



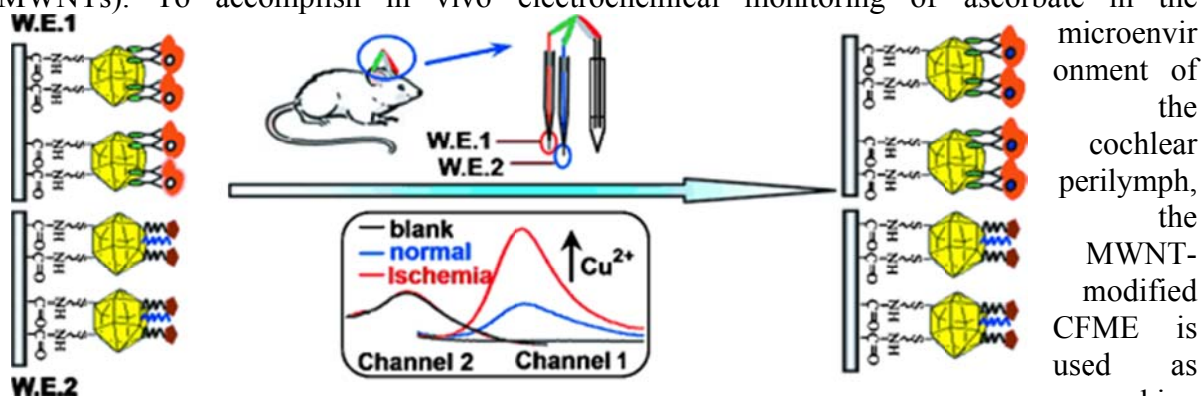
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## TĚŽKÉ KOVY A JEJICH VIZUALIZACE NANOTECHNOLOGICKÝMI NÁSTROJI PRO MONITOROVÁNÍ V ŽIVÝCH ORGANISMECH

*Ing. et Ing. David Hynek, Ph.D.*

### Abstrakt

As one of the most important neurochemicals in biological systems, ascorbate plays vital roles in many physiological and pathological processes. In order to understand the roles of ascorbate in the pathological process of tinnitus, this study demonstrates an in vivo method for real time monitoring of the changes of ascorbate level in the cochlear perilymph of guinea pigs during the acute period of tinnitus induced by local microinfusion of salicylate with carbon fiber microelectrodes (CFMEs) modified with multiwalled carbon nanotubes (MWNTs). To accomplish in vivo electrochemical monitoring of ascorbate in the



microenvironment of the cochlear perilymph, the MWNT-modified CFME is used as working electrode, a microsized Ag/AgCl is used as reference electrode, and Pt wire is used as counter electrode. Three electrodes are combined together around a capillary to form integrated capillary-electrodes.

**pátek 04. 10. 2013, od 10:00 h**

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