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## Research Topics

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### Basic Mechanisms of Chronic Pain

We study how nerve damage and inflammation change the morphology and physiology of nerve and glial cells in peripheral ganglia – sensory and autonomic. We found evidence that such changes contribute to chronic pain. We use electrophysiology and calcium imaging to study glia-glia and neuron–glia interactions.

### Selected Publications

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Weick, M., Cherkas, P.S., Härtig, W., Pannicke, T., Uckermann, O., Bringmann, A., Tal, M., Reichenbach, A., Hanani, M. P2 Receptors in satellite glial cells in trigeminal ganglia of mice. *Neuroscience* 120:969-77, 2003.

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Dublin, P., Hanani, M. Satellite Glial cells in Sensory Ganglia: their Possible Contribution to Inflammatory Pain. *Brain Behav Immun* 21:992-981, 2007.

Thi, M.M., Spray, D.C., Hanani, M. Aquaporin-4 water channels in enteric neurons. *J Neurosci Res*, 86:448-456, 2008.

Huang TY, Belzer V, Hanani M. Gap junctions in dorsal root ganglia: Possible contribution to visceral pain. *Europ J Pain*. In Press, 2009.

Ledda, M., Blum, E., De Palo, S., Hanani, M. Augmentation in gap junction-mediated cell coupling in dorsal root ganglia following sciatic nerve neuritis in the mouse. *Neuroscience*. In press, 2009.