Dr. Anil Kant

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Current Location: Himachal Pradesh India

I did Doctorate, Master (with Thesis) and in biotechnology and four years professional B.Sc Horticulture with Plant Biotechnology as elective module. I 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 lentil under SERC fast track scheme for young scientists from 2004-06. I am working in the Department of Biotechnology and Bioinformatics, at Jaypee University of Information Technology Waknaghat Solan H.P. India since 2006. My primary responsibilities includes teaching and Guiding Doctorate, Postgraduate (M.Sc, M.Tech.) and undergraduate (B.Tech.) biotechnology students.

Teaching Interests

I have been associated with the B.Tech and M.Tech, M.Sc teaching, course curriculum development, as member of various committees, Member secretary of Board of studies of Department and Program coordinator of M Sc Biotechnology Program. I was instrumental in getting the support from Ministry of Science and Technology, Govt. of India, Deptt. of Biotechnology, (DBT) under P.G. Teaching Program for M.Sc. Biotechnology Program (INR 1.30Cr.). This program is initially valid for 5 years (2020-2025). This is a prestigious grant and testimony quality of Biotechnology education in India for last 25 years. I teach different diverse courses to B.Tech. M.Tech. MSc and Ph.D biotechnology students viz Molecular Biology, Genetic Engineering, Recombinant DNA technology, Food Processing and Engineering Plant Genetic Engineering, Food and Agricultural Biotechnology, Industrial Crops and products, Cell culture techniques, Plant tissue culture, Biochemistry, Research Methodology and Data Analysis, Pharmaceutical Biotechnology etc.

Research Interest

My research interests include Molecular Markers, Genomics and Functional genomics, Genetic Engineering, 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 approach (Kant et al 2014). 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). In future I am interested to work functional genomics in plants, genetic engineering and metabolic engineering using microbial/algal /plant platforms for the production of useful products, evaluation and extraction of bioactive photochemical from native, underutilized and medicinal plants. Currently I am working on development of spray induced RNAi, based target ds RNA expressed from a construct in *E. coli,* a step forward to manage devastating fungal diseases of horticultural plants in Himachal Pradesh viz. apple scab. I am doing this research in collaboration with Central potato research Institute Shimla. In the endeavor we are interested to accomplish gene silencing of important gene playing key role in infection cycle of the pathogen, hence, reducing severity of disease. Recently I have also developed interest in the area of Food biotechnology and food processing, as result of my basic training as Horticulture graduate. I think it has immense industrial potential in state of H.P. I am interested in consultancy services in this area as well.

Administrative Responsibilities

Member Secretary Board of Studies:

- Involved in designing of 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, Admission process, Exams, etc
- Coordinator Program support from DBT: All correspondence, admissions, purchase and disbursement of scholarship

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 finalization of purchases

Member Secretary Institutional Biosafety committee

- Recording keeping related to IBSC
- Organizing annual meetings

Other responsibilities included

- Arranged and Coordinated Academic visit of students
- DPMC member of PhD students
- Departmental stock verification committee
- Member lab staff training

Inter institutional collaboration (National & International) developed

- Contributed as one of key stake holder 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

Areas of expertise include;

- 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
- 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,

Education

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

Experience:

A. Teaching and Research experience:

Associate Professor: Sept. 2017 to Till date
Assistant Professor Grade I, II, Senior Grade: July 2006– Aug 2017
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, MSc and Ph.D Biotechnology students
- B.Tech, M.Sc. and M.Tech course curriculum development at university level
- Guided 17 B.Tech 12 M.ech 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
- Standardization of optimum media, nutrients and stress condition for selected algae strains for high lipid productivity, Fatty acid profile analysis of algal oil

Project Scientist, Jun 2004 – Jul 2006
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
CSK HPKV Palampur, Department of Agricultural Biotechnology Pālampur, 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

- Standardization 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*

Research Guidance:

Programmes	Number
M. E. / M. Tech./ M. Ph. / M. Phil	17
Ph. D (Awarded)	07
Ph. D perusing	02

Research/Academic Projects:

Category	Title	Completed	Sponsoring Agency	Amount
Major	DBT PG Teaching Program	2020	DBT Govt of India	1.30 Cr
Major	Identification DNA markers linked with rust resistance gene in lentil.	2007	DST Govt of India	15 lakh
Major	Identification and validation of	2012-2015	DRDO Ministry of	10 lakh

	sex linked markers in seabuckthorn		Defense Govt. India	
Major	Transciptome analysis of male and female flower buds of seabuckthorn	2015-17	DRDO Ministry of Defense Govt. India	10 lakh

Initiatives /Achievements/Contributions

1. DBT supported PG Teaching Program

- I was instrumental as Program coordinator, starting MSc Biotechnology Program and then getting a major financial support from Deptt. of Biotechnology, (DBT), Ministry of Science and Technology, Govt. of India under PG Teaching Program (2020-2025).

