Jalandhar on 4<sup>th</sup> Sep, 2010.
5. **National Symposium** on “**Fundamental and Applied Phycology**” held at Department of Botany, Punjabi University, Patiala from March 25-26<sup>th</sup>, 2013.
6. **Khalsa College Global Punjabi Conference** held at GSSDGS Khalsa College, Patiala from 21-22 Feb, 2018.

### **Workshops and training courses**

1. Attended training course on “**Plant Tissue Culture & its Implications**” sponsored by National Bioresource Development Board, DBT Govt. of India, New Delhi at IHBT, Palampur (H.P.) from September 4<sup>th</sup> – 15<sup>th</sup>, 2006.
2. Attended “**Patent Awareness**” workshop on Patent Awareness organized by PSCST held at Thapar Institute of Engineering and Technology, Patiala on 30<sup>th</sup> September, 2005.
3. Attended two day “**National workshop on Plant Taxonomy**” under taxonomy capacity building scheme (AICOPTAX) sponsored by MOEF, New Delhi, held at Department of Botany, Punjab University Chandigarh from 9<sup>th</sup> -10<sup>th</sup> December, 2006.
4. Attended **Workshop on “Environment from to Solutions (EPS-2010)”** at Chitkara Institute of Engineering & Technology, Punjab University Campus, organized by the Dept. of Applied Sciences, in collaboration with Nature Foundation, India on 21<sup>st</sup> Oct, 2010.
5. Attended two day “**Workshop cum Training Programme on High Performance Thin Layer Chromatography (HPTLC)**” organized by STEP, Thapar University, Patiala from November 21-22, 2011.

6. Attended “**Workshop on Scientific Photography**” organized by STEP, Thapar University, Patiala on November 26, 2011.
7. Attended “**Workshop on Research Methodology**” organized by SMSS, Thapar University Patiala, Punjab on December 17, 2011.
8. Attended one week UGC sponsored “**Workshop on Analysis of Biological Data**” organized by Department of Botanical and Environmental Sciences, GNDU, Amritsar from August 27-September 2, 2012.
9. Attended two weeks DBT sponsored “**Hands on Training Workshop on Molecular Biology & Cytogenetic Techniques**” organized by Punjab State Council For Science & Technology, Chandigarh and Genetic Centre, GMCH, Chandigarh from December 3-15, 2012.
10. Attended three day workshop on “**RAP a STEP (Research as Pedagogy a Science Teacher Education Program)**” at Punjabi University, Patiala from 29 Sep - 1 Oct 2016.

### **Achievements, Awards and Recognitions**

- **Awarded Young Scientist Award** by Academic Council International Consortium of Contemporary Biologists and Madhawi – Shyam Educational Trust in the field of Botany during 4<sup>th</sup> International Conference on: Life Science Research for Rural & Agricultural Development (ICLRAD-2011) held at Central Potato Research Station, Patna from 27<sup>th</sup>-29<sup>th</sup> Dec, 2011.
- **Awarded Best Research Poster Award** by Punjab Academy of Sciences in Life Sciences during 17<sup>th</sup> Punjab Science Congress organized by Punjab Technical University, Kapurthala from 14<sup>th</sup> -16<sup>th</sup> Feb, 2014.
- Awarded **Third Prize in Oral Presentation** of Research Paper entitled “**Cytology of some Grasses from Haryana and adjoining Shiwalik Hills**” in National Conference on “Research in Plant Sciences for Sustainable Development” organized by Department of Botany and Environmental Science at Sri Guru Granth Sahib World University, Fatehgarh Sahib on 16-17 March, 2018.
- Organized **National Environment Awareness Campaign 2011-12** on “**Forests And Biodiversity Conservation**” sponsored by MOEF, Govt. of India.(Regional

Resource Agency: PSCST, Chandigarh) at Public College, Samana (Patiala) on 17-18<sup>th</sup> Feb, 2012.

- Organized Academic visits of B.Sc. Agriculture and Community College students to various places (IMD, Punjabi University Patiala, Polyhouses, Herbarium, Museum, Photo gallery, Botanical Gardens, Plant Conservatory, etc).
- Organized International Day For Biological Diversity 2016 on “**Mainstreaming Biodiversity Sustaining People and their Livelihood**” sponsored by National Biodiversity Authority, Govt. of India in collaboration with PSCST, Chandigarh at GSSDGS Khalsa College, Patiala on 31<sup>st</sup> May, 2016.
- Organized International Day For Biological Diversity 2017 on “**Biodiversity and Sustainable Tourism**” sponsored by National Biodiversity Authority, Govt. of India in collaboration with PSCST, Chandigarh at GSSDGS Khalsa College, Patiala on 31<sup>st</sup> May, 2017.

## Membership

- Life Fellow, ICCB-MSET, Ranchi, Jharkhand, India.
- Member Board of Studies, Community College in Green House Technology at G.S.S.D.G.S. Khalsa College, Patiala for Session 2014-16.
- Member, Under and Post Graduate Board of Studies in Agriculture, G.S.S.D.G.S. Khalsa College, Patiala for Session 2018-19.
- Member, Under Graduate Board of Studies in Botany, G.S.S.D.G.S. Khalsa College, Patiala for Session 2018-19.
- Member Alumni Association, Department of Botany, Punjabi University, Patiala.