TITLE

CO-CRYSTAL OF KETOPROFEN, LYSINE AND GABAPENTIN, PHARMACEUTICAL COMPOSITIONS AND THEIR MEDICAL USE

DESCRIPTION

The present invention relates to a co-crystal of Ketoprofen, Lysine and Gabapentin, to a process for its preparation, to a pharmaceutical composition comprising said co-crystal and to the use of said co-crystal or pharmaceutical composition in the treatment of acute or chronic pain, in particular in the treatment of neuropathic or inflammatory pain.

BACKGROUND ART

Pain is a sensory and emotional experience usually arising from actual or potential tissue damage. Pain conditions can be divided in acute and chronic.

Acute pain is a pain that lasts for a short period, typically less than 3 months, and is commonly associated with tissue injury, inflammation, a surgical procedure, childbirth, or a brief disease process.

Chronic pain has been recognized as a pain that persists past normal healing time and hence lacks the acute warning function of physiological nociception. Usually pain is classified as chronic when it lasts or recurs for more than 3 months.

Chronic pain may have different etiologies and includes neuropathic pain, chronic inflammatory pain, for example arthritis, or pain of unknown origin, as fibromyalgia and restless leg syndrome.

Chronic neuropathic pain is caused by a lesion or disease of the somatosensory nervous system that provides information about the body including skin, musculoskeletal, and visceral organs. A number of diseases or pathological conditions can cause a damage to the sensory neurons resulting in hyperalgesia or allodynia, such for example in lower back pain, sciatalgia, post-operative pain, cancer pain, phantom limb pain, HIV pain, diabetic neuropathy pain, Herpes Zoster pain or trigeminal neuralgia.

Chronic inflammatory pain is associated to strong inflammation of infectious, autoimmune or metabolic etiology, such as rheumatoid arthritis, and by structural changes affecting bones, joints, tendons, or muscles, such as osteoarthrosis.

Therapy of this type of pain usually includes the use of non-steroidal anti-inflammatory drugs, acetaminophen, and other disease-modifying agents.