2. Initiative / contribution in the area Plant Tissue culture Cell culture Technologies

- 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 *Acacia catechu*, *Alnus sp*., *Morus alba* etc.
- Took Initiative to establish algal culture and Biotechnology laboratory at Jaypee University, University Solan HP
- Always took initiative to personally collect samples plant/algae from geographically difficult trains like Kinnaur, Lauhul and Spiti districts of HP and Leh Ladhakh are of J&K.

3.Testing Efficacy of dsRNA in management of Plant diseases: Development of spray induced RNAi for control of Apple scab (*Venturia inaequalis*)

- 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 new plant protection strategy as a viable next generation fungicides / bio molecule for food safety and agricultural production in an environmental friendly and sustainable manner.

4. Gender differences in antioxidant properties, phenotypic plasticity and freeze tolerance in Seabuckthorn (*Hippophaerhamnoides*L.) along an altitudinal gradient in trans-Himalayan Ladakh, India

Through this study we could validate following, which would definitely have profound impact on plantation, harvesting and utilization of seabucthorn in northwestern Himalyas. Seabuckthorn shows sexual differences and seasonal variation in total phenolics and antioxidant capacities in *Hippophae rhamnoides* leaves;

- 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

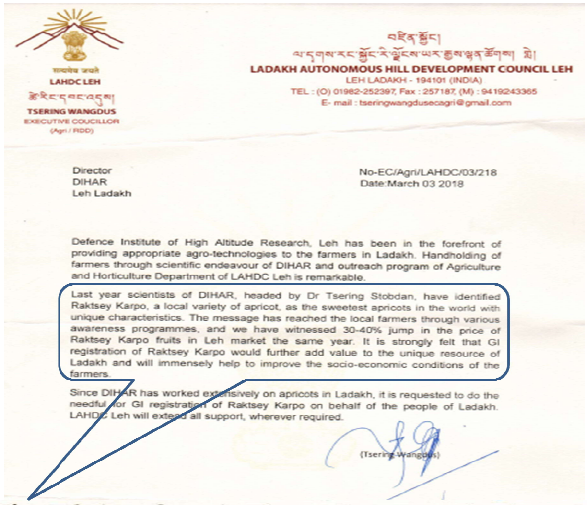
- Females suffer more from negative effects of freezing than males
- It is suggested that male plants should be planted in stressful environmental condition for better survival rate

5. Genetic Diversity studies in plants and DNA Marker development

- Used three different approaches to study genetic diversity and heritability of economical traits in *Pinus gerardiana*; the result obtained from each have different applications in theory and practice.
- Our group did comprehensive studies on *Morus alba* to assess genetic diversity, population structure, gene flow heritability and interaction of traits with altitude in trans-Himalayan Leh and Ladhakh. 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 *H. rhamnoides* in *H. salicifolia* and *H. tibetana* to avoid de-novo marker development, saving both the time and resources. Also did a gene expression study identify seabuckthorn homologous gene, which may have role in sex determination in seabuckthorrn.
- Course and fine mapping of a RAPD and SCAR marker for rust resistance in lentil

6. Fruit quality, phytochemical and diversity studies of apricot (*Prunus armeniaca*L) along an altitudinal gradient in trans-Himalayan Ladakh, India

Though there were many aspect of this study but would like to highlight the direct impact on economy of the stake holders.



LAHDC LEH
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EXECUTIVE COUCILLOR
(Agri / RDD)

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Director
DIHAR
Leh Ladakh

No-EC/Agri/LAHDC/03/218
Date:March 03 2018

Defence Institute of High Altitude Research, Leh has been in the forefront of providing appropriate agro-technologies to the farmers in Ladakh. Handholding of farmers through scientific endeavour of DIHAR and outreach program of Agriculture and Horticulture Department of LAHDC Leh is remarkable.

Last year scientists of DIHAR, headed by Dr Tsering Stobdan, have identified 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 various 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.

