

1. **Name of the Employee:** Dr. Saurabh Sharma
2. **Email Id:** saurabh.86@nib.gov.in
3. **Designation:** Scientist Grade – III
4. **Division/Laboratory:** Immunodiagnostic Kit Laboratory (IDKL)



5. **Educational Qualifications**

- **Ph.D., Biotechnology** (2010-2016)
All India Institute of Medical Sciences (AIIMS), New Delhi
Supervisor – Prof. Jaya S. Tyagi
- **Masters in Biotechnology** (2008-2010)
All India Institute of Medical Sciences (AIIMS), New Delhi
- **B.Sc. (Hons.) – Microbiology** (2005-2008)
Panjab University, Chandigarh

6. **Year of Joining:** 2022

7. **Professional Experience**

- Research Associate at Department of Biotechnology, AIIMS, New Delhi (Feb, 2016 – Jan, 2019)
- Senior Demonstrator at Department of Biotechnology, AIIMS, New Delhi (9th Jan, 2019 – 8th Jan, 2022)
- Scientist Grade III at National Institute of Biologicals, Noida. (7th March, 2022 – ongoing)

8. **Publications**

- Sharma D*, **Sharma S***, Sinha N, Jain N, Kumar A, Sarkar A and Gupta, RK. Novel benzoic thiazolidin-4-one derivatives targeting DevR/DosR dormancy regulator of Mycobacterium tuberculosis. J Mol Struct. 2022 Apr 15:1254:132278
*Equal contribution
- **Sharma S**, Kumar R, Jain A, Kumar M, Gauttam R, Banerjee R, Mukhopadhyay J and Tyagi JS. Functional insights into Mycobacterium tuberculosis DevR-dependent transcriptional machinery utilizing Escherichia coli. Biochem J. 2021 Aug 27;478(16):2079-98
- **Sharma S**, Kumari P, Vashist A, Kumar C, Nandi M, Tyagi JS. Cognate sensor kinase-independent activation of Mycobacterium tuberculosis response regulator DevR (DosR) by acetyl phosphate: implications in anti-mycobacterial drug design. Mol Microbiol. 2019 May;111(5):1182-94
- Kaur K, Kumari P, **Sharma S**, Sehgal S, Tyagi JS. DevR/DosS sensor is bifunctional and its phosphatase activity precludes aerobic DevR/DosR regulon expression in Mycobacterium tuberculosis. FEBSj. 2016 Aug;283(15):2949-62.

- **Sharma S** and Tyagi JS. Mycobacterium tuberculosis DevR/DosR Dormancy Regulator Activation Mechanism: Dispensability of Phosphorylation, Cooperativity and Essentiality of $\alpha 10$ Helix. PLOS ONE. 2016 Aug 4;11(8):e0160723.

9. Book Chapter

- Sati, J., **Sharma, S** and Chadha, V. D. “Covid-19: Rapidly Emerging Scientific Data and its Implications”. *Covid-19 and its Impact on Human Society, First Impressions*. Zarabi, D. and Dutta, J. New Delhi: Narendra Publishing House, 2021. 153-160. ISBN: 9793-90611-78-2.

10. Poster Presentations

- *E. coli* Triple Plasmid Expression System to decipher Transcription Regulatory mechanisms of *Mycobacterium tuberculosis*, **Sharma, S.**, Gauttam, R., Banerjee, R., Mukhopadhyay, and Tyagi, J.S. at SYSCON-2014 on ‘Recent advances in Biological Sciences’, 10th Dec., 2014 at All India Institute of Medical Sciences, New Delhi, India (**Won first prize**).
- Activation of DevR (DosR) dormancy regulon in *Mycobacterium tuberculosis* by metabolite acetyl phosphate necessitates targeting DevR and not the cognate sensor kinases DevS/DosT in anti-mycobacterial therapy, **Sharma S**, Kumari P, Vashist A, Kumar C, Nandi M, Tyagi J.S. at Gordon Research Conference on TB Drug Discovery and Development held at Castelldefels, Spain from July 7-12, 2019 (**Received Carl Storm International Diversity Fellowship for participation**).

11. Oral Presentations

- **Sharma, S** and Tyagi, J.S. “Overexpression of DevR/DosR in *Mycobacterium tuberculosis* overrides requirements of phosphorylation/cooperativity and establishes essentiality of $\alpha 10$ helix in its activation” in the international conference ‘Microbiology in the new Millennium: from Molecules to Communities’ held at Bose Institute, Kolkata, India from 27-29 Oct, 2017.
- **Sharma, S.**, Kumari, P., Vashist, A., Kumar, C., Nandi, M. and Tyagi, J.S. ‘Acetyl phosphate mediated activation of DevR (DosR) dormancy regulon in *Mycobacterium tuberculosis* highlights the importance of targeting DevR and not the cognate sensor kinases DevS/DosT in anti-mycobacterial therapy’ in ‘Challenges of TB: UK-India Newton-Bhabha Fund RSC Researcher Links Workshop’ held on 16-19th December, 2019 at IISER, Pune, India.
- **Sharma, S.**, Kumari, P., Vashist, A., Kumar, C., Nandi, M. and Tyagi, J.S. ‘Acetyl phosphate mediated activation of DevR (DosR) dormancy regulon in *Mycobacterium tuberculosis*: Implications in targeting DevR for anti- mycobacterial therapy’ at the ‘India-EMBO TB symposium 2020 - Mycobacterial Heterogeneity and host tissue tropism’ from 11-15th Feb., 2020. Received ‘**JBC Young Emerging Scientist Best Poster Award**’.

12. Honours and Awards

- Awarded Junior Research Fellowship by CSIR (in 2010 and 2012) securing all India 22nd rank.
- Awarded Junior Research Fellowship by Indian Council of Medical Research (ICMR) in 2010.
- Awarded Junior Research Fellowship by Department of Biotechnology (DBT) in 2010.