

PERFORMA FOR SUPPLY OF INFORMATION FOR ANNUAL REPORT The information should relate to Calendar Year 2020-21 i.e. from (1st July, 2020 to 30th June, 2021)

Details of the Department

- (I) Name : Department of Biotechnology
 (II) Year of Establishment : 1998
 (III) (a) Has the Vision, Mission, etc. of your Department been defined? : Yes/No
 (b) If answer to (i) above is 'Yes', please state the following:
 (1) Vision Statement: As per University
 (2) Mission Statement: As per university
 (3) Objectives of the Department

- Expose the students in the areas of Microbial, Plant and Animal Biotechnology, Molecular Biology, Genetic Engineering, and Nano Science.
- Expose the students to wide spectrum of Biochemistry, Microbiology, Plant Cell, Tissue and Organ Culture technical skills to infuse versatility and brighten their initiative to develop new range of products.
- Train Students for ability to work independently with technical skill, professional maturity and having adaptability to thrive under diverse pressures, for the innovative undertaking and to liaison with various industries.
- Conduct basic and applied research in the areas of Plant Cell Tissue and Organ culture, Molecular Biology, Biochemistry, Microbial Biotechnology and Nano Science and technology.

(IV) Course Offered in the Department:

Course	Sanctioned intake	Present Strength (Total)
Ph. D	Variable	67
PG	20+4 (DBT Sponsored Biotechnology) 20+2+1+1(Self Financing Biotechnology) 39(Five Year M.Sc. biotechnology) 30+2+1+1(Microbiology) 20 (M.Tech Nano Science)	29 (Sponsored Biotechnology) 29 (Self Financing Biotechnology) 45(Five Year M.Sc. biotechnology) 62(Five Year M.Sc. biotechnology) 02(M.Tech Nano Science) =167
U. G.	35+2+1+1(each year)	41 (Ist Year) +43 (IInd Year)+31 Third Year)+24(Fourth Year)+21(Fifth Year)=115
Any other	NIL	NIL

(V) Faculty Details

(Attach a list of the Faculty along with their qualification and their experience)

Professor		Readers		Lecturers	
Sanctioned	Filled	Sanctioned	Filled	Sanctioned	Filled
01	01	02	01	12	07

Name	Designation	Specialization
Professor Ashok Chaudhury	Professor	Plant Molecular Biology
Professor Neeraj Dilbaghi	Professor	Nano Science & Technology, Molecular Microbiology
Professor Namita Singh	Professor	Microbial Biotechnology, Bio active compound, enzymology, Bioenergy,
Professor Vinod Chhokar	Professor	Biochemistry, Enzymology, Plant Biotechnology, Molecular Biology
Dr. Sandeep Kumar	Associate Professor	Nano Science & Technology
Dr. Rajesh Thakur	Associate Professor	Plant Tissue culture, Nano Technology
Dr. Anil Kumar	Associate Professor	Animal Biotechnology
Dr. Santosh Kumari	Associate Professor	Genetics
Dr. Sapna Grewal	Assistant Professor	Plant Biotechnology

(VI) Non-Teaching Position:

Position	Sanctioned	In Position
Tech. Assistant	01	01 Tech. Assistant
Lab Technician	02	00 Lab Technician
Steno- Typist	02	01 Steno-Typist
Clerk	02	02 Clerk
Peon	04	01 Peon
Lab Attendant-cum-Cleaner	08	04 Lab attendant-cum-Cleaner

(VII) a) Students Details:

Ist Year		Final Year	
Sanctioned Intake	Filled	Sanctioned Intake	Filled
149	103	145	98

Name of the course	Ist Year		Second/Final Year	
	Sanctioned Intake	Filled	Sanctioned Intake	Filled
M.Sc. (Biotechnology)	30 DBT 20 self finance 50	30 (17 DBT+13 self Finance) 30	24(DBT) 24 (Self Finance) 48	12 (DBT) + 23 (Self Finance)=35 -
M.Tech. (Nano Science and Technology)	20	02	20	00
M.Sc. Microbiology	30+2+1+1+1	30	3+2+1+1	32
B.Sc. M.Sc. Biotechnology	40+2+1+1+1	41	40+2+1	31(BSc. III Year)

b) Foreign Students Admitted: Nil

(VIII) Research Scholars :

Name of the Teacher	Intake Capacity	Total Number of Ph. D. Students	Registered during the Year	Thesis completed during the Year
Prof. Ashok Chaudhary	8	6	-Nil	3
Prpf. Neeraj Dilbaghi	8	8+2*	-	02
Prof. Namita Singh	8	6+1) (co- supervisor)	01	Nil
Prof. Vinod Chhokar	8	13	3	Nil
Dr. Anil Kumar	5	05		Nil
Dr. Sandeep Kumar	5	5	1	2
Dr. Santosh Kumari	5	4	1	-Nil
Dr. Rajesh Rhakur	5	4	2	Nil
Dr. Sapna Grewal	4	3	2	Nil
Total	56	54	10	7

(IX) Sponsored Research Projects :

Title of the Project	Funding Agency & Amount	Name of the Investigator (s)	Project in process	Awarded during the current year	Completed during the current year
"Determination of Natural Uranium in groundwater in Hisar, Bhiwani and Rewari districts of Haryana"	BARC-BRNS	Prof. Neeraj Dilbaghi (CO-PI)	Completed		
Cellulase production from indigenous fungal Strains using agro Industrial waste and its characterization	9.95 Lakhs/UGC	Dr Namita Singh	Completed	1/7/2011	31/6/2017
Development of Bacillus spp. As plant growth promoting Rhizobacteria for crop under dryland agriculture	UGC 5.80 Lakhs	Prof. K.K. Kapoor Prof. Emeritus	Completed	1/7/2013	31/6/2015

Development of microbial technology for accelerated multi-component municipal organic waste recycling (Indo-Ukrainian Project)	DST Indo Ukraine 39.10 Lakhs	Dr. Namita Singh	Completed	20/06/2016	20/06/2019
Phytase enzyme production, purification & characterization of indigenous microbe for food & feed application	HSCST 8 Lakhs	Dr. Namita Singh	Completed	2016-17	2019-20
Synthesis of pesticide-loaded nanoformulation” by International Industry Adama Agricultural Solutions Ltd. Israel 2017-2019 (25 Lakhs/38000\$)	ADMA Agan Ltd Isreal Intrnational Colloboration 24.89 lakhs	Prof. Neeraj Dilbaghi Dr. Sandeep Kumar	In progress	2017	
Studies on Development Development of MOF/QD based optical sensor for determination of phosphate in agricultural land to facilitate effective crop cultivation	DBT-GOI 59.43 Lakhs	Dr Neeraj Dilbaghi and Sandeep Kumar	In Progress	2020	2023
Development of Novel Fluorescent Platforms for the Detection of Heavy Metals in Water” by DBT, Govt of India 2017-2020	DBT-GOI 66.703	Dr Sandeep and Dr Neeraj Dilbaghi	Completed	2017	2020
Studies on Development of Biosensor for Detection of Explosives (Hydrazine and TNT)” by DRDO, Govt of India. 2017-2020	LSRB-DRDO, Govt of India 38.43 lakh	Prof. Neeraj Dilbaghi and Dr Sandeep Kumar	Completed	2017	2020
Green Synthesis of Nitrogen Nanofertilizer and its characterization for foliar application in wheat (<i>Triticum aestivum</i>)	UGC Start Up Grants 10 Lacs	Dr. Sapna Grewal	Completed	2017	2017-19
'To Develop a Process for bioremediation Chromium from Industrial Effluents using Microbial Consortium'	HSCST 8,33,800	Dr. Namita Singh and Dr. Raman	In Progress	2018	2018-21

Development of vegetable based instant Health product	450000/- TEQIP World Bank	Dr. Namita Singh	In Progress	2020	2021
Development of low aliphatic Glucosinolate <i>Brassica juncea</i> using targeted editing of Pathway gene (s) by CRISPR-Cas9 system	Project DST DST, Govt of India 6.60 Woman scientist DBT, Govt of India	Manju Yadav (PI) and Dr. Vinod Chhokar Mentor	Completed	2017	2019
Green synthesis of Nitrogen Nanofertilizer and its characterisation for foliar application in wheat (<i>Triticum aestivum</i>)”.	10,00,000/- UGC-BSR Start up grant	Dr Sapna Grewal	Completed	2018	2020
To study the synergistic effect of Nano particle of piperine, paclitaxel and Both on the inhibition of the Mitigation of Invasion of human breast cancer cells by Targetting epithelial to measenchymal Transition	32,623,50/- Ministry of health and Family welfare DHR , Govt of India	Prof. Namita Singh (Mentor) Dr Monika Verma(PI)	Ongoing	9/08/2020	08/08/2023
Biochemical and molecular approaches to understand nutritional and industrial quality of barley		Multi-Institutional Project in Collaboration with ICAR-Indian Institute of Wheat and Barley, Karnal [As Centre Principal Investigator]		1/11/2020	31.10.2025
Metal Organic Frameworks-based Platform for Pesticide Removal in Haryana and Punjab Region	HSCST 8.00 Lakh	Dr. Sandeep Kumar and Dr Neeraj Dilbaghi	In Progress	2018	2020

(X) Publications of the Faculty (In total):

Name of The Teacher	Books	Research Papers		Research Papers		Articles
		International	National	Referred	Non-Referred	
Prof. Ashok Chaudhary	1	09		09		
Prpf. Neeraj Dilbaghi		18		18	-	01-
Prof. Namita Singh	1	12		11	1	1
Prof. Vinod Chhokar	Nil	8	-Nil	8	-Nil	-Nil
Dr. Anil Kumar	1	6	-	6	-	-
Dr. Sandeep Kumar	01	24		24		
Dr. Santosh Kumari	Nil	05	-Nil	05	Nil	Nil
Dr. Rajesh Thakur	Nil	02	Nil-	02	-NIL	-NIL
Dr. Sapna Grewal	Nil	04	-01	05	01	Nil
Prof. S.S. Dudeja	NIL	02	02	02	Nil	Nil
Dr Anita Rani Gill	Nil	Nil	Nil	Nil	Nil	Nil
Dr. K.D. Rawat	01	01	-	1	01	-
Dr. Rakesh Yadav	Nil	01	Nil	01	Nil	Nil
Dr Ravinder Kumar	Nil	03	Nil	03	Nil	Nil
Total	5	95	3	95	3	3

