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| Neurosciencea) Cellular and molecular neuroscience1. Neural development

b) Neurotoxicology and Neurotoxicity1. Toxic effects of metal base nanoparticles
2. Toxic effects of heavy metals
3. Toxic effects of pesticides and herbicides
4. Toxic effects of drugs
5. Toxic effects of toxins

c) Neuropharmacology1. Protective and pharmaceutical effects of natural herbs and extracts
2. Nano medicine

d) Experimental neurological and neurodegenerative diseases1. Parkinson's disease
2. Alzheimer's disease
3. Huntington's disease
4. Neuro-oncology
5. Epilepsy
6. Ischemia
7. Psychiatric disorders
8. Trauma
9. Peripheral nerve disease
10. CNS autoimmune diseases
11. Autism

e) Brain aging 1. Neurobiology of brain aging

II. Tissue engineeringa) Bone tissue engineering using glass and glass ceramicsb) Bioceramics-based scaffolds for hard tissue regenerationc) Biocomposite scaffolds for bone tissue engineeringd) Skin regeneration using bioactive glassese) Acellular matrixes for soft tissue healingf) Nanofibrous scaffold for skin wound healingg) Cardiac tissue regeneration using nanofibrous scaffoldsh) Utilizing adult stem cells for tissue engineeringIII. Reproductive biologya) Female infertility1. PCOS model and treatments
2. Endometriosis model and treatments
3. Premature ovarian failures (POF) treatments
4. Improvement the ovarian tissue preservation process
5. Improvement the oocyte preservation process
6. Oocyte and follicles in vitro maturation (IVM)
7. Investigation of environmental factors causing female

infertility1. Evaluation the maternal (genetic, immunologic and etc) factors

in recurrent implantation failure(RIF)1. Stem cell therapy
2. Ovarian tissue culture

b) Male infertility1. Azoospermia models and treatments
2. Evaluation the different methods for sperm preparation to ART
3. Improvement the sperm freezing process
4. Testes tissue preservation
5. Investigation of environmental factors causing male infertility
6. In vitro differentiation of stem cells into gametes
7. Engineered reproductive tissues

c) Embryology1. Optimum condition for invitro fertilization(IVF)
2. Embryo Co-culture
3. Genetic disorders in IVF embryos (embryo biopsy)
4. Improve the embryo freezing process
5. Evaluation the embryo factors in recurrent implantation failure (RIF)
6. Setup the new methods and technology to embryo grading
7. Utilize the new technology for IVM and IVF
8. Gene editing in early stage of embryo growth
9. Teratology and congenital disorders
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