Towards a Comprehension of the Structure of Mouse proNGF

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The neurotrophin NGF (Nerve Growth Factor) is translated as a pro-protein of 27 kDa and cleaved by furin to mature NGF.

NGF is involved in the maintenance and growth of neurons, while the pro-peptide facilitates folding of NGF [1]. ProNGF is the predominant form of NGF in brain [2] and was found to be a high affinity ligand for p75 and to induce p75 dependent apoptosis [3]. The specific receptor for the proNGF is sortilin [4].

We focused on the biophysical biochemical characterization of the mouse proNGF, which was expressed in *E. coli*, refolded and purified. The native structure was proven by fluorescence and circular dichroism. The homogeneity of the protein preparation was tested through dynamic light scattering. We have started a robotic screening for crystallization conditions of the protein and are planning SAXS experiments.

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