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Education

- **Ph.D.** – Université de La Réunion, France
- **M.Sc.** – Department of Microbial Technology, Madurai Kamaraj University
- **B.Sc.** – Nehru Memorial College, Bharathidasan University



Work experience

- Professor and Head, Department of Microbiology, **Central University of Tamil Nadu**, Thiruvavur, India (2022-2026)
- Associate Professor, Department of Microbiology, **Central University of Tamil Nadu**, Thiruvavur, India (2019-2022)
- Associate Professor, **Department of Biosciences, Vellore Institute of Technology University, Vellore, India** (2014-2019)
- Assistant Professor, **Department of Biosciences, Vellore Institute of Technology University, Vellore, India** (2010-2014)
- **Prof. John C Reed's Laboratory, Sanford Burnham Prebys Medical Discovery Institute, USA**, PDF (2008-2009)
- **Sapporo Medical University, Sapporo, Japan**: Visiting Researcher (Oct-Nov 2004)
- **Indian Institute of Science, Bangalore**: Project Assistant (2002-2004)



Research Grants

- **Funding Agency**: Science and Engineering Research Board (SERB), Department of Science and Technology (DST), INDIA. Title: Small Molecule modulators targeting endoplasmic reticulum stress response

pathways. Amount: INR 24,000,00; funding period: 3 years (Aug 2013 to 2016).

- **Funding Agency**: Science and Engineering Research Board (SERB), Department of Science and Technology (DST), INDIA. Title: Small Molecule Modulators for Autophagy; Amount: INR 53,000,00; funding period: 4 years (Aug 2016 to 2021).
- **Funding Agency**: Science and Engineering Research Board (SERB), Department of Science and Technology (DST), INDIA. Title: Screening of inhibitors targeting multiple cellular stress responses in microglial cells; Amount: INR 63,36,000; funding period: 3 years (Feb 2022 to 2025).
- **Funding Agency**: Science and Engineering Research Board (SERB), Department of Science and Technology (DST), INDIA. Title: Investigating the anti-neuroinflammatory activity of flavonoids and the underlying mechanism of action in microglial cells; Amount: INR: 3211780; funding period: 3 years (2022 to 2025)
- **Funding Source**: VIT University, Vellore, India. Title: Synthetic triterpenoid induces neuroblastoma differentiation Amount: INR 3,00,000; funding period: 2015-2017.
- **Funding Source**: VIT University, Vellore, India. Title: Involvement of IRAK4 in Endoplasmic Reticulum stress, Amount: INR 2,00,000; funding period: 2017-2018.



Research Guidance

Ph.D. and M.Sc. Thesis Guidance

- Ph.D. Thesis Awarded: 4
- M.Sc. Thesis awarded: 12

Ph.D. Thesis Co-Director:

- Ph.D. Thesis Awarded: 1 – Indo-French collaboration (Thesis Director: Dr. Christian