(XI) Faculty wise details of Publications during Jan 2020 to June 2021:

(a) Books

Prof. Ashok Chaudhury: NIL

Prof. Neeraj Dilbaghi

Prpf. Neeraj Dilbaghi	Nanosensors for Environmental Applications	2020	Elsevier
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Prof. Namita Singh: NIL

Dr. Vinod Kumar Chhokar NIL

Dr. Anil Kumar Bhankhar NIL

Dr Sandeep Kumar

Dr. Sandeep Kumar	Nanostructured Biomaterials for Biomedical Applications	2020 (In press)	Elsevier
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Dr Santosh Kumari NIL

Dr Rajesh Thakur NIL

Dr. Sapna Grewal Nil

Prof. S.s. Dudeja NIL

Dr Anita Rani Gill NIL

Dr Krishan Datt Rawat

Author (s)	Year	Title of Paper	Name of Journal	Vol. & Pages	Pages	Publisher
Chaubey K K, Singh SV, Singh PK, Gupta S, Vishal K, Choudhary P K, G Pant, Sujata J, Rawat KD . (2020).	2020	Detection of anti-Mycobacterium avium subspecies paratuberculosis antibodies in thyroid and type-1 diabetes patients. Indian Journal of Biotechnology	Indian Journal of Biotechnology	19(1)	49-55	NISCAR
Kumar N, Khandelwal N, Kumar R, Chander Y, Rawat KD , Chaubey KK, Sharma S et al.	2019	Inhibitor of Sarco/Endoplasmic Reticulum Calcium-ATPase Impairs Multiple Steps of Paramyxovirus Replication	Frontiers in microbiology	10: 1-12	1-12	Frontiers

Dr. Rakesh Yadav NIL

Dr Ravinder Kumar NIL

Dr Nayan Tara NIL

(b) Papers

Prof . Ashok Chaudhury

1. Ila Joshi, Deshika Kohli, Akanksha Pal, **Ashok Chaudhury**, Anil Sirohi, Pradeep K Jain (2021). HD-RNAi of effector/parasitism genes for imparting resistance against plant-parasitic nematodes in plants. *Physiological and Molecular Plant Pathology*. 115: ISSN: 0885-5765. Impact Factor: 2.747.
2. Pooja Bangar, Neetu Tyagi, Bhavana Tiwari, Sanjay Kumar, Parmananda Barman, Ratna Kumari, Ambika B Gaikwad, Kangila Venkataramana Bhat, **Ashok Chaudhury** (2021). Identification and Characterization of SNPs in Released, Landrace and wild Accessions of Mungbean (*Vigna radiata* (L.) Wilczek) using Whole Genome Re-sequencing. *Journal of Crop Science Biotechnology*. **24**: 153-165. DOI: 10.1007/s12892-020-00067-0. ISSN: 1975-9479
3. Ila Joshi, Anil Kumar, Deshika Kohli, Ashisk K Singh, Anil Sirhoi, K Subramaniam, **Ashok Chaudhury**, Pradeep K Jain (2020). Conferring root-knot nematode resistance

via host-delivered RNAi-mediated silencing of four *Mi-msp* genes in *Arabidopsis*. Plant Science **298**: <https://doi.org/10.1016/j.plantsci.2020.110592>.

Prof. Neeraj Dilbaghi:

1. Aspects of point-of-care diagnostics for personalized health wellness (2021). Sandeep Kumar, Monika Nehra, Sakina Khurana, Neeraj Dilbaghi, Vanish Kumar, Ajeet Kaushik, Ki-Hyun Kim, (16) 383. <https://doi.org/10.2147/IJN.S267212> (IF: 6.400)
2. Nanoencapsulated curcumin emulsion utilizing milk cream as a potential vehicle by microfluidization: Bioaccessibility, cytotoxicity and physico-functional properties (2021) Prarabdh C. Badgular Kiran Verma, Ayon Tarafdar, Vijendra Mishra, Neeraj Dilbaghi, Kanthi Kiran Kondepudi, Food Research International (148) 110611. <https://doi.org/10.1016/j.foodres.2021.110611> (IF: 6.475)
3. Evaluation of graphene oxide and its composite as potential sorbent for removal of cationic and anionic dyes (2021) Wandit Ahlawat, Neeraj Dilbaghi, Sandeep Kumar, Materials Today: Proceedings (45) 5500-5505. <https://doi.org/10.1016/j.matpr.2021.02.215>
4. Current paradigms in epigenetic anticancer therapeutics and future challenges (2021) Manoj Singh, Vikas Kumar, Nirmala Sehrawat, Mukesh Yadav, Mayank Chaudhary, Sushil K Upadhyay, Sunil Kumar, Varruchi Sharma, Sandeep Kumar, Neeraj Dilbaghi, Anil K Sharma, Seminars in Cancer Biology <https://doi.org/10.1016/j.semcancer.2021.03.013> (IF: 15.707)
5. Internet of medical things (IoMT)-integrated biosensors for point-of-care testing of infectious diseases (2021) Shikha Jain, Monika Nehra, Rajesh Kumar, Neeraj Dilbaghi, TonyY.Hu, Sandeep Kumar, Ajeet Kaushik, Chen-zhong Li, Biosensors and Bioelectronics, 113074. <https://doi.org/10.1016/j.bios.2021.113074> (IF: 10.618)
6. Emerging nanobiotechnology in agriculture for the management of pesticide residues (2021) Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ajeet Kaushik, Christian Sonne, Ki-Hyun Kim, and Sandeep Kumar, Journal of Hazardous Materials (104), 123369. <https://doi.org/10.1016/j.jhazmat.2020.123369> (IF: 10.588)
7. Green synthesis of metal-organic frameworks: A state-of-the-art review of potential environmental and medical applications (2020) Sandeep Kumar, Shikha Jain, Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ki-Hyun Kim, Coordination Chemistry Reviews (420), 213407. <https://doi.org/10.1016/j.ccr.2020.213407> (IF: 22.315)
8. 1D Semiconductor Nanowires for Energy Conversion, Harvesting and Storage Applications (2020) Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ajeet Kaushik, Reza Abolhassani, Yogendra Kumar Mishra, Ki Hyun Kim, and Sandeep Kumar, Nano Energy (76), 104991. <https://doi.org/10.1016/j.nanoen.2020.104991> (IF: 17.881)
9. Sn-MOF@ CNT nanocomposite: An efficient electrochemical sensor for detection of hydrogen peroxide (2020) Rani, Sushma, Bharti Sharma, Rajesh Malhotra, Sandeep Kumar, Rajender S. Varma, and Neeraj Dilbaghi, Environmental Research 191, 110005. <https://doi.org/10.1016/j.envres.2020.110005> (IF: 6.498)
10. Experimental analysis of heat transfer behavior of silver, MWCNT and hybrid (silver+ MWCNT) nanofluids in a laminar tubular flow (2020) Munish Gupta, Vinay Singh, Sandeep Kumar, and Neeraj Dilbaghi. Journal of Thermal Analysis and Calorimetry 1-15. <https://doi.org/10.1007/s10973-020-09453-w> (IF: 3.458)
11. Synthesis and characterization of novel amphiphilic tamarind seed xyloglucan-octenyl succinic anhydride conjugate (2020) Neeraj Dilbaghi, Munish Ahuja, Manju Bernela, Sandeep Kumar, Prashant Bhardwaj, and Harmanmeet Kaur, Journal of Polymer Research 27, 1-8. <https://link.springer.com/article/10.1007/s10965-020-02195-1> (IF:2.599)
12. Rapid redox sensing of p-nitrotoluene in real water samples using silver nanoparticles (2020) Sushma Rani, Neeraj Dilbaghi, Sandeep Kumar, Rajender S. Varma, and Rajesh

- Malhotra, Inorganic Chemistry Communications 120, 108157. <https://doi.org/10.1016/j.inoche.2020.108157> (IF:2.495)
13. Nanotechnology enabled the enhancement of antitrypanosomal activity of piperine against *Trypanosoma evansi* (2020) Ruma Rani, Sandeep Kumar, Neeraj Dilbaghi, Rajender Kumar, Experimental Parasitology 219, 108018. <https://doi.org/10.1016/j.exppara.2020.108018> (IF:2.011)
 14. Fabrication of Zn-MOF@rGO based sensitive nanosensor for the real time monitoring of hydrazine (2020) Sushma Rani, Shivani Kapoor, Bharti Sharma, Sandeep Kumar, Rajesh Malhotra, Neeraj Dilbaghi, Journal of Alloys and Compounds, 816, 152509. <https://doi.org/10.1016/j.jallcom.2019.152509> (IF: 5.316)
 15. Nanotechnology enabled the enhancement of antitrypanosomal activity of piperine against *Trypanosoma evansi* (2020) Ruma Rani, **Sandeep Kumar**, Neeraj Dilbaghi, Rajender Kumar, Experimental Parasitology 219, 108018. <https://doi.org/10.1016/j.exppara.2020.108018>. (IF:2.011)
 16. Nanovehicles for plant modifications towards pest-and disease-resistance traits (2020) Sandeep Kumar, Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Satish K Tuteja, Ki-Hyun Kim, *Trends in plant science*, 25(2), pp.198-212. <https://doi.org/10.1016/j.tplants.2019.10.007> (IF:18.313)
 17. Carbonaceous nanomaterials as effective and efficient platforms for removal of dyes from aqueous systems (2020) Wandit Ahlawat, Navish Kataria, Neeraj Dilbaghi, Ashraf A Hassan, K H Kim, and **Sandeep Kumar**, *Environmental Research* 181, 108904. <https://doi.org/10.1016/j.envres.2019.108904> (IF: 6.498)
 18. Nano-biosensing platforms for detection of cow's milk allergens: an overview (2020) Monika Nehra, Mariagrazia Lettieri, Neeraj Dilbaghi, **Sandeep Kumar**, Giovanna Marrazza, *Sensors* (20), 32. <https://doi.org/10.3390/s20010032> (IF: 3.576)
 19. Investigating the efficiency of α -Bismuth zinc oxide heterostructure composite/UV-LED in methylene blue dye removal and evaluation of its antimicrobial activity (2020) Moondeep Chauhan, Teenu Jasrotia, Gurveengeet Kaur, Chander Prakash, Rajeev Kumar, Neeraj Dilbaghi, Ganga Ram Chaudhary, and **Sandeep Kumar**, *Environmental Research* (180), 108857. <https://doi.org/10.1016/j.envres.2019.108857> (IF: 6.498)
 20. Nanotechnology-based biomaterials for orthopedic applications: Recent advances and future prospects (2020) **Sandeep Kumar**, Monika Nehra, Deepak Kedia, Neeraj Dilbaghi, K. Tankeshwar, and Ki-Hyun Kim. *Materials Science & Engineering C* (106), 110154. <https://doi.org/10.1016/j.msec.2019.110154> (IF: 7.328)