Since DIHAR has worked extensively on apricots in Ladakh, it is requested to do the needful for GI registration of Raktsey Karpo on behalf of the people of Ladakh. LAHDC Leh will extend all support, wherever required.

(Tsering Wangdus)

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7. Genome and Metabolomic based approaches to authenticate Swertia *chirata* from its adulterants and their comparative evaluation against hypoxia induced oxidative stress IN RATS .

The outcome of this work would have significant impact on, conservation marketing and utilization of Swertia *chirata which is an endangered plant of western Himalayas.*

- PsbK-I region was able to discriminate *Swertia chirata* from its adulterants
- Marker compounds are present in the species that can discriminate *Swertia Chirata* from its adulterants
- Based on chemometrics and statistical analysis *Swertia Cordata is* found more closely related to *Swertia Chirata when compared to Andrographis paniculata*
- 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 *S. chirata*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 the liver disorders.
- Hypoxia is associated with the development of memory dysfunction, enhanced oxidative stress, and neuronal damage in Wistar rats. The hydroalcoholic extract of *S. chirata*and *S. cordata* improved memory functions and demonstrated comparable neuroprotective potential

8. Germplasm characterization and collection:

- Identified, isolated and characterized native predominant algal species of Himachal Pradesh with high lipid production potential.
- The selected isolates were used to standardize 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. Got encouraging results and published in high impact factor Journals

HONORS 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

LIST OF PUBLICATIONS

Journal Publications

1. 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. Avilekh NaryalStanzin AngmoPhunchok Angmo Anil Kant O. P. ChaurasiaTsering 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
3. 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

4. AvilekhNaryal ,DiskitDolkar , Ashwani Kumar Bhardwaj , Anil Kant, O.P. Chaurasia , and TseringStobdan, 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

5. AvilekhNaryalSomen AcharyaAshwani Kumar BhardwajAnil KantO.P.ChaurasiaTseringStobdan, 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)

6. AvilekhNaryal, Pushpender Bhardwaj1, Anil Kant, OP Chaurasia1, TseringStobdanAltitude and Seed Phenotypic Effect on Amygdalin Content in Apricot (*Prunus armeniaca*L.) Kernel 2019 Pharmacogn J. 2019; 11(2): 332-33710.5530/pj.2019.11.49(09753575)

7. Kritika Kaushal, Harvinder Singh, Anil Kant, 2019 Hydrochloric extract of Swertia Chirata and Swertia Chordata atteneuates hypoxia mediated memory dysfunction by improving neurological survival in wistar rats Asian J Pharm Clin Res, Vol 12, Issue 2, 356-362

8. 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

9. 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

10. DolkarPhuntsog, DolkarDiskit,Kant Anil,Chaurasia O.P.,StobdanTsering. 2019 Gender differences in phenotypic plasticity and adaptive response of Seabuckthorn (*Hippophaerhamnoides* L.) along an altitudinal gradient in trans-Himalaya. Journal of Berry Research (18785093, 18785123)vol. 9, no. 1, pp. 1-10, 2019

11. Ankush Bansal, Mehul Salaria, Tashil Sharma, Tsering Stobdan, Anil Kant Feb 2018 Comparative de novo transcriptome analysis of male and female Sea buckthorn, 3 Biotech.(2190-5738)11 (02) 96, https://doi.org/10.1007/s13205-018-1122-5.

12. Jagdish Singh Arya, Narendra Singh, Preeti Singh Arya, Anil Kant (Feb.2017) Morphological variations and relationship among onion germplasm for quantitative and qualitative traits at trans-

Himalaya Ladakh, India. Australian Journal of Crop Science,(**1835-2707),** 11(03):329-337 (2017)doi: 10.21475/ajcs.17.11.03.pne369

13. Jha, D., Jain, V., Sharma, B., **Kant, A.** and Garlapati, V. K. (2017), Microalgae-based Pharmaceuticals and Nutraceuticals: An Emerging Field with Immense Market Potential. Chem Bio EngReviews(2196-9744) Vol. 4 (4), 257–272. doi:10.1002/cben.201600023

14. DolkarPhuntsog, DolkarDiskit, Kant Anil,Chaurasia O.P.,StobdanTsering 2017 Gender specific seasonal pattern and altitudinal variation in freeze tolerance responses of Seabuckthorn (*Hippophaerhamnoides* L.) 10.3233/JBR-170165 Journal of Berry Research (18785093, 18785123)vol. 7, no. 4, pp. 291-297, 2017

