

Dr. Anil Kant

Post applied: Professor, Biotechnology

Address office

Jaypee University of Information Technology Wahnaghat

Distt. Solan (H.P.), India PIN-173215

Address Home: B-91/1 Sector-3 New Shimla H.P. PIN-171009

Email: anil.thakur@juitsolan.in,

Designation: Professor, Biotechnology

Current Functional Area: Plant Biotechnology, Molecular Biology, Genetic Engineering

I did Doctorate, Master and in Biotechnology and four years professional B.Sc Horticulture with Plant Biotechnology as elective module. I have worked as Principal Investigator in DST (Department of Science and Technology Government of India) funded project Identification of DNA markers linked with rust resistance gene in lentils under SERC fast track scheme for young scientists from 2004-06, before joining Jaypee University as Assistant Professor in July 2006. Presently I am working as Professor in the Department of Biotechnology and Bioinformatics, at Jaypee University of Information Technology Wahnaghat Solan H.P.

Statement of Teaching Interests

I have been associated with the B.Tech and M.Tech, M.Sc teaching, course curriculum development, as member of various committees, such as Member secretary of Board of studies of Department, Program coordinator of MSc Biotechnology, Curriculum Revision and Evaluation Committee. I have taught different diverse courses to B.Tech. M.Tech. and Ph.D Biotechnology students viz Molecular Biology, Genetic Engineering, Recombinant DNA technology, Plant Genetic Engineering, Industrial Crops and products, Cell culture techniques, Plant tissue culture, Biochemistry, Food and Agricultural Biotechnology, Research Methodology and Data Analysis, Food process and Engineering, Human Genome and Therapeutics, Pharmaceutical Biotechnology etc. I am also open to develop and teach interdisciplinary courses such as Instrumentation, Bioelectronics, Biostatistics and inferential statistics etc. I was instrumental in bringing major financial support from the Ministry of Science and Technology, Govt. of India, Deptt. of Biotechnology, (DBT) under P.G. Teaching Program in May 2020.

Statement of research interest and Future Research Plans

My research interests include Molecular Markers, gene discovery, Recombinant DNA Technology, Genetic Engineering, Functional genomics, Cell and Tissue Culture, etc. I have used molecular markers to study genetic diversity and population structures of *Pinus gerardiana* in H.P (Kant et al 2004, 2006), *Morus alba* in Leh Ladhakh (Bajpai et al. 2014), gene mapping in plants (Kant et al 2006), Molecular analysis for sex determination in dioecious seabuckthorn using genomic approaches (Kant et al 2014, 2018). I have also worked on selection of microalgae as biofuel feedstock and have identified and isolated native predominant algal species of Himachal Pradesh India, which can serve as starting material for strain development (Kant et al 2014, 2016, 2019, 2020). In the future I am interested in working functional genomics in plants, Genetic engineering and metabolic engineering using microbial/algal /plant platforms, Germplasm evaluation and extraction of bioactive phytochemicals from native, resources.

Currently I am working on validation and development of spray induced RNAi, based silencing of apple scab causing fungus. Such gene constructs expressed in *E. coli* can lead to development of spray induced RNAi, based management of the target diseases in future. I am doing this research in collaboration with Central potato research Institute Shimla. We have filed a patent from the outcome of this research work and published research papers in international journals. Recently I have also developed interest in the area of Food biotechnology and food processing

Guided >20 B.Tech, 20 M.Tech/MSc. and 07 Ph. D, Guiding 02 PhD

Administrative Responsibilities

Member Secretary Board of Studies:

- Involved in designing the course curriculum of B. Tech Biotechnology, B. Tech. Bioinformatics, M.Sc. Biotechnology, M.Sc. Biotechnology and Ph D
- Involved in various decision making processes related to smooth running of various programs of the Department
- Involved in conducting regular meeting, Preparation of agenda, minutes of meetings and other arrangements for smooth conduct of meeting

Coordinator M. Sc. Biotechnology Program

- Designed the course curriculum and syllabi of courses of M.Sc. Biotechnology
- Coordination with University authorities regarding every aspect of M.Sc. Biotechnology Program, Advertisements, Admission process, Exams, etc

