
A-1**Solution Structure of Neuropeptide γ from *Carassius auratus* by NMR spectroscopy**Sangwon Lee*, Namgyu Park¹, Yangmee Kim

Department of Chemistry, Konkuk University

¹Department of Biotechnology and Bioengineering, Pukyong National University

Neuropeptide γ is a recently identified tachykinin family peptide which has conserved amino acid sequence of -Phe-X-Gly-Leu-Met-NH₂ in the C-terminal region, where X represents aromatic or hydrophobic residues. In this study, three-dimensional structure of neuropeptide γ from goldfish *Carassius auratus* (G-NP γ) was determined by NMR spectroscopy. CD results show that it adopts α -helical structure in aqueous TFE, SDS micelles, and DPC micelles. The NMR structure of G-NP γ has two helical domain, from Ala5 to Lys10 and from Lys13 to Met21, and a hinge region between two helices. N-terminal helix is thought to play as binding to specific receptor, whereas C-terminal helix is thought to be involved in receptor activation. The structure is also similar to A β 1-40 in SDS micelle in the 19-35 region. The detailed structure-function study should be performed.