Okadaic Acid induced Insult in Primary Rat Hippocampal Neurons

Compound testing for the follwing indications:

- Alzheimer‘s Disease
- Neuroprotection
- Tauopathies

Model:

Okadaic acid is a phosphatase 1 inhibitor known to induce TAU phosphorylation. Indeed, we also demonstrated induction of okadaic acid mediated TAU phosphorylation in primary rat hippocampal neurons (data not shown). In addition to its effect on TAU phopshorylation, okadaic acid also perturbs neuronal viability. This effect can be partially reversed by inhibiting JNK, a kinase directly phosphorylating TAU. This assay allows to analyze kinase inhibitors counteracting okadaic acid mediated cell toxicity and TAU phosphorylation in primary neurons.

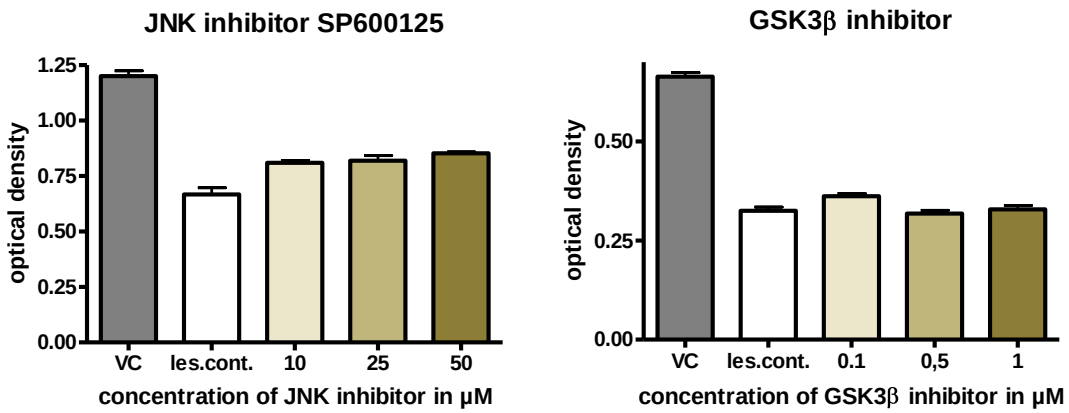

Fig.1. Effect of the JNK inhibitor SP600125 on an okadaic acid induced lesion in primary rat hippocampal neurons. As expected, no effect was observed with a commercially available GSK3β inhibitor.

Remark: The JNK inhibitor SP600125 was demonstrated to reduce TAU phosphorylation in our novel human neuroblastoma cell line overexpressing -hTau441-V337M/R496W.

JSW-Lifesciences GmbH • Parkring 12 • 8074 Grambach • AUSTRIA • EUROPE
Tel: + 43 (0) 316 25 81 11 • Fax: + 43 (0) 316 25 81 11 300 • E-Mail: office@jsw-lifesciences.com • www.jsw-lifesciences.com