Program support from DBT

- All correspondence, admissions, Purchase and disbursement of scholarship
- Member of University screening committee for GAT B routed admission in MSc Biotechnology

Member Departmental Purchase Committee

- Pre-Negotiation with various vendors of equipment and lab supplies with respect to concessions and discounts
- Calling, scrutinising of quotation and finalisation of purchases

Member Secretary Institutional Biosafety committee

- Recording keeping related to IBSC

Other responsibilities included

- Member institutional ethical committee,
- Departmental outreach, Scientific workshops in schools and colleges
- Arranged and Coordinated Academic visit of students
- DPMC member of PhD students
- Departmental stock verification committee
- University stock verification committee

- Member lab staff training

Specific Activities

1. Organized Science and Engineering workshop at DAV Saraswati Nagar Rohru, 12th Oct. 2017
2. Organised a Guest Lecture of lecture: Dr. Debasis Pattanayak Principal Scientist ICAR-National Research Centre on Plant Biotechnology Plant Genetic Engineering: Present Status and Future Trends 16 Dec. 2017
3. Represented JUIT at state level workshop in “National Biodiversity Action Plan (NBAP, National Biodiversity Targets (NBT) and sixth National Report to Convention on Biological Diversity” at Regency Hall, Hotel Holiday Home Shimla 9th Feb., 2018. HIMCOSTE and HP Biodiversity Board
4. Participated and Represented JUIT at the launch workshop of HIMCOSTE Project “Studies on improving livelihood generation through scientific interventions in *Pinus gerardiana* Wall. and important Wild Mushrooms in Himachal Pradesh” 23rd July 2018
5. Coordinated: The tour and academic activities of faculty and Student visit of Sambalpur University, Odisha: Three faculty and 14 MSc. Biotechnology students Visited JUIT 27Feb. To 2nd March 2018
6. Participated and Represented JUIT at “ Biosafety capacity Building Workshop” at UHF Solan organised by MoEFCC and BCIL 6 March 2018 MoEFCC and BCIL
7. Coordinated and conducted workshop on “Biotechnological Techniques at Govt. Degree College Sanjauli” Preparation of detailed itinerary and program, Necessary approval at JUIT, Coordinated for movement Departmental staff research scholars and lab equipment.
8. Coordinated and arranged one day workshop on “Biotechnological Techniques at St. Bede’s College Shimla, Preparation of detailed itinerary and program, Necessary approval at JUIT, Coordinated for movement Departmental staff research scholars and lab equipment.
9. Member, Advisory Committee, Chaired a Session in: International Conference on “Recent Trends in Biotechnology and BioInformatics” August 01 - 03, 2019, Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology.
10. Chaired a session in a virtual international conference on “Technologies for Environmental Sustainability and Smart Agriculture” Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology. September 18 & 19, 2020.
11. Conducted meetings of the Departmental level Committee (DLC) for online teaching of Deptt.

12. Delivered a Lecture and organized quiz w.r.t National Science Day celebration at GSSS Panjgail, Bilaspur H.P. Day Feb 2022.
13. Delivered a Lecture and organized quiz w.r.t National Science Day celebration at GSSS Barmana, Bilaspur, H.P. Feb 2022.
14. Represented JUIT in CM Conclave of Chief Ministers and Parliamentarians of 12 Himalayan states held in Shimla on 5 Oct 2018.
15. Participated and represented JUIT in Sparc, Meeting at IIT Mandi, On 24-25 Oct 2018
16. Delivered an invited lecture at International conference on Molecular Biology of stress response in phototrophs; IGNTU Amarkantak, MP
17. Arranged and Coordinated Departmental visit of Students from Govt college Sanjauli Students and Faculty Members, 11 Sept 2018, Preparation of detailed itinerary and program, Necessary approval at JUIT, Permission and arrangement of Lunch at Annapurna, Coordination for movement of student groups in different labs
18. Organized and Coordinator, Summer training on Molecular Biology and Genetic Engineering Modules, June 2022
19. Chaired a session in 6th International conference on ‘Signal Processing, Computing and Control (ISPCC-2k21), sponsored by IEEE Delhi section (Record No # 53510), on October 07 -09, 2021 at Jaypee University of Information Technology, Wagnaghat, Solan, H.P.
20. Organizing Committee member and chaired a session, In Conference “Renewable Energy for Sustainable Environment” (RESE-2021) Department Of Biotechnology And Bioinformatics at Jaypee University of Information Technology Wagnaghat, Solan - INDIA (173234). 24th and 25th November 2021
21. Organised a invited talk of Mr. Girish Minocha, CEO and MD of Minchys Food Products Shoghi on 16 Dec. 2021
22. Organised a invited talk of Prof Tek Chand Bhalla, on 5 March 2022
23. Organised meeting of Advisory Committee meeting of DBT PG Teaching Program, and made a presentation on 4 July, 2022
24. Participated in the induction program of the University in 2018, 2019, 2022
25. Organized, Induction Program For PG Students of Department 7-10 Sept 2022
26. Coordinator Anti-ragging duties 26th Sep-2022 to 02 nd OCT. 2022

