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Nerve growth factor released from collagen scaffolds protects axotomized cholinergic neurons of the basal nucleus of Meynert in organotypic brain slices

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Highlights Cholinergic neurons of the nBM degenerate in organotypic brain slices

- They can be rescued by exogenous NGF in medium
- CollScaff can be loaded with NGF and release it
- CollScaff can be applied onto brain slices and induce slight reactive gliosis
- CollScaff loaded with NGF protect cholinergic nBM neurons

Abstract

Background: Alzheimer´s disease is accompanied by cell death of cholinergic neurons, resulting in cognitive impairment and memory loss. Nerve growth factor (NGF) is the most potent protein to support survival of cholinergic neurons. New Method: Organotypic brain