

CURRICULUM VITAE

DR. ANIL KUMAR

Personal Details:

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Sex: Male

Date of Birth: August 25th, 1975

Nationality: Indian

Marital Status: Married

Educational Qualifications:

- **D. Phil.** in Botany, HNB Garhwal University Srinagar, India, **2017**. Thesis titled “**Study of mutagenic effects of chromium (Cr) in certain major crop species of Garhwal and their propagation by *in vitro* methods**”.
- **UGC- CSIR (NET) - 2002**
- **GATE - 2003**
- **M.Sc. in Botany**, (First Div.) H.N.B. Garhwal University Srinagar, India, **1996; 66.3%**
- **B.Sc. in Botany, Zoology & Chemistry (First Div.)**, H.N.B. Garhwal University Srinagar, India, **1994; 71.6%**
- **Intermediate (First Div.)** Govt. Inter College Gopeshwar (Chamoli), UP Board, **1991; 68.2%**
- **High School (Second Div.)** Govt. Inter College Gopeshwar (Chamoli), UP Board, **1989; 58.2%**

Teaching Experience: Eighteen Years

- Assistant Professor & Head, Department of Botany, Government Degree College Chaubattakhal, District- Pauri - Garhwal, Uttarakhand, India; July 25, 2005 to July 11, 2014.

- Associate Professor, Department of Botany, Pt. L.M.S. Government (Autonomous) Post Graduate College Rishikesh, District- Dehradun, Uttarakhand, India; July 12, 2014 to September 24, 2021.
- Associate Professor, Department of Botany, Regional Office, Higher Education Uttarakhand, Doon University Campus, District- Dehradun, Uttarakhand, India; September 25, 2021 to June 18, 2022.
- Associate Professor, Department of Botany, S.D.M. Government Post Graduate College Doiwala, District- Dehradun, Uttarakhand, India; June 18, 2022 to till date.

Research Experience: Eighteen Years

- Research work on mutagenic effect of heavy metal chromium (Cr) on two cash crops of Garhwal i.e. *Vigna angularis* (Willd.) Ohwi & Ohashi and *Eleusine coracana* (L.) Gaertn. their cytogenetics and propagation of mutants by *in vitro* methods. Among large number of industrial pollutants heavy metals occupy considerably lethal position. Phytoremediation is a method of heavy metals amputation from soil with the help of mutant plants. The investigation involved the production of chemically induced mutants in plants which were then propagated by *in vitro* methods. These mutants have high role in the industrial areas heavily infested by heavy metals especially Cr. Mutants generally don't survive in nature thus *in vitro* methods were used to propagate these plants. Standard tissue culture methods were used for this work. The mutants were selected after extensive cytogenetic screening which involved somatic, meiotic, physiological and foliar investigations.
- Worked on different aspects of Cytogenetics and *in vitro* propagation of medicinal plant *Zanthoxylum armatum* Roxb.
- Investigated foliar epidermal patterns in some medicinal plants of Uttarakhand like *Adhatoda zeylanica*, *Reinwardtia indica*, *Woodfordia fruticosa*, *Zanthoxylum armatum*, *Cucumis pubescens* and *Coix lachryma-jobi*.
- Biodiversity assessment of Aromatic and Medicinal Plants of Garhwal region of Uttarakhand with the help of Cytotaxonomy.
- Plant Tissue Culture of *Vigna angularis*, *Eleusine coracana* and *Withania somnifera*.
- Several Dissertations of Post Graduate (M.Sc.) Students.

Orientation Program/ Refresher Courses/ Training Programs Attended:

- 1) Fifteen Days "Faculty Development Program", April 2-16, 2006, Government Post Graduate College Rishikesh, Uttarakhand.
- 2) Orientation Program Organized by UGC-ASC Punjab University, Chandigarh, India, September 1- 28, 2007 with Grade "A".