27. Chaired a session in International Conference on Emergent Converging Technologies and Biomedical Systems, September 23 -24, 2022, (ETBS – 2k22)
28. Organised BoS meetings, Prepared agenda, minutes of meetings from 2017- 2022, all necessary documentations and presented the agenda as member secretary.
29. Prepared agenda items of the Department for ACM meetings from 2017-2022
30. Students mentoring of allocated students and in low scoring students in courses
31. Issuing LOR to students, and filling online recommendation questionnaire of various foreign Universities related to admissions of our students.
32. Evaluation of PhD thesis of students from other Universities
33. Conducting Practical examination of courses of programs like MSc Biotechnology, MSc Microbiology of external Universities
34. Paper setter of various UG, PG and PhD programs of external Universities.

Inter institutional collaboration (National & International) developed

- Contributed as one of stakeholder in the MoU between JUIT, and DIHAR, DRDO, Leh.
- Played Key role in establishment of Linkages with CPRI Shimla and Execution of MoU
- Handled and Handling an inter-institutional projects/ externally funded as PI

Areas of expertise include

<ul style="list-style-type: none"> ● Conceive, Strategy development, Designing experiments and Management of research Projects ● Technology Development and implementation ● DNA RNA isolation and purification from various sources, cDNA, Gene/DNA fragment amplification ● Genomics, Molecular breeding, DNA Markers analysis and development ● DNA sequencing, Nucleic acid hybridization, Plasmid/Vector, Gene cloning techniques, ● Gene expression analysis 	<ul style="list-style-type: none"> ● Enzyme and cell based assays ● Micro-propagation of plants, In vitro Selection of cell lines ● Isolation, characterization of microalgae: media nutrient and stress optimization for optimum productivity ● Genetic engineering of Microbial and plant cells ● Problem solving, planning and organization, Flexible Confident ● Instruments/Equipments/Facilities Handled: Spectrophotometers, Electrophoresis units, Thermal Cycler, Gel Doc systems, Ultra centrifuges, HPLC, Cell/tissue culture Facility, Growth Chambers/Green Houses,
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Education

<i>Dec 1999 – Jul 2002</i>	Ph. D, Biotechnology, Dr. Yashwant Singh Parmar University of Horticulture and Forestry Solan, India
<i>Aug 1996 – Dec. 1998</i>	M.Sc., Biotechnology, Dr. Yashwant Singh Parmar University of Horticulture and Forestry Solan, India
<i>Aug 1992 – Jun 1996</i>	B.Sc., Horticulture, Biotechnology, Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Solan, India

Experience:

A. Teaching and Research experience: 21 Years

Professor: 1 July 2024 till date

Associate Professor: Sept. 2017 to Till date >5 Years

Assistant Professor Grade I, II, Senior Grade: July 2006– Aug 2017, 11 Years 01 Months

Jaypee University of Information Technology, Department of Biotechnology and Bioinformatics Solan, India, Guiding and Teaching Doctorate, Postgraduate (M.Tech.) and undergraduate (B.Tech.) biotechnology students and other Administrative and Departmental Responsibilities