Prof. Namita Singh

1. Jyoti Rani, Charu Chauhan, Tanwee Das, Seena Kumari Punita Sharma, Sanjay Tevatiyaa, Karan Patel, Ashwani K. Mishra, **Namita Singh**, Rajnikant Dixit (2021) Hemocyte RNA-Seq analysis of Indian malarial vectors *Anopheles stephensi* and *Anopheles culicifacies*: From similarities to differences, *Gene* Volume 798, 25 September 2021, 145810 <https://doi.org/10.1016/j.gene.2021.145810> ISSN: 0378-1119, Impact Factor 3.688
2. Pardeep Kumar, S Dev., S, Singh Dhayal., V, Acharya., S, Kumar, S, Kumar, **Namita Singh**, R. Dhar (2021) Synergistic effect of Mg and Se co-doping on the structural, optical and anti-bacterial activity of ZnO thin films, *Inorganic Chemistry Communications* Volume 131, September 2021, 108801 <https://doi.org/10.1016/j.inoche.2021.108801>, Impact Factor 2.495
3. Dhingra G. G. • Saxena A, Nigam A, Hira P, Singhvi N., Anand S., Kaur J., Kaur J., Dua A., Negi V., Gupta V., Sood U, Kumar., R. Lal S, Verma H, Verma M, Singh P., Rawat P., • Singh Priya, Dogra C, R, Tripathi C, • Talwar C. Singh Y, Lal B, • Pabbi S, **Singh Namita**, Kalia V. C. • Rup Lal (2021) *Microbial World: Recent Developments in Health*,

- Agriculture and Environmental Sciences Indian J Microbiol (Apr–June 2021) 61(2):111–115. <https://doi.org/10.1007/s12088-021-00931-9>
<https://doi.org/10.1016/j.inoche.2021.108801C>. **Impact Factor 2.461**
4. Yogesh Chander, Ram Kumar, Nitin Khandelwal, **Namita Singh**, Brij Nandan, Shringi Sanjay Barua, Naveen Kumar (2020) Role of p38 mitogen-activated protein kinase signalling in virus replication and potential for developing broad spectrum antiviral drugs Rev Med Virol, Pages 1-16 **Impact Factor 6.989** DOI: [10.1002/rmv.2217](https://doi.org/10.1002/rmv.2217)
 5. R Urana, A Dahiya, **N Singh**, P Sharma (2020) A Review on Rhizoremediation: PlantMicrobe Interaction Enhances the Degradation of Polyaromatic Hydrocarbons chapter in book Microbial Services in Restoration Ecology , ISBN: 978-0-12-819978-7 , Year 2020, Pages 283-295 ISBN: 978-0-12-819978-7
 6. Acharya Balkrishna, Pallavi Thakur, Shivam Singh, Swami Narsingh, **Namita Singh**, Rakesh Kumar Sharma (2020) Computational screening approaches for investigating potential activity of phytoligands against SARS-CoV-2 Short Title: In silico screening of phytochemicals as potent inhibitors of SARS-CoV-2 article <https://www.researchsquare.com/article/rs-23206/v1>, Year 2020
 7. Raman Kumar, Priyanka Sharma, Ahmad Umar, Rajeev Kumar, **Namita Singh**, P. K. Joshi, Fahad A. Alharthi, Abdulaziz Ali Alghamdi and Nabil Al-Zaqri (2020) In Vitro Bioadsorption of Cd²⁺ Ions: Adsorption Isotherms, Mechanism, and an Insight to Mycoremediation Processes , Volume 8, Year 2020, Pages 1085 <https://doi.org/10.3390/pr8091085> **Impact Factor 2.847**.

Prof. Vinod Chhokar

1. Kumar R, Salar RK, Naik P.K. Yadav M, **Chhokar V** et al (2021) Population genetic diversity and structure analysis of sixty genotypes of *Aloe vera* using AFLP markers. South African Journal of Botany. Published Online First <https://doi.org/10.1016/j.sajb.2021.06.008>
2. Kumar A , Luhach N , Chauhan R, Badgajar H , Soni S , **Chhokar V** et al (2021) Synthesis and characterization of silver nanoparticles using citrus fruit juice for evaluation of anticancer activity against Colo-205 Cell Lines. Journal of Nanoscience and Nanotechnology. 21 (6): 3580-3587.
3. Dudeja S, Chhokar V, Beniwal V , Badgujjar H, Chauhan R, Soni S, Kumar A (2021) Optimization and Production of antimicrobial compounds by Aspergillus flavus MTCC 13062 and its Synergistic studies. Biocatalysis and Agricultural Biotechnology. Published online First <https://doi.org/10.1016/j.bcab.2021.102065>
4. Bishnoi SK, He X, Phuke RM, Kashyap PL, Alakonya A, **Chhokar V**, Singh RP and Singh, PK (2020). Karnal bunt: A re-emerging old foe of wheat. Frontiers in Plant Science 11: 569057. doi: 10.3389/fpls
5. Kumar D, Kumar A, **Chhokar V**, Gangwar O.P et al (2020). Genome-wide association studies in diverse spring wheat panel for Stripe, Stem and Leaf rust resistance. Frontiers in Plant Science. 11: 748-775
6. Rabuma T, Gupta O.P. **Chhokar V** (2020). Phenotypic characterization of chili pepper (*Capsicum annuum* L.) under *Phytophthora capsici* infection and analysis of genetic diversity among identified resistance accessions using SSR markers. Physiological and Molecular Plant Pathology 112: Published Online First <https://doi.org/10.1016/j.pmpp.2020.101539>
7. Chaudhary P, Beniwal V, Umar A, Kumar R, Sharma P, Kumar A , Al-Hadeethi Y, **Chhokar V** (2020) In vitro microcosm of co-cultured bacteria for the removal of

hexavalent Cr and tannic acid: A mechanistic approach to study the impact of operational parameters. Ecotoxicology and Environmental Safety. 208 :Published Online First. <https://doi.org/10.1016/j.ecoenv.2020.111484>

8. Dudeja S, Chhokar V, Badgujjar H. Chauhan R, Soni S, Beniwal V and Kumar A (2020). Isolation and screening of antibiotic producing fungi from solid-state waste. Polymorphism. 4. 59-71

Dr. Anil Kumar

1. Kumar A , Luhach N , Chauhan R, Badgujjar H , Soni S , **Chhokar V** et al (2021) Synthesis and characterization of silver nanoparticles using citrus fruit juice for evaluation of anticancer activity against Colo-205 Cell Lines. Journal of Nanoscience and Nanotechnology. 21 (6): 3580-3587.
2. Dudeja S, Chhokar V, Beniwal V , Badgujjar H, Chauhan R, Soni S, Kumar A (2021) Optimization and Production of antimicrobial compounds by *Aspergillus flavus* MTCC 13062 and its Synergistic studies. Biocatalysis and Agricultural Biotechnology. Published online First <https://doi.org/10.1016/j.bcab.2021.102065>
3. Kumar D, Kumar A, **Chhokar V**, Gangwar O.P et al (2020). Genome-wide association studies in diverse spring wheat panel for Stripe, Stem and Leaf rust resistance. Frontiers in Plant Science. 11: 748-775
4. Chaudhary P, Beniwal V, Umar A, Kumar R, Sharma P, Kumar A , Al-Hadeethi Y, **Chhokar V** (2020) In vitro microcosm of co-cultured bacteria for the removal of hexavalent Cr and tannic acid: A mechanistic approach to study the impact of operational parameters. Ecotoxicology and Environmental Safety. 208 :Published Online First. <https://doi.org/10.1016/j.ecoenv.2020.111484>
5. Dudeja S, Chhokar V, Badgujjar H. Chauhan R, Soni S, Beniwal V and Kumar A (2020). Isolation and screening of antibiotic producing fungi from solid-state waste. Polymorphism. 4. 59-71

Dr. Sandeep Kumar

1. Naked eye colorimetric detection of *Escherichia coli* using aptamer conjugated graphene oxide enclosed Gold nanoparticles (2021) Ritika Gupta, Amit Kumar, Sandeep Kumar, Anil Kumar, Pinnaka, Nitin Kumar Singhal, Sensors and Actuators B: Chemical (329), 129100. <https://doi.org/10.1016/j.snb.2020.129100> (IF: 7.460)
2. Emerging nanobiotechnology in agriculture for the management of pesticide residues (2021) Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ajeet Kaushik, Christian Sonne, Ki-Hyun Kim, and **Sandeep Kumar**, *Journal of Hazardous Materials* (104), 123369. <https://doi.org/10.1016/j.jhazmat.2020.123369> (IF: 10.588)
3. A hybrid biological-adsorption approach for the treatment of contaminated groundwater using immobilized nanoclay-algae mixtures (2021) Sara Mollamohammada, Ashraf Aly Hassan, Mohamed Dahab, and **Sandeep Kumar**, *Water* (13), 633. <https://doi.org/10.3390/w13050633> (IF: 3.103)
4. Current paradigms in epigenetic anticancer therapeutics and future challenges (2021) Manoj Singh, Vikas Kumar, Nirmala Sehrawat, Mukesh Yadav, Mayank Chaudhary, Sushil K Upadhyay, Sunil Kumar, Varruchi Sharma, **Sandeep Kumar**, Neeraj Dilbaghi, Anil K Sharma, *Seminars in Cancer Biology* <https://doi.org/10.1016/j.semcancer.2021.03.013> (IF: 15.707)
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<https://doi.org/10.1016/j.scitotenv.2021.148477> (I.F.: 7.96)

