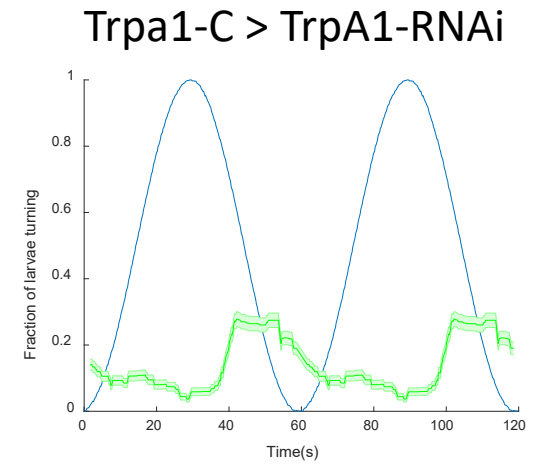
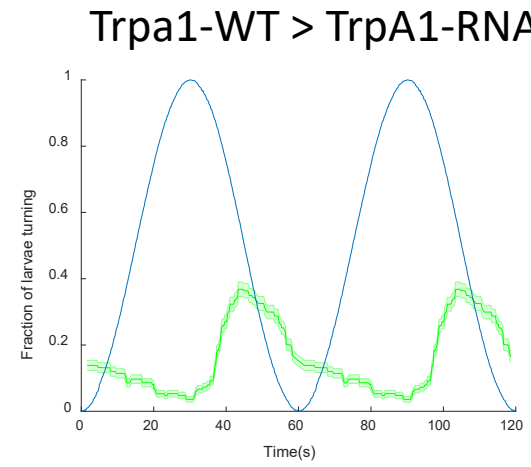
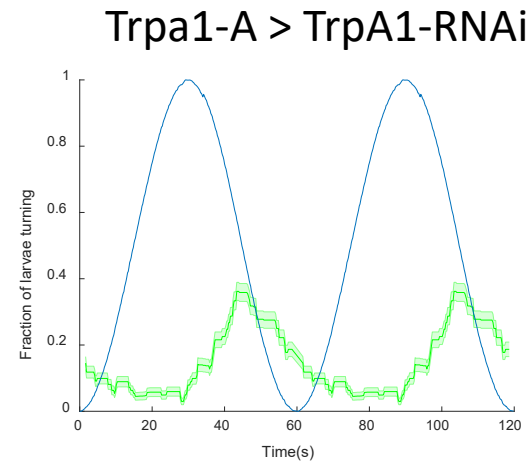
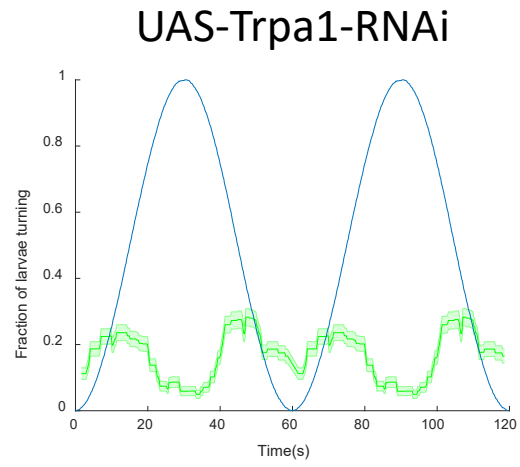
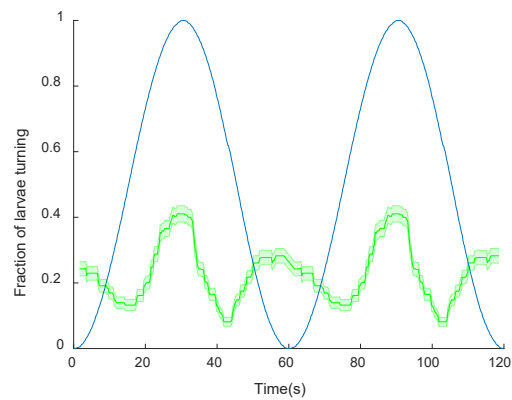


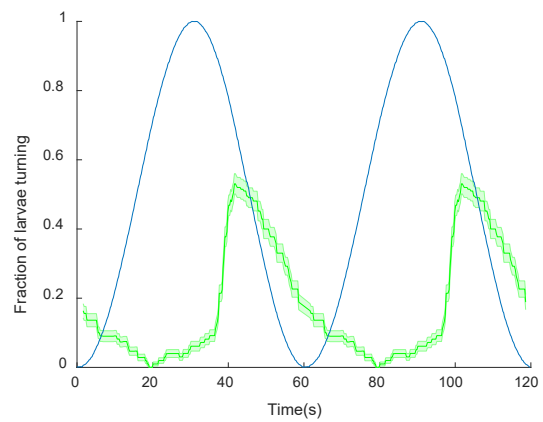
1) We have new and ample data about TrpA1 isoforms, both behavioral and physiological. More than we had in the summer and more than we put in the grant.