- Taught diverse courses on biotechnology to B.tech, M.tech and Ph.D Biotechnology students
- B.Tech and M.Tech course curriculum development at university level
- Guided >20 B.Tech 12 M.Tech/MSc and 07 Ph. D, Guiding 02 PhD
- Genetic diversity, Adaptation, population genetics and fruit quality characteristics of *Morus alba* L. from trans-Himalayan Ladakh region
- Molecular analysis for sex determination in dioecious seabuckthorn using genomic approaches
- Growth kinetics; Specific growth rate, Doubling per day and Doubling time
- Collection, Identification and Screening of Potential lipid producing microalgae for Lipid content, Biomass and lipid productivity
- Standardisation of optimum media, nutrients and stress condition for selected algae strains for high lipid productivity, Fatty acid profile analysis of algal oil
- Member secretary Institutional biosafety committee, member institutional ethical committee, purchase committee, curriculum development and revision committee

Project Scientist Jun 2004 – Jul 2006: 2 Years

CSK HPKV Palampur H.P. India , Advanced Centre for Hill Bio resources and Biotechnology, Palampur, India DST funded SERC fast track scheme for young scientists 'Identification of DNA markers linked to rust resistance gene in lentil' -Fine mapping and linkage studies of rust resistance gene in lentil.

- Screening of RAPD and development of SCAR marker for rust resistance locus in lentil
- Crossing of selected genotypes for Development of mapping F 2 population
- Fund management Purchase of supplies and equipments related to the projects

Research Associate Oct 2002 – Dec 2003 1 year 3 months

CSK HPKV Palampur, Department of Agricultural Biotechnology Palampur, India

- Screening of RAPD marker for rust resistance locus in lentil

Research Associate Jul 2002 – Sep 2002

National Bureau of Plant Genetic Resources, New Delhi, India

- Standardisation of cryopreservation techniques for long term conservation of medicinal yam'- Tissue culture and Cryopreservation of medicinal yams.

Research Fellow Nov 1998 – Dec 2001 3 Years 01 months

Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Department of Biotechnology Solan, India DBT funded project 'Strengthening of tree biology research'

- Plant tissue culture of woody plants
- Morphological, Biochemical and DNA markers to study genetic diversity and population structure of *Pinus gerardiana*

B. Research Guidance:

Programmers	Number
M. E. / M. Tech./ M. Ph. / M. Phil	20
Ph. D (Awarded)	07
Ph. D perusing	02


C. Research/Academic Projects:

Category	Title	Completed	Sponsoring Agency	Amount
Major	Development and Testing of nano-particleconjugates formulations of selected broad-spectrum fungicide used in Agriculture	Ongoing	Kanpur Fertilizer ltd	5 Lakh
Major as Co-PI	"CO-phillic nanotextured surface immobilized enzymes for expedited microalgal biomass production through CO ₂ enrichment and production of eco-friendly pigments"	Ongoing	HMCOTE, Govt of H.P.	6.8 Lakh
Major	DBT PG Teaching Program		DBT Govt of India	1.30 Cr
Major	Identification DNA markers linked with rust resistance genes in lentil.	2007	DST Govt of India	15 lakh
Major	Identification and validation of sex linked markers in seabuckthorn	2012-2015	DRDO Ministry of Defense Govt. India	10 lakh
Major	Transcriptome analysis of male and female flower buds of sea buckthorn	2015-17	DRDO Ministry of Defense Govt. India	10 lakh

