

12th World Cancer Congress

July 23-25, 2018 | Moscow, Russia

Nonopioid painkillers as an alternative to a conventional therapy

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Pain is an unpleasant sensation with negative emotional background that warns the body about dangerous pressure and protects it from a damage. However, there is another kind of pain, which instead of body protection brings unreasonable anguish. The most undesirable kind of pain should be considered cancer pain caused by the hyperactivation of the nociceptive system. Such intense and chronic pain exhausts patients both physiologically and psychologically as well as influences on recovery processes. Properly selected painkillers can not only alleviate the pain, but contribute to the therapy in general. Two systems of nociception and antinociception are closely interrelated in human to maintain a balance of pain stimuli recognition. Opioids are actively used drug for pain relief in cancer therapy. These molecules turn on the antinociceptive system through the activation of mu and delta opioid receptors. We suggest to put in the practice alternative painkillers that

can directly inhibit the nociceptive system and do not affect on opioid receptors activation as well. First of all, this approach allows to reduce the numerous side effects of prolonged opioids administration during therapy. The long lasting analgesic effect of novel drug seeds caused by their inhibitory effect on the ion channels widely represented in the peripheral neurons of mammalian nociceptive system and involved in pain stimuli detection and further signal transduction. Two much promising drug seeds undergo preclinical trials and already have shown safety for animals and lack of additive effect.

Speaker Biography

Sergey Kozlov is the head of a laboratory of neuroreceptors and neuroregulators. His research oriented on active molecules development and characterisation of their biological function in cells. He has a lot of patents on compounds suitable for a practical use in medicine.

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