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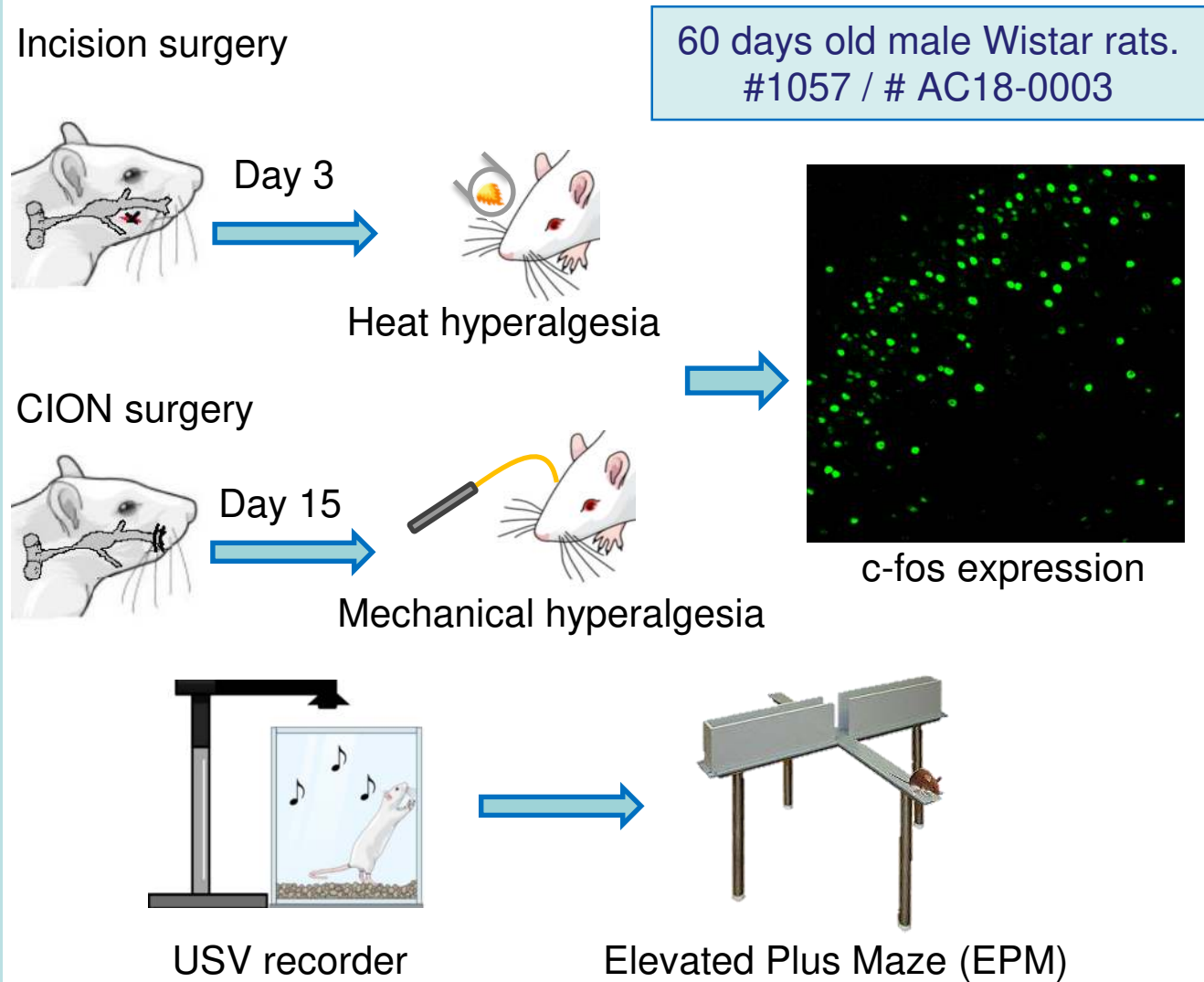
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Background and aims

Chronic orofacial pain conditions affect the trigeminal system, resulting in neuronal plasticity, leading to patients' negative affect. Studies have suggested that ultrasonic vocalizations (USV) emitted by rats in appetitive and aversive contexts may correspond to an expression of the affective component of pain.

Methods



Conclusion

Persistent pain is related to impaired social interaction and mood changes. The analysis of USV may be a useful tool to enhance the translational aspect of these pain models.

