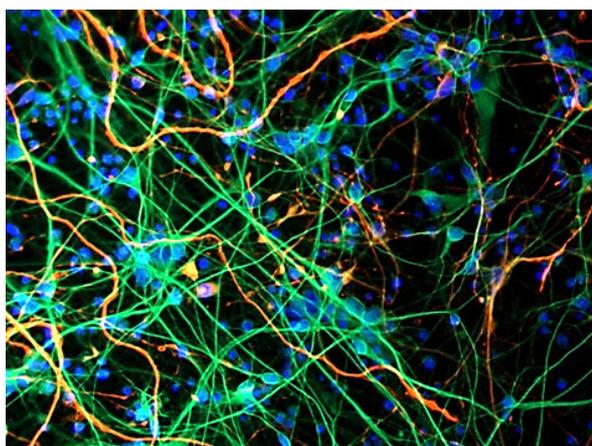


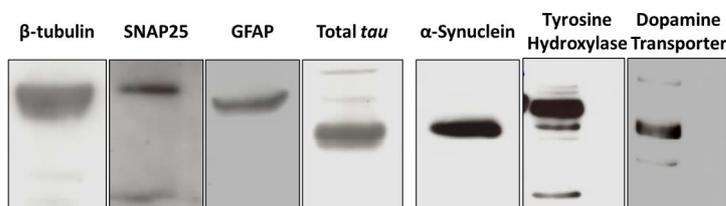
In vitro Human Neuronal Protection Screens for Alzheimer's & Parkinson's Disease

SynAging uses proprietary amyloid- β oligomer ($A\beta O$) preparations to induce Alzheimer's disease and α -synuclein oligomer (αSO) or α -synuclein fibrils (αSF) to induce Parkinson's disease in iPS cell derived human neuronal cultures.

SynAging has established highest reproducibility of $A\beta O$, αSO and αSF -induced neuronal cell death. Human iPS cells and differentiating media are used from MTI-GlobalStem, Gaithersburg, MD, USA (GSC-4312, HIP™ Neuron Kit). Cells are differentiated and matured for five weeks.



Above: 400x magnification of fully differentiated human neurons stained with antibodies for: neurons - MAP2 (green), glia cells - GFAP (in red), and cell cores - DAPI (blue). The culture contains 30-40% neurons in an astro-glial background.

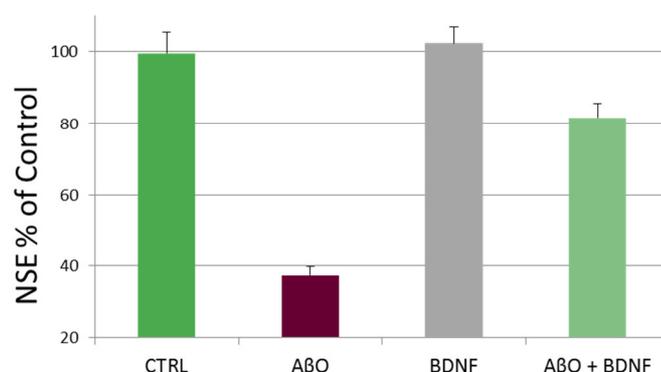


Dopaminergic Neuronal Markers

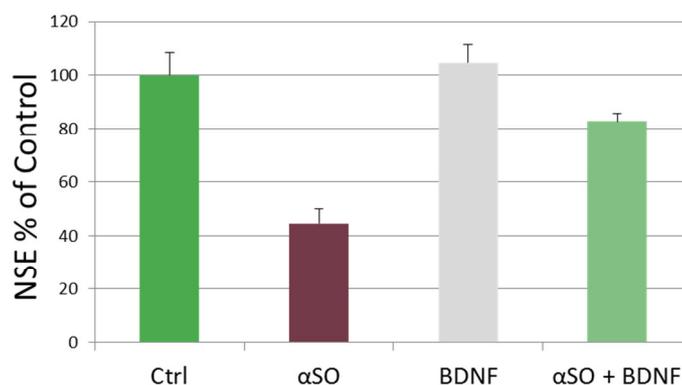
Matured human neurons express many neuronal markers (figure above) and are treated with vehicle, $A\beta O$, αSO , αSF , BDNF (as positive control) and test items. All assays are performed in triplicates, providing excellent statistical results and small standard deviations.

SynAging SAS: Your partner in naturally induced phenotypic models, accelerating drug discovery for proteopathic CNS diseases

Six test compounds can be tested in triplicate in one multiwell plate, alternatively a dose-response curve for six concentrations of one test compound can be produced. For novel test compounds we suggest to test at least three concentrations (e.g. 100nM, 1 μ M, 10 μ M), as many CNS active compounds show bell shaped dose-response curves.



Following $A\beta O$ and compound treatment for 24h, the quantification of human neuron viability is performed by an ELISA for neuron specific enolase (NSE). BDNF has been established as a positive control.



Following αSO (or αSF) and compound treatment for 72h, the quantification of human neuron viability is performed by an ELISA of neuron specific enolase (NSE). BDNF has also been established as a positive control in this assay.

SynAging will adapt test protocols for optimal results in customer drug discovery projects.