List of 10 Best Papers of The Applicant Highlighting the Important Contributions

My research is mainly focus on neuroscience. The list of following 10 papers shows the success of my contributions towards neuroscience, which gives a glimpse of how productive and diversified is the research in neuropharmacology targeted to new drug design and discovery. All these 10 papers mainly focussed stroke, neuroprotection, and recovery. Following are the strategy for deployment or knowledge transfer of my research outcomes into a community context.

Society
Discovering new drugs from natural sources is essential for tackling worldwide health challenges and achieving health-related sustainable development goals.

Academia
The mechanism(s) of action of all the tested compounds can contribute to new knowledge in neurodegenerative disorders treatment.

Government
Through this research project, one of the significant objectives of the Strategic Plan for Non-Communicable Diseases (NCDs), which is to encourage and promote the capacity for high-quality research and development for the prevention and control of NCDs, can be achieved.

Industry
Industry players view natural products as significant sources of novel medications. All the tested compounds in my research may emerge from this research as a key player in the treatment of neurodegenerative disorders.

Environment
Ultimately, the drug discovery from the natural source will help conserve nature (Protecting Earth's natural resources for current and future generations).

List of 10 Best Papers

1. Lum PT, **Sekar M**, Seow LJ, Shaikh MF, Arulsamy A, Retinasamy T, Gan SH, Gnanaraj C, Esa NM, Ramachawolran G, Subramaniyan V, Chinni SV and Wu YS. Neuroprotective potency of mangiferin against 3-nitropropionic acid induced Huntington's disease-like symptoms in rats: possible antioxidant and anti-inflammatory mechanisms. Frontiers in Pharmacology. 2023;14:1189957. https://doi.org/10.3389/fphar.2023.1189957 **(IF: 5.6)**

2. Amir Yusri MA, **Sekar M**, Wong LS, Gan SH, Ravi S, Subramaniyan V, Mat Rani NNI, Chidambaram K, Begum MY, Ramar M, Safi SZ, Selvaraj S, Wu YS, Revathy P, Fuloria S, Fuloria NK, Lum PT, Djearamane S. Celastrol: A Potential Natural Lead Molecule for New Drug Design, Development and Therapy for Memory Impairment. Drug Design, Development and Therapy. 2023;17:1079-1096. https://doi.org/10.2147/DDDT.S389977 **(IF: 4.8)**

3. Gnanaraj C, **Sekar M,** Fuloria S, Swain SS, Gan SH, Chidambaram K, Rani NNIM, Balan T, Stephenie S, Lum PT, Jeyabalan S, Begum MY, Chandramohan V, Thangavelu L, Subramaniyan V, Fuloria NK. *In Silico* Molecular Docking Analysis of Karanjin against Alzheimer's and Parkinson's Diseases as a Potential Natural Lead Molecule for New Drug Design, Development and Therapy. *Molecules*. 2022; 27(9):2834. https://doi.org/10.3390/molecules27092834 **(IF: 4.8)**

4. Lum PT, **Sekar M,** Gan SH, Bonam SR, Shaikh MF. Protective Effect of Natural Products against Huntington's Disease: An Overview of Scientific Evidence and Understanding their Mechanism of Action. *ACS Chemical Neuroscience 2021;12:391-418.* https://doi.org/10.1021/acschemneuro.0c00824 **(IF: 5.0)**

5. Lum PT, **Sekar M,** Gan SH, Pandy V, Bonam SR. Protective Effect of Mangiferin on Memory Impairment: A systematic review. Saudi Journal of Biological Sciences 2021;28(1):917-927. https://doi.org/10.1016/j.sjbs.2020.11.037 **(IF: 4.4)**

6. Subramanian A, Tamilanban T, Alsayari A, Ramachawolran G, Wong LS, **Sekar M**, Gan SH, Subramaniyan V, Chinni SV, Rani NNIM, Suryadevara N, Wahab S. Trilateral association of autophagy, mTOR and Alzheimer's disease: Potential pathway in the development for Alzheimer's disease therapy. *Frontiers in Pharmacology* 2022;13:1094351. https://doi.org/10.3389/fphar.2022.1094351 **(IF: 5.6)**

7. Selvaraj LK, Jeyabalan S, Wong LS, **Sekar M**, Logeshwari B, Umamaheswari S, Premkumar S, Sekar RT, Begum MY, Gan SH, Izzati Mat Rani NN, Chidambaram K, Subramaniyan V, Al Fatease A, Alamri A, Sathasivam KV, Selvaraj S, Vijeepallam K, Fuloria S and Fuloria NK. Baicalein prevents stress-induced anxiety behaviors in zebrafish model. *Frontiers in Pharmacology* 2022;13:990799. https://doi.org/10.3389/fphar.2022.990799 **(IF: 5.6)**

8. Jeyabalan S, Bala L, Subramanian K, Jabaris SL, **Sekar M**, Wong LS, Subramaniyan V, Chidambaram K, Gan SH, Mat Rani NNI, Begum MY, Safi SZ, Selvaraj S, Al Fatease A, Alamri A, Vijeepallam K, Fuloria S, Fuloria NK and Djearamane S. Potential effects of noni (*Morinda citrifolia* L.) fruits extract against obsessive-compulsive disorder in marble burying and nestlet shredding behavior mice models. Frontiers in Pharmacology. 2022;13:993927. https://doi.org/10.3389/fphar.2022.993927 **(IF: 5.6)**

9. Thayumanavan G, Jeyabalan S, Fuloria S, **Sekar M**, Ravi M, Selvaraj LK, Bala L, Chidambaram K, Gan SH, Rani NNIM, Begum MY, Subramaniyan V, Sathasivam KV, Meenakshi DU, Fuloria NK. Silibinin and Naringenin against Bisphenol A-Induced Neurotoxicity in Zebrafish Model - Potential Flavonoid Molecules for New Drug Design, Development, and Therapy for Neurological Disorders. *Molecules*. 2022;27(8):2572. https://doi.org/10.3390/molecules27082572 **(IF: 4.6)**

10. Fuloria S, Yusri MAA, **Sekar M**, Gan SH, Rani NNIM, Lum PT, Ravi S, Subramaniyan V, Azad AK, Jeyabalan S, Wu YS, Meenakshi DU, Sathasivam KV, Fuloria NK. Genistein: A Potential Natural Lead Molecule for New Drug Design and Development for Treating Memory Impairment. *Molecules* 2022;*27:*265. https://doi.org/10.3390/molecules27010265 **(IF: 4.6)**