Innovation/Achievements/Contributions	Validation
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<p>1. DBT supported PG Teaching Program</p> <ul style="list-style-type: none"> ● I was instrumental as Program coordinator of MSc program in getting major financial support from Deptt. of Biotechnology, (DBT), Ministry of Science and Technology, Govt. of India under PG Teaching Program (2020-2025). (Submitted Budget, INR 1.71Cr.). Getting this prestigious grant is testimony to the quality of Biotechnology education in India for the last 25 years. Only two Private Universities amongst 62 were supported under this program. ● It is expected that winning of such a grant from DBT Govt of India will have a positive impact on image projection of the university at many platforms including inspections/visits of NAAC, NBA, AICTE and State Regulatory bodies. ● The Program and department got space at different platforms amongst various premier institutes, including IITs, Central and State Universities throughout India. 	<p>Sanction Letter from DBT</p> <p>Service Function documents</p>
<p>2. Initiative contribution in the area Plant Tissue culture Cell culture Technologies</p> <ul style="list-style-type: none"> ● Developed good protocol for direct regeneration and Agrobacterium mediated transformation of Tomato, Contributed in development of micro propagation protocols of many woody plant species such as <i>Acacia catechu</i>, <i>Alnus sp.</i>, <i>Morus alba</i> etc. ● Took Initiative to establish algal culture and Biotechnology laboratory at Jaypee University, University Solan HP ● Always took initiative to personally collect samples of plant/algae from geographically difficult tracts like Kinnaur, Lahul and Spiti districts of HP and LehLadhakh are of J&K. 	<p>Evident from Publications in High impact factor Journals</p>
<p>3. Testing Efficacy of dsRNA in management of Late Blight of Tomatoes; Development of spray induced RNAi for control of Apple scab (<i>Venturia inaequalis</i>)</p> <ul style="list-style-type: none"> ● Took up this HP specific research initiative in collaboration with CPRI Shimla ● The RNAi based dsRNA molecules and their application in crop plants is non-transgenic approach and it could circumvent the limitations of transformation and public concerns about the GMOs in future. ● In future, dsRNA will become a new plant protection strategy as a viable next generation fungicides/biomolecule for food safety and agricultural production in an environmentally friendly and sustainable manner. I am currently working on two important crops and their limiting disease in Himachal Pradesh in collaboration with CPRI Shimla. 	
<p>4. Gender differences in antioxidant properties, phenotypic plasticity and freeze tolerance in Seabuckthorn (<i>Hippophaerhamnoides</i>L.) along an altitudinal gradient in trans-Himalayan Ladakh, India</p> <p>Through this study we could validate following, which would definitely have profound impact on plantation, harvesting and utilisation of seabuckthorn in northwestern Himalayas Seabuckthorn shows sexual differences and seasonal</p>	<p>Evident from Publications in High impact factor Journals</p>

<p>variation in total phenolics and antioxidant capacities in <i>Hippophae rhamnoides</i> leaves;</p> <ul style="list-style-type: none"> ▪ Male exhibited significantly higher TPC and FRAP ▪ Significant seasonal variation in TPC and TAC was observed in both sexes ▪ October is best time for harvesting SBT leaves ▪ Result obtained in this study can be considered for harvesting of SBT leaves for extraction of health promoting compound and product development ▪ Females suffer more from negative effects of freezing than males ▪ It is suggested that male plants should be planted in stressful environmental condition for better survival rate 	
<p>5. Genetic Diversity studies in plants and DNA Marker development</p> <ul style="list-style-type: none"> ● Used three different approaches to study genetic diversity and heritability of economical traits in <i>Pinus gerardiana</i>; the results obtained from each have different applications in theory and practice. ● Was instrumental in setting up molecular biology lab at Jaypee University, Wanknaghat ● Our group did comprehensive studies on <i>Morus alba</i> to assess genetic diversity, population structure, gene flow heritability and interaction of traits with altitude in trans-Himalayan Leh and Ladakh. A huge amount of data generated, published in different international Journals of repute, with total cumulative impact factors of 6.1. ● Markers development: Tested and Validated Applicability of sex linked SCAR markers developed for <i>H. rhamnoides</i> in <i>H. salicifolia</i> and <i>H. tibetana</i> to avoid de-novo marker development, saving both the time and resources. Also did a gene expression study identify seabuckthornhomologous gene, which may have role in sex determination in seabuckthorn. ● I was instrumental in the course and fine mapping of RAPD and SCAR markers for rust resistance in lentils. 	<p>Evident from Publications in High impact factor Journals</p>
<p>6. Fruit quality, phytochemical and diversity studies of apricot (<i>Prunus armeniaca</i>L) along an altitudinal gradient in trans-Himalayan Ladakh, India Though there were many aspects of this study but would like to highlight the direct impact on the economy of the stakeholders.</p>	<p>Evident from Publications in High impact factor Journals and evidence as presented</p>

