

## Vikrant Singh Rajput (PhD)

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### Academic Profile

2017            **Ph.D.** (Biological Science), Indian Institute of Integrative Medicine (CSIR-IIIM), Jammu, India.

2010            **Bachelor of Technology** (Biotechnology), Amity University, Noida, UP, India.

### Research Interests

- TB Biology, TB drug discovery and development.
- Technologies evaluating PK/PD of TB drugs.
- TB diagnostics.
- Anti-bacterial drug discovery
- Novel drug targets.
- Elucidation of mode of action of novel leads.
- Exploring and combating bacterial resistance mechanisms.
- Bacterial pathogenesis.
- Bio-safety and bio-containment.
- Computational biology

### Professional Experience

Dec, 2022-till date            **Assistant Professor**, Dept. of Biomedical Engg., Central University of Rajasthan, Ajmer (RJ), India.

March, 2022-Nov, 2022        **Scientist**, Foundation for Neglected Diseases Research (FNDR), Bengaluru, India.

- (2022) **EMBO travel grant** to present poster at NACARB-2022, Ascona, Switzerland.

Jan, 2019-Jan, 2022            **Young Scientist**, School of Biotechnology, Jawaharlal Nehru University, New Delhi, India.

- (2019) **Young Scientist research grant** awarded by Dept. of Health Research (DHR), Govt. of India (***Research grant worth Rupees Forty Six Lakhs***).
- Published research articles in reputed journals as corresponding author and senior co-author.
- Active collaborations with medicinal chemists, pharmacologists and computational biologists on various projects.

Feb, 2018-Jan, 2019            **Scientist**, Bio-safety Support Unit, Regional Center for Biotechnology, Department of Biotechnology (DBT), Faridabad, India.

June, 2017-Feb, 2018        **MHRD Post-doctoral Fellow**, Indian Institute Technology (IIT) Roorkee, India.

July, 2016-May, 2017        **Adhoc Faculty**, Biotechnology Dept., National Institute of Technology (NIT) Raipur, India.

Aug, 2010- Mar, 2016        **Ph.D. Scholar** (Biological Science) at Indian Institute of Integrative Medicine (CSIR), Jammu, India.

- Published research articles in leading journals as primary author and co-author.
- Active participator at institutional outreach activities.
- (2016) **Poster Prize** on World TB day symposium organized by AIIMS Delhi.
- (2015) **Best Patent Award** by CSIR-IIIM (Govt. of India).
- (2013) **Award for** "Significant contribution in Discovery Biology for novel scaffolds in Tuberculosis" by CSIR-IIIM (Govt. of India)
- (2010) **Qualified the country-wide research fellowship exam GATE.**

## No. of Publications, Book Chapters, Books edited Patents & Sponsored projects

<b>Total publications</b>	25
<b>International journals</b>	24
<b>National journals</b>	1
<b>Book Chapters (International publishers)</b>	5
<b>Book</b>	1
<b>National patents</b>	1
<b>International patents</b>	10
<b>Sponsored project</b>	1 (Funded by DHR (Govt. of India), Rs.46 lakhs /-)

### Selected Publications

- Shikimate kinase inhibitors: An update on promising strategy against *Mycobacterium tuberculosis*. **Vikrant Singh Rajput\***, Ashish Runthala and Inshad Ali Khan\* (**\*Corresponding Author**) (2023). Current Drug Targets. Doi:10.2174/1389450124666230208102645.
- Cis elements: Added Boost to the Directed Evolution of Plant Genes. Harisomayajula Valli, Devi Prasanna, **Vikrant Singh Rajput\***, Wuriti Sridhar, N.N.V. Sakuntala, Padamata Harshavardhan and Ashish Runthala\* (**\*Corresponding Author**) (2022). Journal of Pure and Applied Microbiology. <https://doi.org/10.22207/JPAM.16.1.68>
- 1,3,4-oxadiazole conjugates of capsaicin as potent NorA efflux pump inhibitors of *Staphylococcus aureus*. Fatima Naaz, Arif Khan, Anchala Kumari, Intzar Ali, Faiz Ahmad, Bilal Ahmad Lone, Nazia Ahmad, Inshad Ali Khan, **Vikrant Singh Rajput\***, Abhinav Grove\*, Syed Shai\* (**\*Corresponding Author**) (2021). Bioorganic Chemistry. <https://doi.org/10.1016/j.bioorg.2021.105031>.
- An Immunoinformatics approach to design a multi-epitope vaccine against *Mycobacterium tuberculosis* exploiting secreted exosome proteins. Rahul Sharma#, **Vikrant Singh Rajput#**, Salma Jamal, Abhinav Grover and Sonam Grover (#**Authors contributed equally**) (2021). Nature Scientific Reports. <https://doi.org/10.1038/s41598-021-93266-w>.
- Engineering a Multi Epitope Vaccine Against SARS-CoV-2 By Exploiting Its Non Structural and Structural Proteins. **Vikrant Singh Rajput** Ritika Sharma, Anchala Kumari, Nidhi Vyas, Vijay Prajapati and Abhinav Grover (2021). Journal of Biomolecular and Structure Dynamics. <https://doi.org/10.1080/07391102.2021.1924265>
- Dual inhibition of SARS-CoV-2 Spike and Main Protease through a repurposed drug, Rutin. Anchala Kumari#, **Vikrant Singh Rajput#**, Priya Nagpal, Himanshi Kukrety, Sonam Grover and Abhinav Grover (2020). (#**Authors contributed equally**). Journal of Biomolecular and Structure Dynamics. <https://doi.org/10.1080/07391102.2020.1864476>
- Benzothiazole derivative as a novel *Mycobacterium tuberculosis* shikimate kinase inhibitor: Identification and elucidation of its allosteric mode of inhibition. Rukmankesh Mehra#, **Vikrant S. Rajput#**, Monica Gupta, Reena Chib, Priya Wazir. Amit Kumar, Inshad A. Khan and Amit Nargotra (2016) (#**Authors contributed equally**). Journal of Chemical Information and Modeling. DOI: 10.1021/acs.jcim.6b00056.
- Screening of anti tubercular library identifies novel Shikimate kinase inhibitors of *M. tuberculosis*. **Vikrant Singh Rajput**, Rukmankesh Mehra, Sanjay Kumar, Amit Nargotra and Inshad A. Khan (2015). Applied Microbiology and Biotechnology. DOI: 10.1007/500253-015- 7268-8.

### Patents

- Singh, P. P.; Munagala, G.; Kushalava, R. Y.; Khan, I. A.; Kalia, N. P.; **Singh, V. R.**; Nargotra, A.; Sawant, S. D.; Vishwakarma, Ram Aarey. 6-Nitro-2,3-dihydroimidazo[2,1-b] oxazoles and a process for the preparation thereof.

S. no.	Country/Organization	Legal Staus	Patent No.
1.	India	ACTIVE  Filling Date: 2013-10-04  Anticipated expiration: 2034-03-31	IN2954DE2013A
2.	European Union		EP3052503A1
3.	European Union		EP3052503B1
4.	Spain		ES2707362T3
5.	Japan		JP2016531898A
6.	Japan		JP6532457B2
7.	Taiwan		TW201514184A
8.	Taiwan		TWI654192B
9.	USA		US2016244462A1
10.	USA		US9845330B2
11.	WIPO		WO2015049693A

### Books Edited

Drugs and a Methodological Compendium (2023) (Springer) ISBN-13:978-9811979514, Ed. **Vikrant Singh Rajput** & Ashish Runthala.

I hereby affirm that all the details mentioned here are correct to the best of my knowledge.

**Vikrant Singh Rajput**