Publications

1. Asveda T, Talwar P, **Ravanan P***. Evaluating the Reliability of Virtual Screening: Experimental Insights From Flavonoid Library Screen Targeting Caspase-3. **The FASEB Journal**. 2026 Feb 28;40(4):e71553. [doi: 10.1096/fj.202504176R](https://doi.org/10.1096/fj.202504176R). Impact Factor: 4.2
2. An integrated framework identified potent inhibitors targeting IRE1 α . Divya S, Talwar P, **Ravanan P***. **Bioorganic & Medicinal Chemistry**, 2026 Feb 7;136:118590. [doi: 10.1016/j.bmc.2026.118590](https://doi.org/10.1016/j.bmc.2026.118590). Online ahead of print. Impact Factor: 3.0
3. Matin M, Singla RK, Jóźwik A, Horbańczuk JO, Ksepka N, Wysocki K, Ijinu TP, Krishnakumar NM,**Ravanan P**..., Bonn GK, Shen B, Atanasov AG et al., Health-promoting and medicinal properties of Zingiberaceae family plants: A minireview with a special focus on galangal, turmeric, cardamom, and ginger. **Current Research in Biotechnology**, [10.1016/j.crbiot.2025.100329](https://doi.org/10.1016/j.crbiot.2025.100329), Available online from Sep 2025. *Impact Factor: 4.0*
4. Saha P, **Ravanan P**, Talwar P*. A Multi-Omics Exploration of PPARG Activation in Colon Cancer: Kinases Featuring a PPRE Sequence within Regulatory Regions. **Biology Direct**. 2025 Jun 11;20(1):68. [doi: 10.1186/s13062-025-00654-7](https://doi.org/10.1186/s13062-025-00654-7). *Impact Factor: 5.7*
5. **Ravanan P**, Gurralla, KK, Preethi M, Roy CL, Liz TA, Divya S, Kannan M, Banu JR. Biogas production from chicken feathers via pretreatment with keratinolytic protease secreting bacteria. *Biomass Conversion and Biorefinery*, 2025. Feb. Published online. [doi: 10.1007/s13399-025-06638-x](https://doi.org/10.1007/s13399-025-06638-x). **Impact Factor: 3.5**
6. Patel H, Banerjee A, Saha P, Divya S, **Ravanan P** & Talwar P*. SNP Analysis of the SOD1 gene involved in Amyotrophic Lateral Sclerosis (ALS). *Journal of Taibah University for Science*, 19, Jan 2025, <https://doi.org/10.1080/16583655.2024.2420463>. *Impact Factor: 4.1*
7. Asveda T, Talwar P, **Ravanan P***. Exploring microglia and their phenomenal concatenation of stress responses in neurodegenerative disorders. *Life Sciences*. 2023 Sep 1;328:121920. Link: [doi: 10.1016/j.lfs.2023.121920](https://doi.org/10.1016/j.lfs.2023.121920). *Impact Factor: 6.7*
8. Divya S, **Ravanan P***. Cellular battle against endoplasmic reticulum stress and its adverse effect on health. *Life Sciences*. 2023 Apr 17;323:121705. [Link: doi: 10.1016/j.lfs.2023.121705](https://doi.org/10.1016/j.lfs.2023.121705). *Impact Factor: 6.7*
9. **Ravanan P***, Firoz A*, Saha P, Prashar T, Talwar P. Genome-wide screening and identification of potential kinases involved in endoplasmic reticulum stress responses. *Life Sciences*. 2023 Mar 15;317:121452. Link: [doi: 10.1016/j.lfs.2023.121452](https://doi.org/10.1016/j.lfs.2023.121452). *Impact Factor: 6.7*
10. Talwar P*, Singh P, **Ravanan P*** Structure-Based Virtual Screening and Discovery of New Bi-functional DAPK1 inhibitors. *Molecular Biotechnology*. 2023 Jun 23. Link: [doi: 10.1007/s12033-023-00744-9](https://doi.org/10.1007/s12033-023-00744-9). *Impact Factor: 2.9*
11. Singla RK, De R, Efferth T, Mezzetti B, Uddin Md S, Sanusi, Ntie-Kang F,...**Ravanan P**..., Atanasov AG, Shen B, The International Natural Product Sciences Taskforce (INPST) and the power of Twitter networking exemplified through #INPST hashtag analysis. *Phytomedicine*, Volume 108, Jan 2023, 154520. Link: <https://doi.org/10.1016/j.phymed.2022.154520>. *Impact Factor: 7.9*
12. Narra Sai S, Sarah R, Rondeau P, Patche J, Veeren B, Gonthier MG, Viranaicken W, Diotel N, **Ravanan P**, d' Hellencourt CL, Meilhac O* ApoA-I Nanoparticles as Curcumin Carriers for Cerebral

Endothelial Cells: Improved Cytoprotective Effects against Methylglyoxal. Pharmaceuticals (Basel), 2022 Mar 13; 15(3): 347. [Link: https://www.mdpi.com/1424-8247/15/3/347](https://www.mdpi.com/1424-8247/15/3/347) Impact Factor: 5.2