 <p>Raktsey Karpo, a local variety of apricot, as the sweetest apricots in the world with unique characteristics. The message has reached the local farmers through awareness programmes, and we have witnessed 30-40% jump in the price of Raktsey Karpo fruits in Leh market the same year. It is strongly felt that GI registration of Raktsey Karpo would further add value to the unique resource of Ladakh and will immensely help to improve the socio-economic conditions of the farmers.</p>	
<p>7. Genome and Metabolomic based approaches to authenticate <i>Swertia chirata</i> from its adulterants and their comparative evaluation against hypoxia induced oxidative stress IN RATS .</p> <p>The outcome of this work would have significant impact on conservation marketing and utilization of <i>Swertia chirata</i> which is an endangered plant of western Himalayas.</p> <ul style="list-style-type: none"> ▶ PsbK-I region was able to discriminate <i>Swertia chirata</i> from its adulterants ▶ Marker compounds are present in the species that can discriminate <i>Swertia Chirata</i> from its adulterants ▶ Based on chemometrics and statistical analysis <i>Swertia Cordata</i> is found more closely related to <i>Swertia Chirata</i> when compared to <i>Andrographis paniculata</i> ▶ Hypoxia is associated with the development of hepatic damage, enhanced oxidative stress, altered hepatic morphology and disrupted hepatic biochemical profile in Wistar rats. Hydroalcoholic extract of <i>S. chirata</i> demonstrated marked hepatoprotective potential which was associated with the attenuation of hypoxia-mediated oxidative stress. Our finding provides an experimental justification for the traditional use of this plant during liver disorders. ▶ Hypoxia is associated with the development of memory dysfunction, enhanced oxidative stress, and neuronal damage in Wistar rats. The hydroalcoholic extract of <i>S. chirata</i> and <i>S. cordata</i> improved memory functions and demonstrated comparable neuroprotective potential 	<p>Evident from Publications in High impact factor Journals</p>
<p>8. Germplasm characterization and collection:</p> <ul style="list-style-type: none"> ● Identified, isolated and characterised native predominant algal species of Himachal Pradesh with high lipid production potential. 	<p>Evident from Publication</p>

<ul style="list-style-type: none"> ● The selected isolates were used to standardise media, stress and nitrogen sources for higher lipid productivity. ● Also did studies on expression of genes, transcriptome analysis to figure out the gene responsible for higher lipid content. We have got encouraging results and published in a high impact factor Journal (Algal Research, 5.0 PLOS one 3.53). 	s in High impact factor Journals
<p>9. Leadership attributes: Demonstrated with following accomplishments</p> <p>Inter institutional collaboration (National & International) developed</p> <ul style="list-style-type: none"> ● Contributed as one of the stakeholders in the MoU between JUIT, Solan and DIHAR, DRDO, Leh. ● Played Key role in establishment of Linkages with CPRI Shimla(MoU) and Execution of MoU ● Handled and Handling an inter-institutional projects/ externally funded as PI ● Involved in organising and conducting meetings, compiling minutes of meetings as Member and Member Secretary of different institutional committees in various capacities like, BoS IBSC, IEC, Curriculum Design committee, Departmental Purchase committee, ● Shouldering the responsibility of Program coordinator of MSc program 	Service function Proofs

HONOURS AND AWARDS

- Merit Position in HPBSE Dharmshala H.P.India in Matriculation Examination.
- Recipient of ASPPE Agricultural Research Foundation Fellowship for Masters Research (1997-1999).
- Received best paper Award during the satellite Seminar on Biotechnical Approaches for Crop Improvement: Opportunities and Challenges at HPKVV, Palampur (September, 2003).
- Recipient of SERC Fast Track Fellowship under young scientist scheme from Department of Science and technology, Ministry of Science and technology, Govt. of India.
- Brandis Award for best paper of the year (2007) in Indian Forester. ICFRE Deheradoon

References

1. Dr. S.K. Chakrabarti, Vice Chancellor at Uttar Banga Krishi Vishwavidyalaya, Cooch Behar, West Bengal, Former Director Central Potato Research Institute Shimla India. 171001 Email: skc_cpri@yahoo.co.in, directorcpri@gmail.com, 91-940001400