6. Green synthesis of metal–organic frameworks: A state-of-the-art review of potential environmental and medical applications (2020) **Sandeep Kumar**, Shikha Jain, Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ki-Hyun Kim, *Coordination Chemistry Reviews* (420), 213407. <https://doi.org/10.1016/j.ccr.2020.213407> (IF: 22.315)
7. 1D Semiconductor Nanowires for Energy Conversion, Harvesting and Storage Applications (2020) Monika Nehra, Neeraj Dilbaghi, Giovanna Marrazza, Ajeet Kaushik, Reza Abolhassani, Yogendra Kumar Mishra, Ki Hyun Kim, and **Sandeep Kumar**, *Nano Energy* (76), 104991. <https://doi.org/10.1016/j.nanoen.2020.104991> (IF: 17.881)
8. Metal organic frameworks for the adsorptive removal of gaseous aliphatic ketones (2020) Vikrant Kumar, Danil Bukhvalov, Ki Hyun Kim and **Sandeep Kumar**, *ACS Applied Materials and Interfaces* (12), 10317-10331. <https://dx.doi.org/10.1021/acsami.9b20375> (IF: 9.229)
9. Engineering MIL-100(Fe) on 3D porous natural diatoms as a versatile high performing platform for controlled isoniazid drug release, Fenton’s catalysis for malachite green dye degradation and environmental adsorbents for Pb²⁺ removal and dyes (2020) U. T. Uthappa, G. Sriram, O. R. Arvind, **Sandeep Kumar**, Ho-Young-Jung, Gururaj M. Neelgund, Dusan Losic, and Mahaveer D. Kurkuri, *Applied Surface Science* 528, 146974. <https://doi.org/10.1016/j.apsusc.2020.146974> (I.F.: 6.707)
10. Toxicity profiling of metallosurfactant based ruthenium and ruthenium oxide nanoparticles towards the eukaryotic model organism *Saccharomyces cerevisiae* (2020); Varsha Dogra, Gurpreet Kaur, Rajeev Kumar, **Sandeep Kumar**, *Chemosphere* 128650. <https://doi.org/10.1016/j.chemosphere.2020.128650> (I.F.:7.086)
11. Carbonaceous nanomaterials as effective and efficient platforms for removal of dyes from aqueous systems (2020) Wandit Ahlawat, Navish Kataria, Neeraj Dilbaghi, Ashraf A Hassan, K H Kim, and **Sandeep Kumar**, *Environmental Research* 181, 108904. <https://doi.org/10.1016/j.envres.2019.108904> (IF: 6.498)
12. Nanotechnology-based biomaterials for orthopedic applications: Recent advances and future prospects (2020) **Sandeep Kumar**, Monika Nehra, Deepak Kedia, Neeraj Dilbaghi, K. Tankeshwar, and Ki-Hyun Kim, *Materials Science & Engineering C* (106), 110154. <https://doi.org/10.1016/j.msec.2019.110154> (IF: 7.328)
13. Aspects of Point-of-Care Diagnostics for Personalized Health Wellness (2020) **Sandeep Kumar**, Monika Nehra, Sakina Khurana, Neeraj Dilbaghi, Vanish Saini, Ajeet Kaushik, Ki-Hyun Kim, *International Journal of Nanomedicine* (In press). <https://doi.org/10.2147/IJN.S267212> (IF: 6.400)
14. Toxicity assessment of palladium oxide nanoparticles derived from metallosurfactants using multi assay techniques in *Allium sativum* (2020) Varsha Dogra, Gurpreet Kaur, Rajeev Kumar, and **Sandeep Kumar**, *Colloids and Surfaces B: Biointerfaces* (187), 110752. <https://doi.org/10.1016/j.colsurfb.2019.110752> (IF: 5.268)
15. Investigating the efficiency of α -Bismuth zinc oxide heterostructure composite/UV-LED in methylene blue dye removal and evaluation of its antimicrobial activity (2020) Moondeep Chauhan, Teenu Jasrotia, Gurveengeet Kaur, Chander Prakash, Rajeev Kumar, Neeraj Dilbaghi, Ganga Ram Chaudhary, and **Sandeep Kumar**, *Environmental Research* (180), 108857. <https://doi.org/10.1016/j.envres.2019.108857> (IF: 6.498)
16. Ca²⁺-Substitution effect on the electronic structure of CaCu₃Ti₄O₁₂ studied by electron spectroscopy for chemical analysis (2020) Jani, Komal K., Divyesh V. Barad, Pooja Y. Raval, Monika Nehra, Nimish H. Vasova, Narendra Jakhar, Kunal B. Modi, **Sandeep Kumar**, Dong-Kwon Lim, and Rishi Kumar Singhal. *Ceramics International* (In press). <https://doi.org/10.1016/j.ceramint.2020.10.138> (IF: 4.527)

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18. Highly ordered and crystalline Cu nanowires in anodic aluminium oxide membranes for biomedical applications (2020) Monika Nehra, Ananya N. Dilbaghi, Vishal Singh, Nitin Kumar Singhal, and **Sandeep Kumar**, *Physica Status Solidi A: Applications and Materials Science* 1900842. <https://doi.org/10.1002/pssa.201900842> (IF: 1.759)
19. Experimental analysis of heat transfer behavior of silver, MWCNT and hybrid (silver+MWCNT) nanofluids in a laminar tubular flow (2020) Munish Gupta, Vinay Singh, **Sandeep Kumar**, and Neeraj Dilbaghi. *Journal of Thermal Analysis and Calorimetry* 1-15. <https://doi.org/10.1007/s10973-020-09453-w> (IF: 4.626)
20. Nanotechnology enabled the enhancement of antitrypanosomal activity of piperine against *Trypanosoma evansi* (2020) Ruma Rani, **Sandeep Kumar**, Neeraj Dilbaghi, Rajender Kumar, *Experimental Parasitology* 219, 108018. <https://doi.org/10.1016/j.exppara.2020.108018> (IF:2.011)
21. "Evaluation of graphene oxide and its composite as potential sorbent for removal of cationic and anionic dyes (2021) Ahlawat, Wandit, Neeraj Dilbaghi, and **Sandeep Kumar**, *Materials Today: Proceedings* 45, <https://doi.org/10.1016/j.matpr.2021.02.215> (IF: 1.8)
22. Internet of medical things (IoMT)-integrated biosensors for point-of-care testing of infectious diseases (2021) Shikha Jain, Monika Nehra, Rajesh Kumar, Neeraj Dilbaghi, Tony Y Hu, Sandeep Kumar, Ajeet Kaushik, Chen-zhong Li, *Biosensors and Bioelectronics* 179, 113074. <https://doi.org/10.1016/j.bios.2021.113074> (IF:10.618)
23. Sn-MOF@ CNT nanocomposite: An efficient electrochemical sensor for detection of hydrogen peroxide (2020) Sushma Rani, Bharti Sharma, Rajesh Malhotra, **Sandeep Kumar**, Rajender S Varma, Neeraj Dilbaghi, *Environmental Research* 191, 110005. <https://doi.org/10.1016/j.envres.2020.110005> (IF:6.498)
24. Rapid redox sensing of p-nitrotoluene in real water samples using silver nanoparticles (2020) Sushma Rani, Neeraj Dilbaghi, Sandeep Kumar, Rajender S Varma, Rajesh Malhotra, *Inorganic Chemistry Communications* 120, 108157. <https://doi.org/10.1016/j.inoche.2020.108157> (IF:2.495)
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Dr. Rajesh Thakur NIL

Dr. Santosh Kumari

1. Promila, Sapna Grewal, **Santosh Kumari**, Sonia Goel, Rajesh Thakur & Shikha Yashveer (2020) Assessment of antibacterial activity of biosynthesised ZnO nanoparticles against *Xanthomonas axonopodis* pv. *malvacearum* causing bacterial

blight in cotton. *Journal of Nanoscience & Nanotechnology*, Volume 21, Number 6, June 2021, pp. 3531-3538

2. Prexha, Sapna Grewal, Promila, **Santosh Kumari** & Sonia Goel (2020) In Vitro antifungal & antibacterial effects of biosynthesized zinc oxide nanoparticles against selected pathogenic and non-pathogenic strains. *Journal of Nanoscience & Nanotechnology*, Volume 21, Number 6, June 2021, pp. 3539-3546
3. Kaur, M., Sharma, P., & **Kumari, S.** (2021). Utilization of agricultural waste from paddy (rice) fields for the synthesis of nanocellulose. *Journal of Nanoscience & Technology Volume 21, Number 6, June 2021, pp. 3622-3629.*
4. Kaur, M., Sharma, P., & **Kumari, S.** (2021). State of Art Manufacturing and Producing Nanocellulose from Agricultural Waste: A Review. *Journal of Nanoscience & Technology, Volume 21, Number 6, June 2021, pp. 3394-3403.*
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Dr. Sapna Grewal

1. Sonia Goel, Kalpana Singh, **Sapna Grewal** & Manoj Nath (2020) Impact of “Omics” in improving drought tolerance in wheat. *Critical Reviews in Plant Sciences* 39 (3): 222-235 (I.F – 5.1) : <https://doi.org/10.1080/07352689.2020.1778924>
2. Promila Sheoran, **Sapna Grewal**, Santosh Kumari, Sonia Goel (2021) Enhancement of growth and yield, leaching reduction in *Triticum aestivum* using biogenic synthesized zinc oxide nanofertilizer. *Biocatalysis and Agricultural Biotechnology*, 32 (Online) <https://doi.org/10.1016/j.bcab.2021.101938>
3. Promila, **Sapna Grewal**, Santosh Kumari, Sonia Goel, Rajesh Thakur & Shikha Yashveer (2021) Assessment of antibacterial activity of biosynthesised ZnO nanoparticles against *Xanthomonas axonopodis* pv. *malvacearum* causing bacterial blight in cotton *Journal of Nanoscience & Nanotechnology* Volume 21, Number 6, June 2021, pp. 3531-3538(8). <https://doi.org/10.1166/jnn.2021.19010> (IF- 1.35)
4. Prexha, **Sapna Grewal**, Promila, Santosh Kumari & Sonia Goel (2021) In Vitro antifungal & antibacterial effects of biosynthesized zinc oxide nanoparticles against selected pathogenic and non-pathogenic strains. *Journal of Nanoscience & Nanotechnology*. Volume 21, Number 6, June 2021, pp. 3539-3546(8). <https://doi.org/10.1166/jnn.2021.19011> (IF- 1.35)
5. Dhiraj Panhale, **Sapna Grewal** & Sonia Goel (2021) “Isolation, Identification and Characterization of Bioluminescent Bacteria from Different Beaches of India”. *Annals of Biology Accepted. Annals of Biology* 37 (1) : 27-30.

