

19 July 2019

Dear Ms. Holland,

I write this letter of support to confirm that I recently provided the Ross lab with the Oprm1-Cre mice that were generated in my lab. These mice will be a very useful tool to visualize and manipulate the neurons that express MOR, thereby enabling the studies described in your F30 application, studying the role of mu-opioid receptor expressing neurons in the RVM in the modulation of nociception. In this mouse, an Oprm1-IRES-Cre cassette is knocked into the first coding exon. Although this genetic tool is not yet described in a publication, we have nevertheless validated correct targeting by Southern blotting and the expression pattern in the parabrachial nucleus resembles that determined by Allen Institute *in situ* hybridization. Thus, I anticipate that the Oprm1-Cre mice will allow you to visualize and manipulate MOR-expressing neurons in the RVM, which are likely to be involved in descending pain modulation.

I wish you success in your grant application.

Sincerely,

