

Therapeutic and Preventive Effects of TRK-700 in Rat Models of Chemotherapy-induced Peripheral Neuropathy (CIPN).

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Chemotherapy-induced peripheral neuropathy (CIPN) is a common treatment-related adverse effect often associated with several chemotherapeutic agents. Here, we describe the therapeutic and preventive effects of TRK-700 on CIPN in rat models. The therapeutic effects were evaluated by von Frey test and cold plate test. On the other hands, the preventive effects were evaluated in the same way after the repeated administration prior to the induction of CIPN. As the results, TRK-700 attenuated mechanical allodynia and cold allodynia in a rat model of CIPN by oxaliplatin. In addition, after the repeated administration prior to the induction of CIPN by oxaliplatin, paclitaxel or bortezomib, TRK-700 prevented the development of mechanical allodynia and cold allodynia (oxaliplatin only). Interestingly, the anti-allodynic effects were maintained at least 1 week after the drug withdrawal. Therefore, TRK-700 may have a therapeutic potential in the treatment of CIPN.