Book Chapter

Suman Pahal, Shruti Sinha, Manish Jangra, Sonia Goel and **Sapna Grewal**. (2021) **Pharmacological and Medicinal Properties of *Cajanus cajan*** in Book entitled “*Cajanus Cajan: Cultivation, Uses and Nutrition*”. Nova science Publishers, New York pp 63-110

Prof. S.S. Dudeja

1. Dudeja, S.S., Suneja-Madan, Pooja, Paul, Minakashi, Maheswari, Rajat and Kothe, Erika, 2021. Bacterial endophytes: Molecular interactions with their hosts. *J. Basic Microbiol.* First published: 08 April 2021 <https://doi.org/10.1002/jobm.202000657>
2. Aneja, Bharti, Sharma, Vishal, Yadav, Neelam R. Yadav Ram C. and Dudeja S. S. Dudeja 2021 Effect of Drought Stress on Photosynthetic Parameters and Gene

Expression in *Brassica juncea* L. (Czern. and Coss.) *Int.J.Curr.Microbiol.App.Sci* 10(02): 550-570 <https://doi.org/10.20546/ijcmas.2021.1002.066>

Dr Anita Rani Gill

One Patent has been granted in March 2021 titled: A PROCESS FOR PREPARING A HAIRYROOT CULTURE EXTRACT OF FICUS RELIGIOSA L. HAVING INDUCED ACETYLCHOLINESTERASE INHIBITORY ACTIVITY AND COMPOSITION THEREOF

Dr. K. D. Rawat NIL

Dr. Rakesh Yadav

1. Nitu Gautam, Neha Salaria, Kajal Thakur, Sarvjeet Kukreja, Neha Yadav, Umesh Goutam & Rakesh Yadav Green Silver (2020) Nanoparticles for Phytopathogen Control. Proceedings of the National Academy of Sciences, India Section B: Biological Sciences volume 90, 439–446

Dr Ravinder Kumar

2. **Kumar, R.**, Salar, R.K., Naik, P.K., Yadav, M., Kumar, A., Kumar, A., Yogi, R., Kumar, M. and Chhokar, V., 2021. Elucidation of genetic diversity and population structure of sixty genotypes of Aloe vera using AFLP markers. *South African Journal of Botany*.
3. Kumar, A., Luhach, N., Chauhan, R., Badgujar, H., Soni, S., Chhokar, V., Parshad, J., Beniwal, V., **Kumar, R.**, Yogi, R. and Kumar, A., 2021. Synthesis and Characterization of Silver Nanoparticles Using Citrus Fruit Juice for Evaluation of Anticancer Activity Against Colo-205 Cell Lines. *Journal of Nanoscience and Nanotechnology*, 21(6), pp.3580-3587.
4. Yogi, R., Kumar, N., **Kumar, R.** and Jain, R.K., 2020. Genetic diversity analysis among important rice (*Oryza sativa* L.) genotypes using SSR markers. *Advances in Bioresearch* 11 (2), 68-74

Dr. Nayan Tara

1. AD Dalal , **Nayan Tara**, , A Chaudhury(2020). Morphological analysis of T1 and T2 transgenic rice (*Japonica Taipei 309*) Progeny plants harboring *CCAI* gene under the green house. *Research journal of biotechnology*. 15(7), 43-51

BOOK CHAPTERS:

1. “Alleviation of Cold Stress by Psychrotrophic Microbes” In book: *Advances in Plant Microbiome and Sustainable Agriculture* Meena Sindhu, Kamla Malik, Seema Sangwan, Anuj Rana, **Nayan Tara**, Sushil Ahlawat. published by International Publisher Springer Nature Singapore Pt. Ltd. in 2020, DOI: [10.1007/978-981-15-3204-7_8](https://doi.org/10.1007/978-981-15-3204-7_8).

(XII) Participation in Seminars/Conferences/Workshops, etc. during 2020:

(a) International Conferences:

Prof. Ashok Chaudhary: NIL

Prof. Neeraj Dilbaghi: Nil

Prof. Namita Singh

1. 61st Annual Conference “Microbial World: Recent Developments in Health, Agriculture and Environmental Sciences” being organised jointly by The Energy and resources Institute , University of Delhi and IARI under the aegis of Association of Microbiologists of India (AMI) and Indian Network for Soil Contamination and Research (INSCR) from 3rd to 5th February, 2021
 2. Suryakant Panchal, Manju Bala Bishnoi, Taruna sheoran, Mandeep Kumar, **Namita Singh**. “Metagenomic Diversity among the phenanthrene degrading consortia in the region of Haryana, India” Presented poster and abstract published in 61st Annual conference of AMI -2021 & International Symposium on “Microbial world : Recent Development in health ,Agriculture and Environmental studies” 3rd -5th feb,2021 jointly organized by the Association of microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI), University of Delhi (DU), Indian agricultural research institute (IARI) and Indian national science academy (INSA).page no.200.
 3. Manju Bala Bishnoi, Suryakant Panchal, Renuka Sharma, Monika Verma, **Namita Singh**. “Study the effect of pigment precursor as substrate for mass production and pigment accumulation in Cyanobacterial isolate 13MNS2014” Presented poster and abstract published in 61st Annual conference of AMI -2021 & International Symposium on “Microbial world : Recent Development in health ,Agriculture and Environmental studies” 3rd -5th feb,2021 jointly organized by the Association of microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI), University of Delhi (DU), Indian agricultural research institute (IARI) and Indian national science academy (INSA).page no.214.
 4. Punita Sharma, **Namita Singh**. “Harnessing the power of the microbial structure of *Hermetia illucens* for the benefit of waste management process”. Presented poster and abstract published in 61st Annual conference of AMI -2021 & International Symposium on “Microbial world : Recent Development in health ,Agriculture and Environmental studies” 3rd -5th feb,2021 jointly organized by the Association of microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI), University of Delhi (DU), Indian agricultural research institute (IARI) and Indian national science academy (INSA).page no.202.
-

Prof. Vinod Kumar Chhokar NIL
Dr Sandeep Kumar NiL
Dr Santosh Kumari NIL
Dr. Sapna Grewal NIL

Dr Rakesh Yadav

- Rakesh Yadav. Genome-Wide Analysis and Expression Profiling of the HMA Gene Family in *Populus trichocarpa*. Inbix2020: Indian Conference on Bioinformatics 2020, Virtual, India, December 4-5, 2020.

(b) National Conferences: Nil

(C) Workshops and Refresher Courses

Prof. Ashok Chaudhury NIL

Prof. Neeraj Dilbaghi

- Organized 5 Subject Refresher Courses, 2 Interdisciplinary Refresher Courses, 4 One Month faculty induction programme, 4 Short term courses and 3 Webinars as Course Director of HRDC.
- Organized and launched IInd and IIIrd Annual Refresher Program for Teachers (ARPIT-2019 & ARPIT-2020) as Course Director and Course Co-ordinator of HRDC through SWAYAM Portal.

Prof. Namita Singh

- Attended National E- Workshop On Intellectual Property Rights (IPR) Organized By School of Life Sciences, JNU, Jaipur Enterprunureship and Career Hub (ECH), University of Rajasthan, Jaipur 30 April 2021,
- Attended Webinar on Workd Zoonoses Day, 2021 Preventing Future Zoonotic Pandemics Interventions at the Wildlife- Livestock- Human Interface organized by ICAR-NRCE, Hisar, Haryana on world Zoonotic day 2021.
- Attended **ASM Virtual Online Workshop on Scientific Writing and Publishing"** on Wednesday, 07th of April 2021.
- 61st Annual Conference "Microbial World: Recent Developments in Health, Agriculture and Environmental Sciences" being organised jointly by The Energy and resources Institute , University of Delhi and IARI under the aegis of Association of Microbiologists of India (AMI) and Indian Network for Soil Contamination and Research (INSCR) from 3rd to 5th February, 2021

Dr. Vinod Kumar Chhokar NIL

Dr. Anil Kumar Bhankhar NIL

Dr Sandeep Kumar NIL

Dr Santosh Kumari

1. Participated in virtual international conference "NANOFORAGRI 2020 Application of Nanotechnology for Sustainable, Productive and Safer Agriculture and Food System" on 5 and 6 November 2020 organised by TERI-Deakin Nanobiotechnology Centre, Gurugram

Dr Rajesh Thakur NIL

Dr Sapna Grewal NIL

Dr Anita Rani Gill

One month online course attended from April 2021 to June 2021, "DO Your Venture: Entrepreneurship For Everyone organized by IIM Bangalore offered for the National Commission for Women, India

Dr Rakesh Yadav NIL

Dr Ravinder Kumar NIL

Dr Nayan Tara NIL

(c) Workshops and Refresher Courses attended:

Prof. Ashok Chaudhury NIL

Prof. Neeraj Dilbaghi NIL

Prof. Namita Singh

- Attended National E- Workshop On Intellectual Property Rights (IPR) Organized By School of Life Sciences, JNU, Jaipur Enterprunureship and Career Hub (ECH), University of Rajasthan, Jaipur 30 April 2021,
- Attended Webinar on Workd Zoonoses Day, 2021 Preventing Future Zoonotic Pandemics Interventions at the Wildlife- Livestock- Human Interface organized by ICAR-NRCE, Hisar, Haryana on world Zoonotic day 2021.
- Attended **ASM Virtual Online Workshop on Scientific Writing and Publishing"** on Wednesday, 07th of April 2021.
- Science Leadership Workshop” **June 22-28, 2020 Organized by Central University of Punjab, Bathinda**
- 61st Annual Conference “Microbial World: Recent Developments in Health, Agriculture and Environmental Sciences” being organised jointly by The Energy and resources Institute , University of Delhi and IARI under the aegis of Association of Microbiologists of India (AMI) and Indian Network for Soil Contamination and Research (INSCR) from 3rd to 5th February, 2021

Dr. Vinod Kumar Chhokar NIL

Dr. Anil Kumar Bhankhar NIL

Dr Sandeep Kumar NIL

Dr Santosh Kumari NIL

Dr Rajesh Thakur

- One week FDP on Photonics By ATAL Academy Department of Physics GJUS&T, Hisar Online Nov. 2-6 2020
- One week work shop on Workshop On Frontiers in Science & Engineering Science Foundation and MHRD-IIC-DDUC Chapter(Under the aegis of DBT Star College Program) Deen Dayal Upadhyaya College University of Delhi, New Delhi University of Delhi, New Delhi online sept 14-19 2020.
- One week Diverse area of Biotechnology Departemnt of Biomand Nano technology GJUST Hisar Online Aug 25th to sept 2 n2020
- Supportsystem for Enterprenureship development

Dr. Sapna Grewal NiL

Dr Anita Rani Gill NIL

Dr Krshan Datt Rawat NIL

Dr. Rakesh Yadav

- Nanomaterials and Sustainable Applications”, ICT Mumbai-Marathwada Campus, Jalna-431203, India, December 2-3, 2020
- National E-Conference on Advanced Research in Materials Science (2021), Kamraj College, Tamilnadu.,February 22-23, 2021.
- Webinar Series: Infection Prevention and Control (IPC) for COVID-19 Virus, WHO, 15th April 2021.