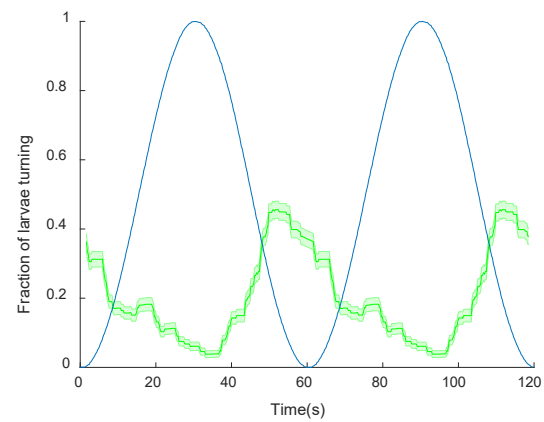
Trpa1-BC-KO



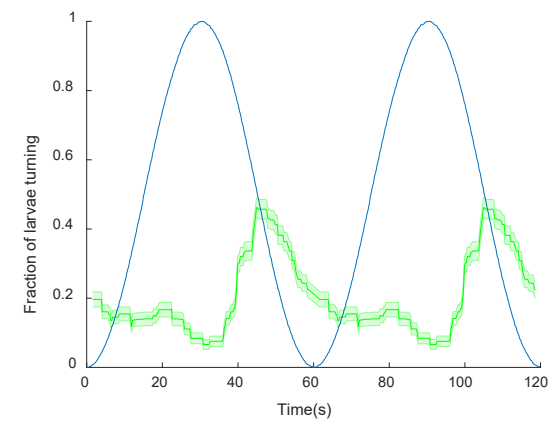
Trpa1-AD-KO



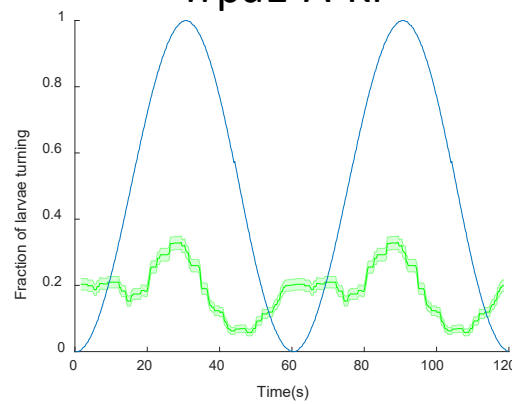
Trpa1-AB-Gal4(KO)



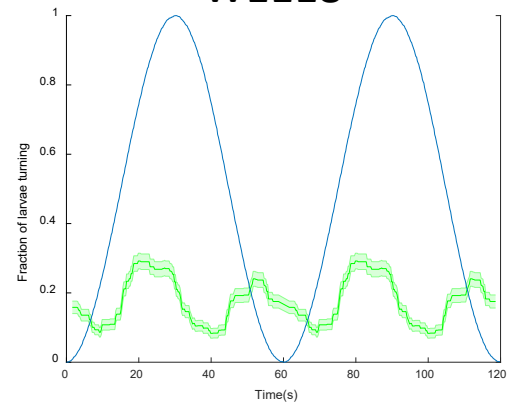
Trpa1-AB-Gal4(KO) x Trpa1-AD-KO



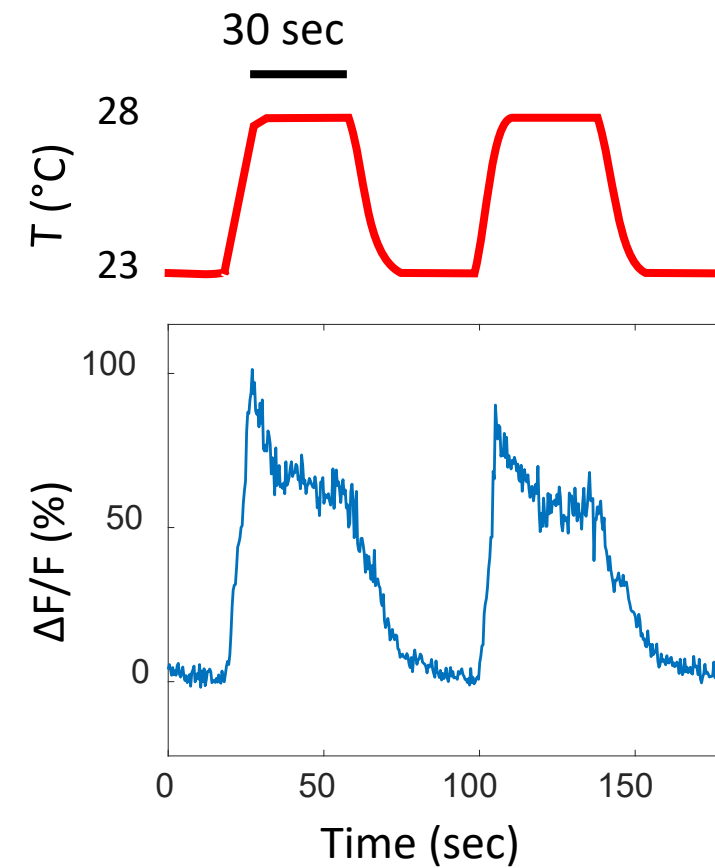
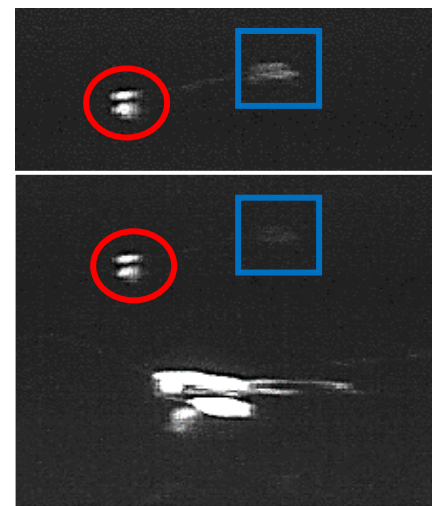
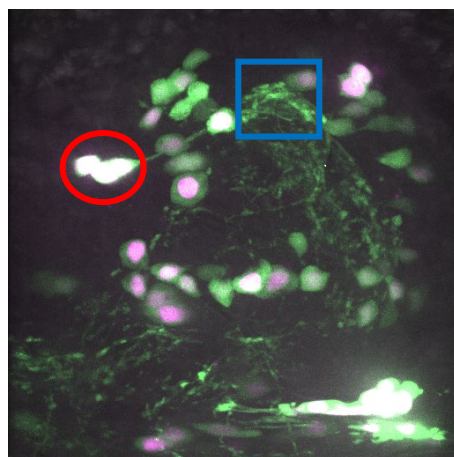
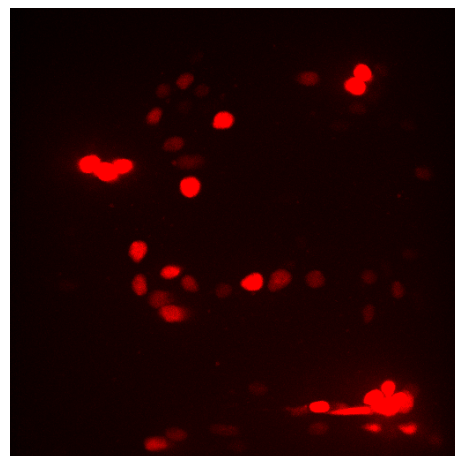
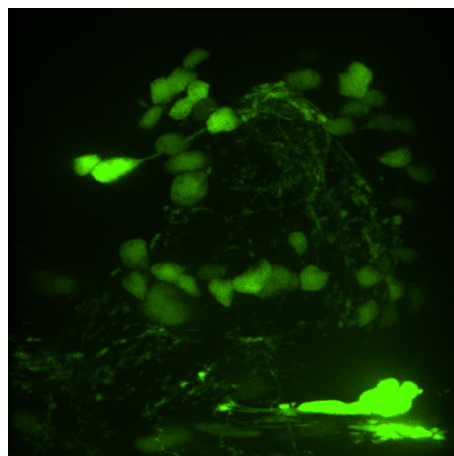
Trpa1-A-KI



