Functional Analyses of Chemical Sensory Cells

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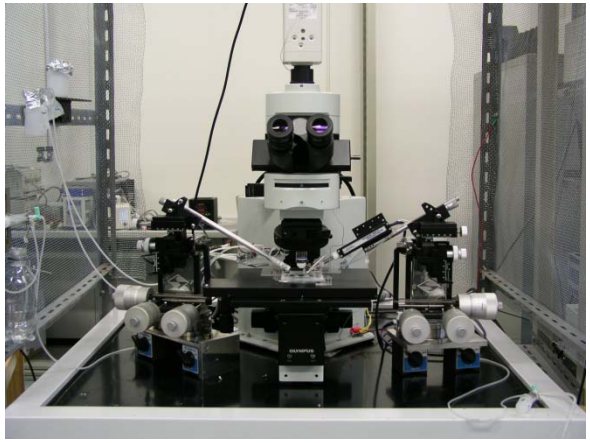
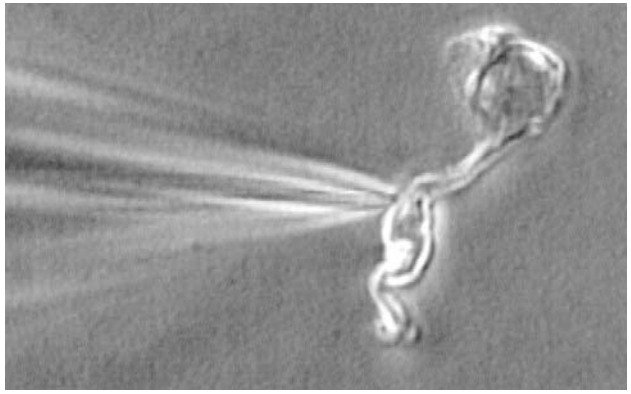


A patch-clamp setup for electrical recordings from chemical sensory cells .



A patch-pipette electrode can detect picoampere currents of the cell membrane in real-time recordings

Content：

Human and animals can detect various chemical substances by using sensory functions of taste and smell. Our research interests center on the mechanisms and functions of the sensory cells for these chemical senses. Chemical sensory cells can transduce chemical stimuli into electrical responses of their plasma membranes. These transduction machineries are very important for the first cell events of taste and smell sensations. To study their transduction mechanisms, we record and analyze electrical responses of taste receptor cells and olfactory receptor cells of vertebrates by using patch-clamp techniques and other electrical recording methods. We are also interested in ion channel functions of these chemical sensory cells.

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