

**Kiran Sankarappan, Class 2025****Campus:** Clinical Campus, Round Rock TX**Research Area:** Neuroregenerative Stem Cell Therapies**Mentor:** Ashok Shetty, PhD

Kiran Sankarappan, a member of the Class of 2025 in the Texas A&M School of Medicine, is investigating as Medical Scholar Explorer the therapeutic role of stem-cell derived extracellular vesicles in treating Subarachnoid Hemorrhage and Alzheimer's disease under the guidance of [Ashok Shetty, PhD](#), Professor, Department of Molecular and Cellular Medicine and Associate Director of Institute of Regenerative Medicine. Subarachnoid Hemorrhage is a life-threatening complication resulting from an aneurysmal rupture between the arachnoid and pia mater of the brain, prompting immediate imaging and intervention. Given that stem cells mediate neural regeneration via the release of extracellular vesicles, our project aims to critically evaluate the current literature on the promise of stem cell-derived extracellular vesicles in easing subarachnoid hemorrhage-induced brain dysfunction. The goal of my MSE is to write a review article to submit for publication in a peer-reviewed journal. In addition to writing a review article, I will contribute to an ongoing research project testing the efficacy of human neural stem cell-derived extracellular vesicle (hNSC-EV) treatment in models of Alzheimer's disease for suppressing neuroinflammation and amyloid plaque deposition. This project aims to slow the progression of cognitive decline in Alzheimer's disease through hNSC-EV treatment.