2. Dr T S Bhalla, Professor Emeritus, Former Professor and Head, Department of Biotechnology, Himachal Pradesh University Shimla, Email: bhallatc@rediffmail.com, phone no. 9418439910.
3. Dr. PK Naik Professor, School of Life Sciences, Sambalpur University, JyotiVihar, Burla Sambalpur, Odisha, India – 768 019 Mobile: 91-9479268802 Email: pknaik1973@gmail.com, pknaik1973@suniv.ac.in
4. Dr Krishan Kumar Professor Department of Fruit Science House No.16, Type-IV, UHF Campus Nauni, Solan 173 230 (HP) Tel. 0091 -1792 – 252301 drkrishankumar@gmail.com; fruitbreeding@gmail.com

PUBLICATIONS

Research Papers: 46

Book Chapters: 07

Conference Presentations: 25

LIST OF PUBLICATIONS

Journal Publications

1. **S. Bhagta**, V. Bhardwaj and **A. Kant**, “Exogenous dsRNA trigger RNAi in *Venturia inaequalis* resulting in down regulation of target genes and growth reduction,” Molecular Biology Reports, vol. 50, pp. 8421–8429 (2023). Doi: 10.1007/s11033-023-08736-3. (IF-2.742)
2. **S. Bhagta**, S. Siddappa, V. Bhardwaj and **A. Kant**, “ Comparative expression profile of selected genes in *Venturia inaequalis* Cooke (Wint.) infecting apple fruits and leaves.” Gene Reports, vol. 36, pp. 101961 (2024). Doi: 10.1016/j.genrep.2024.101961. (IF-1.37)
3. Jagdish S Arya , Narendra Singh , Harvinder Singh , Anil Kant, Feb 2022, Onion genotypes Red Cereole, followed by Katarina Red 3 and Katarina Red 7 are superior with respect to post harvest quality parameters, Australian Journal of Crop Science, 16(02), 162-170, doi: 10.21475/ajcs.22.16.02.3169
4. Swati Sharma, Anil Kant Thakur, Surajbhan Sevda, Tejraj M.Aminabhavi, Vijay Kumar Garlapati (2023). A waste-based circular economy approach for phycoremediation of X-ray developer solutions. *Environmental Pollution*, 316 (1), pp. 120530-, DOI: <https://doi.org/10.1016/j.envpol.2022.120530> [Impact factor 9.98].
5. Anwasha Chowdhury , Monika Choudhary, Vidushi Sharma, Anil Kant, Jitendraa Vashist, Vijay Kumar Garlapati, Jesus Simal-Gandara, (2023), Exploration of Indian Traditional recipe “Tarvaani” from the drained rice gruel for nutritional and probiotic potential. International Journal of Gastronomy and Food Science Volume 31, March 2023, 100670, <https://doi.org/10.1016/j.ijgfs.2023.100670> [Impact factor 3.194]

