

Contact Detail

Dr. JITENDER KUMAR

Assistant professor
Department of Plant Science
Central University of Himachal Pradesh
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Professional Qualification

MSc, PhD

Employment History

- Assistant Professor, Central University of Himachal Pradesh from 11-03-2022 to till date.
- Assistant Professor, SBBS University, Khaila, Jalandhar from 22-01-2022 to 10-03-2022.
- Assistant Professor, JC DAV College, Dasuya, Punjab from 10-08-2020 to 21-06-2021.
- Assistant Professor, JC DAV College, Dasuya, Punjab from 24-07-2019 to 23-06-2020.
- Assistant Professor, JC DAV College, Dasuya, Punjab from 27-10-2018 to 13-06-2019.

Specialization

Ethnobotany, Cytogenetics, Plant Diversity, Seed Technology, Plant Tissue Culture and Plant Biochemical Engineering.

Research Interest

- Conservation and *in vitro* Propagation of endangered Medicinal and Aromatic plants
- Production of Secondary Metabolites from endangered Medicinal and Aromatic plants through tissue culture techniques.
- Standardization of seed germination of endangered Medicinal and Aromatic plants through *in vitro* and *in vivo* techniques.
- Engineering of metabolic pathways for the production of secondary metabolites of endangered Medicinal and Aromatic plants using bioreactors.
- Elucidation of metabolic pathways for the production of Secondary Metabolites using *in silico* techniques.
- Development and design of novel therapeutics from medicinally important plants.

Awards/ Fellowships/ Membership Professional Bodies

- UGC- Rajiv Gandhi National Fellowship for PhD program (Year 2010-2015).
- Life Member Him Science Congress Association (HSCA).
- Life Member Himalayan Life Science Society (HLSS).

Research Project Sanctioned

Year	Source of funds	Project title
2022	DST-SERB	" <i>Invitro</i> micropropagation and phytochemical investigation of chemical constituents found in orchids of <i>Astavarga</i> group".

Publications

1. **Jitender Kumar**, Priyanka Sandal, Ashwini Singh, Ashwani Kumar, Vedpriya Arya, Reema Devi, Bhagwati Prashad Sharma and Rachna Verma. Conservation Status, Anticancer Compounds and Pharmacological Aspects of *Podophyllum hexandrum* Royle: A Review. Indian Journal of Ecology. Vol. 49(3), 2022, 1096-1102.
2. Acharya Balkrishna, Rajesh Juyal, Reema Devi, **Jitender Kumar**, Ankush Prakash, Promila Pathak, Ved Priya Arya, and Ashwani Kumar. Ethnomedicinal status and pharmacological profile of some important orchids of uttarakhand (NorthWestern Himalayas), India. Journal of Orchid Society of India. Vol. 34, 2020, 137-147.
3. Anuprabha, Promila Pathak, Ankush Prakash and **Jitender Kumar**. Regeneration competence of *Denrobium nobile* Lindl. Through pseudobulb segments: A study *invitro*. Journal of Orchid Society of India. Vol. 31, 2017, 73-77.
4. Sharma D.K, Kumar Anil and **Kumar Jitender**. Chemical profiling assisted quality assessment of Podophyllotoxin from *Podophyllum hexandrum* by LC-APCI-3Q-MS/MS. International Journal of Farm Sciences. Vol. 6(3), 2016, 70-76.
5. **Jitender kumar**, Harjeet Dhillon. TLC profiling and phytochemical screening of *Podophyllum hexandrum* Royle – An endangered medicinal plant. International Journal of Farm Sciences. Vol. 5(1), 2015, 56-61.
6. **Jitender kumar**, Kamal dev, Anil kumar. Quantification of podophyllotoxin from *Podophyllum hexandrum* using HPLC-UV-DAD. Journal of Tree Sciences. Vol. 33(2), 2014, 33-37.

Article Published

1. **Jitender Kumar** and Promila Pathak (2019). Some medicinally important orchids of Himachal Pradesh and its uses. The Journal of Orchid Society of India, pp 92-95
2. **Jitender Kumar** and Promila Pathak (2018). Green house with special reference to orchids - a review. The Journal of Orchid Society of India, pp 70-74.

