

### **STATEMENT OF RESEARCH ACHIEVEMENTS**

Dr. Siddhesh S. Kamat's research group uses innovative chemical biology approaches in identifying hitherto unknown biological pathways that regulate lipid metabolism and signalling, and how these pathways are dysregulated in different human diseases. Specifically, his lab has made seminal contributions in understanding of the molecular basis of the neurodegenerative disorder PHARC and neuroinflammation, besides mapping the deregulated lysophospholipid metabolism associated with this disease. Additionally, his lab has deciphered unannotated lipid pathways in immunological processes like phagocytosis, ferroptosis. Uniquely, Siddhesh has established/developed state-of-the-art lipidomics and chemoproteomics LC-MS platforms to unravel novel mechanisms associated with onset/progression of diseases caused by perturbed lipid homeostasis. The discoveries and technologies developed by his research group have tremendous translational potential, and will be very influential in the coming years, towards identifying hitherto unknown pharmacological targets in numerous human diseases. Siddhesh has established a globally competitive chemical biology lab and published numerous high-quality publications in reputed journals (e.g. *Nature Chemical Biology*, *Cell Chemical Biology*, *PNAS*, *ACS Chemical Biology*, *JBC*). In addition, he has extensively collaborated with several groups within the country, and enabled them to reveal underlying metabolome-dependent phenotypes across scales and model systems. These collaborations have yielded high quality papers in reputed journals (e.g. *PNAS*, *Elife*, *JCB*). His academic achievements have been recognised by various national and international scientific forums, which include:

1. **Editorial Board Membership, Journal of Biological Chemistry (2023)**  
(<https://apps.asbmb.org/jbcboard/Default.aspx?SearchPhrase=kamat>)
2. **Editorial Board Membership, British Journal of Pharmacology (2022)**  
(<https://bpspubs.onlinelibrary.wiley.com/hub/journal/14765381/editorial-board.html>)
3. **SwarnaJayanti Fellowship 2021 (in Life Sciences Category)**  
(<https://dst.gov.in/sites/default/files/LIST%20OF%20SJF%20AWARDEES-%202020-21.pdf>)
4. **The CDRI Award for Excellence in Drug Research 2021 (Life Sciences Category)**  
([https://cdri.res.in/pdf/award/CDRI\\_Awards\\_2021.pdf](https://cdri.res.in/pdf/award/CDRI_Awards_2021.pdf))
5. **EMBO Young Investigator Award 2020**  
(only Indian to receive this award in 2020 amongst 27 scientists worldwide)  
(<https://www.embo.org/press-releases/twenty-seven-life-scientists-become-embo-young-investigators/>)

6. **Merck Young Scientist Award in Biological Sciences 2019**  
(<https://www.merckgroup.com/in-en/company/merck-young-scientist-awards.html>)
7. **Indian National Science Academy (INSA) Young Scientist Medal 2019**  
(<https://www.insaindia.res.in/youngmedal.php>)
8. **UAA-ICT Distinguished Alumni Award – Young Achiever 2019**  
(<https://www.udctalumni.org.in/newsroom/news/UAA-ICT-Distinguished-Alumni-Awards-Announced-808.dz>)
9. **DST-SERB India, Early Career Research Award (2017)**
10. **DBT/Wellcome Trust India Alliance, Intermediate Fellowship (2016)**  
(<https://www.indiaalliance.org/fellow/siddhesh-s-kamat>)
11. **9<sup>th</sup> Irving S. Sigal Postdoctoral Fellowship from the American Chemical Society (2013).** This fellowship is given biannually to only 1 Ph.D. student from the chemistry departments of the top 50 US universities interested in pursuing a postdoc in chemical biology.  
(<https://www.acs.org/content/acs/en/funding-and-awards/grants/sigalfellowship/pastrecipients.html>)