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# Targeting Trends

*Reporting the latest news in Molecular Surgery*

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***Denise Higgins, Editor***

ADVANCED TARGETING SYSTEMS

## IB4-SAP Prevents Axotomy-Induced Sprouting of Aß Fibers

*Contributed by ATS's 2004 Society for Neuroscience Poster of the Year Award Winner: Michelle Pearson, Purdue Pharma, Discovery Research, 6 Cedar Brook Drive, Cranbury NJ 08540*

Neuropathic pain results in hyperalgesia and allodynia. It has been proposed that sprouting of myelinated touch-responsive Aβ-fibers into the innervation territory of pain-sensitive C-fibers in the spinal cord contributes to these abnormal behaviors.[1] The extent of sprouting has recently been challenged and it has been proposed that C-fibers rather than Aβ-fibers are involved. We have investigated whether selectively ablating a population of small-diameter nociceptors (see Fig. 1) and their associated C-fibers, reduces axotomy-induced sprouting. We ablated this population of sensory neurons by intraneural injection of isolectin B4 conjugated to saporin (IB4-SAP).

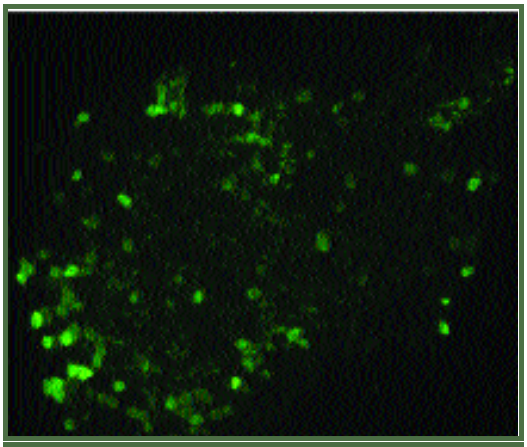

**Fig. 1** IB4 labels small diameter nociceptors in the dorsal root ganglia.

Methods: Male, Sprague-Dawley rats received an intraneural injection (directly into the sciatic nerve at mid-thigh level) of either IB4-SAP (2 µl of 0.66 µg/µl) or PBS (2 µl of 0.01 M). Two weeks later, the left sciatic nerve was again exposed and tightly ligated. In the control animals, the nerve was exposed but not ligated. Two weeks following nerve ligation, cholera toxin-β (CTB) subunit conjugated to FITC (2 µl of 20 µg/µl) was administered into the left sciatic nerve in both experimental and control groups. Three days post CTB-FITC injection, animals were perfused with 4% *(continued on page 6)*

## ATS Seeks Strategic Partner for Chronic Pain Drug

Toxicology studies with the potential chronic pain therapeutic, SP-SAP (Substance P-Saporin) are continuing successfully. The second study will be initiated in a few months and ATS is diligently pursuing a pharmaceutical partner that can quickly bring the drug to clinical trials in humans.

With the recent news of the undesirable side effects of such pain drugs as Vioxx and Celebrex, the need for a safe, effective chronic pain therapeutic becomes more urgent every day. ATS acknowledges its expertise as a research supply company does not provide the necessary elements for successful drug development. For this reason, an immediate alliance is sought with a partner experienced in bringing a drug to approval and dedicated to the needs of chronic pain patients.

**Track progress on SP-SAP drug development on our website: www.ATSbio.com.**