W1118

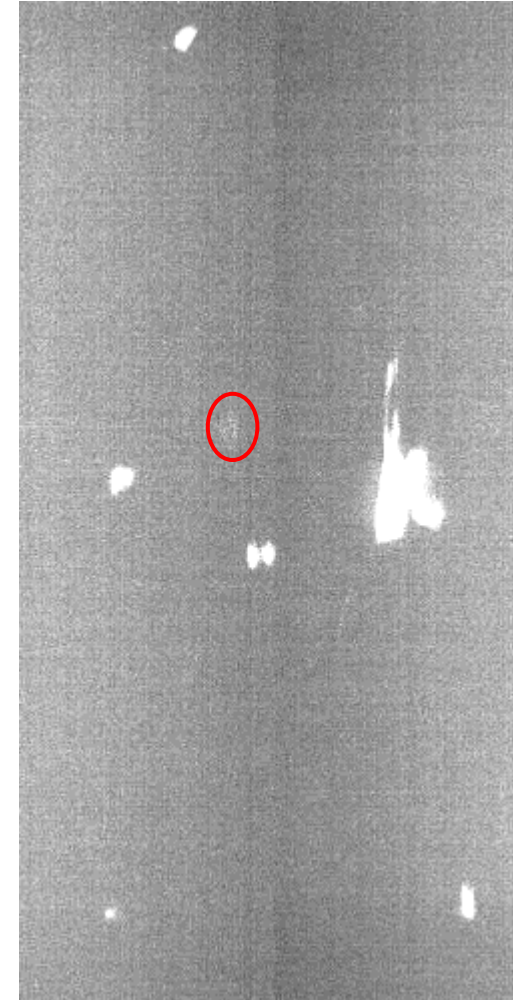
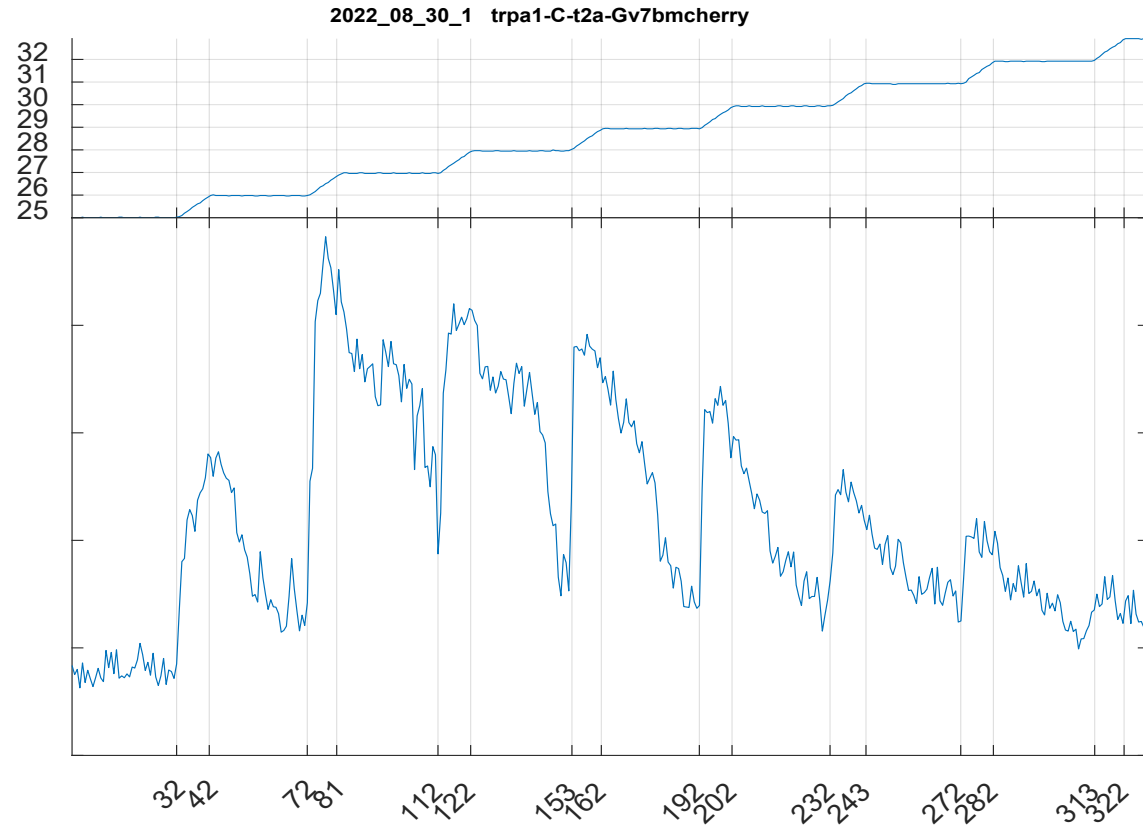


