

Report of Botany Department (Session 2017-18)



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Department Name: **Botany**

Session: **2017-18**

Names of Programme/Courses/offered:

- Under graduate Course - B.Sc. Medical Three Year Programme

Faculty Publications/Awards/Achievements/Activities:

I. **Faculty Publications**

1. **Dr. Gunjan Sud**

1. Gunjan Sud (2017). First record of *Prenanthesaitchisoniana* (Beauv.) Roohi Bano & Qaiser (Asteraceae) from India. **Check List**. Vol 13 (2).
2. Gunjan Sud (2017). Additions to the family Asteraceae of Una district, Himachal Pradesh. **Journal of Economic and Taxonomic Botany**. 40 (1-2): 65-70.

2. **Dr. Purnima Bhandari**

1. **Bhandari P.** and Garg, N. 2017 Dynamics of Arbuscular Mycorrhizal Symbiosis and Its Role in Nutrient Acquisition: An Overview. *In: Mycorrhiza - Nutrient Uptake, Biocontrol, Eco restoration*, (eds.) Varma A., Prasad R., Tuteja N., Springer, Cham, Switzerland, pp. 21-43.
2. **Bhandari, P.** and Garg, N. 2017. Arbuscular Mycorrhizal Symbiosis: A Promising Approach for Imparting Abiotic Stress Tolerance in Crop Plants. *In: Plant-Microbe Interactions in Agro-Ecological Perspectives*, (eds.) Singh, D., Singh, H. and Prabha, R., Springer, Singapore, pp. 377-402.
3. Garg, N., **Bhandari, P.**, Kashyap, L. and Singh, S. 2017. Arbuscular mycorrhizal symbiosis: A boon for sustainable legume production under salinity and heavy metal stress. *In: MYCORRHIZAL FUNGI*, (eds.) Aggarwal, A. and Yadav, K., Astral International Pvt., Ltd, New Delhi, pp. 247-273.

II. **Faculty Presentation** in National/International Conference

1. **Dr. Purnima Bhandari**

1. Meenal and **Bhandari, P.** 2018. Nitric oxide alleviates NaCl-induced oxidative stress by upregulating defense response in *Cicer arietinum* L. genotypes. *In: 12th Chandigarh Science Congress (CHASCON), February 12-14, 2018. Organized by Panjab University, Chandigarh with Chandigarh Region Innovation and Knowledge cluster (CRIKC). **Poster presentation***
2. Sihag, S. and **Bhandari, P.** 2018. Modulatory role of exogenous glucose on germination characteristics and early seedling growth of differentially tolerant chickpea genotypes under salt stress *In: 12th Chandigarh Science Congress (CHASCON), February 12-14, 2018. Organized by Panjab University, Chandigarh with Chandigarh Region Innovation and Knowledge cluster (CRIKC). **Poster presentation***
3. **Bhandari, P.** and Garg, N. 2017. Silicon nutrition augments plant vigour, ionic homeostasis and defense mechanisms in mycorrhizal *Cicer arietinum* L. genotypes under salt stress. *In: 7th International Conference on Silicon in Agriculture. Organized by University of Agricultural sciences, Bengaluru, on 24-28 October 2017, Bengaluru, India. **Oral presentation.***

2. **Dr. Geetika Singh**

1. Singh, G. and Puri, Richa. 2017. Seed invigoration techniques to improve germination of Bamboo seeds. *In: “International conference on Plant systematic: Priorities and challenges” in New Delhi. November 10-12, 2017. **Poster presentation.***

III. **Faculty activities:**

1. A seven-day national faculty development programme on ‘*Expanding Paradigms of Pedagogy*’ on April 13, 2017 to April 19, 2017. Organized by Mehr Chand Mahajan DAV College for Women. Sector-36, Chandigarh (**Dr. Purnima Bhandari, Dr. Geetika Singh**).

2. Workshop on “*Awareness Generation Camp; Dissemination of knowledge Camp; Skills about Recent Advances in Nutrition and Safety*” Organized by the Department of Microbial and Food Technology, November 23, 2017. (**Dr. Gunjan Sud**)
3. A workshop on ‘*How to grow your Compost*’ was organized by Dr Purnima Bhandari, Assistant professor, Department of Botany on 11th September, 2017 where around 60 students of B.Sc. (Medical) participated.

