



Dr Takahiro TAKANO

Takahiro Takano is an Assistant Professor in Eastman Institute for Oral Health at University of Rochester, NY. He has completed his B. S. in Biology at York College, The City University of New York, NY, his M. S. at Fordham University, NY, and his Ph. D. at New York Medical College, NY in 2003. As a postdoctoral fellow, he custom-built a microscope for in vivo rodent brain imaging, combining UV laser photolysis and newly emerging multi-photon excitation laser-scanning imaging system to study glio-neuronal and glio-vascular interactions in intact brain. He also applied bioluminescence imaging technique to the setting of spinal cord injury and succeeded to visualize dynamic ATP release activity at the penumbra of the injury site. After he was appointed to a faculty position he broadened his interest in neuroscience to peripheral nerves, particularly on modulation of nociceptive signaling with purinergic pathways. His recent study using animal models of pain revealed that the acupuncture was associated with increase of extracellular purines including ATP and adenosine at the acupuncture point in both rodent model and human. Furthermore, blockage of adenosine A1 receptor at the acupuncture points abolished the analgesic effect of both inflammatory and neuropathic pain in animal models. His current focus is, by using animal models of chronic pain, to investigate how the local activation of adenosine receptor at acupuncture point influences pain perception.