Publications of Interest

ReNeuron is advancing the frontiers of medicine through its unique stem cell technology, driving innovation in exosome research, cell-based therapies, and precision cell-based models. Our proprietary stem cell lines have been used by research groups all over the World and published in leading scientific journals, highlighting their critical role in advancing the field of regenerative medicine.

Explore a selection of these publications to see how ReNeuron's technology is being used to redefine what's possible in targeted, exosome and cell-based innovation.

Exosome-related:

1) Neural stem cell–derived extracellular vesicles purified by monolith chromatography retain stimulatory effect in in vitro scratch assay - Cytotherapy **(2025)**
2) A report on the International Society for Cell & Gene Therapy 2022 Scientific Signature Series, "Therapeutic advances with native and engineered human extracellular vesicles" - Cytotherapy **(2023)**
3) Investigating heparin affinity chromatography for extracellular vesicle purification and fractionation - ScienceDirect **(2022)**
4) Exosomes from neuronal stem cells may protect the heart from ischaemia/reperfusion injury via JAK1/2 and gp130 - Katsur - 2021 - Journal of Cellular and Molecular Medicine - Wiley Online Library **(2021)**
5) High content, quantitative AFM analysis of the scalable biomechanical properties of extracellular vesicles - Nanoscale (RSC Publishing) **(2021)**
6) Manufacturing Exosomes: A Promising Therapeutic Platform: Trends in Molecular Medicine **(2018)**
7) Concise Review: Developing Best-Practice Models for the Therapeutic Use of Extracellular Vesicles | Stem Cells Translational Medicine | Oxford Academic **(2017)**
8) Investigation of Content, Stoichiometry and Transfer of miRNA from Human Neural Stem Cell Line Derived Exosomes | PLOS One **(2016)**

ReNeuron's Cell Lines:

ReN Cell CX and VM (commercially available lines)

1) Hypoxia-Inducible Factor Prolyl Hydroxylase Inhibitor, FG4592, Induces Endogenous Metallothionein3 Expression in Human Neuronal Cell Line, ReNcell CX Cells

2) Pluripotent stem cell-derived neural progenitor cells can be used to model effects of IL-6 on human neurodevelopment | Disease Models & Mechanisms | The Company of Biologists

3) Initial phase establishment of an in vitro method for developmental neurotoxicity test using Ki-67 in human neural progenitor cells - PubMed

4) Characterisation of ReNcells CX and VM stimulated with interleukin-1β and lipopolysaccharide - ScienceDirect

5) Comparative analysis of human embryonic stem cell-derived neural stem cells as an in vitro human model

6) Differential development of neuronal physiological responsiveness in two human neural stem cell lines | BMC Neuroscience | Full Text

7) Immortalized Human Neuronal Progenitor Cells (ReNcell CX) Represent an Ideal Model to Investigate the Inhibition of Adult Neurogenesis in the SVZ Mediated by TGF-β (P5.095) | Neurology.

8) Specific human antisense oligonucleotide (ASO) targeting TGF-βRII rescues proliferation of TGF-β arrested human neuronal progenitor cells (ReNcell CX) (S5.007) | Neurology

9) Brain endothelium-derived extracellular vesicles containing amyloid-beta induce mitochondrial alterations in neural progenitor cells

10) Positive feedback loop between Sox2 and Sox6 inhibits neuronal differentiation in the developing central nervous system | PNAS

11) Advanced 3D Models of Human Brain Tissue Using Neural Cell Lines: State-of-the-Art and Future Prospects

12) Endogenous tau released from human ReNCell VM cultures by neuronal activity is phosphorylated at multiple sites | bioRxiv

13) Full article: Analysis of the interplay between MeCP2 and histone H1 during in vitro differentiation of human ReNCell neural progenitor cells

14) Microorganisms | Free Full-Text | Herpes Simplex Virus Type 1 Induces AD-like Neurodegeneration Markers in Human Progenitor and Differentiated ReNcell VM Cells

15) Establishment of ion channel and ABC transporter assays in 3D-cultured ReNcell VM on a 384-pillar plate for neurotoxicity potential - ScienceDirect

16) CAR (CARSKNKDC) Peptide Modified ReNcell-Derived Extracellular Vesicles as a Novel Therapeutic Agent for Targeted Pulmonary Hypertension Therapy | Hypertension

17) Cost-Effective Cosmetic-Grade Hyaluronan Hydrogels for ReNcell VM Human Neural Stem Cell Culture

18) A dynamic view of the proteomic landscape during differentiation of ReNcell VM cells, an immortalized human neural progenitor line | Scientific Data

19) Characterization of Apoptosis Signaling Cascades During the Differentiation Process of Human Neural ReNcell VM Progenitor Cells In Vitro | Cellular and Molecular Neurobiology

20) Caspase-2 and caspase-8 trigger caspase-3 activation following 6-OHDA-induced stress in human dopaminergic neurons differentiated from ReNVM stem cells: Neurological Research: Vol 35, No 4

21) Survival of transplanted human neural stem cell line (ReNcell VM) into the rat brain with and without immunosuppression - ScienceDirect

22) Human Neurospheroid Arrays for In Vitro Studies of Alzheimer's Disease | Scientific Reports

23) 2-DE proteome analysis of a proliferating and differentiating human neuronal stem cell line (ReNcell VM) - Hoffrogge - 2006 - PROTEOMICS - Wiley Online Library

