

## **P5.28.**

### **Distribution of trigeminal afferent terminals on the functionally different motoneurons of the glossopharyngeal and vagus nerves in the frog, *Rana esculenta***

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Frog's prey-catching behavioral pattern consists of sequence of coordinated activity of different muscles corresponding to stages of feeding. Snapping of prey object stimulates the trigeminal afferent terminals in the oral cavity and pharynx which initiate contraction of muscles innervated by the glossopharyngeal and vagus (IX-X) nerves. The aim of our experiments was to examine whether the trigeminal afferents form direct connections with the motoneurons of IX, X nerves. The trigeminal and the glossopharyngeal-vagus nerves were labeled with different fluorescent dyes. Close appositions between the trigeminal afferent fibers and IX-X motoneurons of the ambiguus nucleus were detected with confocal microscopy. In order to show the spatial distribution of these connections within the functionally different subdivisions of the ambiguus nucleus, NeuroLucida reconstruction of the brainstem was made showing the spatial distribution of the trigeminal afferents on the dendrites and perikarya of the IX-X motoneurons. To detect only the terminals of the mesencephalic trigeminal nucleus, related to the proprioceptive innervations of the oral cavity, the Gasserian ganglion was destroyed before the fluorescent labeling. The possible monosynaptic connections between the trigeminal afferents and IX-X motoneurons presented here may be one of the morphological substrate of a very quick response of the frog during the prey-catching behavior.

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