Temperature-responsive neurons are shown with red circle



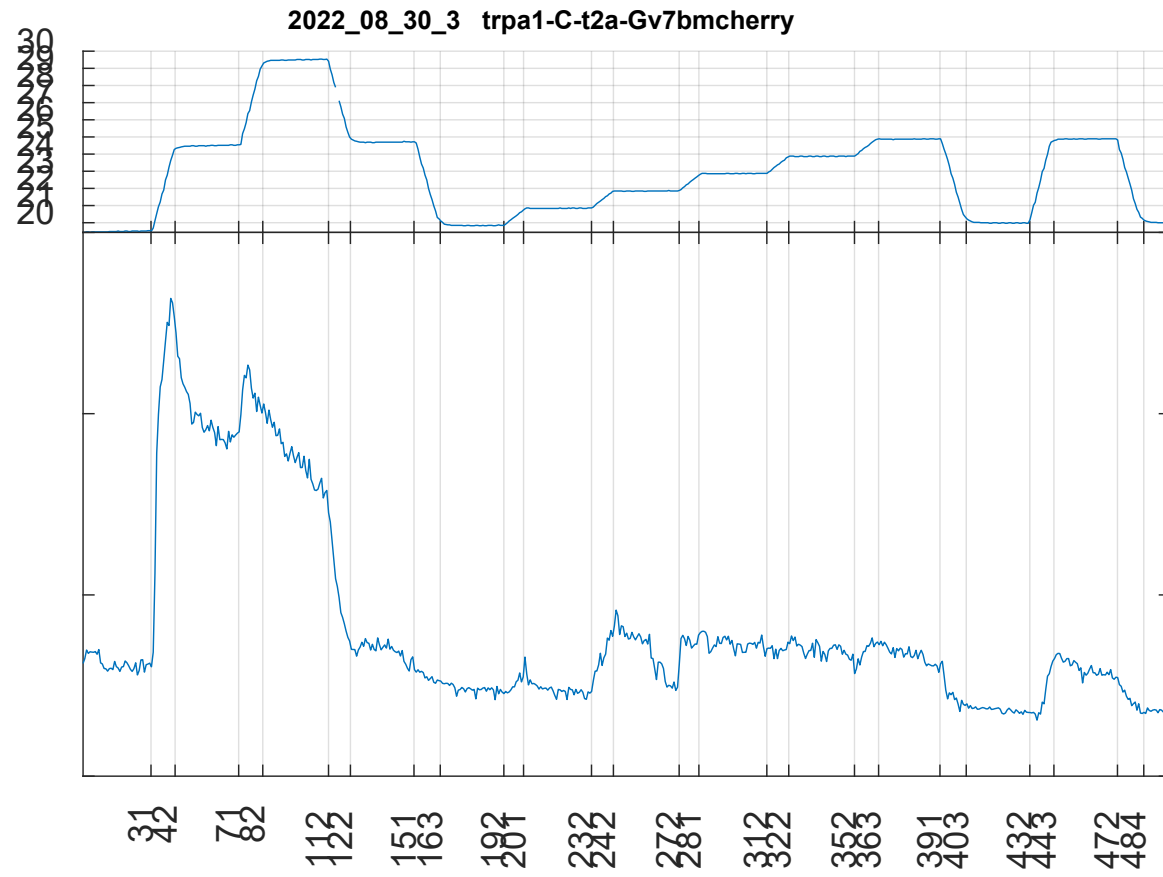
TrpA1-C

Signal in processes



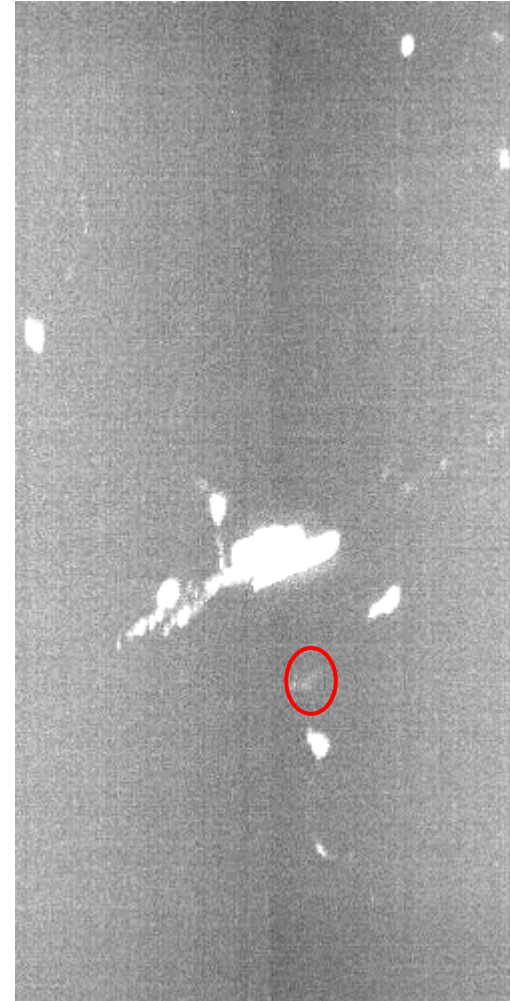
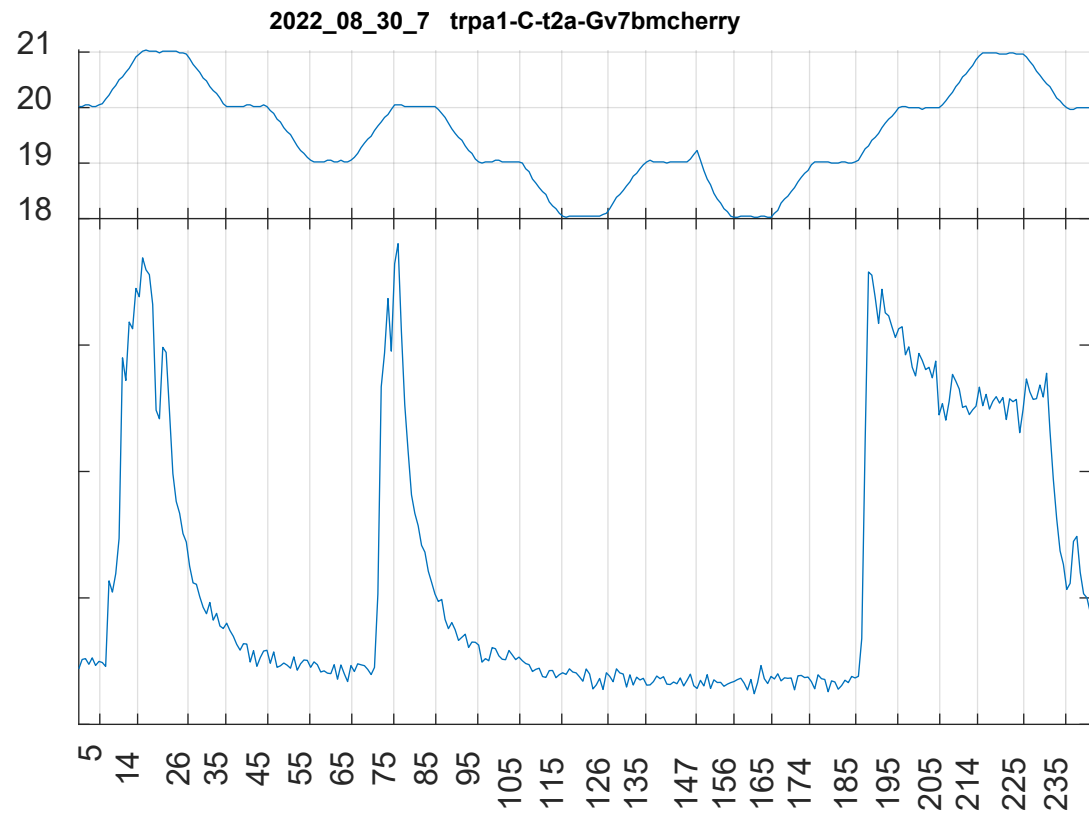
TrpA1-C

