Department of Microbiology & Cell Biology

Indian Institute of Science, Bangalore-560 012, India

Dr. Amit Singh
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: ***Characterizing reverse transsulfuration* (RTS)** ***pathway enzyme in Mtb, Role of Fe-S cluster biogenesis systems in Mtb, and identification of redoxosome of Mtb***

Publications:

- Dewan A, …. Chakrapani H and **Singh A.** Intracellular peroxynitrite perturbs redox balance, bioenergetics, and Fe-S cluster homeostasis in *Mycobacterium tuberculosis*. ***Redox Biology***, 2024, 103285.
- Das M, Sreedharan S, …. and **Singh A**. Cysteine desulfurase (IscS)–mediated fine- tuning of bioenergetics and SUF expression prevents *Mycobacterium tuberculosis* hypervirulence. ***Sci Adv***. 2023; 15(50): eadh2858
- Shee S, Veetil RT, …. and **Singh A**. Biosensor-integrated transposon mutagenesis reveals *rv0158* as a coordinator of redox homeostasis in *Mycobacterium tuberculosis*. ***eLife***. 2023. 29(12): e80218.
- Bandyopadhyay P, Pramanick I, …. and **Singh A**. S-Adenosylmethionine-responsive cystathionine β-synthase modulates sulfur metabolism and redox balance in *Mycobacterium tuberculosis*. ***Sci Adv***. 2022. 8: eabo0097.
- Tripathi A, Anand K, …. and **Singh A**. *Mycobacterium tuberculosis* requires SufT for Fe-S cluster maturation, metabolism, and survival in vivo. ***PloS Pathog***. 2022. 18(4): e1010475.
- Anand K, Tripathi A, …. and **Singh A**. *Mycobacterium tuberculosis* SufR Responds to Nitric oxide via its 4Fe-4S cluster and Regulates Fe-S cluster Biogenesis for Persistence in Mice. ***Redox Biol***. 2021. 102062.
- Das M, Dewan A, Shee S and **Singh A**. The Multifaceted Bacterial Cysteine Desulfurases: From Metabolism to Pathogenesis. ***Antioxidants***. 2021. 10: 997

Amit Singh's group at IISc (75-90% Contribution): Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

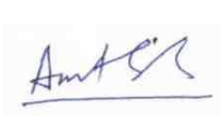
II: Novel strategies to investigate Human Immunodeficiency Virus (HIV) Latency

Publications:

- Suman Manna, Ragini Agrawal, ……, **Singh A***, and Chakrapani H* . Orthogonal Persulfide Generation through Precision Tools Provides Insights into Mitochondrial Sulfane Sulfur. (co-corresponding author) ***Angew. Chem. Int. Ed***. *2024, e202411133.* (*: co-corresponding author).
- Pal KV, Agrawal R, …. and **Singh A**. Hydrogen sulfide blocks HIV rebound by maintaining mitochondrial bioenergetics and redox homeostasis. ***eLife*** 2021. 10: e68487.
- Singh S, Ghosh S, …. and **Singh A.** Antioxidant nanozyme counteracts HIV-1 by modulating intracellular redox potential. ***EMBO Mol Med***. 2021. e13314.
- Tyagi P, Pal VK, …. 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 (75-90% Contribution): Conceptualized the research, supervised the project, performed experiments, generated reagents, analyzed the data, secured the funding, and drafted the manuscript.

Sincerely,



email: asingh@iisc.ac.in **Phone:** **91-80-22932604** **Fax:** **91-80-23602697**