15. Rakesh Singh Gour, Madhusudan Bairagi, Vijay Kumar Garlapati& Anil Kant (2018): Enhanced microalgal lipid production with media engineering of potassium nitrate as a nitrogen source, Bioengineered(2165-5987), 9, (01,) 98–107DOI: 10.1080/21655979.2017.1316440

16. DolkarPhuntsog, DolkarDiskit, AngmoStanz, KantAnil, Kumar Bhuvnesh,Stobdan, Tsering (Feb.2017). Sexual differences and seasonal variations in total phenolics and antioxidant properties in *Hippophaerhamnoides* leaves. Journal of Berry Research,(18785093, 18785123) vol. 7, no. 1, pp. 61-69, 2017. DOI 10.3233/JBR-170147
17. Akanksha Bajpai Vijay Kumar Garlapati, Rakesh Singh Gour and Anil Kant(March 2017) Evaluation of Microalgae from Himalayan region for nutraceutical activities Int J Pharm Bio Sci (0975-6299),2017 Jan ; 8(2): (B) 174-178
18. Gour RS, Chawla A, Singh H, Chauhan RS, **Kant A** (2016) Characterization and Screening of Native *Scenedesmus* sp. Isolates Suitable for Biofuel Feedstock. PLoS ONE (19326203) 11(5): e0155321. doi:10.1371/journal.pone.0155321

19. Chandan Singh, Jatindra K. Pradhan, Sonali Singh, Pradeep K. Naik, **Anil Kant**, and Harvinder Singh (June 2015) Biosynthesis and Antibacterial-Activity of Silver and Gold Nanoparticles Using Liquorice Root: A Green Chemistry Approach J. Colloid Sci. Biotechnol. 4, 147-152.(2164-9642, 2164-9634)
20. Tamanna Sharma, Rakesh Singh Gour, **Anil Kant**, Rajinder Singh Chauhan, (Nov., 2015), Lipid content in Scenedesmus species correlates with multiple genes of fatty acid and triacylglycerol biosynthetic pathways, Algal Research, 12, 341-349, ISSN 2211-9264, http://dx.doi.org/10.1016/j.algal.2015.09.006. (IF 5.014)

21. Aseem Chawla, TseringStobdan, Ravi B Srivastava Varun Jaiswal, RS Chauhan **Anil Kant** (April 2015), Sex-biased temporal gene expression in male and female floral buds of Seabuckthorn (*Hippophaerhamnoides*) PLoS ONE 10(4): e0124890.doi:10.1371/journal.pone.0124890 (IF3.534)

22. Prabodh K Bajpai, Ashish R Warghat, **Anil Kant**, Ravi B Srivastava, TseringStobdan (Feb 2015),*High phenotypic variation in Morus alba L. along an altitudinal gradient in Indian trans-Himalaya*. Journal of Mountain Science.(19930321, 16726316),12 (2) 446-455, DOI:10.1007/s11629-013-2875-2 (IF 1.06)

23. Aseem Chawla, **Anil Kant**,TseringStobdan, Ravi B. Srivastava, R.S. Chauhan, (April 2014),*Cross-species application of sex linked markers in H. salicifolia and H. tibetana.*Scientia Horticulturae (03044238)170, 281–283. (IF2.54)

24. Rakesh Singh Gour, Anil Kant, Rajinder Singh Chuahan, and (Jan. 2014): *Screening of micro algae for Growth and lipid accumulation properties.* Journal of Algal Biomass Utilization. 5 (1), 38-46.(2229-6905)
25. Prabodh K Bajpai, Ashish R Warghat**Kant Anil**, Srivastava Ravi, StobdanTsering, (Aug .2014), Detecting molecular signatures of natural selection in Morus alba L. populations from the trans-Himalaya. Journal of Systematics and Evolution.(16744918)52(5),589–597, DOI: 10.1111/jse.12109 (IF 4.22)

26. Prabodh K Bajpai, Ashish R Warghat, Ram Kumar Sharma, Ashish Yadav, **AnilK Thakur**, Ravi B Srivastava, TseringStobdan, (April 2014),*Structure and Genetic Diversity of Natural Populations of Morus alba in the Trans-Himalayan Ladakh Region.* Biochemical Genetics.(00062928, 15734927)52 (3), 137-152*doi:10.1007/s10528-013-9634-5*(IF1.5)

