Table 2: Summary of preclinical animal studies investigating the effect of pain on cognition

Pain model	Species	Cognitive test	Cognitive domain	Key Findings	Reference
CFA-induced inflammatory pain	Rat	Operant delayed non-matching to position lever press task	Spatial learning, recognition memory and attention	Decrease in accuracy and decrease in number of rewards earned in pain model	Cain et al. (1997)
CFA-induced inflammatory pain	Rat	Operant delayed non-matching to position lever press task	Spatial learning, recognition memory and attention	Decrease in accuracy and decrease in response latency	Lindner et al. (1999)
2, 4, 6-trinitrobenzene-induced inflammatory pain (colitis)	Rat	Novel object recognition	Recognition memory, attention	Decrease in attention towards novel object in pain model	Millecamps et al. (2004)
Formalin-induced inflammatory pain	Rat	Operant nose-poke task	Attention	Increased number of omissions in pain model	Boyette-Davis et al. (2008)
CFA-induced inflammatory pain	Rat	Operant nose-poke task	Attention	Decrease in accuracy, increased number of omissions and increase in preservative responses in pain model	Pais-Vieira (2009a)
Kaolin-induced inflammatory pain	Rat	Rodent gambling task	Emotional decision making	Increased preference for high risk level associated with larger, more infrequent rewards in pain model	Ji et al. (2010)
Carageenan-induced inflammatory pain	Rat	Rodent gambling task	Emotional decision making	Increased preference for high risk level associated with larger, more infrequent rewards and increase in number of omissions in pain model	Pais-Vieira et al. (2009b)

Pain model	Species	Cognitive test	Cognitive domain	Key Findings	Reference
L5 transection-induced neuropathic pain	Rat	Morris Water maze (acquisition and probe)	Spatial learning and memory	Increased latency to platform during acquisition and decreased frequency in platform zone during probe in pain model	Hu et al. (2010)
SNI model of neuropathic pain	Rat	Morris Water maze (traditional acquisition and reversal)	Spatial learning and memory and cognitive flexibility	Decreased % of distance swam in new platform location and increased % in old location in pain model	Leite-Almeida et al. (2009)
SNL model of neuropathic pain	Mouse	Passive avoidance	Aversive learning	No impairment of passive avoidance response in pain model	Suzuki et al. (2007)

Abbreviations: CFA: complete Freund's adjuvant, SNI: spared nerve injury, SNL: spinal nerve ligation