Results

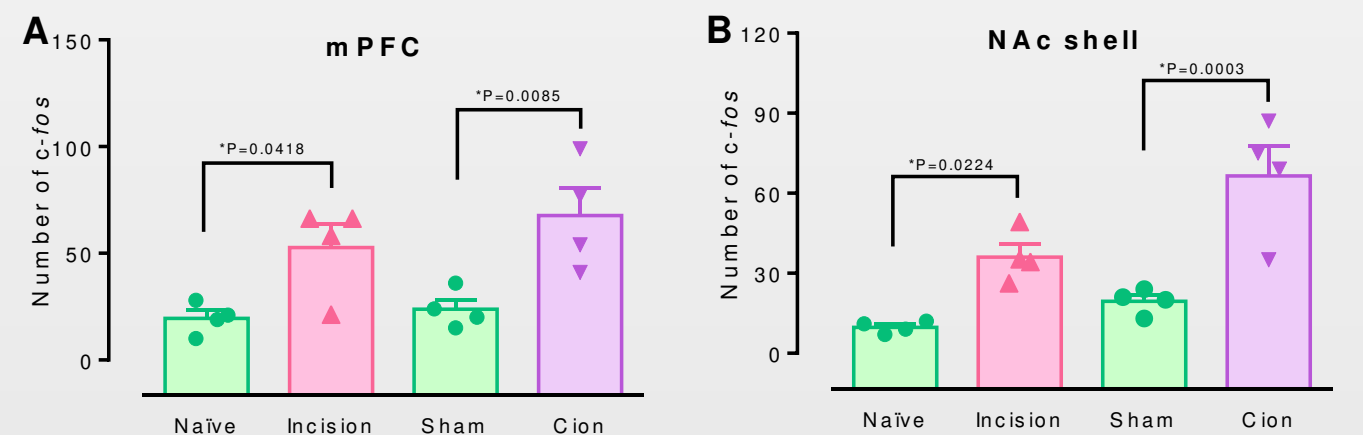


Fig 1: c-fos expression on day 3 after intraoral mucosae incision or on day 15 after CION. In (A) medial pre-frontal cortex (mPFC), and (B) nucleus accumbens (NAc) shell. *P<0.05. t-test.

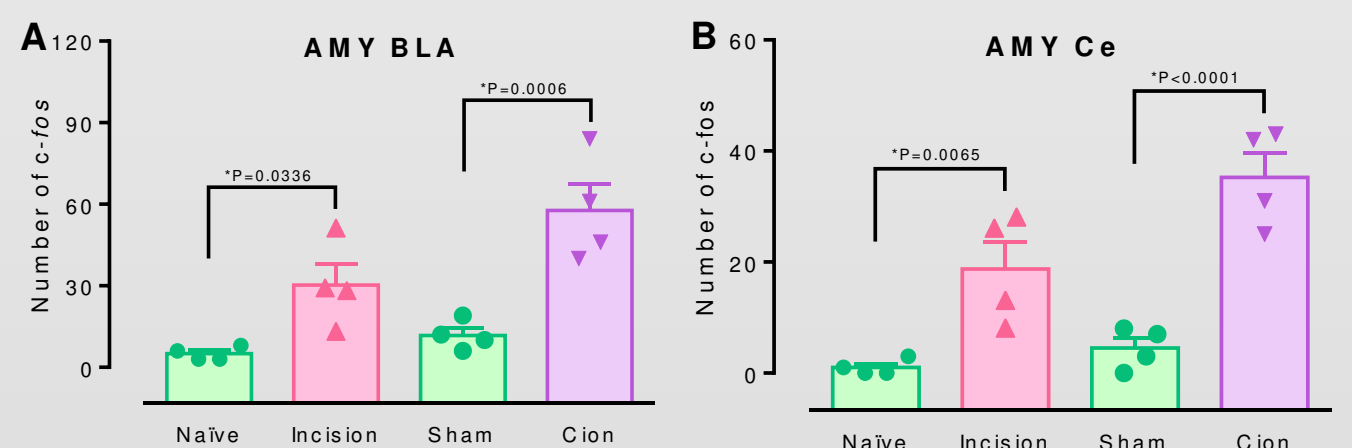


Fig 2: c-fos expression on day 3 after intraoral mucosae incision or on day 15 after CION. In the amygdala (A) basolateral (AMY BLA), and (B) central (AMY Ce) shell. *P<0.05. t-test.