24) 3D models of Alzheimer's disease patient microglia recapitulate disease phenotype and show differential drug responses compared to 2D | bioRxiv

25) A High-content screen identifies compounds promoting the neuronal differentiation and the midbrain dopamine neuron specification of human neural progenitor cells | Scientific Reports

26) Human Neural Progenitor Cells Show Functional Neuronal Differentiation and Regional Preference After Engraftment onto Hippocampal Slice Cultures | Stem Cells and Development

27) Neural progenitors derived from human embryonic stem cells are targeted by allogeneic T and natural killer cells - Preynat-Seauve - 2009 - Journal of Cellular and Molecular Medicine - Wiley Online Library

Cortical Derived – CTX:

1) Clinical-Grade Human Neural Stem Cells Promote Reparative Neovascularization in Mouse Models of Hindlimb Ischemia | Arteriosclerosis, Thrombosis, and Vascular Biology

2) Differentiation of a Human Neural Stem Cell Line on Three Dimensional Cultures, Analysis of MicroRNA and Putative Target Genes

3) A conditionally immortal clonal stem cell line from human cortical neuroepithelium for the treatment of ischemic stroke - ScienceDirect

4) Human Neural Stem Cell Therapy for Chronic Ischemic Stroke: Charting Progress from Laboratory to Patients | Stem Cells and Development

5) Implantation of the clinical-grade human neural stem cell line, CTX0E03, rescues the behavioral and pathological deficits in the quinolinic acid-lesioned rodent model of Huntington's disease | Stem Cells | Oxford Academic

6) The Neural Stem Cell Line CTX0E03 Promotes Behavioral Recovery and Endogenous Neurogenesis After Experimental Stroke in a Dose-Dependent Fashion - Paul

Stroemer, Sara Patel, Andrew Hope, Cathy Oliveira, Kenny Pollock, John Sinden, 2009

7) c-MycERTAM transgene silencing in a genetically modified human neural stem cell line implanted into MCAo rodent brain | BMC Neuroscience | Full Text

8) Characterisation of neurons derived from a cortical human neural stem cell line CTX0E16 | Stem Cell Research & Therapy | Full Text

9) The Psychiatric Risk Gene NT5C2 Regulates Adenosine Monophosphate-Activated Protein Kinase Signaling and Protein Translation in Human Neural Progenitor Cells - Biological Psychiatry

10) Stochastic Choice of Allelic Expression in Human Neural Stem Cells - Jeffries - 2012 - STEM CELLS - Wiley Online Library

Striatum derived – STR:

1) Characterization of gene expression changes in human neural stem cells and endothelial cells modeling a neurovascular microenvironment - ScienceDirect

2) Purmorphamine Increases DARPP-32 Differentiation in Human Striatal Neural Stem Cells Through the Hedgehog Pathway | Stem Cells and Development

3) Implantation of undifferentiated and pre-differentiated human neural stem cells in the R6/2 transgenic mouse model of Huntington's disease | BMC Neuroscience | Full Text

4) In Vitro Modeling of the Neurovascular Environment by Coculturing Adult Human Brain Endothelial Cells with Human Neural Stem Cells | PLOS One

Hippocampal derived – HPC:

1) Antidepressants increase human hippocampal neurogenesis by activating the glucocorticoid receptor | Molecular Psychiatry

2) Pro- and Anti-Inflammatory Properties of Interleukin in Vitro: Relevance for Major Depression and Human Hippocampal Neurogenesis | International Journal of Neuropsychopharmacology | Oxford Academic

3) Neurogenesis is disrupted in human hippocampal progenitor cells upon exposure to serum samples from hospitalized COVID-19 patients with neurological symptoms | Molecular Psychiatry

4) Effect of Inflammatory Cytokines on Major Histocompatibility Complex Expression and Differentiation of Human Neural Stem/Progenitor Cells | Stem Cells | Oxford Academic.

5) The effects of genotype on inflammatory response in hippocampal progenitor cells: A computational approach - ScienceDirect

6) Predicting progression to Alzheimer's disease with human hippocampal progenitors exposed to serum | Brain | Oxford Academic

7) Cellular phenotyping of hippocampal progenitors exposed to patient serum predicts conversion to Alzheimer's Disease | bioRxiv

Ventral Mesencephalon derived – VME:

1) Implantation of c-mycERTAM Immortalized Human Mesencephalic-Derived Clonal Cell Lines Ameliorates Behavior Dysfunction in a Rat Model of Parkinson's Disease | Stem Cells and Development

Spinal Cord derived – SPC:

1) Human conditionally immortalized neural stem cells improve locomotor function after spinal cord injury in the rat | Stem Cell Research & Therapy | Full Text
2) Conditionally immortalized stem cell lines from human spinal cord retain regional identity and generate functional V2a interneurons and motorneurons | Stem Cell Research & Therapy | Full Text
3) Treating spinal cord injury in rats with a combination of human fetal neural stem cells and hydrogels modified with serotonin | Acta Neurobiologiae Experimentalis
4) Transplantation of neural precursors generated from spinal progenitor cells reduces inflammation in spinal cord injury via NF-κB pathway inhibition | Journal of Neuroinflammation | Full Text

Liver and retinal derived- LIV, hRPC:

1) Characterization of lipid metabolism in a novel immortalized human hepatocyte cell line | American Journal of Physiology-Endocrinology and Metabolism | American Physiological Society
2) Molecular Characterization of Human Retinal Progenitor Cells | IOVS | ARVO Journals