

ANIL KUMAR

ASSISTANT PROFESSOR
CENTRE FOR MEDICAL BIOTECHNOLOGY

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ACADEMIC QUALIFICATION

Ph.D. Biotechnology, Kurukshetra University, Kurukshetra, India	2012
M.Sc. Biotechnology, Kurukshetra University, Kurukshetra, India	2006
B.Sc. Medical, Kurukshetra University, Kurukshetra, India	2004

ACADEMIC ACHIEVEMENTS

- Council of Scientific and Industrial Research -National Eligibility Test (CSIR-NET)
- Industrial Council of Agricultural Research--National Eligibility Test (ICAR-NET)
- Graduate Aptitude Talent Examination (GATE)
- Awarded with University Research Scholarship (URS) by Kurukshetra University, Kurukshetra, India
- Awarded with Rajiv Gandhi National Fellowship (RGNF) by University Grant Commission, India

TEACHING PROFILE

I have teaching experience of more than 12 years and counting. During my tenure, I have taught many subjects including Genetics, Cell and Molecular biology, Bioinformatics, Biostatistics, Immunology, Genetic Engineering, Microbiology and Animal Biotechnology.

Institution: Kurukshetra University, Kurukshetra 2012 to 2013
Position: Assistant Professor (ad-hoc)

Institution: Maharshi Dayanand University, Rohtak 2013 onwards
Position: Assistant Professor

RESEARCH PROFILE

I have research experience in the field of Environmental Toxicology and Genetic Epidemiology. My research interest includes Environmental Toxicology, Genetic epidemiology, Human genetics and genomics, Animal Cell culture and Nutrigenomics

- **Research Grant Received:** Major Research Project entitled “Study of xenobiotic metabolizing gene polymorphisms and their association with cytogenetic biomarker in pesticides exposed worker” funded by University Grant Commission, India

- **Research Guidance:**

Doctorate.: 04

Postgraduate.: 35

PUBLICATIONS

Research/Review papers

- 1) Singh, J., Bhardwaj, A., **Kumar, A.**, Singh, G., Priya, K., & Giri, S. K. (2022). Comparative frequency distribution of glutathione S-transferase mu (GSTM1) and theta (GSTT1) allelic forms in Himachal Pradesh population. *Egyptian Journal of Medical Human Genetics*, 23(1), 1-7.
- 2) Raya, D., Shreya, A., **Kumar, A.**, Giri, S. K., Salem, D. R., Gnimpieba, E. Z., ... & Dhiman, S. S. (2022). Molecular regulation of conditioning film formation and quorum quenching in sulfate reducing bacteria. *Frontiers in Microbiology*, 13.
- 3) Verma, N., Pandit, S., **Kumar, A.**, Yadav, G., Giri, S. K., Lahiri, D., ... & Prasad, R. (2022). Recent Update on Active Biological Molecules in Generating the Anticancerous Therapeutic Potential of *Garcinia mangostana*. *Applied Biochemistry and Biotechnology*, 1-21.
- 4) Batra, M., Bhatnager, R., **Kumar, A.**, Suneja, P., & Dang, A. S. (2022). Interplay between PCOS and Microbiome: The road less travelled. *American Journal of Reproductive Immunology*.
- 5) Verma, N., Pandit, S., Gupta, P. K., Kumar, S., **Kumar, A.**, Giri, S. K., ... & Priya, K. (2022). Occupational health hazards and wide spectrum of genetic damage by the organic solvent fumes at the workplace: A critical appraisal. *Environmental Science and Pollution Research*, 1-13.
- 6) Singh, H., Kalra, O. P., Shankar, D., & **Kumar, A.** (2022). A Case Control Study of Risk Assessment of Diabetes and Nephropathy with eNOS (T786C and 27bp VNTR) Gene Polymorphisms. *The Journal of the Association of Physicians of India*, 70(5), 11-12.

