CURRICULUM VITAE

Dr. Rajesh Kumar

Ph.D (Biotechnology), MBA, LLM

Designation: Assistant Professor

Department of Biotechnology

University Institute of Engg and Technology

Kurukshetra University Kurukshetra

Mobile: 09991107701

E mail: rkumar2015@kuk.ac.in , dahiya76@gmail.com

Objective: To facilitate learners and motivate young engineers to learn new things.

Academic qualifications : Ph.D, SLET in Life Science.

PhD : "Production partial purification and characterization of lipase from Fungi and its application in detergent industry" from year 2000- 2004 from Kurukshetra University Kurukshetra

SLET in Life Science for Lectureship in year 2005

M.Sc. Biotechnology (1997-99) Kurukshetra University Kurkshetra Haryana

B.Sc. Medical, (1994-97), M.D.U. Rohtak, Haryana

12th Class A.I.J.H.M. College Rohtak, Haryana, 1994

10th Class Govt High School Dujana, Jhajjar, Haryana, 1992

NPTEL COURSES

1. Bioinformatics : 12 weeks course conducted by Indian Institute of Madras form Jan to April 2021.
2. Structural Biology: 12 weeks course conducted by Indian Institute of Rurkee from Jan to April 2022.

Teaching experiences: Sixteen years of teaching experience at University Institute of Engineering and Technology, since July 2006 till date

Administrative Experience: Acted as Faculty Incharge Department of Biotechnology from May 2018 to July 2021

Research experience: Guided more than 12 M.Tech Students. Also guided B.Tech Students in their minor and major Projects

Field of Interests: Microbial Biotechnology, Enzyme production and Bioinformatics

Published Research Papers:

1 Sharma, J., Kumar, R and Singh, A (2004) Production of alkaline lipase by Aspergillus fumigatus using SSF of products obtained from grain processing. Ind J Microb. Vol 44(2); pp 141-143.

2 Nehra, K.S., Singh, A., Sharma, J., Kumar, R and Dhillon, S (2004) Production and characterization of alkaline protease from Aspergillus sp. and its compatibility with commercial detergents. Asian J of Microbial Biotech Environ Sci. 6. 72-76.

3 Sharma, J Singh, A., Kumar, R and Mittal, A (2006) Partial purification of an alkaline protease from a new strain of Aspergillus oryzae AWT.20 and its enhanced stabilization in entrapped ca-alginate beads. The internet j of microbiology. Vol 2(2):1-9.

4 Vats, S., Kumar, R andMiglani, K (2011) Isolation, characterization and identification of high

salinity tolerant, heavy metal contaminant and antibiotics resistant amylolytic-thermophilic Pseudomonassp. Int J Pharma Sci Review and Research.vol 10(2). pp 125-129.

5 Vats, SKumar, R and Negi, S (2012) Natural food that meet antibiotics resistance challenge: In vitro synergistic antimicrobial activity of Azadirachtaindica, Terminalia chebula, Pipernigrum and photoactivated cow urine. Asian Journal of Pharmaceutical and Biological Research vol 2(2) 122-126.

6 Saini, J., Kashyap, D., Batra,B., Kumar, S., Kumar, R and Malik, D (2013) Green Synthesis of Silver Nanoparticles by Using Neem (AzadirachtaIndica) and Amla (PhyllanthusEmblica) Leaf Extract. Indian journal of applied research vol 3(5) pp 209-210.

7 Kumar, S Saini, J Kashyap, D, Batra, B Grewal, A Malik D and Kumar, R (2013) green synthesis of plant-mediated silver nanoparticles using mangiferaindicaand syzygiumcuminileaf extract Int J pharma sci research Vol. 4(8): 3189-3191.

8 Singh N, Kumar R, Khatak S, Malik D K and Anita Grewal (2013) Morphological, Physiological and Biochemical Characterization ofBacteria Isolated From Pineapple Juice Asian J. Exp. Biol. Sci. Vol 4 (4) 2: 651-653.

9 Sharma K.M., R. Kumar*, Vats S and Gupta A. (2014) Production, partial purification and characterization of alkaline protease from Bacillus aryabhattai K3. IntJ Adv in Pharmacy, Biology and chemistryVol. 3(2) 290-298.