13. Gopinath PM, Twayana KS, **Ravanan P***, John Thomas, Mukherjee A, Jenkins DF, Chandrasekaran N*. Prospects on the nano-plastic particles internalization and induction of cellular response in human keratinocytes. Particle and Fibre Toxicology, 2021 Sep 8;18(1):35. [Link: doi.org/10.1186/s12989-021-00428-9](https://doi.org/10.1186/s12989-021-00428-9). Impact Factor: 10.0
14. Klionsky DJ, Abdel-Aziz AK, Abdelfatah S, Abdellatif M, ...**Ravanan P**....,et al., Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition). Autophagy, 2021, 17 (1), 1-382. <https://doi.org/10.1080/15548627.2020.1797280>. Link: doi/full/10.1080/15548627.2020.1797280. Impact factor: 13.0
15. Abdullah A, Talwar P, d'Hellencourt CL, **Ravanan P***. IRE1 α is critical for Kaempferol-induced neuroblastoma differentiation. The FEBS Journal, 2019 Apr;286(7):1375-1392. Link: [doi/full/10.1111/febs.14776](https://doi.org/10.1111/febs.14776). Impact Factor: 5.6
16. Krishna Deepak RNV, Abdullah A, Talwar P, Fan H, **Ravanan P***. Identification of FDA-approved drugs as novel allosteric inhibitors of human executioner caspases. Proteins, 2018 Nov;86(11):1202-1210. Link: [doi/10.1002/prot.25601](https://doi.org/10.1002/prot.25601). Impact Factor: 4.0
17. Twayana KS, Chaudhari N, **Ravanan P***. Prolonged lipopolysaccharide exposure induces transient immunosuppression in BV2 microglia. Journal of Cellular Physiology, 2019 Feb;234(2):1889-1903. doi: 10.1002/jcp.27064. Link: [doi/10.1002/jcp.27064](https://doi.org/10.1002/jcp.27064). Impact Factor: 6.5
18. Chaudhari N, **Ravanan P***. Bardoxolone methyl induces neuritogenesis in Neuro2a cells. Pharmacological Reports, 2018 Aug;70(4):730-736. Link: [doi/10.1016/j.pharep.2018.02.012](https://doi.org/10.1016/j.pharep.2018.02.012). Impact Factor: 4.4
19. Abdullah A, **Ravanan P***. The unknown face of IRE1 α - Beyond ER stress. European Journal of Cell Biology, 2018 Jun;97(5):359-368. Link: <https://pubmed.ncbi.nlm.nih.gov/29747876/>. Impact Factor: 6.6
20. Anasa VV, Manickam M, Talwar P, **Ravanan P***. Identification of ASB7 as ER stress responsive gene through a genome wide in silico screening for genes with ERSE. PLoS One, 2018 Apr 9;13(4):e0194310. Link: <https://doi.org/10.1371/journal.pone.0194310>. Impact Factor: 3.7
21. Twayana KS, **Ravanan P***. Eukaryotic cell survival mechanisms: Disease relevance and therapeutic intervention. Life Sciences, 2018 Jul 15;205:73-90. Link: <https://pubmed.ncbi.nlm.nih.gov/29730169/>. Impact Factor: 6.7
22. Abdullah A, **Ravanan P***. Kaempferol mitigates Endoplasmic Reticulum Stress Induced Cell Death by targeting Caspase 3/7. Scientific Reports, 2018 Feb 1;8(1):2189. doi: 10.1038/s41598-018-20499-7. Link: <https://www.nature.com/articles/s41598-018-20499-7>. Impact Factor: 5.0
23. Chaudhari N, Talwar P, Lefebvre D'hellencourt C, **Ravanan P***. CDDO and ATRA Instigate Differentiation of IMR32 Human Neuroblastoma Cells. Frontiers in Molecular Neuroscience, 2017 Sep 26;10:310. Link: <https://www.frontiersin.org/articles/10.3389/fnmol.2017.00310/full>. Impact Factor: 6.2
24. **Ravanan P***, Srikumar IF, Talwar P. Autophagy: The spotlight for cellular stress responses. Life Sciences, 2017 Nov 1;188:53-67. Link: <https://pubmed.ncbi.nlm.nih.gov/28866100/>. Impact Factor: 6.7
25. Singh P, **Ravanan P**, Talwar P*. Death Associated Protein Kinase 1 (DAPK1): A Regulator of Apoptosis and Autophagy. Frontiers in Molecular Neuroscience, 2016 Jun 23;9:46. Link: <https://pubmed.ncbi.nlm.nih.gov/27445685/>. Impact Factor: 6.2
26. Parimisetty A, Dorsemans AC, Awada R, **Ravanan P**, Diotel N, Lefebvre d'Hellencourt C. Secret talk between adipose tissue and central nervous system via secreted factors-an emerging frontier in the neurodegenerative research. Journal of Neuroinflammation, 2016 Mar 24;13(1):67. Link: <https://pubmed.ncbi.nlm.nih.gov/27012931/>. Impact Factor: 9.5