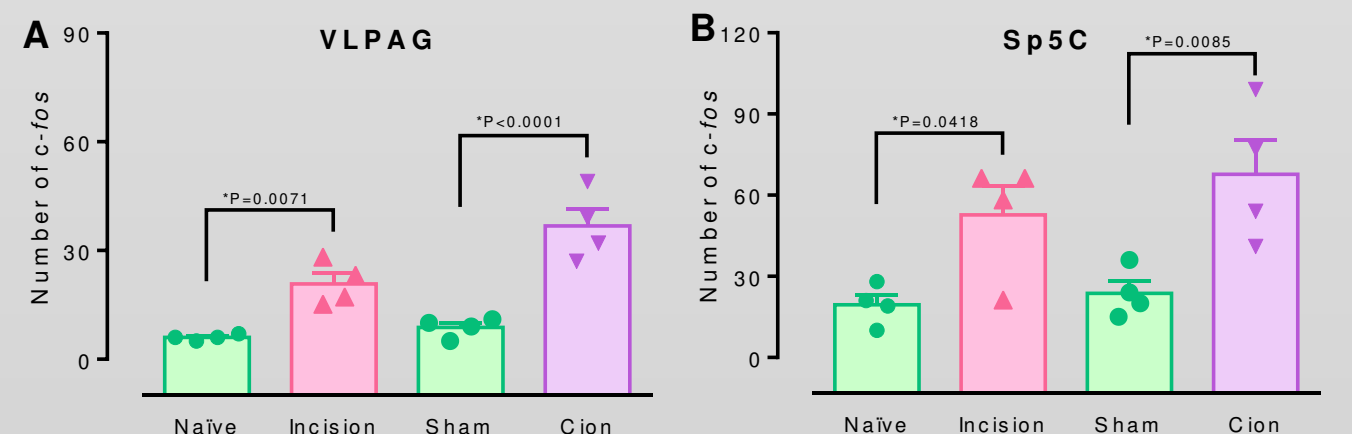


Fig 3: c-fos expression on day 3 after intraoral mucosae incision or on day 15 after CION. In (A) ventrolateral periaqueductal gray (VLPAG), and (B) trigeminal subnucleus caudalis (Sp5C). *P<0.05. t-test.