Dr Ravinder Kumar NIL

Dr Nayan Tara NIL

(d) Organized

Prof. Ashok Chaudhury: NIL

Prof. Neeraj Dilbaghi

- Organized 5 Subject Refresher Courses, 2 Interdisciplinary Refresher Courses, 4 One Month faculty induction programme, 4 Short term courses and 3 Webinars as Course Director of HRDC.
- Organized and launched IInd and IIIrd Annual Refresher Program for Teachers (ARPIT-2019 & ARPIT-2020) as Course Director and Course Co-ordinator of HRDC through SWAYAM Portal.

Prof. Namita Singh

- Organized : One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31,2020 sponsored by Department of Biotechnology Govt. of India New Delhi
- Organize 61st international conference of the Association of microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI),University of Delhi (DU),Indian agricultural research institute (IARI) and Indian national science academy (INSA). 2-5th Feb., 2021. Online.
- Organize webinar on COVID-19 Infection: origin and transmission sponsored by Association of Microbiologist of India on 15/8/2020.
- Organize webinar on Epidemiology, detection, treatment, transmission and comparative genomics of SARS-COV-2 and managing personal and professional life during COVID-19 pandemic and lockdown sponsored by Association of Microbiologist of India on 23/08/2020.
- Organize webinar on Jumping of viruses from one species to another sponsored by Association of Microbiologist of India on 06/09/2020.
- Organize webinar on Microbes, Immunity, and vaccines sponsored by Association of Microbiologist of India on 20/09/2020
- Organize webinar on Probiotic Dairy foods in modulating human health and well being sponsored by Association of Microbiologist of India on 20/09/2020
- Organize webinar on Translation regulation in eukaryotes: the role of regulatory networks and RNA Epi transcriptome sponsored by Association of Microbiologist of India on 11/10/2020

Dr. Vinod Kumar Chhokar

Organized :One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31,2020 sponsored by Department of Biotechnology Govt. of India New Delhi

Dr. Anil Kumar Bhankhar

Organized One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31,2020 sponsored by Department of Biotechnology Govt. of India New Delhi

Dr Sandeep Kumar **NIL**
Dr Santosh Kumari **NIL**
Dr Rajesh Thakur **NIL**
Dr. Sapna Grewal **NIL**
Dr Anita Rani Gill **NIL**
Dr Krshan Datt Rawat **NIL**
Dr. Rakesh Yadav **NIL**
Dr Ravinder Kumar **NIL**
Dr Nayan Tara **NIL**

(XIII) Association with National and State Level Bodies (Give teacher-wise details):

(i) Member of Professional bodies

Prof. Ashok Chaudhury

1. Member of Executive Council, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.
2. Member of Academic Council, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.
3. Association of Microbiologist of India (AMI), Life Member.
4. Society, Sustainable Agriculture Resource & Management (SSARM), Life Member.
5. Chairman, House Allotment Committee, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.
6. Members of Board of Studies & Research, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.
7. Members of Board of Studies & Research, Chaudhary Devi Lal University, Sirsa, Haryana.

Prof. Neeraj Dilbaghi

- **Association of Microbiologists of India. (Life Member)**
- **Society for Conservation of Domestic Animal Biodiversity (Life Member)**
- **Society for Sustainable Agriculture & Resource Management. (Life member & Coordinator GJUST Chapter)**

Prof. Namita Singh

- Life member of Association of Microbiologist of India
- Association of Microbiologists of India. (**Life Member**) Executive member of Hisar unit for the year 2005-2006, 2009-2010, 2016-2019, Elected General Secretary AMI Hisar Unit 2019-20,
- General Secretary (Elect) 2020 -2023 Association of Microbiologist of India
- Association for promotion of DNA Fingerprinting & other DNA Technologies. (**Life Member L-595**)
- Indian Science Congress.
- Indian Society of Cell Biology
- Indian Science Congress.
- Indian Women scientists Association.
- Society for conservation of Domestic Animal Biodiversity (**Life Member**)
- Society for Sustainable Agriculture & Resource Management

Dr. Vinod Kumar Chhokar

- Life Member, Society of Biological Chemist, India
- Life Member, Association of Microbiologists of India
- life Member, Society for Conservation of Domestic Animal Biodiversity, India
- Life Member, International Aloe Science Council, Texas, USA

Dr. Anil Kumar Bhankhar: NIL

Dr Sandeep Kumar: NIL

Dr Santosh Kumari: NIL

Dr Rajesh Thakur AIMA

Dr. Sapna Grewal: NIL

Prof. S.S. Dudeja:

- **Member of RAC(Research Advisory Committee)** of National Bureau of Agriculturally Important Microorganisms (ICAR –NBAIM, Mau, U.P.) 2019-2022
- Consultant on Microbial inoculants – organic inputs(ICRISAT) under Asian Development Bank, Manilla (Aug 2019 – March 2020)
- **In the panel of Experts of ASRB for Microbiology discipline, New Delhi- Attended two meetings during this period.**
- Acted as External Expert in the selection committee of Professor of Biotechnology, CDLU, Sirsa
- Journal of Basic Microbiology (Germany) **Senior Editor Plant Microbe Interactions**

Dr Anita Rani Gill: NIL

Dr Krshan Datt Rawat: NIL

Dr. Rakesh Yadav Member

- American Nano Society

Dr Ravinder Kumar: NIL

Dr Nayan Tara: NIL

- (i) Member of Expert Committee

Name of the Teacher	Expert Committee
Prof. Ashok Chaudhury	<ul style="list-style-type: none">➤ Member of Executive Council, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.➤ Member of Academic Council, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.➤ Worked as Director, Pandit Deendayal Upadhyaya Incubation & Innovation Centre, Guru Jambheshwar University of Science & Technology, Hisar, Haryana from 7th June 2019 to 10th June 2020.➤ Association of Microbiologist of India (AMI), Life Member.➤ Society, Sustainable Agriculture Resource & Management (SSARM), Life Member.➤ Chairman, House Allotment Committee, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.➤ Members of Board of Studies & Research, Guru Jambheshwar University of Science & Technology, Hisar, Haryana.➤ Members of Board of Studies & Research, Chaudhary Devi Lal University, Sirsa, Haryana.
Prof. Neeraj Dilabaghi	<ul style="list-style-type: none">➤ Expert Reviewer for Evaluation of Projects submitted under UGC-Scheme for Trans disciplinary Research for India's Developing Economy (STRIDE) Program under Component 2.

	<ul style="list-style-type: none"> ➤ Member of Executive Council of Haryana State Council for Science and Technology, Government of Haryana. ➤ Member of Expert Committee for preparation of Road Map Document for restructuring/expansion of Science & Technology Department Haryana and its implementation of Haryana State Council for Science and Technology, Government of Haryana. ➤ Member of Expert Panel nominated by Haryana State Council for Science and Technology, Government of Haryana for finalization of Research & Development (R&D) Projects for the year 2020-21. ➤ Member of Expert Panel nominated by Haryana State Council for Science and Technology, Government of Haryana for Screening of Research & Development (R&D) Projects for the year 2020-21. ➤ Expert Member nominated by HSCST, Government of Haryana for Shortlisting of Proposals under DBT Skill Vigyan State Partnership Program in Life Science and Biotechnology (17-9-2020) ➤ Member of Expert Panel nominated by Haryana State Council for Science and Technology, Government of Haryana for finalization of Research & Development (R&D) Projects for the year 2019-20. ➤ Member of Expert Panel nominated by Haryana State Council for Science and Technology, Government of Haryana for Screening of Research & Development (R&D) Projects for the year 2019-20. ➤ Institutional Coordinator (RUSA) of GJUS&T, Hisar. ➤ Member of Departmental Research Committee, Staff council and Scientific Advisory Committee of Dept of Bio & Nano Technology. ➤ Member of Board of Studies of Dept of Bio & Nano Technology. ➤ Member of Faculty of Science and Technology Interface. ➤ Member of Women Cell of the University. ➤ Member of Institutional Animal Ethics Committee of GJUST, Hisar. ➤ Outside Expert Member of Internal Quality Assurance cell of CRSU, JIND. ➤ Outside Expert Member of Internal Quality Assurance cell of JC Bose YMCAUS&T, Faridabad. ➤ Outside Expert Member of Internal Quality Assurance cell of DCRUST, Murthal. ➤ Outside Subject Expert member of Selection Committee for CAS in Department of Biotechnology, MDU, Rohtak. (Jan, 2018) ➤ Outside Subject Expert member of Selection Committee for promotion to the post of Associate Professor under Career Advancement Scheme (CAS) for the Department of Biomedical Engineering (CAS) for the Department of Bio-Medical Engineering, DCRUST, Murthal. (18-1-2021) ➤ Coordinator, Hisar Knowledge Hub, Cluster of institutes. ➤ Member, Research Promotion Board, GJUS&T, Hisar. ➤ Incharge Radio-Ecology Centre. ➤ Member of DST- Purse Project implementation. ➤ Course Director & Course Coordinator, National Resource Centre, HRDC, GJUST Hisar. ➤ Member of NAAC Steering Committee for NAAC, Cycle-IV.
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	<ul style="list-style-type: none"> ➤ Internal Member of Internal Quality Assurance cell of GJUS&T, Hisar. ➤ Member of Research Promotion Board of GJUS&T, Hisar.
Prof. Namita Singh	<ul style="list-style-type: none"> ➤ Member of Advisory Committee Intellectual Property Rights and Technology Commercialization Cell (IPR & TCC), GJUS&T, Hisar ➤ Member of BOSR CUH, Mahendergd ➤ Member of BOS Department of Biotechnology university college of engineering KUK. ➤ Member of UGBOS , CDLU, Sirsa ➤ Member of PGBOSR, CBLU Bhiwani. ➤ Member of PGBOS Department of Bioinformatics MDU Rohtak ➤ External expert of Member of PG BOSR Department of Bioinformatic MDU Rohtak, ➤ Member of BOSR North-Eastern Hill University Department of Rural Development & Agricultural Production Tura Campus, Tura-794002, West Garo Hills, Meghalaya ➤ UGC Chairman Nominee for CPE advisory board of S S Khanna College Allahabad ➤ UGC Chairman Nominee of Governing council of R.J. College Mumbai ➤ UGC Chairman Nominee member of Governing council of Duvvuru Ramanamma Womens College GUDUR-524101 ➤ Member of IBSC, LLRU, Hisar DBT Nominee ➤ Member of IBSC, IPR-cell, BOSR, AC member of GJUS&T, Hisar. ➤ Member of Under Graduate Board of Studies in Microbiology Kurukshetra University Kurukshetra 2021-2023 ➤ UGC Chairman Nominee Expert Committee visit to Rama Devi Women's University, Bhubaneswar, Odisha for on-the-spot assessment of the infrastructure and other facilities available with the University and submission of its report to consider the proposal of the university for inclusion under Section 12-B of the UGC Act, 1956. ➤ Member of selection committee assistance professor At Delhi university Delhi ➤ Member of CAS selection committee at Ambedkar institute of Biomedical Sciences at University of Delhi. ➤ Acted as subject expert for CAS Selection committee Department of Biotechnoloft Jiwaji University Gawalior ➤ Acted as Ph.D. Thesis evaluation expert in Biotechnology, Bioinformatics MDU Rohtak, JNU, Delhi University ,DAVV Indore, Barkatullaha University Bhopal ➤ Chair the session Microbial pathogenesis in the 61 st international conference of the Association of Microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI),University of Delhi (DU),Indian agricultural research institute (IARI) and Indian national science academy (INSA). 2-5th Feb 2021.