27. Prabodh K Bajpai, Ashish R Warghat P Dhar, **Anil Kant**, Ravi B Srivastava, TseringStobdan. (Aug., 2014). *Variability and fruit color effect on antioxidant activity, phenolics, flavonoids, anthocyanin and proanthocyanidin content in Morus alba L. fruit from the trans-Himalaya, India*. LWT - Food Science and Technology (10961127)59 (5) 981-988. http://dx.doi.org/10.1016/j.lwt.2014.07.055 (IF 2.546)

28. Dorin Gupta, R K Mittal, **Anil Kant**, Mohar Singh, 2007: *Association studies for agro-physiological and quality traits of triticale x bread wheat derivatives in relation to drought and cold stress.* Journal of Environmental Biology (23940379, 02548704), 28 (2), 265-269. (IF 0.68)

29. Chand U, PC Katoch, Anil Kant, 2007: *Differential manifestation of micro mutations for different quantitative traits in Basmati rice.* ORYZA, (2249-5266). 44(2), 99-103.

30. Chand U, Katoch PC, Kant A, 2007, Mutagenic effectiveness and efficiency of ethyl methanesulphonate and gamma-rays in scented rice. ORYZA. (2249-5266),44(1), 61-63

31. Chand U, Katoch PC, Kant A, 2006, Induced additive and dominace gene effect in scented rice. ORYZ, (2249-5266). 43(2), 94-96

32. Baljit Singh, G S Chauhan, D K Sharma, Anil Kant, I Gupta, Nirmala Chauhan, 2006: *The release dynamics of model drugs from the psyllium and N-hydroxymethylacrylamide based hydrogels.* International Journal of Pharmaceutics(.03785173), 325(1-2), 15-25. (IF 3.46)

33. Anil Kant, VaishnuDutt, D. R. Sharma, 2006: *Genetic variability in phenotypic characters of Pinus gerardiana. Indian Forester (00194816),Vol. 132:681-690.*

34. Anil Kant, D Pattanayak, S K Chakrabarti, Rajan Sharma, Manisha Thakur, D R Sharma, 2006: *RAPD analysis of variability in Pinus gerardiana Wall. - An endangered conifer of North Western Himalayas.* Indian Journal of Biotechnology (09725849,09750967), 5(1), 62-65. (IF 0.48)

35. Nag N, Sharma SK, Anil Kant, 2006: *Agronomic Evaluation of some induced mutants of urdbean (Vigna mungo (L.) Hepper).* SABRAO Journal of breeding and Genetics (10297073) 38(1) 29-38. (IF 0.23)

36. Anil Kant, S. K. Sharma, Rajan Sharma, R.K. Sharma, T. Mohapatra, 2004: *Identification of RAPD and AFLP markers Linked with rust gene in Lentil*. Crop Improvement. 31, 1-10.

37. Anil Kant, D. R. Sharma, 2004: *Evaluation of genetic diversity in Pinus gerardiana using isozymes.* Indian Journal of Plant Genetic Resources. 17, 48-52.

38. Sharma Rajan, Kant Anil, Kaushal R. P. 2004. *Generation of pea mutants for resistance to ascochyta blight and powdery mildew and their characterization using isozyme markers.* Journal of Genetics and Breeding. 58: 149-156.

39. Manisha Thakur, DR Sharma, Kamlesh Kanwar, Anil Kant, 2002: *In vitro regeneration of Acacia catechu Willd. from callus and mature nodal explants--an improved method.* Indian journal of experimental biology. 40(7), 850-853. (IF 1.2)

40. D Gupta, RK Mittal, M Singh, A Kant. 2005: *Evaluation of triticale x bread wheat derivatives for agro-morphological, physiological and biochemical traits in relation to drought and cold stress*. Annals of Biology 21(2), 143-147

Conference Proceedings

1. Jagdish Sigh Arya Nishtha Thakur, Arshiya Chauhan, Narender Singh **Anil Kant,**Oct 2018. Evaluation of onion genotypes for quality of bulb during post harvest storage in agro-climatic conditions of Ladakh. 3rd Himachal Science Congress; Rural Upliftment Thruogh Science & Technology Interventions held at IIT Mandi, Oct 22-23 2018.

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3. Mehul Salaria, Tashil Sharma, Ankush Bansal, TseringStobdan and **Anil Kant**, "Comparative transcription factors mining of Sea buckthorn male and female flower buds" in *Indian Conference on Bioinformatics (Inbix'17)*, held at Birla Institute of Scientific Research, Jaipur during Nov., 7-9, 2017.

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