



# Department of Microbiology & Cell Biology

Indian Institute of Science, Bangalore-560 012, India

---

**Dr. Amit Singh**  
Associate Professor

## Annexure II:

This is to confirm that the research work described for the award has not been given any award in the past.

### PI and CO-PIs contributions on the research work:

#### **I: Antioxidant Nanozyme prevents reactivation of HIV-1 from human latent CD4<sup>+</sup> T cells.**

Reference: Singh S, Ghosh S, Pal VK, Munshi MH, Shekhar P, Murthy DTN, Mugesh G and **Singh A**. Antioxidant nanozyme counteracts HIV-1 by modulating intracellular redox potential. *EMBO Mol Med*. 2021. e13314.

**Amit Singh's group at IISc (75% Contribution):** Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

**G Mugesh's group at IISc (25% Contribution):** Generated nanoparticles for the assays.

#### **I: Targeting heterogeneity in redox physiology of *Mycobacterium tuberculosis* to improve therapy outcome**

Reference: Mishra R, Kohli S, Malhotra N, Bandhyopadhyay P, Mehta M, Munshi M, Adiga V, Ahuja VK, Shandil RK, Rajmani RS, Seshasayee ASN and **Singh A**. Targeting redox heterogeneity to counteract drug tolerance in replicating *Mycobacterium tuberculosis*. *Sci Transl Med*. 2019. 11 (518)

**Amit Singh's group at IISc (90% Contribution):** Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

**Aswin Sai Narain Seshasayee' group at NCBS (5% Contribution):** Conducted RNA sequencing data analysis.

**Radha K. Shandil's group at FNDR, Bangalore (5% Contribution):** Pharmacokinetic drug-drug interaction studies

#### **II: Making Common antibiotics powerful against Tuberculosis**

Reference: Mishra S, Shukla P, Bhaskar A, Anand K, Baloni P, Jha RK, Mohan A, Rajmani RS, Nagaraja V, Chandra N, and **Singh A**. Efficacy of  $\beta$ -lactam/  $\beta$ -lactamase inhibitor combination is linked to *WhiB4*-mediated changes in redox physiology of *Mycobacterium tuberculosis*. *eLife*. 2017 May 26(6). pii: e25624.

---

**email:**  
[asingh@mcbl.iisc.ernet.in](mailto:asingh@mcbl.iisc.ernet.in)

**Phone:**  
91-80-22932604

**Fax:**  
91-80-23602697



# Department of Microbiology & Cell Biology

Indian Institute of Science, Bangalore-560 012, India

---

**Dr. Amit Singh**  
Associate Professor

**Amit Singh's group at IISc (90% Contribution):** Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

**Nagasuma Chandra's group at IISc (5% Contribution):** Data analysis and protein interaction network mapping.

**V Nagaraja's group at IISc (5% Contribution):** In vitro transcription assays.

### **III: HIV- TB Co-infection: importance of redox and mitochondrial bioenergetics**

*Reference: Tyagi P, Pal V, Agrawal R, Srinivasan S, Singh, S and **Singh A.** Mycobacterium tuberculosis reactivates HIV-1 via exosomes-mediated resetting of cellular redox potential and bioenergetics. **mBio.** 2020. 11; e03293*

**Amit Singh's group at IISc (95% Contribution):** Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

**Sandhya Srinivasan, V Proteomics, New Delhi (5% Contribution):** Analysis of Proteomics data

Sincerely,

---

**email:**  
[asingh@mcbl.iisc.ernet.in](mailto:asingh@mcbl.iisc.ernet.in)

**Phone:**  
91-80-22932604

**Fax:**  
91-80-23602697