Introduction:

The objective of this project was to identify the functional consequences of TAFA4 in a neuroinflammatory and neurodegenerative pain model. Our results indicate that TAFA4 interacts with nociceptive transmission. TAFA4 is involved in pain modulation through inhibition of nociceptive terminals. We found that the expression of TAFA4 is increased in the dorsal horn of inflamed mice. These results demonstrate that TAFA4 could modulate the integration of nociceptive input in inflammatory condition.

Methods:

1. Activation of spinal dorsal horn inhibitory networks by the CLTMR derived chemokine TAFA4

2. TAFA4 decreases spontaneous excitatory activity in dorsal horn

3. TAFA4 modulates C fibers evoked EPSCs

4. Presynaptic action of TAFA4 on synaptic activity

5. Effect of TAFA4 mediated though inhibitory transmission

6. Direct synaptic contact between CLTMRs and GABAergic terminals

7. Antinociceptive action of TAFA4 in CIA inflammatory pain model

8. TAFA4 decreases spontaneous EPSC frequency in CIA model

9. Effect of TAFA4 on C-fibers evoked EPSCs in CIA condition

10. TAFA4 decreases neuronal discharge in CIA animals

11. Effect of TAFA4 mediated though GABAergic transmission

12. Characterization of TAFA4 expression in spinal cord and dorsal horn

13. Synaptic actions of TAFA4

14. Neuronal discharge and nociceptive transmission

15. Conclusion:

The expression of TAFA4 is increased in the dorsal horn of inflamed mice. These results demonstrate that TAFA4 could modulate the integration of nociceptive input in inflammatory condition. The objective of this project was to identify the functional consequences of TAFA4 in a neuroinflammatory and neurodegenerative pain model. Our results indicate that TAFA4 interacts with nociceptive transmission. TAFA4 is involved in pain modulation through inhibition of nociceptive terminals. We found that the expression of TAFA4 is increased in the dorsal horn of inflamed mice. These results demonstrate that TAFA4 could modulate the integration of nociceptive input in inflammatory condition.