

Human pain mimicked through an animal pain-like responses?

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Pain is the most common reason people seek health care and is the leading cause of disability in the world. Current clinically used analgesics do not provide sufficient pain relief and poor tolerability limits their chronic use. Thus, pain research urgently needs novel non-opioid targets and preclinical methods to ensure discovery of efficacious and safe treatments for patients. The biggest complaint by human pain patients is spontaneous pain, which is thought to be reflected from clinical questionnaires (e.g. NRS, VAS) about the severity and location of pain. However, these can't be implemented in the preclinical pain research, and we still must use methods, which rely on non-verbal/observable pain-related behavior. Thus, there is a definite need to develop and validate additional, more translational and objective preclinical read-outs, besides the typical ones such as mechanical and/or thermal stimulus evoked pain-like responses, better recapitulating the hallmark features seen in human pain. This would help to achieve higher success rates in future clinical pain trials. Here, I will discuss about recent preclinical attempts and research using translational surrogate pain models mimicking Ph1 settings in healthy human volunteers, and non-evoked behavioral read-outs [e.g. mechanical conflict avoidance, blood flow imaging, CatWalk] in neuropathic and osteoarthritis pain models together with pharmacological validation in rodents.