

## Neuroprotection after Oxygen-Glucose Deprivation (OGD) and Excitotoxic insult in serum-free Organotypic Hippocampal Slice Cultures (OHCs)

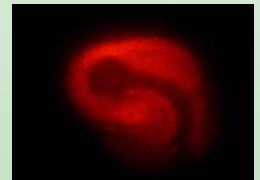
Compounds of interest can be assessed *in vitro* for their

- Neuroprotective properties after OGD and Excitotoxic insult by glutamatergic agonist glutamate (Propidium iodide uptake)
- Cytoprotective properties after OGD (LDH Release)

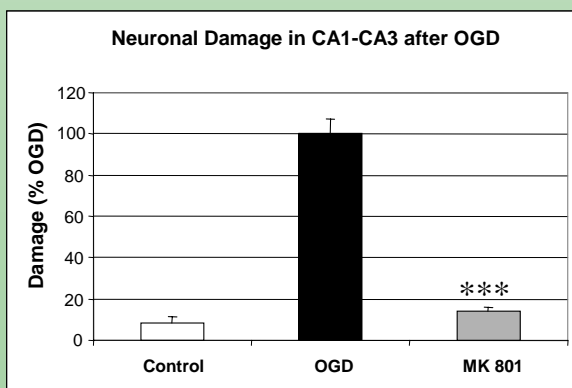
### Models

#### Cell degeneration assays

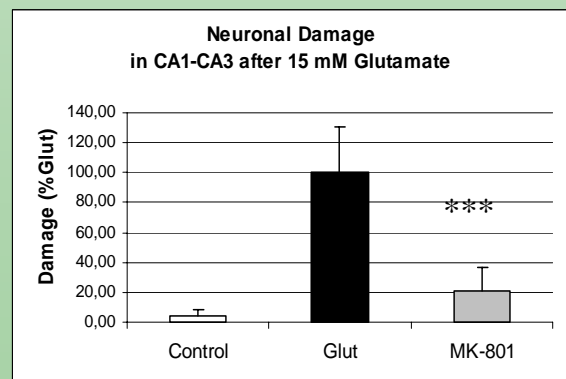
Neuronal cell death after oxygen-glucose deprivation (OGD) and Excitotoxic insult by glutamatergic agonist glutamate is assessed by densitometric measurement of propidium iodide (PI) uptake. Fluorescent images will be acquired semi-automatised (Nikon motorised stage; LUCIA software) and analysed by densitometry to quantify necrotic cell death (LUCIA Image analysis software). Cell death is expressed as % PI-uptake of the respective regions of interest (CA1, CA3)



Additionally LDH release measurement in the culture medium provides information on general cell death (including glial cells) in the slice culture.



**Fig.1** Quantification of neuronal cell death after OGD (area CA1-CA3) by PI uptake. OGD=Oxygen Glucose Deprivation. MK801=Treatment with 10µM neuroprotective reference substance. (n=8/bar)



**Fig.2** Quantification of neuronal cell death after Excitotoxic insult by glutamatergic agonist glutamate (area CA1-CA3) by PI uptake. (n=8/bar)