- 7) Verma, N., Giri, S. K., Singh, G., Gill, R., & **Kumar, A.** (2022). Epigenetic regulation of heat and cold stress responses in crop plants. *Plant Gene*, 100351.
- 8) Ram, G., Vats, T., **Kumar, A.**, Singh, G., & Giri, S. K. (2021). Cross Talk Between Renal Transporters and Polycystin-1 as a Potential Molecular Target Involved in Autosomal Dominant Polycystic Kidney Disease. *Iranian Journal of Kidney Diseases*, 15(3).
- 9) Ram, G., **Kumar, A.**, Singh, G., & Giri, S. K. (2021). In silico screening and molecular docking study of compounds from *Pedalium murex* L. with Vasopressin2 receptor target for Autosomal Dominant Polycystic Kidney Disease. *Beni-Suef University Journal of Basic and Applied Sciences*, 10(1), 1-8.
- 10) **Kumar, A.**, Yadav, A., Giri, S. K., Dev, K., Gautam, S. K., Gupta, R., & Aggarwal, N. (2011). Influence of GSTM1 and GSTT1 genotypes and confounding factors on the frequency of sister chromatid exchange and micronucleus among road construction workers. *Chemosphere*, 84(5), 564-570.
- 11) **Kumar, A.**, Yadav, A., Giri, S. K., Dev, K., Gautam, S. K., Gupta, R., & Aggarwal, N. (2011). Effect of genetic polymorphism of GSTM1 and GSTT1 genotypes on cytogenetic biomarkers among coaltar workers. *environmental toxicology and pharmacology*, 32(2), 128-135.
- 12) Giri, S. K., Yadav, A., **Kumar, A.**, Dev, K., Gupta, R., Aggarwal, N., ... & Gautam, S. K. (2011). Association of GSTM1 and GSTT1 polymorphisms with DNA damage in coal-tar workers. *Science of the total environment*, 409(20), 4465-4469.
- 13) Giri, S. K., Yadav, A., **Kumar, A.**, Dev, K., Gulati, S., Gupta, R., ... & Gautam, S. K. (2013). Polymorphic variation of CYP1A1 and CYP1B1 genes in a Haryana population. *Biochemical genetics*, 51(11), 853-864.
- 14) Dev, K., Giri, S. K., **Kumar, A.**, Yadav, A., Singh, B., & Gautam, S. K. (2012). Derivation, characterization and differentiation of buffalo (*Bubalus bubalis*) amniotic fluid derived stem cells. *Reproduction in Domestic Animals*, 47(5), 704-711.
- 15) Dev, K., Gautam, S. K., Giri, S. K., **Kumar, A.**, Yadav, A., Verma, V., ... & Singh, B. (2012). Isolation, culturing and characterization of feeder-independent amniotic fluid stem cells in buffalo (*Bubalus bubalis*). *Research in Veterinary Science*, 93(2), 743-748.
- 16) Dev K, Giri SK, **Kumar A**, Yadav A, Singh B, Gautam SK (2012) Expression of Transcriptional Factor Genes (Oct-4, Nanog, and Sox-2) and Embryonic Stem Cell-Like Characters in Placental Membrane of Buffalo (*Bubalus bubalis*). *J Membrane Biol.* 245 (4): 177 - 183. (Impact Factor: 2.43).
- 17) Yadav, A., Aggarwal, N. K., Kumar, K., & **Kumar, A.** (2008). Tannase production by *Aspergillus fumigatus* MA under solid-state fermentation. *World Journal of Microbiology and Biotechnology*, 24(12), 3023-3030.
- 18) **Kumar, A.**, Yadav, A., Giri, S. K., Dev, K., Gulati, S., Gautam, S. K., ... & Aggarwal, N. (2012). Allelic variation of GSTM1 and GSTT1 genes in Haryana population. *Genomic Medicine, Biomarkers, and Health Sciences*, 4(3), 98-102.