Abstract published

1. **Jitender Kumar** “Effect of elicitors on *invitro* grown callus for the production of podophyllotoxin” in International conference on “Modernization of Traditional Indian Medicine: Public Health & Industrial perspectives” at Patanjali Research Institute, Haridwar on 1- 4, August, 2022.pp 254
2. **Jitender Kumar** & Priyanka sandal “Impact of COVID-19 on Food and Agriculture sector of Indian Economy” in National conference on “COVID-19: A turning point of Indian Economy towards Digitalisation” at JC DAV College, Dasuya, 29 July, 2021. pp. 58
3. **Jitender Kumar** & Ashwani Kumar “Quantification of Podophyllotoxin from *Podophyllum hexandrum* Royle using HPLC & LCMS/MS” in International conference on “Integration on Traditional Medicinal System with Modern Science: Relevance, Challenges and Future Perspectives” at Patanjali Research Institute, Haridwar on 11-13th March, 2021. pp. 93
4. **Jitender Kumar**, Ankush Prakash and Promila Pathak. Orchids: An ancient mystery of medicinal industry. Recent Advances in Orchidology with special emphasis on Biology, Climate Change, Conservation, and Commercialization of Floriculturally and Therapeutically Important taxa for the Welfare of Science and Society” and Orchid Show at CIARI, Port Blair Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 15-17 February, 2019. pp 47
5. **Jitender Kumar**, Neha Sharma, NitikaVerma Saloni Saini and Promila Pathak. Orchids: A wonder in Ayurveda Recent Advances in Orchidology with special emphasis on Biology, Climate Change, Conservation, and Commercialization of Floriculturally and

Therapeutically Important taxa for the Welfare of Science and Society” and Orchid Show at CIARI, Port Blair Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 15-17 February, 2019. pp 48

6. **Jitender Kumar**, Pratibha, Ankush Prakash, and Promila Pathak. Major Terrestrial Medicinal Orchids of Himachal Pradesh: An Urgent Need for Conservation. Current Trends in Conservation, Sustainable Development, Biological and Social Benefit of Medicinally and Floriculturally Significant Orchids & Orchid Show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp11.
7. Manikaran Kaur, Aarti, Shivani, Ankush Prakash, **Jitender Kumar** and Promila Pathak. Orchid Diversity in India: Need for Conservation. Current Trends in Conservation, Sustainable Development, Biological and Social Benefit of Medicinally and Floriculturally Significant Orchids & Orchid Show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp 31
8. Pratibha, **Jitender Kumar**, Vasundhra, and Promila Pathak. Plant Tissue Culture: A Biotechnological Approach for the Conservation of Orchids. Current Trends in Conservation, Sustainable Development, Biological and Social Benefit of Medicinally and Floriculturally Significant Orchids & Orchid Show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp 32
9. Ankush Prakash, Promila Pathak, **Jitender Kumar**, Vasundhra and K C Mahant. Orchids as a Rich Source of Phytochemicals. Current trends in conservation, sustainable development, biological and social benefit of medicinally and floriculturally significant orchids & orchid show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp 43
10. Vasundhra, **Jitender Kumar**, Ankush Prakash, Pratibha and Promila Pathak. Orchid

Care and Cultivation in Green House. Current Trends in Conservation, Sustainable Development, Biological and Social Benefit of Medicinally and Floriculturally Significant Orchids & Orchid Show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp 48

11. Nitika Verma, Neha Sharma, Ankush Prakash, **Jitender Kumar**, Saloni Saini and Promila Pathak. Floriculturally Important Orchids and How To Grow Them. Current Trends in Conservation, Sustainable Development, Biological and Social Benefit of Medicinally and Floriculturally Significant Orchids & Orchid Show, Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018. pp 53
12. Vasundhara, Promila Pathak, **Jitender Kumar** and Ankush Prakash. Some medicinally important orchids of Himachal Pradesh and their uses. 12th Chandigarh science congress (CHASCON), Panjab University, Chandigarh, 12-14 February 2018. pp 293
13. Pratibha, Promila Pathak and **Jitender Kumar**. An exotic patio: A guide to grow orchids in a greenhouse. 12th Chandigarh science congress (CHASCON), Panjab University, Chandigarh, 12-14 February 2018. pp 257
14. D K Sharma, Anil Kumar, Ashima Sharma and **Jitender Kumar**. RP-HPLC-DAD-MS/MS method for the evaluation of geographical impacts on podophyllotoxin concentration in roots of *Podophyllum hexandrum*. 12th Chandigarh science congress (CHASCON), Panjab University, Chandigarh, 12-14 February 2018. pp 78
15. Purnima Chauhan, **Jitender Kumar** and Pratibha. Molecular characterization of white root rot resistant somaclone of M7 and susceptible genotypes of apple. 12th Chandigarh science congress (CHASCON), Panjab University, Chandigarh, 12-14 February 2018. pp 56
16. **Jitender kumar** and Anil kumar. LC-MS/MS and HPLC quantification of podophyllotoxin from *Podophyllum hexandrum*. International conference on Emerging Trends in Biotechnology (ICETB 2014). XI convention of Biotech Research Society, India. Indo-Italian workshop on industrial pharmaceutical biotechnology. Jawaharlal Nehru University, New Delhi, 6-9 November 2014. pp IBF-147