6. Shagun Sharma, Astha Singh, Swati Sharma, Anil Kant Thakur, SurajbhanSevda, Mohammad J. Taherzadeh, Vijay Kumar Garlapati (2021). Functional Foods as formulation ingredients in beverages: Technological Advancements and Constraints. *Bioengineered*, 12 (2), 11055-11075(6.8)
7. Rakesh Singh Gour, Vijay Kumar Garlapati & Anil Kant, Jan 2020 *Effect of Salinity Stress on Lipid Accumulation in Scenedesmus sp. And Chlorella sp.: Feasibility of Stepwise Culturing*, *Current Microbiology* (Online first), DOI 10.1007/s00284-019-01860-z (2.343)
8. Avilekh Naryal, Stanzin Angmo, Phunchok Angmo, Anil Kant, O. P. Chaurasia Tsering Stobdan, April 2019 Sensory attributes and consumer appreciation of fresh apricots with white seed coats *Horticulture, Environment, and Biotechnology* <https://doi.org/10.1007/s13580-019-00146-4> 2211-3460
9. Rinchen Tsewang Singh Narendra, Maurya Samar Bhadur, Kant Anil, 2019, Mineral content estimation in *Atriplex hortensis* L., an indigenous vegetable of Trans-Himalayan region of Ladakh, India, *Research on Crops* , Vol 20 (1) 135-140, 10.31830/2348-7542.2019.019
10. Avilekh Naryal, Diskit Dolkar, Ashwani Kumar Bhardwaj , Anil Kant, O.P. Chaurasia , and Tsering Stobdan, Jan 2020, Effect of Altitude on the Phenology and Fruit Quality Attributes of Apricot (*Prunus armeniaca* L.) Fruits, *Defence Life Science Journal*, Vol. 5, No. 1, January 2020, pp. 18-24, DOI : 10.14429/dlsj.5.14656
11. Avilekh Naryal, Somen Acharya Ashwani Kumar Bhardwaj, Anil Kant, O.P. Chaurasia, Tsering Stobdan, 2019, Altitudinal effect on sugar contents and sugar profiles in dried apricot (*Prunus armeniaca* L.) fruit, *Journal of Food Composition and Analysis* Volume 76, March 2019, Pages 27-32, <https://doi.org/10.1016/j.jfca.2018.11.003> (08891575) (4.52)
12. Avilekh Naryal, Pushpender Bhardwaj, Anil Kant, O. P. Chaurasia, Tsering Stobdan, Altitude and Seed Phenotypic Effect on Amygdalin Content in Apricot (*Prunus armeniaca* L.) Kernel 2019 *Pharmacogn J.* 2019; 11(2): 332-337 [10.5530/pj.2019.11.49\(09753575\)](https://doi.org/10.5530/pj.2019.11.49(09753575))
13. Kritika Kaushal, Harvinder Singh, Anil Kant, 2019 Hydrochloric extract of *Swertia Chirata* and *Swertia Chordata* attenuates hypoxia mediated memory dysfunction by improving neurological survival in wistar rats *Asian J Pharm Clin Res*, Vol 12, Issue 2, 356-362

14. Kritika Kaushal, Harvinder Singh, Anil Kant Thakur, 2019 Antioxidant and hepatoprotective effect of swertiachirata on hypoxia-induced oxidative stress in wistar rats Asian J Pharm Clin Res, Vol 12, Issue 1, 2019, 76-80, [2455-3891/0974-2441](https://doi.org/10.31824/2455-3891/0974-2441)
15. Arya, Jagdish Singh & Singh, Narendra & Singh Arya, Preeti & Kant, Anil 2018 Comparative performance of onion genotypes using 'Sets and Seedlings' as planting material at Leh cold desert. Journal of Applied Horticulture(0972-1045), 2018, 20, (1) 64-68
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3. **Kant Anil**, Sharma S.K. and Gupta Dorin 2008,: *Marker Assisted Selection and Breeding: Potentials and its Application in Some Major Crops*. In: Crop Improvement Strategies and Applications. I. K. International New Delhi. Pp 9788189866785
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7. **Kant A.** and Srivastava D. K., 2003: *Plant regeneration and Agrobacterium mediated gene transfer studies in tomato (Lycopersicon esculentum Mill.)* In: Biotechnological Strategies in Agro processing (S.S. Marwaha and I.K. Arora Editors). pp361-369. Asiatech Publishers Inc. New Delhi. ISSN81-87680-09-1

Orientation/Refresher Courses, Summer/Winter Schools, Faculty Development Programmes, Seminars/Conferences/Workshops Attended/ Organized

National Symposium on Computational Systems Biology NSCSB - March 18-20, 2016, Department of Biotechnology and Bioinformatics (JUIT), H.P. National Network for Mathematical and Computational Biology, Department of Mathematics Indian Institute of Science Bangalore 560 012

Workshop on Statistical Techniques in Biological and Medical Sciences

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1. Singh Rakesh **Kant Anil**, Chawla Aseem, Chauhan R.S. 2013 Amplified Partial 18S rRNA gene sequence of three microalgae; *Scenedesmus quadricauda*, *Scenedesmus dimorphus* and *Chlorella spp* Sequences ID KC790428 KC790429 KC790430 KC790431 KC790432 KC790433 KC790434 KC790435
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