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**Educational Qualification:** M. Pharm (Pharmacology)

**Year of Registration:** July 2018

**Project Supervisors:** Dr. Justin Antony

**Research Abstract:**

Excitatory amino acid transporter-2 (EAAT-2) is a predominant glutamate transporter system present in the brain which clears 90% of glutamate from the synapse into the astrocytes for the further glutamate-glutamine-glutamate cycle. Earlier reports indicate that dysfunction of EAAT-2 is important pathological event occurring in several neurodegenerative disorders. Impairment of EAAT-2 resulted in accumulation of excess glutamate in synapse lead to excitotoxicity in neurons followed by neuronal death. Reports implicated that activation of EAAT-2 in brain may reduce the excitotoxicity mediated neuronal death during neurodegenerative conditions. Kong et al., 2014 have reported that small molecule LDN/OSU-0212320 which could activate the EAAT-2 transporter system shown neuroprotection in primary astrocyte cell cultures. It is clearly indicating that developing molecule to activate glial EAAT-2 transporter system may have good pharmacological and therapeutic value. Thus, my current research is focused to design, synthesize, and characterize some novel compounds targeting central EAAT-2 transporter activation. Further the synthesized novel compounds will be subjected to neuroprotective evaluation using suitable *in-vitro* and *in-vivo* models followed by molecular mechanism elucidation.

**Fellowships: Non-Govt**

- ✚ JSS AHER Research Fellowship

**Awards & Scholarships:**

- ✚ Awarded first for the “G. Rangachari Memorial Award” from Tamilnadu Pharmaceutical Sciences Welfare Trust Scholarship for the M.Pharm project in the year 2017-2018.
- ✚ Awarded Scholarship from Tamilnadu State Council for Science and Technology for the M.Pharm project in the year 2017-2018.
- ✚ Received best oral presenter award in 2018 – “Neuroprotective Evaluation of Combination of AT<sub>1</sub> and NMDA Receptor Antagonists in Animal Model of Alzheimer’s Disease”.
- ✚ 3 Research Publications (National).

**Way Forward:** In the future, I am determined to become a prominent women scientist in the field of molecular neuroscience and to build a neuroscience research unit for the tackling of fatal neurodegenerative disorders.