Students Publications/Awards/Achievements/Activities:

Student Participation and Award:

1. **Meenal** of B.Sc. (III) Medical **bagged second prize in *Poster presentation*** under **plant science section** in 12th Chandigarh Science Congress (CHASCON), February 12-14, 2018. Organized by Panjab University, Chandigarh with Chandigarh Region Innovation and Knowledge cluster (CRIKC).
2. **Sonam Sihag** of B.Sc. (III) Medical **bagged consolation prize in *Poster presentation*** under **plant science section** in 12th Chandigarh Science Congress (CHASCON), February 12-14, 2018. Organized by Panjab University, Chandigarh with Chandigarh Region Innovation and Knowledge cluster (CRIKC).

Student Activities:

1. A workshop on ‘*How to grow your Compost*’ was organized by Dr Purnima Bhandari, Assistant professor, Department of Botany on 11th September, 2017 where around 60 students of B.Sc. (Medical) participated. The main theme of the workshop included “*Compost Banao, Compost Apnao*”. By composting, we are able to convert the daily dustbin contents into rich, organic manure and grow flowers, vegetables or plants with it, thus lowering carbon footprint. In addition, students were made aware about the first step of composting that included segregation of waste into wet and dry waste.



2. A lecture cum workshop on 'Plant Tissue Culture' was organized on 28th October, 2017 in which Prof. Promila Pathak, Professor, Department of Botany, Panjab University, Chandigarh and her team gave hands-on training and delivered a lecture. About 50 students of B.Sc. (II) and B.Sc. (III) Medical participated. During the lecture, Dr. Pathak explained various aspects of tissue culture to the participants including its historical perspective, discoveries in the field, *In Vitro* culture and the applications of tissue culture. The hands-on workshop aimed at equipping the participants with practical knowledge of various techniques related to tissue culture, including sterilization technique, media preparation and inoculation methods. The students participated enthusiastically and benefited from the insights of the expert during the interactive session.



3. Under the aegis of Rashtriya Uchcharat Shiksha Abhiyan (RUSA), three **composting units** of dimensions 10 by 15 were constructed. This initiative was taken under **Swachh Bharat Abhiyan** where main aim include recycling of the green waste (i.e. plant litter) generated in the college campus into manure, that could be further utilized for gardening purpose.



4. Another initiative taken up by Department of Botany included labelling of plants growing in the campus area. The main objective of this activity was to identify and educate the students about the different plant species that they encounter in their daily lives. Labelled plates included plant botanical name, family to which they belong and their common name.



5. Setting up of an artificial forest with the theme “**Back to Nature**” where different ornamental and medicinal saplings of plants including giloy, amla, Murraya have been planted. The main objective of this innovative practice taken under Swachhta Mission was for (i) generating awareness among masses about the uses of such economically important plants and (ii) converting more campus area under a green cover. The initiative is a move towards a cleaner, greener and a healthier environment. It is first of its kind in the region. About 40 plants of medicinal and economic relevance, including *Simarouba glauca* DC., *Withaniasomnifera* (L.) Dunal, *Pyrus communis* L., *Cascabelathevetia* (L.) Lippold, *Buteamonosperma* (Lam.) Taub., *Terminaliachebula* Retz., *Sapindusmukorossi* Gaertn., which will ultimately develop into a stratified forest, have been planted on 13th March, 2018. The chief

guest on the occasion was Honorable Mayor of Chandigarh, Shri Davesh Moudgil. The students of the Botany department actively participated in the plantation drive.



6. A visit to Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana was organized on 24th February, 2018 where 50 students of B.Sc. III Year visited the department and got equipped with the latest research.



7. A Visit to Soilless culture site, Department of Mechanical Engineering Punjab Agricultural University, Ludhiana was organized on 24th February, 2018 where 50 students of B.Sc. III (Medical) were apprised with the recent trends in the field of hydroponics.