

Dr. Rakesh Kumar, Ph.D.

Scientist B

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Degree/Examinations	University/College/Institution	Year
Ph.D Bioinformatics	International Center for Genetic Engineering and Biotechnology	2021
M.Sc. Biotechnology	Hemwati Nandan Bahuguna Garhwal University	2011
B.Sc. Medical Technology (Laboratory)	Post Graduate Institute of Medical Education and Research (PGIMER)	2009

Research interests

Chemoinformatics, Artificial Intelligence, Molecular dynamics, Genomics, metabolomics

Publications

1. **Kumar, R.;** Gupta, D., Identification of CYP1B1-specific candidate inhibitors using combination of in silico screening, integrated knowledge-based filtering, and molecular dynamics simulations. *Chem Biol Drug Des* 2016, 88, 730-739.
2. **Kumar, R.;** Jade, D., A novel identification approach for discovery of 5-HydroxyTryptamine 2A antagonists: combination of 2D/3D similarity screening, molecular docking and molecular dynamics. 2019, 37, 931-943.
3. Roy, S.; **Kumar, R.;** Mittal, V.; Gupta, D., Classification models for Invasive Ductal Carcinoma Progression, based on gene expression data-trained supervised machine learning. *Scientific reports* 2020, 10, 4113.
4. Shakeel, T.; Gupta, M.; Fatma, Z.; Kumar, R.; **Kumar, R.;** Singh, R.; Sharma, M.; Jade, D.; Gupta, D.; Fatma, T.; Yazdani, S. S., A consensus-guided approach yields a heat-stable alkane-producing enzyme and identifies residues promoting thermostability. 2018, 293, 9148-9161.
5. Sharma, C.; **Kumar, R.;** Kumar, N.; Masih, A.; Gupta, D.; Chowdhary, A., Investigation of Multiple Resistance Mechanisms in Voriconazole-Resistant *Aspergillus flavus* Clinical Isolates from a Chest Hospital Surveillance in Delhi, India. 2018, 62.
6. Pandey, R.; **Kumar, R.;** Gupta, P.; Mohmmmed, A.; Tewari, R.; Malhotra, P.; Gupta, D., High throughput in silico identification and characterization of Plasmodium falciparum PRL phosphatase inhibitors. *Journal of biomolecular structure & dynamics* 2018, 36, 3531-3540.

7. Ogunmolu, F. E.; Jagadeesha, N. B. K.; **Kumar, R.**; Kumar, P.; Gupta, D.; Yazdani, S. S., Comparative insights into the saccharification potentials of a relatively unexplored but robust *Penicillium funiculosum* glycoside hydrolase 7 cellobiohydrolase. *Biotechnology for Biofuels* 2017, 10, 71.
8. Misra, S.; Ojha, H.; **Kumar, R.**; Gupta, D.; Sharma, K. Quantitative Structure Activity Relationship Study of MF-63 (Phenanthrene Imidazole Series) Derivatives for mPGES-1 Inhibitory Activity. 2016; 2016.
9. Jade, D. D.; Pandey, R.; **Kumar, R.**; Gupta, D., Ligand-based pharmacophore modeling of TNF- α to design novel inhibitors using virtual screening and molecular dynamics. *Journal of Biomolecular Structure and Dynamics* 2020, 1-17.

Research Experience

- I. Oct, 2019 - Mar, 2021: Technical Research Assistant, DBT APEX BTIC centre, ICGEB, New Delhi
- II. Aug, 2016 – Nov, 2018: Senior Research Fellow, ICGEB, New Delhi

Fellowships

- I. Senior Research Fellowship funded by Council of Scientific and Industrial Research (CSIR) and Department of Biotechnology (DBT, Govt. of India during Ph.D.
- II. Junior Research Fellowship funded by Council of Scientific and Industrial Research (CSIR) and Department of Biotechnology (DBT), Govt. of India during Ph.D.
- III. Students Fellowship sponsored by Department of Biotechnology, MHRD, Govt. of India, during M.Sc.

Workshop/Training

1. Organized “Bioinformatics techniques in genome and proteome analysis” workshop held at ICGEB, New Delhi, India from 16-17 February, 2016
2. Attended “High Performance Computing” workshop held at IUAC, New Delhi, India on 5-6 May, 2014
3. “Artificial Intelligence: Concepts & Multidisciplinary Applications In Modern Biology” workshop held at DBT APEX BTIC, ICGEB, New Delhi, India from 17-20 September, 2019
4. “International Vaccine Conference & International workshop on Malaria Parasite Biology: Strategies for Drug and Vaccine Development” held at ICGEB, New Delhi, India from 27th November -1st December, 2017
5. “5th Bioinformatics Workshop cum Hands-on Training 2013 on Multi-criteria Drug Design” held at BIF, Jamia Hamdard, New Delhi, India from 03-04 September, 2013