Signal in processes



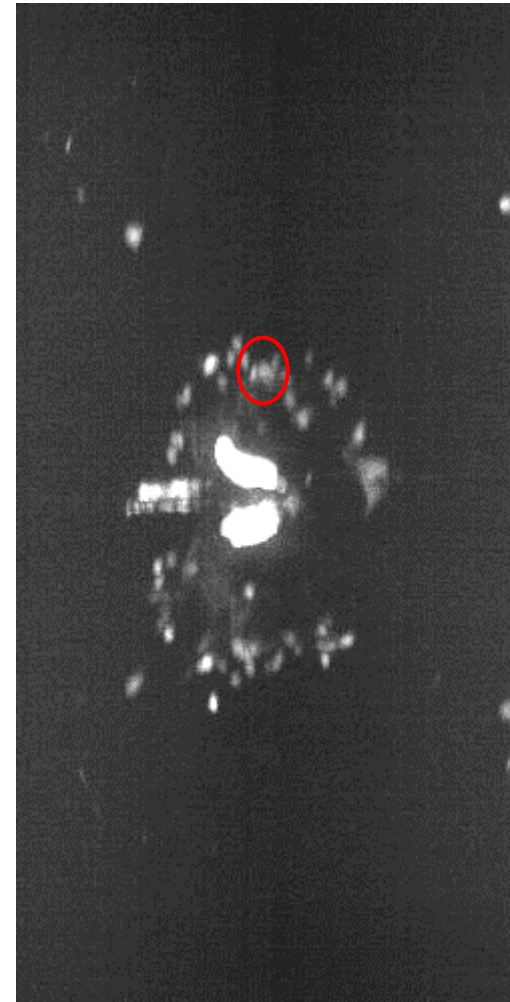
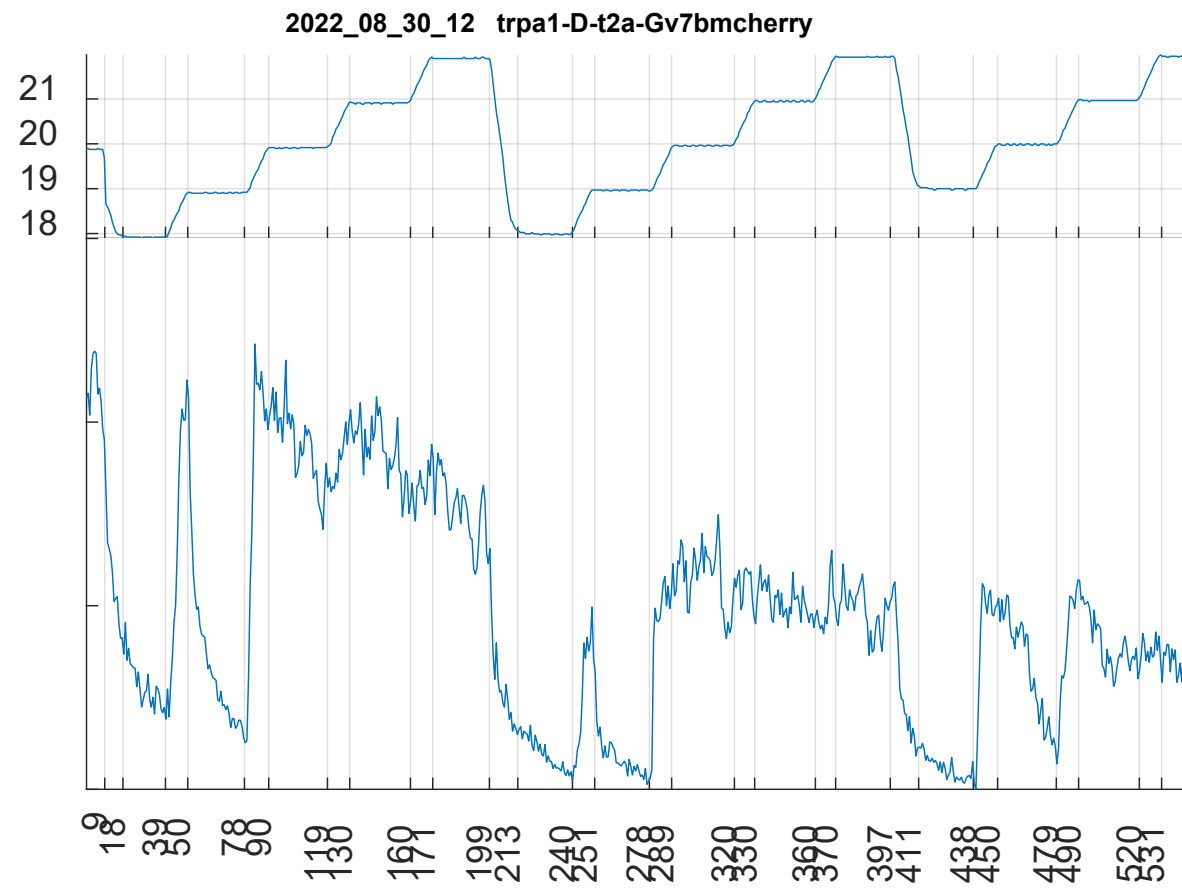
TrpA1-C