27. Chaudhari N, Talwar P, Parimisetty A, Lefebvre d'Hellencourt C, **Ravanan P***. A molecular web: endoplasmic reticulum stress, inflammation, and oxidative stress. *Frontiers in Cellular Neuroscience*, 2014 Jul 29;8:213. Link: <https://pubmed.ncbi.nlm.nih.gov/25120434/>. *Impact Factor: 6.1*
28. Manickam M, **Ravanan P**, Singh P, Talwar P*. In silico identification of genetic variants in glucocerebrosidase (GBA) gene involved in Gaucher's disease using multiple software tools. *Frontiers in Genetics*, 2014 May 27;5:148. Link: <https://pubmed.ncbi.nlm.nih.gov/24904648/>. *Impact Factor: 4.7*
29. Andecky RJ, Welsh K, Finlay D, Lee PS, González-López M, Ganji SR, **Ravanan P**, Mace PD, Riedl SJ, Vuori K, Reed JC, Cosford ND*. Design, synthesis and evaluation of inhibitor of apoptosis protein (IAP) antagonists that are highly selective for the BIR2 domain of XIAP. *Bioorganic and Medicinal Chemistry Letters*, 2013, 23 (14), 4253-4257. Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3772719/>. *Impact factor: 2.9*
30. **Ravanan P**, Benosman S, , Correa RG, Hou YC, Yu M, Gulen MF, Li X, Thomas J, Cuddy M, Matsuzawa Y, Sano R, Matsuzawa S and Reed JC*. Interleukin-1 Receptor-Associated Kinase-2 (IRAK2) Is a Critical Mediator of Endoplasmic Reticulum (ER) Stress Signaling. *PLoS One* 2013, 8(5): e64256. Doi:10.1371/journal.pone.0064256. Link: <https://pubmed.ncbi.nlm.nih.gov/23724040/>. *Impact factor: 3.7*
31. **Ravanan P**, Sano R, Talwar P, Ogasawara S, Matsuzawa S, Cuddy M, Singh SK, Rao GS, Kondaiah P, Reed JC*. Synthetic triterpenoid cyano enone of methyl boswellate activates intrinsic, extrinsic, and endoplasmic reticulum stress cell death pathways in tumor cell lines. *Molecular Cancer Therapeutics*, 2011, 10(9), 1635-43. Link: <https://mct.aacrjournals.org/content/10/9/1635>. *Impact factor: 6.0*
32. **Ravanan P**, Singh SK, Rao GS, Kondaiah P*. Growth inhibitory, apoptotic and anti-inflammatory activities displayed by a novel modified triterpenoid, cyano enone of methyl boswellates. *Journal of Biosciences*, 2011, 36(2), 297-307. Link: <https://pubmed.ncbi.nlm.nih.gov/21654084/>. *Impact factor: 2.7*
33. **Ravanan P**, Harry GJ, Awada R, Hoareau L, Tallet F, Roche R, Lefebvre d'Hellencourt C*. Exposure to an organometal compound stimulates adipokine and cytokine expression in white adipose tissue. *Cytokine*, 2011, 53(3):355-62. Link: <https://pubmed.ncbi.nlm.nih.gov/21194965/>. *Impact factor: 4.0*
34. Hoareau L, Bencharif K, Rondeau P, Murumalla R, **Ravanan P**, Tallet F, Delarue P, Cesari M, Roche R*, Festy F*. Signaling pathways involved in LPS induced TNFalpha production in human adipocytes. *Journal of Inflammation (Lond)*, 2010 Jan, 7 (8), 1. doi: 10.1186/1476-9255-7-1. Link: <https://pubmed.ncbi.nlm.nih.gov/20148136/>. *Impact factor: 6.2*
35. Hoareau L, Buyse M, Festy F, **Ravanan P**, Gonthier MP, Matias I, Petrosino S, Tallet F, d'Hellencourt CL, Cesari M, Di Marzo V, Roche R*. Anti-inflammatory effect of palmitoylethanolamide on human adipocyte. *Obesity*, 2009, 17(3):431-8. Link: <https://pubmed.ncbi.nlm.nih.gov/19131941/>. *Impact factor: 9.2*
36. Subba Rao GS*, Kondaiah P, Singh SK, **Ravanan P**, Sporn MB. Chemical modifications of natural triterpenes - glycyrrhetic and boswellic acids: evaluation of their biological activity. *Tetrahedron*, 2008, 64(51):11541-11548. Link: <https://pubmed.ncbi.nlm.nih.gov/20622928/>. *Impact factor: 2.3*
37. Hoareau L, **Ravanan P**, Gonthier MP, Delarue P, Gonçalves J, Césari M, Festy F, Roche R*. Effect of PEA on LPS inflammatory action in human adipocytes. *Cytokine*, 2006, 34(5-6):291-296. Link: <https://pubmed.ncbi.nlm.nih.gov/16884908/>. *Impact factor: 4.0*

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