LIST OF PROJECTS

Research projects as Principal investigator

S. No	Title of Project	Funding agency	Amount	Date of sanction & duration
1	Evaluation of therapeutic efficacy and mechanism of repetitive transcranial magnetic stimulation on the cognitive enhancement in hypobaric hypoxic environment	LSRB, DRDO	77,87,010/-	2023-2026
2	A study of differential protein expression in injured spinal cord tissue of rats to predict biomarkers of recovery following Intermittent Theta-Burst stimulation and iron oxide nanoparticles implantation	DST Power forum	Rs. 44,24,640/-	2022-2025
3	Development of complex biomimetic artificial nerve-graft for repairing spinal cord injury	ICMR	6,65,660/-	2022-2023
4	Theranostics exosomes for imaging directed treatment of brain metastases	ICMR-DHR	Rs. 61,26,734	2021-2024
5	Facilitated recruitment of anterior cingulate cortex as a compensatory circuitry of contextual fear memory in the absence of hippocampus.	DST – CSRI (PDF)	Rs 21,19,744/-	2022-2024
6	Clinical research to assess efficacy of repetitive transcranial magnetic stimulation along with implantation of neurotrophic coated nanoparticles in complete spinal cord injury patients.	DBT	Rs. 88,35,200/-	2020-2024
7	Neuromodulation of cortical excitability and plasticity by low frequency repetitive transcranial magnetic stimulation in infantile hemiplegic cerebral palsy patients	ICMR	Rs. 51,34,802/-	2019-2023
8	Correlation of neurocognitive and motor function deficit severity with gut physiology in Cerebral palsy children	ICMR (SRF)		2022-2025
9	Modulation of cortical brain maps by external magnetic field in spinal cord	ICMR		2022-2025

	injured rats	(RA)		
10	To investigate the combined neuromodulatory effects of intermittent theta burst stimulation (iTBS) and probiotics on gut-brain axis in Parkinson's disease – a randomized controlled trial.	ICMR (RA)		2022-2025
11	Formulation of phantom brain to establish dosimetry of magnetic fields following repetitive transcranial magnetic field stimulation	AIIMS	Rs 5,00,000/-	2019-2020
12	A novel combinatorial approach for neuroregeneration in an in-vivo spinal cord injured rat model: neurotrophic factors coated iron oxide nanoparticles impregnated in a biocompatible hydrogel system.	DST	Rs 32,23,632/-	2017-2021
13	To investigate the biochemical and functional alterations by novel diagnostic tool GluCEST and prevention of progression of Alzheimer's disease by non-invasive Magnetic field stimulation therapy in streptozotocin (STZ) induced rat model	ICMR	Rs. 21, 58, 080/-	2019-2022
14	Functional and morphological study of antigravity muscle in spinal cord transected rats: combinatorial effect of electromagnetic field exposure and Iron Oxide nanoparticle implantation.	ICMR	Rs 13,20,000/-	2019-2022
15	Effect of chronic exposure to low intensity magnetic field on streptozotocin induced synaptic dysfunction and amyloid precursor protein processing in rats	ICMR	Rs 13,20,000/-	2019-2022
16	The study of therapeutic effect of superparamagnetic iron oxide naoparticles implantation and magnetic field stimulation on motor, cognitive in a 6-OHDA rat model of Parkinsons Disease	ICMR	1,06,8000	2015-2018
17	Functional development of the visual cortex following prenatal repetitive auditory stimulation in chicks (Gallus	DST	Rs. 23,12,000/-	2011-2014

	domesticus): role of noradrenaline			
18	Motor and cognitive behaviour in 6-hydroxydopamine (6-OHDA) adult rat model of Parkinson's disease following magnetic field exposure and implantation of ferromagnetic nanoparticles	DST	Rs. 26,18,920/-	2009-2012
19	Effect of prenatal chronic auditory stimulation on expression of synaptic proteins in the visual wulst of domestic chicks (Gallus domesticus)	Institute research grant, AIIMS	Rs. 1,00,000/-.	2010- 2011
20	Behavioral development of visual system following prenatal chronic auditory stimulation in chicks (Gallus domesticus)	Institute research grant, AIIMS	Rs. 1,00,000/-.	2009- 2010
21	Prenatal auditory stimulation: effect on spatial memory and expression of synaptic proteins in chick hippocampus	CSIR	Rs. 16,00,000/-	2006-2009
22	Effect of exposure to magnetic field following implantation of ferromagnetic plates on the recovery from spinal cord injury in rats	Institute research grant, AIIMS	Rs. 1,00,000/-.	2008-2009
23	Estimation of ß-endorphin and nociceptin in ventromedial nucleus of hypothalamus after prolonged sucrose ingestion by microdialysis	AIIMS	Rs 1,00,000/-	2007-2008
24	Histochemical investigations into the possible neural substrate responsible for sucrose induced pain modulation	AIIMS	Rs 1,00,000/-	2006 - 2007
25	Effect of prolonged sucrose feeding on tonic pain and orosensory reward.	AIIMS	Rs 40,000/-	2005 - 2006

Research projects as Co-Principal investigator

Sl No.	Title of Project	Funding agency	Amount	Date of sanction & duration
1.	Intermediate and long-term therapeutic efficacy of r TMS in drug refractory focal epilepsy of childhood: A randomised double blind sham-controlled study	Funded ICMR	47.24 lacs	2022 - 2025
2.	Therapeutic intervention of small molecule based novel activator of Sirtuin on rat model of Alzheimer's disease	ICMR	65,00,000/-	2019-2022
3.	Effect of administration of human bone marrow derived mesenchymal stem cells on the expression level and promoter methylation pattern of stroke related genes in middle cerebral artery occlusion model of stroke in rats.	DBT	50 lacs	2014-2017
4.	Effect of transcranial magnetic stimulation on pain status of Chronic tension type Headache patients.	AIIMS	2,50,000/-	2014-2016
5.	To study the effect of repeated magnetic stimulation on sensorimotor recovery in spinal cord injured patients.	DST	19,88,140/-	2009-2011
6.	Influence of prenatal chronic noise exposure on brain stem auditory nuclei, hippocampus and spatial memory in chicks	DBT	65 lakhs	2008-2011
7.	Effect of bone marrow stromal cells and Magnetic Stimulation on the Sensory-Motor Recovery of Spinalised Rats	ICMR	16, 55, 200/-	2008-2011
8.	Influence of prenatal auditory stimulation on the development of synaptic proteins, brain derived growth factor and	DBT	17 lakhs	2006-2009

	spatial memory in chick hippocampus.			
9.	Effect of prenatal auditory overstimulation with species-specific and music sounds on postnatal learning in domestic chicks	AIIMS	Rs 40,000/-	April 2003 to March 2005