10 Kumar, M; Kumar, R and Malik, D. K (2016) Keratin degradation by bacterial strain isolated from poultry farm soil. J of Pharmacy Research. Vol 10 (2) pp 113-115.

11 Kumar, R, Kaur, J Jain S, and Ashwani Kumar (2016) Optimization of laccase production from Aspergillus flavus by design of experiment technique: Partial purification and characterization. J. Genetic Engg . Biotech Vol 14 (1): 125-131.

12 Joshi, A, Kumar, R and Sharma, A (2018) Molecular Docking Studies, Bioactivity Score Prediction, Drug Likeness Analysis of GSK-3 β Inhibitors: A Target Protein Involved in Alzheimer's Disease. Biosci Biotech Res Asia. Vol: 15(2), 455-467.

13 Khatak, S, Malik D K and Kumar,R. Dahiya (2019) Tecomastans: A noxious weed put to beneficial use. Int. J. Chem. Studies. Vol: 7(3): 296-299.

14 Ajamani, AKumar R, Bhargava, P and Vats, S (2019) Mathematically optimized production, purification and characterization of penicillin G Acylase from soil bacterial isolates AA17A and AA17B. Indian J Biotechnology Vol. 18: 260-268.

Book Chapters

1 Kumar, R., Sharma, J., & Gaur, P. (2004) Phytoremediation of Soil contaminated with heavy metals. In Biotechnological Applications in Environmental Management. Edited by Prof. R. K. Trivedi. B S Publishers Hyderabad. PP. 215-224.

2 Sharma, J., Singh, A., &Kumar, R.(2004) Sludge granulation process in UpflowAnaerobic Sludge Blanket reactors. In Biotechnological application in Environmental Management Edited by Prof. R. K. Trivedi,B S Publishers Hyderabad.PP-221-227.

3 Tomar, P., S &Kumar, R., DNA computing Origin and Future. Edited by Deepak Garg &Amardeep Singh. Allied Publishers Pvt. Ltd. New Delhi.

4 Sharma, J., Singh, A., &Kumar, R.(2004)Intellectual Property Rights and Biotechnology. In Microbial Biotechnology edited by P. C. Trivedi. Aavishkar Publishers, Distributors, Jaipur (India).pp 329-343.

5 Saini, H.S, Saini, R, Kumar R, and Anjali Dahiya. (2018) Translation Initiation Regulation and Cancer: A Review. Emerging Trends and Challenges in Biosciences edited by Raj Pal Singh, Astral Publisher.(India).pp223-237.

6 Saini, H.S Saini, R, Kumar R, and Anjali Dahiya. (2018)Celiac Disease: Pathogenesis, Diagnosis, Treatment and Novel Therapeutics Emerging Trends and Challenges in Biosciences edited by Raj Pal Singh, Astral Publisher.(India).pp 151-163.

7 Saxena,P., Srivastava, J., Pandey, S ., Srivastava S., Maurya N., Kaushik, N C., Mishra, S., Asthana, G., Bhargava, P., Kumar, R and Siddharth Vats (2019) Plants for Biocontrol and Biological Control of Plant Pathogens. In: Varma A., Tripathi S., Prasad R. (eds) Plant Biotic Interactions. Springer, Cham pp 147-179.

8 Kumar, N., Srivastava, P., Viswakerma, K., Kumar, R., Kuppala, H., Maheshwari, S K and Vats, S. (2020)The Rhizobium-Plant Symbiosis: State of the Art. In Plant Microbes symbiosis. Editors: Varma, Ajit,Tripathi, Swati, Prasad, Ram, Springer International; pp 1-20.

9 Bhargava, P., Gupta, N., Kumar, R., and Vats, S.(2020)Plant and Microbes Bioresources for sustainable development and control. In Plant Microbes symbiosis. Editors: Varma, Ajit,Tripathi, Swati, Prasad, Ram, Springer International; pp 153-176.

10 Budhiraja,N., Srivastava,P., Agrahari,S., Shukla, D., Mudgil, B., Saxena, S., Dahiya, R and Vats, S. (2020) Plant-Metal Interaction: A Biochemical and Molecular Analysis for phytoremediation. In Plant Microbiome Paradigm. Editors: Editors: Varma, Ajit,Tripathi, Swati, Prasad, Ram, Springer International; pp 71-92. (2020)

Book edited

1. Editor of a book " Microbes for human mankind and applications" Editors (Deepak Kumar Malik, MeenuRathi, Rajesh Kumar, Divya Bhatia) of Astral International Publisher in 2020. ISBN: 978-93-89569-01-8(HB).

