

Publication highlights

Find out how opti-ox™
technology is
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Synaptophysin autoantibodies mediate synaptic dysfunction in cerebellar ataxia

Ho et al.
Cell Reports Medicine 2026
doi: 10.1016/j.xcrm.2026.102822
Featuring ioGlutamatergic Neurons

NRN1 as a therapeutic target for Alzheimer’s disease

Pugh DA et al.
Alzheimer’s & Dementia 2026
doi: 10.1002/alz.71149
Featuring ioGlutamatergic Neurons and ioAstrocytes

A measles virus encoding a CD19/CD3 bispecific T cell engager shows enhanced preclinical anti-BCP-ALL efficacy without significant toxicity

Heinze S et al.
Molecular Therapy Oncology 2026
doi: 10.1016/j.omton.2026.201127
Featuring ioGlutamatergic Neurons

Phenotypic screening with primary and human iPSC-derived neurons

Markossian S, Grossman A, Baskir H et al.
Assay Guidance Manual 2025
Featuring ioGlutamatergic Neurons

A triple serine motif in the intracellular domain of SorCS2 impacts its cellular signaling

Dalby et al.
iScience 2025
doi: 10.1016/j.isci.2025.112695
Featuring ioGlutamatergic Neurons powered by opti-ox

Schizophrenia risk gene ZNF804A controls ribosome localization and synaptogenesis in developing human neurons

Sichlinger, et al.
Sci Adv. 2026
doi: 10.1126/sciadv.aea0755
Featuring opti-ox enabled glutamatergic neurons iPSC cell line

Drug treatment alters performance in a neural microphysiological system of information processing

Wattmuff et al.
Communications Biology 2025
doi: 10.1038/s42003-025-08194-6
Featuring opti-ox enabled glutamatergic neurons iPSC cell line

Dynein and dynactin move long-range but are delivered separately to the axon tip

Fellows et al.
Journal of Cell Biology 2024
doi: 10.1083/jcb.202309084
Featuring opti-ox enabled glutamatergic neurons iPSC cell line

Rewiring of the promoter-enhancer interactome and regulatory landscape in glioblastoma orchestrates gene expression underlying neuroglial synaptic communication

Chakraborty et al.
Nature Communications 2023
doi: 10.1038/s41467-023-41919-x
Featuring ioGlutamatergic Neurons

Functional neurological restoration of amputated peripheral nerve using biohybrid regenerative bioelectronics

Rochford and Carnicer-Lombarte et al.
Science Advances 2023
doi: 10.1126/sciadv.add8162
Featuring opti-ox enabled skeletal myocytes iPSC cell line

HNRNPH1 regulates the neuroprotective cold-shock protein RBM3 expression through poison exon exclusion

Qiaojin Lin et al.
The EMBO Journal 2023
doi: 10.15252/embj.2022113168
Featuring opti-ox powered hiPSC-derived glutamatergic neurons with constitutive expression of Cas9

CRISPR-Cas9 genetic screen leads to the discovery of L-Moses, a KAT2B inhibitor that attenuates Tunicamycin-mediated neuronal cell death

Pavlou et al.
Nature Scientific Reports 2023
doi: 10.1038/s41598-023-31141-6
Featuring opti-ox powered hiPSC-derived glutamatergic neurons with constitutive expression of Cas9

Three-dimensional bioprinting of human iPSC-derived neuron-astrocyte cocultures for screening applications

Whitehouse et al.
JoVE Journal of Visualized Experiments 2023

doi: 10.3791/65856

Featuring ioGlutamatergic Neurons

Interferon-γ exposure of human iPSC-derived neurons alters major histocompatibility complex I and synapsin protein expression

Pavlinek et al.
Frontiers in Psychiatry 2022

doi: 10.3389/fpsyt.2022.836217

Featuring opti-ox enabled glutamatergic neurons iPS cell line

Depletion of intracellular glutamine pools triggers toxoplasma gondii stage conversion in human glutamatergic neurons

Bando et al.
Frontiers in Cellular and Infection Microbiology 2022

doi: 10.3389/fcimb.2021.788303

Featuring ioGlutamatergic Neurons

Compounds co-targeting kinases in axon regulatory pathways promote regeneration and behavioral recovery after spinal cord injury in mice

Mah et al.
Experimental Neurology 2022

doi: 10.1016/j.expneurol.2022.114117

Featuring ioGlutamatergic Neurons

Lipid-bilayer-supported 3D printing of human cerebral cortex cells reveals developmental interactions

Zhou et al.
Advanced Materials 2020

doi: 10.1002/adma.202002183

Featuring ioGlutamatergic Neurons

Inducible and deterministic forward programming of human pluripotent stem cells into neurons, skeletal myocytes, and oligodendrocytes

Pawlowski et al.
Stem Cell Reports 2017

doi: 10.1016/j.stemcr.2017.02.016

Featuring opti-ox technology

PUBLICATIONS IN REVIEW

A human neuron-microglia tri-culture platform to study the influence of microglia on developing neuronal networks in vitro

Guerrisi S et al.
BioRxiv 2026

doi:
10.64898/2026.04.06.716675

Featuring ioGlutamatergic Neurons, ioGABAergic Neurons, ioMicroglia and ioMicroglia TREM2 R47H/R47H

Cell-type specific molecular and functional consequences of TDP-43 loss-of-function in human induced neurons

Filippa VG et al.
bioRxiv 2026

doi:
10.64898/2026.01.26.700683

Featuring ioGlutamatergic Neurons and ioMotor Neurons

Circadian clocks in human cerebral organoids

Rzechorzek, et al.
bioRxiv 2024

doi:
10.1101/2024.02.20.580978

Featuring opti-ox enabled microglia male iPS cell line and opti-ox enabled glutamatergic neurons iPS cell line

Who we are

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