Although they have more effect on nonhistaminergic sensation.

IB4-saporin attenuates acute and eliminates chronic muscle pain in the rat.

In order to clarify the roles of isolectin B4-positive and IB4-negative nociceptors in inflammatory and ergonomic muscle pain, the authors administered 3.2 µg of IB4-SAP (Cat. #IT-10) into the intrathecal space of rats. Although the baseline mechanical nociceptive threshold was not affected in the lesioned animals, mechanical hyperalgesia had a shorter duration. In the ergonomic models peak hyperalgesia was attenuated, and prolongation of PGE2-induced mechanical hyperalgesia was completely prevented.

Two patterns of thrombopoietin signaling suggest no coupling between platelet production and thrombopoietin reactivity in thrombocytopenia-absent radii syndrome.

Lower than normal blood platelet counts result from a congenital disorder called thrombocytopenia (thrombocytopenia absent radii syndrome, or TAR). Recent work indicates a complex pattern of inheritance, and possibly that TAR is at least a digenic disorder. The authors performed an extended study investigating signal transduction via immunoblotting, gel electrophoretic shift assays, and flow cytometry. One of the antibodies used was anti-p70 S6K (Cat. #AB-241). The authors conclude that there are defects in both platelet production and function in TAR.

Age-related Accumulation of Non-heme Ferric and Ferrous Iron in Mouse Ovarian Stroma Visualized by Sensitive Non-heme Iron Histochemistry.

The mammalian ovary engages in continuous growth and cellular differentiation as long as the animal is capable of reproduction. During these processes iron ions are released from heme structures; these ions are capable of generating free radicals. The purpose of this study was to investigate non-heme iron distribution in ovarian tissue, and how this distribution changes during aging. Lipid peroxidation was monitored by immunohistochemistry using anti-conjugated malondialdehyde (Cat. #AB-T090). The data indicate that increasing oxidative stress, non-heme iron accumulation in ovarian stromal tissue, and aging are related.

Selective cholinergic depletion in medial septum leads to impaired long term potentiation and glutamatergic synaptic currents in the hippocampus.

Long term potentiation (LTP) is dependent on excitatory neurotransmission in the hippocampus, which plays a major role in learning and memory. The authors examine whether cholinergic lesions in the medial septum result in LTP alteration or affect synaptic glutamate receptor subtypes. After bilateral administration of 192-IgG-SAP (Cat. #IT-01, 50 ng per injection) into the medial septum of rats, hippocampal slices were made and the LTP of the slices was measured. The data show modulation of medial septal LTP and hippocampal glutamatergic currents by cholinergic afferents.

Strongly amphiphilic photosensitizers are not substrates of the cancer stem cell marker ABCG2 and provides specific and efficient light-triggered drug delivery of an EGFR-targeted cytotoxic drug.

Many anti-cancer drugs are substrates of the ATP-binding cassette transporter ABCG2. Unfortunately ABCG2 is also thought to play an important role in multi-drug resistance and the protection of cancer stem cells against chemotherapeutics and photodynamic therapy. This paper examined whether photosensitizers used in photochemical internalization (PCI) are substrates for ABCG2. Streptavidin-ZAP (Cat. #IT-27) was combined with biotinylated EGF and applied to cells in culture; saporin (Cat. #PR-01) was used as a control. The data show that PCI with the EGF-saporin toxin did not utilize ABCG2 to enter cells.