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## Does hUCB derived Lin-ve stem cells rescue amyloid-β peptide induced mouse model of memory loss

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**Objectives:** The objective of the study was to evaluate the effect of lineage negative human umbilical cord blood derived stem cells in rescue of memory loss in animal model of AD.

**Methods:** We used digital stereotaxis, immunohistochemistry, real time PCR and behavioral assays such rota rod and morris water maze in order to evaluate the learning and memory in experimetal and control Swiss Albino mice. Lineage negative stem cells were purified by MACS and labelled by CFDA dye in order to trace the stem cell recruitment, incorporation and differentiation and FACS analysis to characterize these cells before transplantation.

**Results:** There was dose dependent rescue of memory loss caused by transplantation of lineage negative hUCB cells. There was increase in BDNF and CREB expression subsequent to transplantation of Lineage negative human UCB cells as well as decline in apoptosis analyzed by Fas L and Fluro Z. The immunolocalization of Abeta reduced with transplantation of these cells.

**Conclusion:** Lineage negative UCB cells possess the necessary neurotrophic effect in extending the survival of hippocampal neurons which may contribute in rescue of memory loss. The immunolocalization of Abeta reduced with transplantation.

## **Biography**

Akshay Anand completed his Ph.D from PGIMER, Chandigarh, India. He has extensive post-doctoral experience; with strong track record of understanding research by exploiting invitro, invivo, electrophysiological and behavioral approaches. He was involved in the discovery of animal model of AMD published in Nature Medicine. Anand is a recipient of numerous prestigious awards including recent Sardar Vallabhabhi Patel Award, 2014, He serves as the Editor in Chief of Annals of Neurosciences, Neuroepidemiology; Reviews Editor of Frontiers in Behavioral Neurosciences. Anand has over 82 publications in peer reviewed Journals and also serve as the resource faculty for various national/International forums, academic and regulatory committees.

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