General article

1 Thakur, M. K., Kumar, A., Singh, A., &Kumar, R.(2003) Molecular Markers and their application in livestock breed characterization. Biochem. Cell. Article 39(1)-1-8.

2. Mangotra, A; Singhmar,E; Kumar,R., Khuttan, A and Gautam,S.K (2013) Molecular genetics in cancer research: Current scenario and future prospective. Int.J. Cell Sci and Biotechnology. Vol 2 pp 15-20.

Review articles

1 Kumar, R and Vats,S (2015) Amylolytic-Extremoenzymes: Saviour of environments. European Journal of Biomedical and Pharmaceutical sciences. Vol 2(5) 694-702.

2 Sharma,M.K, Kumar, R, Pawar, S and Ashwani Kumar(2017) Microbial alkaline protease : optimization of production parameters and their properties. J. Genetic engg .Biotech. Vol 15: 115-126.

3. Joshi, A, Sharma, A and Kumar, R (2018) Docking of GSK-3β with novel inhibitors, a target protein involved in Alzheimer's disease. Biosci. Biotech. Res. Comm. 11(2): 277-284.

Abstracts

1 "Production of alkaline lipase from Aspergillus fumigates". In 43rd annual conference of AMI (Association of Microbiologist of India) held at CCS HAU. Hissar on Dec 11-13, 2002.

2 "Compatibility of alkaline protease produced by Aspergillus oryzae with various commercial detergents" in 44th AMI conference held at University of Agricultural Sciences, Dharwad on Nov 12-14, 2003.

3 “Compatibility of alkaline lipase produced by Aspergillus fumigates with various commercial detergents” in 44th AMI conference held at University of Agricultural Sciences, Dharwad on Nov 12-14, 2003.

4 “Use of solid state fermentation conditions for production of alkaline protease by Aspergillus oryzae” in 91st session of Indian science congress held at Punjab University Chandigarh from Jan 3-7, 2004.

5 “Production of alkaline lipase under solid state fermentation condition byAspergillus fumigatus” in 91st session of Indian science congress held at Punjab University Chandigarh from Jan 3-7, 2004.

6 “Optimization of production parameters for alkaline Protease production from Bacillus sp.” In National Symposium on Emerging Trends in Biotechnology organized by MM Modi college, Patiala on 24th Feb 2012.

7 “Production of alkaline protease from Bacillus aryabhattai K 3” In International conference on Mycology and Plant Pathology organized by centre of advanced study in botany, Banaras Hindu University, Varanasi from Feb 27-29, 2012.

8 “ Extraction and partial purification of amylase from malus pumila” In national conference on Recent advances in Chemical, Biological & Environmental Sciences, 2015 organised by M. M. Modi College, Patiala from 30-31 January, 2015.

9 “Natural way to meet antibiotics resistance challenge: In vitro synergistic antimicrobial activity of Indian spices, cow urine and medicinal plant extract” In international conference on new horizons in biotechnology,2011 organised by National Institute for Interdisciplinary science and technology,CSIR,Trivandrum India from 21-24,2011

10 “Protease production optimization from bacterial strain under submerged fermentation”

11 Mathematically optimized production, purification and characterization of Penicillin G Acylasefrom AA17A and AA17B: An Industrial biocatalyst for production of aminopenicillanic acid a core moiety of different penicillin. In International Conference on Bio-Innovation for environment and health sustainable development, organised by Indian Institute of Toxicology, Lucknow, from 27-28 Nov, 2018

Paper/poster presented in National / international conferences

1 Presented a poster in 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation, and Apoptosis organised by JNU New Delhi India from 8-10 Nov 2014.

2 Presented a paper in 7th National Conference on “Recent Advances in Chemical, Biological & Environmental Sciences (RACES) - 2015” organised by M. M. Modi College, Patiala from 30-31 January, 2015

3 Presented a poster in 5th National Conference on “Chemical sciences : emerging Scenario and global challenges (NCCS-2016)” organised by Arya. P.G. College, Panipat on March 26, 2016.