Conferences & Seminars

1. Paper presented title “Effect of elicitors on *invitro* grown callus for the production of podophyllotoxin” in International conference on “Modernization of Traditional Indian Medicine: Public Health & Industrial perspectives” at Patanjali Research Institute, Haridwar on 01-04, August, 2022.
2. Paper presented with title “Impact of COVID-19 on Food and Agriculture sector of Indian Economy” in National conference on “COVID-19 : A turning point of Indian Economy towards Digitalisation” at JC DAV College, Dasuya, 29 July, 2021.
3. Poster presented title “Quantification of Podophyllotoxin from *Podophyllum hexandrum* Royle using HPLC & LCMS/MS” in International conference on “Integration on Traditional Medicinal System with Modern Science: Relevance, Challenges and Future Perspectives” at Patanjali Research Institute, Haridwar on 11-13th March, 2021.
4. Paper presented with title: “Development of Agriculture in relation to food security” at National seminar on “Sustainable Rural livelihood-opportunities and challenges” at G.G.D.S.D College, Haryana, Distt. Hoshiarpur on March 7th, 2020.
5. Paper presented with title “Role of Organic Farming in Indian Agriculture” in National seminar on Contribution of Organic Agriculture to Sustainable Development, JC DAV College, Dasuya, 27 March 2019.
6. Paper presented with title “Role of IQAC in Higher Educational Institutes” in National conference on Role of IQAC in Academic and Administrative Audit, JC DAV College, Dasuya, 21 February 2019.
7. Paper presented with title “Phytochemical Screening and Antibacterial Activities of *Podophyllum hexandrum*- A Endangered Medicinal Plant” in 1st National Conference on “Recent Advances in Sciences”, Thakur P.G College of Education, Dhaliara (H.P), 16thFeburary, 2019.
8. Poster presented in National conference cum workshop on “Major Terrestrial Medicinal Orchids of Himachal Pradesh: An Urgent Need for Conservation” at Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala, Organized by The Orchid Society of India (TOSI) Panjab University, Chandigarh, 16-18 March, 2018.

9. Poster presented in International conference on “LC-MS/MS and HPLC quantification of podophyllotoxin from *Podophyllum hexandrum*” at Jawaharlal Nehru University, New Delhi, 6-9 November 2014.
10. Participated in National Symposium on “Impact of Plant Tissue Culture on Advances in Plant Biology” at St. Xavier’s College, Ahmedabad, 19-21 January, 2012.
11. Participated in National Conference on “3rd Indian Youth Science Congress”, New Delhi, 03-05 November 2011.
12. Participated in National Conference on “National workshop cum seminar on Advances in Electron Microscopy and Allied fields” at Shoolini University, Bajhol, Solan, 23-29 September, 2011.

Trainings/Workshops/FDP

1. One week Hands on Training Program on “Techniques in Biotechnology” at Shoolini University in Collaboration with SAIF/ CIL Panjab University, Chandigarh from July 21-27, 2022 under the aegis of DST STUTI (Synergistic Training Program Utilizing the Scientific and Technological Infrastructure).
2. One week Faculty Development Programme (FDP) on “How to create your own MOOCS” organised by Teaching Learning Centre, Ramanujan College, University of Delhi from 28-05-2022 to 03-06-2022.
3. One month training on Molecular biology and Plant tissue culture at Department of Plant Breeding & Genetics under the guidance of Dr. H.K Chaudhary, at Chaudhary Sarvan Kumar, Himachal Pradesh, Agriculture University, Palampur, Himachal Pradesh, India, from 15-01-2010 to 14-02-2010.
4. Training on Entrepreneurship Skill Development Program on Biotechnology conducted by Department of Micro Small and Medium Enterprises (MSME), in Shoolini Institute of Life Sciences and Business Management Organized by Govt. of India from 19-02-2009 to 25-03-2009.