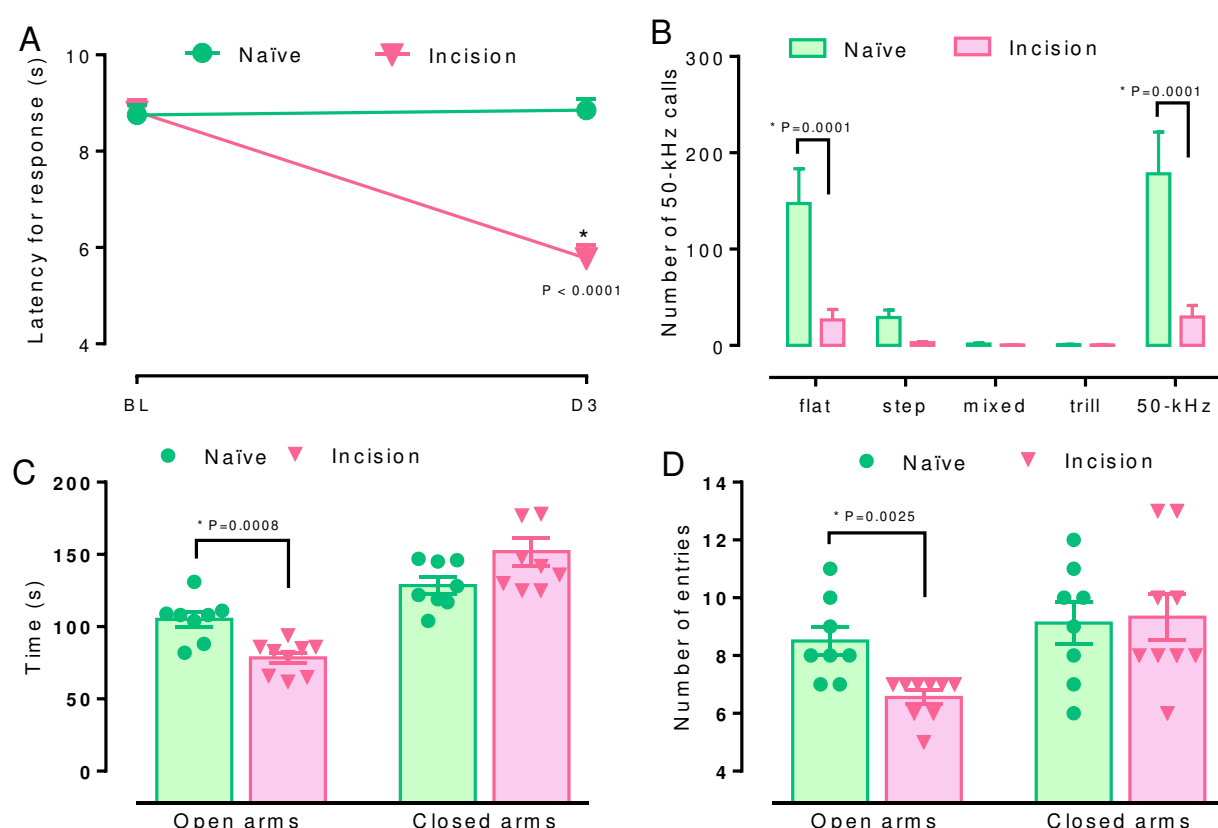


Fig 4: Analysis of pain parameters and anxiety-like behavior on day 3 after incision surgery. (A) Heat hyperalgesia, (B) spontaneous USV emission, (C) time spending, and (D) number of entries in the open and closed arms in the EPM. n=8-11. *P<0.05. RM (A) two-way ANOVA (B) followed by Bonferroni post-hoc test; t-test (C,D).

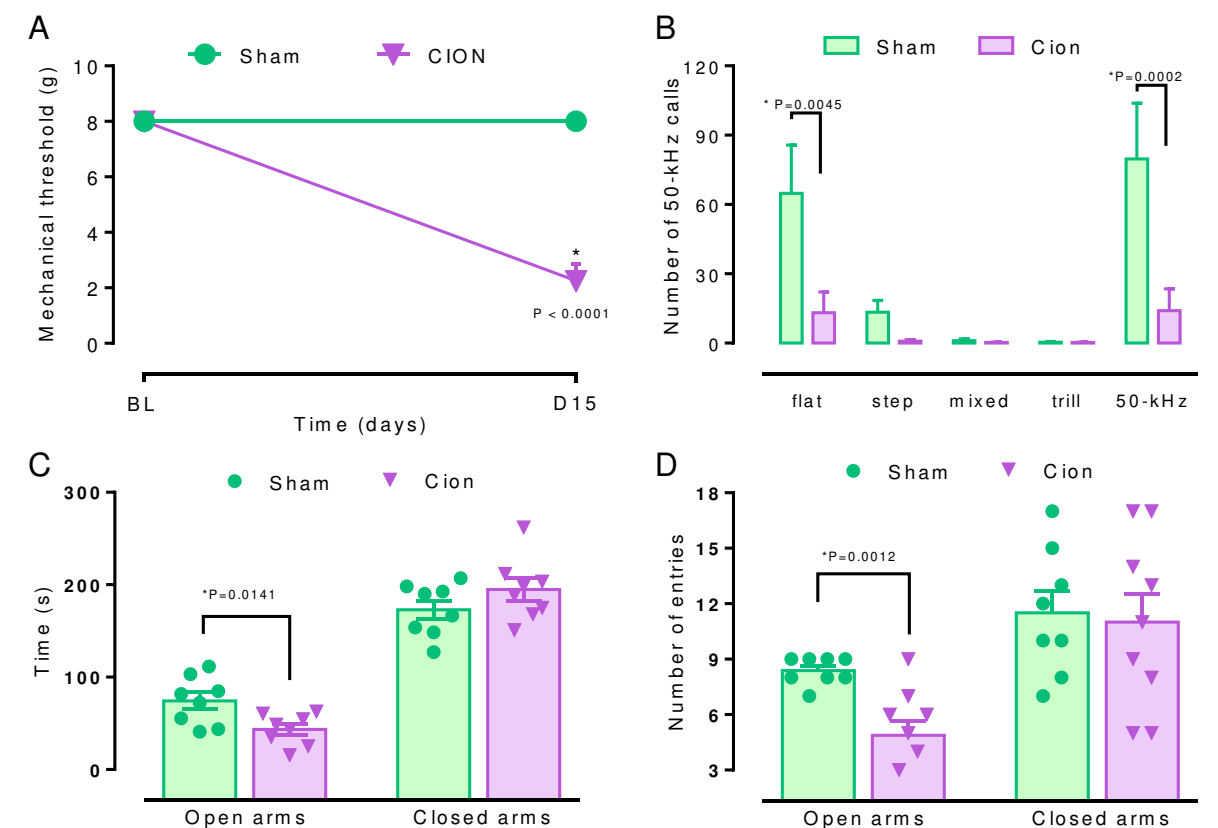


Fig 5: Analysis of pain parameters and anxiety-like behavior on day 15 after CION surgery. (A) Mechanical hyperalgesia, (B) spontaneous USV emission, (C) time spending, and (D) number of entries in the open and closed arms in the EPM. n=7-10. *P<0.05. RM (A) two-way ANOVA (B) followed by Bonferroni post-hoc test; t-test (C,D).