Book Chapters

1. Giri, S. K., Verma, N., Singh, G., Gill, R., **Kumar, A.** (2022) Impact of Agrochemicals on Soil Microbiota. *Agrochemicals in Soil and Environment: Impact and remediations*, Springer (ISBN: 978-981-16-9310-6).
2. Verma, N., Kanupriya., Gill, R., **Kumar, A.** (2022) Plant and microbes assisted remediation of cadmium contaminated soil. *Hazardous and trace materials in soil and plants-sources, effects and management*, Elsevier (ISBN:978-032-39-1632-5).
3. Gill, R., Naeem, M., Ansari, A. A., **Kumar, A.**, Kumar, A., Chhikara, A., Bremont, J.F.J., Tuteja, N., Gill, S.S. (2022) *Agrochemicals in Soil and Environment. An Overview: Agrochemicals in Soil and Environment: Impact and remediations*, Springer (ISBN: 978-981-16-9310-6).
4. Dang, A.S., Verma, N., Giri, S. K., **Kumar, A.** (2022) Probiotics and Health Benefits. *Nutraceuticals: Food Applications and Health Benefits*, Nova Science Publishers, Inc. USA (ISBN: 978-1-68507-488-3).
5. Verma, N., Giri, S. K., Singh, G., **Kumar, A.** (2022) Bioactive Peptides and Proteins: *Nutraceuticals: Food Applications and Health Benefits*, Nova Science Publishers, Inc. USA (ISBN: 978-1-68507-488-3).
6. Heena, Verma, N., Giri, S. K., **Kumar, A.** (2022) Prebiotics and Health Benefits. *Nutraceuticals: Food Applications and Health Benefits*, Nova Science Publishers, Inc. USA (ISBN: 978-1-68507-488-3).
7. Giri, S. K., **Kumar, A.** (2018) Xenobiotic Compounds (Major Environmental Pollutants) and its Sources. *Dynamic of Ecosystem and Climate change in India*, Serials publication, India (ISBN-978-93-86611-47-5).

SEMINAR/CONFERENCE/WORKSHOP

Paper Presentation (Last five years))

- Paper entitled “Cytochrome P450 (CYP1A1m2) as a biomarker of susceptibility in pesticides exposed agriculture workers” presented in National Conference on “Natural Sciences: Exploration through Innovations” organized from May 27-28, 2022 by Maharaja Agrasen University, Solan, India.
- Paper entitled “Evaluation of Genetic damage among Pesticides exposed workers” presented in International seminar on “Sustainable Environment and Agriculture under Global Climate change” organized on Feb 21, 2019 by M.D. University, Rohtak, India
- Paper entitled “The Study of Ameliorative Effect of Curcumin against Parathion Induced Genotoxicity Using Lipid Peroxidation Assay” presented in national seminar on

“Frontiers in Life Sciences-An Interdisciplinary Perspective” organized on March 15, 2019 by M.D. University, Rohtak, India

- Paper entitled “Study of Genetic Polymorphisms in Xenobiotics Metabolizing Genotypes” in National Conference on “Global Climate Change: Concerns and Solutions” organized from Feb 15-16, 2019 by ESM Cell, M.D, University, Rohtak, India
- Paper entitled “Ozone Layer Depletion and Its Impact on Environment” presented in National Conference on “Strategies to mitigate the effects of Climate change steps toward Sustainable Development” organized from Dec 8-9, 2017 by Maharaja Agrasen University, Solan, India.

PROFESSIONAL AFFILIATIONS

- Life time member of Indian Science Congress (ISCA)
- Indian Society of Human Genetics

PROFESSIONAL CONTRIBUTIONS

As coordinator

Departmental Coordinator, Carrier Counselling & Placement Cell, M. D. University, Rohtak
Departmental Coordinator, Internal Quality Assurance Cell, M. D. University, Rohtak
Departmental Coordinator, Alumni & relations cell, M. D. University, Rohtak

As Conference/workshop organizer

Worked as organizing secretary for the National seminar, entitled “Frontiers in Genetics and Genomics”, Nov 22 2016.

Worked as organizing secretary for International workshop, entitled “Industries Academia Interaction: Bridging the Gap”, Nov 26, 2019.

(Anil Kumar)