Signal in processes



TrpA1-D

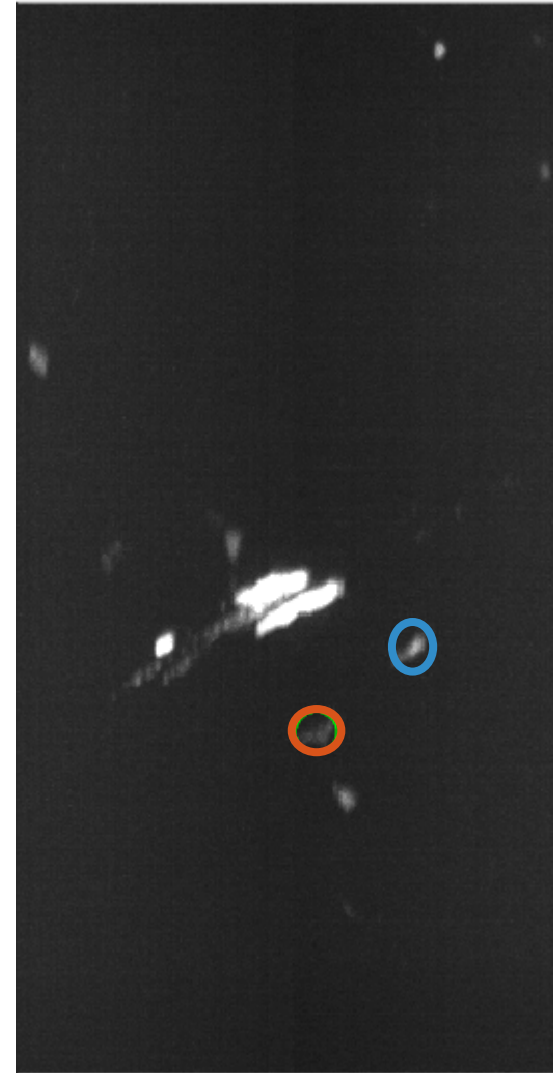
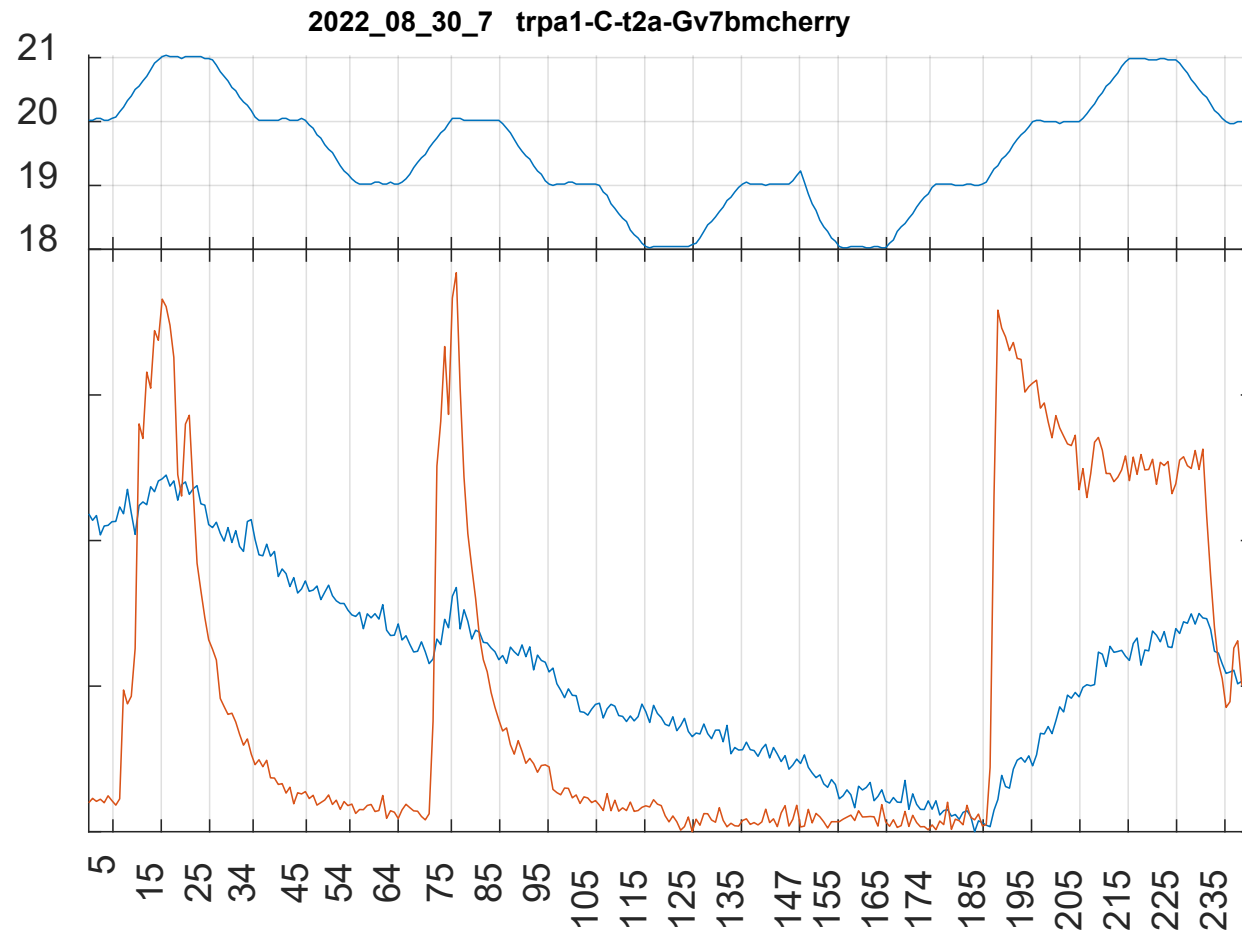
Signal in processes