	<ul style="list-style-type: none"> ➤ Acted as Pannelist in the One day National seminar on Pedogogical Concerns Challenges and Solutions in the Wake of Covid-19 crisis held on 25th May, 2020 11:00 to 1:00 PM. Organized by S.S. Khanna Girls Degree College, Allahabad, An Autonomous NAAC A Grade College U.P.
Prof. Vinod Kumar Chhokar	<ul style="list-style-type: none"> ➤ Acted as external expert for the CAS promotion in CCS HAU ➤ Acted as external expert for screening of applications for the post of Assistant Professor and Associate Professor at CUH, Mahindergarh ➤ Acted as external expert for the PhD's thesis evaluation of MDU, Rohtak, PU Chandigarh, JNU, New Delh
Dr Anil Kumar Bhanekar	➤ NSS Cordinator GJUS&T, Hisar
Dr Sandeep Kumar	NIL
Dr. Santosh Kumari	NIL
Dr Rajesh Thakur	NIL
Dr Sapna Grewal	NIL
Prof.S.S. Dudeja	<ul style="list-style-type: none"> ➤ Member of RAC(Research Advisory Committee) of National Bureau of Agriculturally Important Microorganisms (ICAR – NBAIM, Mau, U.P.) 2019-2022 ➤ Consultant on Microbial inoculants – organic inputs(ICRISAT) under Asian Development Bank, Manilla (Aug 2019 – March 2020) ➤ In the panel of Experts of ASRB for Microbiology discipline, New Delhi- Attended two meetings during this period. ➤ Acted as External Expert in the selection committee of Professor of Biotechnology, CDLU, Sirsa Journal of Basic Microbiology (Germany) - Senior Editor – Plant Microbe Interactions

Name of the Teacher	Member of Academic Bodies of various of other Institutions
Prof. Ashok Chaudhary	NIL
Prof. Neeraj Dilbaghi	<ul style="list-style-type: none"> ➤ Outside Expert – PG Board of Studies, Deptt. Of Biotechnology, DCRUST, Murthal ➤ Outside Expert – PG Board of Studies, Deptt. Of Biotechnology, CDLU, Sirsa. ➤ Outside Expert – DRC, Deptt. of Biomedical Engineering, DCRUST, Murthal ➤ Outside Expert –Board of Faculty of Humanities and Sciences, YMCA, Faridabad. ➤ Outside Subject Expert –Board of Studies, Department of Biotechnology UIET, KUK. ➤ Outside Subject Expert –Board of Studies of Affiliating I Colleges UIET, KUK. ➤ Outside Subject Expert –Board of Studies, Department of Biotechnology, KUK. ➤ Outside Subject Expert –Board of Studies, Department of Microbiology, KUK. (18-6-2021 to 17-6-2023)

	<ul style="list-style-type: none"> ➤ Outside Subject Expert –Board of Studies, Department of Biotechnology Punjabi University, Patiala. ➤ Outside Subject Expert –Academic Audit of Mechanical Engg, YMCAUS&T, Faridabad. (17 March, 2020) ➤ Outside Subject Expert –Academic Audit of Basic and Applied Science department. NIFTEM, Kundli, Sonapat. (4 March 2020) ➤ Outside Expert – School Board of School of Environment and Earth Sciences, Central University of Punjab, Bathinda. ➤ Outside Expert – PGBOS, Deptt. of Food Technology, CDLU, Sirsa. • Member Nominee of Academic Planning Board of CDLU, Sirsa
<p>Prof. Namita Singh</p>	<ul style="list-style-type: none"> ➤ Member of Advisory Committee Intellectual Property Rights and Technology Commercialization Cell (IPR & TCC), GJUS&T, Hisar ➤ Member of BOSR CUH, Mahendergd ➤ Member of BOS Department of Biotechnology university college of engineering KUK. ➤ Member of UGBOS , CDLU, Sirsa ➤ Member of PGBOSR, CBLU Bhiwani. ➤ Member of PGBOS Department of Bioinformatics MDU Rohtak ➤ External expert of Member of PG BOSR Department of Bioinformatic MDU Rohtak, ➤ Member of BOSR North-Eastern Hill University Department of Rural Development & Agricultural Production Tura Campus, Tura-794002, West Garo Hills, Meghalaya ➤ UGC Chairman Nominee for CPE advisory board of S S Khanna College Allahabad ➤ UGC Chairman Nominee of Governing council of R.J. College Mumbai ➤ UGC Chairman Nominee member of Governing council of Duvvuru Ramanamma Womens College GUDUR-524101 ➤ UGC Chairman Nominee Expert Committee visit to SRM Institute of Science and Technology related to recognition of ODL programme 2018-19. ➤ UGC Chairman Nominee Expert Committee visit to SRM Institute of Science and Technology related to recognition of ODL programme 2018-19 ➤ UGC Chairman Nominee Expert Committee visit to Spicer Adventist University, Pune 2019 ➤ UGC Chairman Nominee Expert Committee visit to Centre for Environment Institute of Science and Technology Jawaharlal Nehru Technological University Hyderabad Telangana , INDIA 2019 ➤ UGC Chairman Nominee Expert Committee visit to Sikkim Manipal University Sikkim ODL programme 2018-19 ➤ Expert committee member of COE proposal of Different State University of M.P. under RUSA grant Madhya Pradesh Govt.of India

	<p>2019</p> <ul style="list-style-type: none"> ➤ Member of IBSC, LLRU, Hisar DBT Nominee ➤ Member of IBSC, IPR-cell, BOSR, AC member of GJUS&T, Hisar. ➤ Member of Under Graduate Board of Studies in Microbiology Kurukshetra University Kurukshetra 2021-2023 ➤ UGC Chairman Nominee Expert Committee visit to Rama Devi Women's University, Bhubaneswar, Odisha for on-the-spot assessment of the infrastructure and other facilities available with the University and submission of its report to consider the proposal of the university for inclusion under Section 12-B of the UGC Act, 1956. ➤ Member of selection committee assistance professor At Delhi university Delhi ➤ Member of CAS selection committee at Ambedkar institute of Biomedical Sciences at University of delhi. ➤ Acted as subject expert for CAS Selection committee Department of Biotechnoloft Jiwaji University Gawalior ➤ Acted as Ph.D. Thesis evaluation expert in Biotechnology, Bioinformatics MDU Rohtak, JNU, Delhi University ,DAVV Indore, Barkatullaha University Bhopal ➤ Subject Expert syllabus desing committee for M.Sc. and B.Sc. Microbiology at Microbiology Department, Sheth P. T. Mahila College of Arts & Home Science, Surat, Gujarat.
Prof. Vinod Chhokar	<ul style="list-style-type: none"> ➤ Outside Subject Expert, Advisory Committee to monitor the progress of DBT supported Post Graduate Teaching Programme in Biotechnology in HP University, Shimla [August 8, 2018 to August 7,2020] ➤ External Subject Expert, Post Graduate Board of Studies & Research, Department of Biotechnology, HP University, Shimla [January 12, 2019 to January 11, 2021] ➤ External Subject Expert, Under Graduate Board of Studies, Department of Biotechnology, M.D. University, Rohtak [July 17, 2019 to July 16, 2021] ➤ External Subject Expert, Under Graduate Board of Studies, Department of Biotechnology, Kurukshetra University, Kurukshetra [October 5, 2020 to October 4, 2022] ➤ Additional duties performed ➤ Dean, International Relation , GJUST, Hisar ➤ Nodal Officer, Association of Indian Universities , GJUST, Hisar ➤ Chairman, Standing Purchase Committee, GJUST, Hisar [August 2020,to August, 2022]
Dr. Anil Kumar	<ul style="list-style-type: none"> ➤ Program Coordinator of NSS ➤ House counselor of sports ➤ Training and placement officer of the department

