

# 大学院特別講義のご案内

日時: 2016年10月3日(月) 17:30～19:00(質疑応答時間あり)

場所: 大阪大学医学部 銀杏会館 大会議室

(本特別講義は、大阪大学医学部附属病院疼痛医療センター主催 第17回学術セミナーとして開催されます。)

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演題: “The role of adenosinergic neurotransmission in peripheral neuropathy.”

Current treatments for neuropathic pain are inadequate. Adenosine and its four cognate GPCR receptors (A1AR, A2AAR, A2BAR, and A3AR) have important roles in physiological and pathophysiological states. Studies in patients with neuropathic pain have shown that intravenous infusions of adenosine have extraordinary analgesic properties, but adenosine itself can not be used as a medicine because it has a plasma half-life of only seconds. Animal studies show that agonists with selectivity for the A1AR and A2AAR subtypes are analgesics, but their use is limited by cardiovascular and renal side-effects. In contrast, kidney and cardiovascular tissues express very low levels of the A3AR subtype. Our laboratory and others have shown that agonists selective for the A3AR are potent analgesics in every animal model of neuropathic pain tested to date. Complete analgesic effects are seen with doses that have no detectable side-effects, no analgesic tolerance develops, and the mechanism of action does not involve the opioid cannabinoid systems. A3AR agonists have several potential mechanisms of action, including stimulation of astrocytes to release IL-10 and an effect on neuronal mitochondria that promotes energy production. In summary, data collected to date indicate that A3AR selective agonists may provide safe and effective pain relief in patients suffering with chronic neuropathic pain.