TrpA1-C

Signal in processes – orange

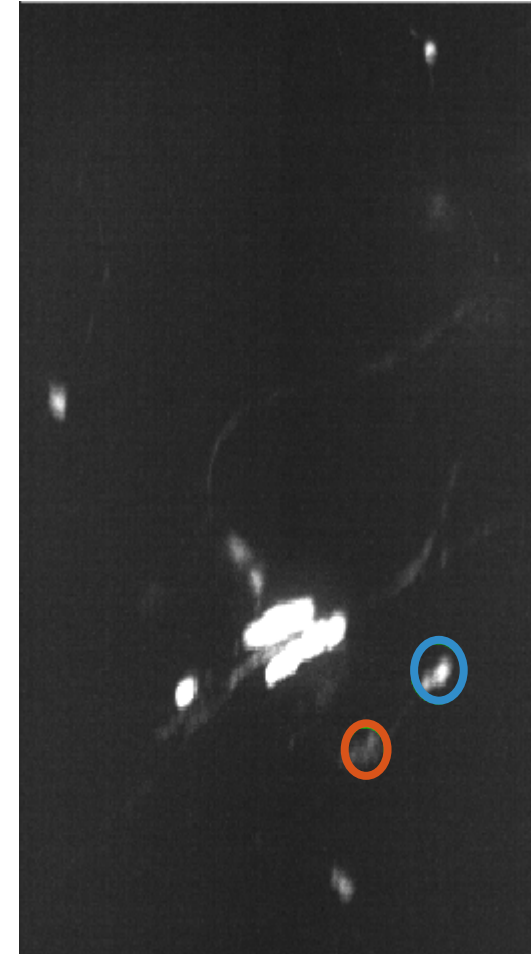
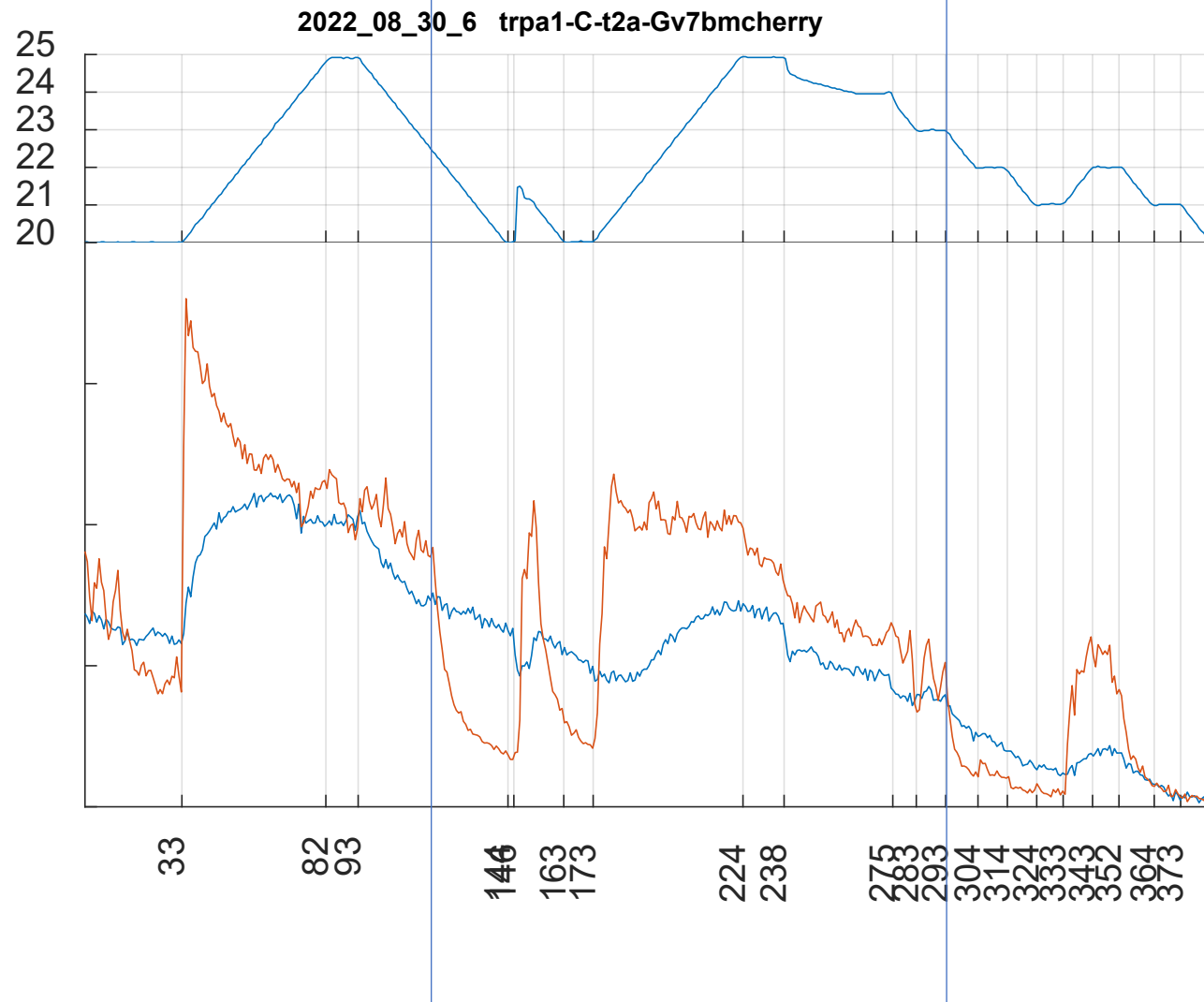
Signal in sell bodies - blue