- 3) Refresher Course in Environmental Sciences Organized by UGC-ASC Jawaharlal Nehru University, New Delhi, India, April 4- 29, 2011 with Grade “A”.
- 4) Seven days “4th INSPIRE Internship Program/ Science Conclave: a Congregation of Nobel Laureates and Eminent Scientists” at IIIT Allahabad, India, November 26-December 02, 2011.
- 5) Refresher Course in Life Sciences Organized by UGC-ASC, Banaras Hindu University, Varanasi, UP, November 19 to December 09, 2013 with Grade “A”.
- 6) Training Programme on Capacity- Building in Geospatial Technologies (Equivalent to Refresher Course) Department of Natural Resources, TERI University, New Delhi, 01-21 December 2016.
- 7) Participated in One Week Online Faculty Development Program on “RESEARCH METHODOLOGY: TOOLS & TECHNIQUES” under Pandit Madan Mohan Malviya National Mission on Teachers and Training Scheme of MHRD, Govt. of India held from 5th-11th June, 2020 at ARSD College, University of Delhi.
- 8) Participated in One week Online Science Academies’ Science Leadership Workshop organized by Central University of Punjab Bhatinda, 22-28 June 2020.
- 9) Participated in One Week Online Faculty Development Program (FDP on “Moodle Learning Management System” organized by Assam Women’s University, Jorhat, Assam in association with IIT Bombay Spoken Tutorial (An initiative of National Mission on Education through ICT, MHRD, Govt. of India) from 22nd June to 26th June, 2020.
- 10) Participated in Two Week Online Faculty Development Program e on “MANAGING ONLINE CLASSES AND CO- CREATING MOOCS 3.0” under Pandit Madan Mohan Malviya National Mission on Teachers and Training Scheme of MHRD, Govt. of India held from July 25th -10th August, 2020 by Teaching Learning Centre, Ramanujan College, University of Delhi and obtained Grade A.
- 11) Participated in “E- Refresher Course on 21st Century: The Era of Biotechnology” organized by Department of Biotechnology, AKS University Satna (MP) from September 3rd to October 28th, 2020.
- 12) Participated in NGP-DST Summer School on Geospatial Science and Technologies (Level-1), Punjab Remote Sensing Centre Ludhiana, Punjab from April 21, 2022 to May 11, 2022.

Papers Published in National/ International Journals:

- 1) **Anil Kumar**, Shalabh Gupta and Gulshan Kumar Dhingra (2014): Effect of chromium on the foliar epidermal pattern in different accessions of *Vigna angularis*; **ESSENCE - INTERNATIONAL JOURNAL FOR ENVIRONMENTAL REHABILITATION**

AND CONSERVATION. VOLUME V: NO. 1, 2014 [72 – 83] [ISSN 0975-6272].
<https://essence-journal.com> (Copernicus Indexed Journal)

- 2) Shalabh Gupta and **Anil Kumar** (2014): Karyotypic Studies in Genus *Zanthoxylum armatum* Roxb. - A High Value Medicinal Plant from Uttarakhand; **JOURNAL OF INDIAN BOTANICAL SOCIETY. VOLUME 93(3&4), 2014 [281-283].** [ISSN 0019 - 4468] <https://www.indianbotsoc.org> (UGC Care Journal)
- 3) **Anil Kumar**, Shalabh Gupta, Gulshan Kumar Dhingra and Pooja Kukreti (2014): Genotoxic Effects of Chromium (Cr) in *Eleusine coracana* - Mitotic analysis; **ESSENCE - INTERNATIONAL JOURNAL FOR ENVIRONMENTAL REHABILITATION AND CONSERVATION. VOLUME V: NO. 2, 2014 [126 – 132] [ISSN 0975-6272].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 4) **Anil Kumar**, Shalabh Gupta and Gulshan Kumar Dhingra (2014): Effect of chromium on the growth and yield in different accessions of *Vigna angularis* – **PROGRESSIVE RESEARCH 9 (SPECIAL) : [687-689].**
- 5) **Anil Kumar**, G K Dhingra and Shalabh Gupta, (2015): Genotoxicity due to Chromium – Mitotic effects in *Vigna angularis*; **ESSENCE - INTERNATIONAL JOURNAL FOR ENVIRONMENTAL REHABILITATION AND CONSERVATION. VOLUME VI: NO. 2, 2015 [161 – 168] [ISSN 0975-6272].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 6) Shalabh Gupta, **Anil Kumar** and Ajay Kumar Paliwal (2015): Sex and altitude based study on leaf related parameters in *Zanthoxylum armatum* Roxb.; **ESSENCE - INTERNATIONAL JOURNAL FOR ENVIRONMENTAL REHABILITATION AND CONSERVATION. VOLUME VI: NO. 2, 2015 [180 – 183] [ISSN 0975-6272].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 7) Shalabh Gupta, **Anil Kumar** and Ajay Kumar Paliwal (2018): Effect of time and colchicine on the mitotic index of *Zanthoxylum armatum* Roxb.; **ONLINE INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL, VOLUME-08, MAR 2018 SPECIAL ISSUE [ISSN 2249-9598].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 8) **Anil Kumar** and Shalabh Gupta (2018): Mutagenic studies of male meiosis in chromium treated accessions of *Vigna angularis*; **ONLINE INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL, VOLUME-08, MAR 2018 SPECIAL ISSUE [ISSN 2249-9598].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 9) **Anil Kumar**, G K Dhingra and Shalabh Gupta, (2018): Mutagenic studies of male meiosis in chromium treated accessions of *Eleusine coracana*; **ESSENCE - International Journal for Environmental Rehabilitation and Conservation. Volume VI: No. IX (1) [38 – 45] [ISSN 0975-6272].** <https://essence-journal.com> (Copernicus Indexed Journal)
- 10) **Anil Kumar and Shalabh Gupta (2019)** *In Vitro* culture for Chromium treated mutants in *Vigna angularis*; **Journal of the Gujarat Research Society, Volume 21 Issue 06,**

