

“The mechanistic pathways of transcranial direct current stimulation (tDCS) in cerebellar adaptation”

1. Direct-current stimulation (DCS), a safe non-invasive brain stimulation technique, reduces the baseline gain of vestibulo-ocular reflex (VOR) acutely in a polarity-specific manner in mice. (*this thesis*)
2. The anodal DCS induced decrease in VOR gain in mice is directly dependent on the PP2B mediated synaptic long-term potentiation (LTP) and intrinsic plasticity pathways of Purkinje cells (PC). (*this thesis*)
3. There is no effect of tDCS on VOR adaptation in humans. (*this thesis*)
4. When PC LTP is genetically ablated in mice, anodal DCS induces an acute effect on the multi-unit activity (MUA) of the cerebellar cortex. (*this thesis*)
5. The state-predicting feedback control (SPFC) framework is a robust computational model that successfully mimics the behavior of compensatory eye movement (CEM) conditions. (*this thesis*)
6. “The true laboratory is the mind, where behind illusions we uncover the laws of truth.” -- *Jagadish Chandra Bose*
7. “What I cannot create, I do not understand.” -- *Richard P Feynman*
8. “By plucking her petals you do not gather the beauty of the flower.” -- *Rabindranath Tagore*
9. “Everything in existence is the same energy, manifesting itself in a million different ways.” -- *Sadhguru JV*
10. “Ask the right questions, and nature will open the doors to her secrets” -- *Chandrasekhara V Raman*
11. “Let your life be your message.” -- *Mahatma Gandhi*