(XIV) Details of Consultancy Work in the Department: **Nil**

Job Work	Name of agency	Total amount

(XV) Lecturers delivered (Give teacher-wise details):

Invited talks delivered in Refresher Courses	
Extension Lecturer	Prof. Ashok Chaudhury
	Prof. Neeraj Dilbaghi Invited talk 24 Extension Lecture 7 Any other 01
	<ol style="list-style-type: none"> 1. Delivered One invited expert lecture on "Covid-19: Overcoming Challenges to Self Reliance" to the participants of Webinar on "COVID-19 - Critical analysis and alternative treatments, an organic symbiotic paradigm" organized by Department of Science & Technology, Haryana on August 25, 2020. 2. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities" to the participants of Webinar organized by UIET, KUK on 23-7-2020. 3. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP-I organized by UGC-HRDC, GJUS&T, Hisar on 25-9-2020. 4. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP organized by UGC-HRDC, JMI, New Delhi on 4-12-2020. 5. Delivered One invited expert lecture on "How to Formulate a Research Proposal? Discipline Specific Research" to the participants of FIP organized by UGC-HRDC, JMI, New Delhi on 4-12-2020. 6. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP organized by UGC-HRDC, KU, Kurukshetra on 3-12-2020. 7. Delivered One invited expert lecture on "How to Formulate a Research Proposal? Discipline Specific Research" to the participants of FIP organized by UGC-HRDC, KU, Kurukshetra on 3-12-2020. 8. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP organized by UGC-HRDC, JMI, New Delhi on 15-1-2021. 9. Delivered One invited expert lecture on "How to Formulate a Research Proposal? Conducting Discipline Specific Research" to the participants of FIP organized by UGC-HRDC, JMI, New Delhi on 15-1-2021. 10. Delivered One Expert lecture on "How to Formulate a Research Proposal and Funding Opportunities for Young Researchers" to the participants of FIP organized by UGC-HRDC, GJUS&T, Hisar on 13-10-2020.

11. Delivered one invited lecture on "Nanomaterials- The Smart materials" to the participants of Refresher Course in Chemistry organized by UGC-HRDC, GJUS&T, Hisar on 2-10-2020.
12. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP-II & III organized by UGC-HRDC, GJUS&T. Hisar on 10-12-2020.
13. Delivered One invited expert lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of IDRC on Quantitative Biology organized by UGC-HRDC, GJUS&T. Hisar on 12-1-2021.
14. Delivered One invited expert lecture on "Opportunities and future perspectives in Bio-mechatronics "to the participants of FDP on "Opportunities and Challenges in different sectors of Biotechnology post pandemic" organized by UIET, KU, Kurukshetra on 10-3-2021.
15. Delivered One invited expert lecture on " Innovations in Science & Technology During & Post COVID-19 " to the participants of FDP on "Opportunities and Challenges in different sectors of Biotechnology post pandemic" organized by UIET, KU, Kurukshetra on 11-3-2021.
16. Delivered One invited expert lecture on "Innovations in Science & Technology for Sustainable Development during & Post COVID-19" to the participants of FIP organized by UGC-HRDC, KU, Kurukshetra on 1-3-2021.
17. Delivered One invited expert lecture on "How to Formulate a Research Proposal? Conducting Discipline Specific Research" to the participants of FIP organized by UGC-HRDC, BPS University, Khanpur on 26-1-2021.
18. Delivered two invited expert lecture on "Nanotechnology & Environment Sustainability I & II" to the participants of Faculty Development programme on Green Technologies & Environmental Sustainability organized by JC Bose University of S&T, YMCA, Faridabad on 8-9-2020.
19. Delivered One invited Expert lecture on "Science, Technology & Innovation for Sustainable Development During & Post Covid " to the participants of PSCS&T sponsored National Science Day 2021 organized by DAV Institute of Engineering and Technology, Jalandhar on 19-2-2021.
20. Delivered one invited lecture on "Covid-19 Pandemic: Transforming Challenges into opportunities towards Self-reliant India" to the participants of FIP organized by UGC-HRDC, PU, Chandigarh on 11-1-2021.
21. Delivered One invited expert lecture on "Innovations in Science & Technology During & Post COVID-19" to the participants of FIP-IV organized by UGC-HRDC, GJUS&T. Hisar on 9-3-2021.
22. Delivered One invited expert lecture on "Nanobiotechnology - Applications and Perspectives" to the participants of National Science Day organized by DN College Hisar on 2-3-2021.
23. Delivered One invited expert lecture on "Applications of Nanobiotechnology in Diagnostics" to the participants of online training on Recent techniques in Nucleic acid based Diagnostics organized by Dept of Animal Biotechnology,

	<p>LUVAS on 15-1-2021.</p> <ol style="list-style-type: none"> 24. Delivered one invited expert lecture on "COVID-19 Pandemic- A Story of Global leader" to the participants of SRC on RM for SS organized by UGC-HRDC, GJUS&T. Hisar on 17-3-2021. 25. Delivered One invited expert lecture on "Nanotechnology- A research Avenue" to the participants of Online Refresher Course on "Research management" organized by AAR&EM, HRM, CCS HAU, Hisar on 19-4-2021. 26. Delivered One invited expert lecture on "Global leadership during Covid-19 Pandemic" to the participants of One week Leadership development Programme organized by UGC-HRDC, GJUS&T. Hisar on 11-3-2021. 27. Delivered One invited expert lecture on "Innovations in Science & Technology for Sustainable Development during & Post COVID-19" to the participants of national Science Day organized by MDU, Rohtak on 28-02-2021. 28. Conducted Workshop on "Learning based Outcomes" as Invited Expert Member for the Faculty of Life Sciences, CDLU, Sirsa on 19/1/2021.
	<p>Prof. Namita Singh</p> <ul style="list-style-type: none"> ➤ Delevered Lecture in 61st Annual Conference "Microbial World: Recent Developments in Health, Agriculture and Environmental Sciences" being organised jointly by The Energy and resources Institute , University of Delhi and IARI under the aegis of Association of Microbiologists of India (AMI) and Indian Network for Soil Contamination and Research (INSCR) from 3rd to 5th February, 2021 ➤ Deliver a lecture and act as panelist in a wrkshop organized by S.S.Khanna College Allahabad on "New Education Policy 2020- Concepts, Approaches and Challenges 11/10/2020 ➤ Talk Delivered on Line webinar at S.S. Khanna College On Biotechnology carrier oportunity for the Biotechnology Student and teacher in the International Seminar sponsored by S S Khanna College Allhabad. ➤ Chairman of The session and deliver a talk on Health Sustainability in a five-day International e-Conference on "Sustainability Challenges & Transforming Opportunities amidst COVID-19" from 26th-30th July, 2020 under the banner of strengthening component of Star College Scheme of DBT, Department of Biotechnology, Government of India organized by S.S. Khanna College Allahabad 28/7/2020 ➤ Lecture delivered at CUH Mahenderghad ➤ Deliver a talk in Science Popularisation Lecture Series on line at S.S. Khanna College Allahabad . 20th- 26th March 2021 ➤ Talk delivered in the department of Bioinformatics MDU Rohtak. Cloud commputing present and future in the field of life sciences
	<p>Dr Rajesh Thakur</p> <ul style="list-style-type: none"> ➤ Lecture delivered as resource person: "Data management using Excel Sheet" on 1-Mar-2021 in UGC sponsored one-month online (live mode) Faculty Induction Programme-4 conducted by UGC-HRDC, GJUS&T, Hisar from 8-Feb-2021 to 13-Mar-2021

	<p>Dr. Rakesh Yadav</p> <p>➤ Analysing Gene & Protein through smart bioinformatics tools, LPU, Phagwada, Ludhiana, 8 Oct 2020.</p>
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Any other

(XVI) Details of the Academic Activities/ Programs organized in the Department during the year:

- (i) Seminar /Conferences/ Refresher Courses etc. NIL
- (ii) Extension Lecturers NIL
- (iii) Students Tours/ Training Programmes NIL
- (iv) Industry Interaction Programs NIL
- (v) Any other

(XVII) Any other Information:

Seminar and conferences organized by all faculty

Prof. Ashok Chaudhury:

- Organized: One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31, 2020 sponsored by Department of Biotechnology Govt. of India New Delhi

Prof. Neeraj Dilbaghi

- Organized 5 Subject Refresher Courses, 2 Interdisciplinary Refresher Courses, 4 One Month faculty induction programme, 4 Short term courses and 3 Webinars as Course Director of HRDC.
- Organized and launched IInd and IIIrd Annual Refresher Program for Teachers (ARPIT-2019 & ARPIT-2020) as Course Director and Course Co-ordinator of HRDC through SWAYAM Portal.

Prof. Namita Singh

- Organized: One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31, 2020 sponsored by Department of Biotechnology Govt. of India New Delhi
- Organize 61st international conference of the Association of microbiologists of India (AMI) and Indian Network for soil contamination research (INSCR) in association with The energy and resource institute (TERI), University of Delhi (DU), Indian agricultural research institute (IARI) and Indian national science academy (INSA). 2-5th Feb., 2021. Online.
- Organize webinar on COVID-19 Infection: origin and transmission sponsored by Association of Microbiologist of India on 15/8/2020.
- Organize webinar on Epidemiology, detection, treatment, transmission and comparative genomics of SARS-COV-2 and managing personal and professional

life during COVID-19 pandemic and lockdown sponsored by Association of Microbiologist of India on 23/08/2020.

- Organize webinar on Jumping of viruses from one species to another sponsored by Association of Microbiologist of India on 06/09/2020.
- Organize webinar on Microbes, Immunity, and vaccines sponsored by Association of Microbiologist of India on 20/09/2020
- Organize webinar on Probiotic Dairy foods in modulating human health and well being sponsored by Association of Microbiologist of India on 20/09/2020
- Organize webinar on Translation regulation in eukaryotes: the role of regulatory networks and RNA Epi transcriptome sponsored by Association of Microbiologist of India on 11/10/2020

Prof. Vinod Chhokar

- Organized : One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31,2020 sponsored by Department of Biotechnology Govt. of India New Delhi

Dr. Anil Kumar

- Organized : One Week Webinar Series on “Diverse Areas of Biotechnology” from August 25-31,2020 sponsored by Department of Biotechnology Govt. of India New Delhi

Seminar/ workshop: NIL

Signature of the Chairpersons/ Incharges