October 2019; [1028-1035] [ISSN: 0374-8588] <http://www.gujaratresearchsociety.in>
(UGC Care Journal)

- 11) **Anil Kumar and Shalabh Gupta (2020)** Study of the effect of Chromium induced changes in seed germination patterns of *Vigna angularis*; **SERSC INTERNATIONAL JOURNAL OF DISASTER RECOVERY AND BUSINESS CONTINUITY, VOL. 11. NO. 3, (2020), [929-936] [ISSN: 2005-4289]**
<http://sersc.org/journals/index.php/IJDRBC/issue/archive>
- 12) **Shalabh Gupa, Anil Kumar and Harshvardhan Gaur (2020)** Dedifferentiation and redifferentiation attempts in *Withania somnifera* **SERSC INTERNATIONAL JOURNAL OF FUTURE GENERATION COMMUNICATION AND NETWORKING, VOL. 13, No. 04, (2020), [1288- 1294] [ISSN: 2233-7857]**
<http://sersc.org/journals/index.php/ijfgcn>
- 13) **Anil Kumar and Pooja Kukreti (2020)** Book Chapter: Forest Mapping and Classification of Doon Valley, Uttarakhand using Remote Sensing - **Geology and Natural Resources of Himalaya by R.A. Singh and Piyush K. Singh, ASR Publications, Lucknow.**
- 14) **Anil Kumar (2020)** Effective Callus Formation and Plant Regeneration of Chromium Induced Mutants in *Eleusine Coracana (L.) Gaertn.* **ANNALS OF R.S.C.B, VOL. 24, ISSUE 2, 2020, PAGES. 2015 - 2025 [ISSN: 1583-6258]** <http://annalsofrscb.ro> (Scopus Indexed Journal)
- 15) **Shalabh Gupta, Anil Kumar and Shivani Pawar (2020)** Plant Vegetative Morphological Variation Studies in Different Species of *Carthamus*; **JOURNAL OF CRITICAL REVIEWS VOL 7, ISSUE 03, 2020 [ISSN- 2394-5125]**
<http://www.jcreview.com> (Scopus Indexed Journal)
- 16) **Anil Kumar and Shalabh Gupta (2020)** Traditional Uses of Timur (*Zanthoxylum Armatum* Roxb.) in Uttarakhand - Past and Future Prospects; **JOURNAL OF CARDIOVASCULAR DISEASE RESEARCH VOL12, ISSUE07, 2020 [ISSN: PRINT -0975-3583, ONLINE - 0976-2833]** <http://www.jcreview.com> (Scopus Indexed Journal)
- 17) **Anil Kumar (2021)** Medicinal Plants Utilized by Different Tribes of Uttarakhand **CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES Volume: 02 Issue: 05 | Sep-Oct 2021, [499-505] [ISSN: 2660-4159]**
<http://cajmns.centralasianstudies.org>
- 18) **Anil Kumar (2021)** Plant Taxonomy in India - A Developmental Process; **MIDDLE EUROPEAN SCIENTIFIC BULLETIN, VOLUME 17, OCT-2021 [378-385] [ISSN: 2694-9970]** <https://cejsr.academicjournal.io>
- 19) **Anil Kumar (2022)** Geospatial Science and Technology Utilization in Agriculture **INTERNATIONAL JOURNAL OF TREND IN SCIENTIFIC RESEARCH AND DEVELOPMENT (IJTSRD) VOLUME 6, ISSUE 4, MAY-JUNE 2022;**
www.ijtsrd.com [1448-1453] [e-ISSN: 2456 – 6470].

Life & Fellow Membership of Journals:

- Indian Science Congress Association.
- Journal of Indian Botanical Society.
- **ESSENCE** - International Journal for Environmental Rehabilitation and Conservation

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