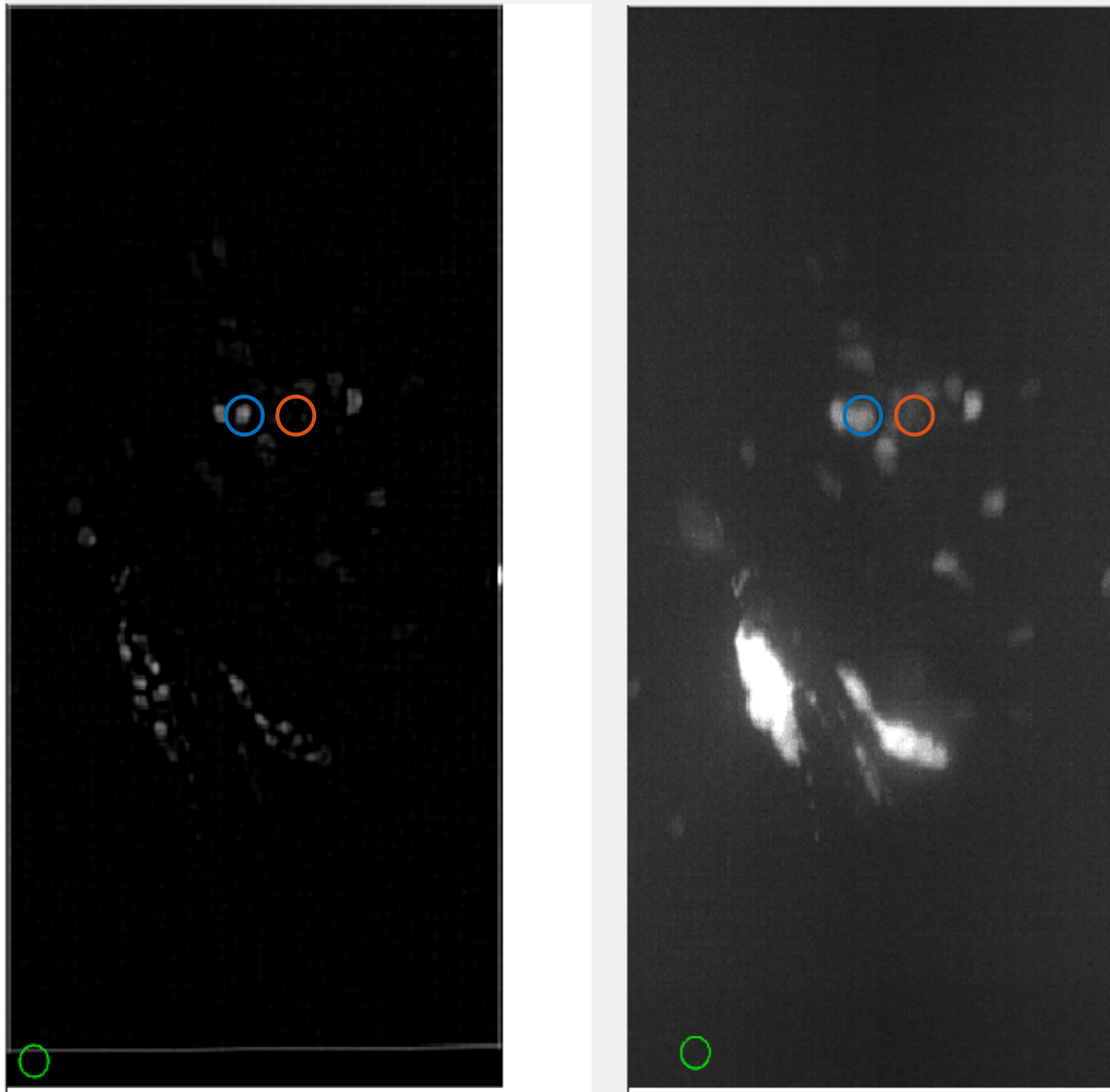
TrpA1-C

Signal in processes – orange

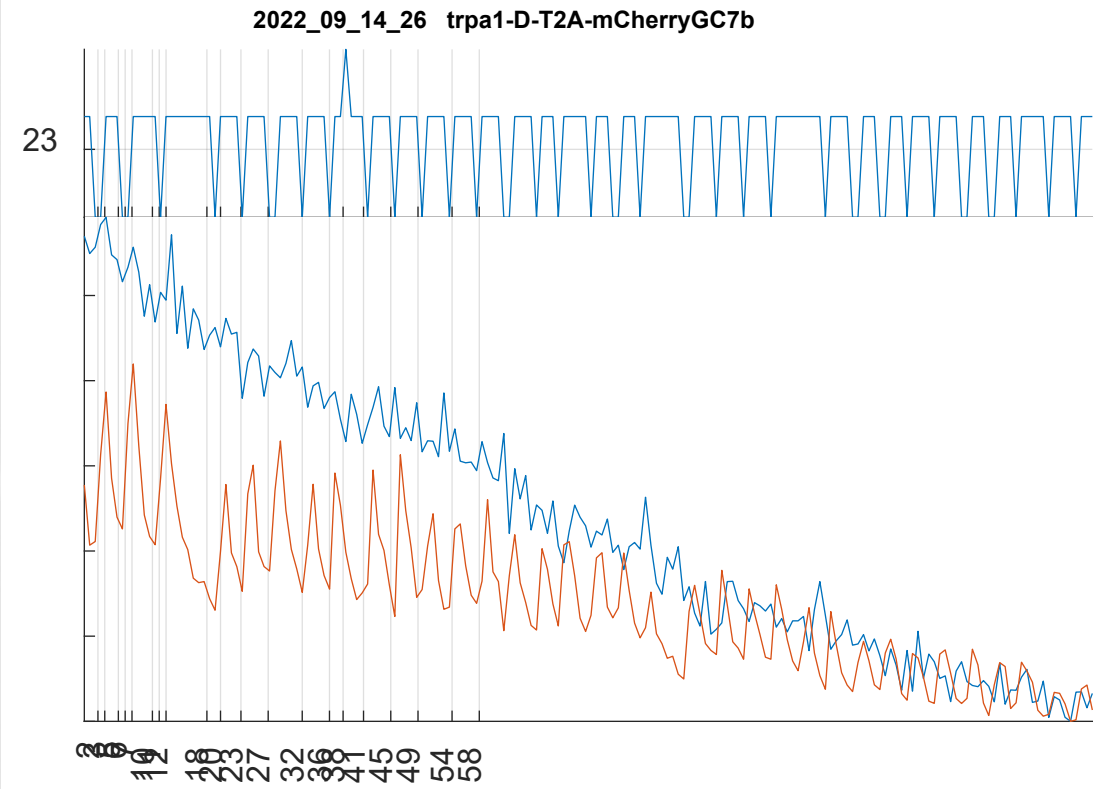
Signal in sell bodies - blue



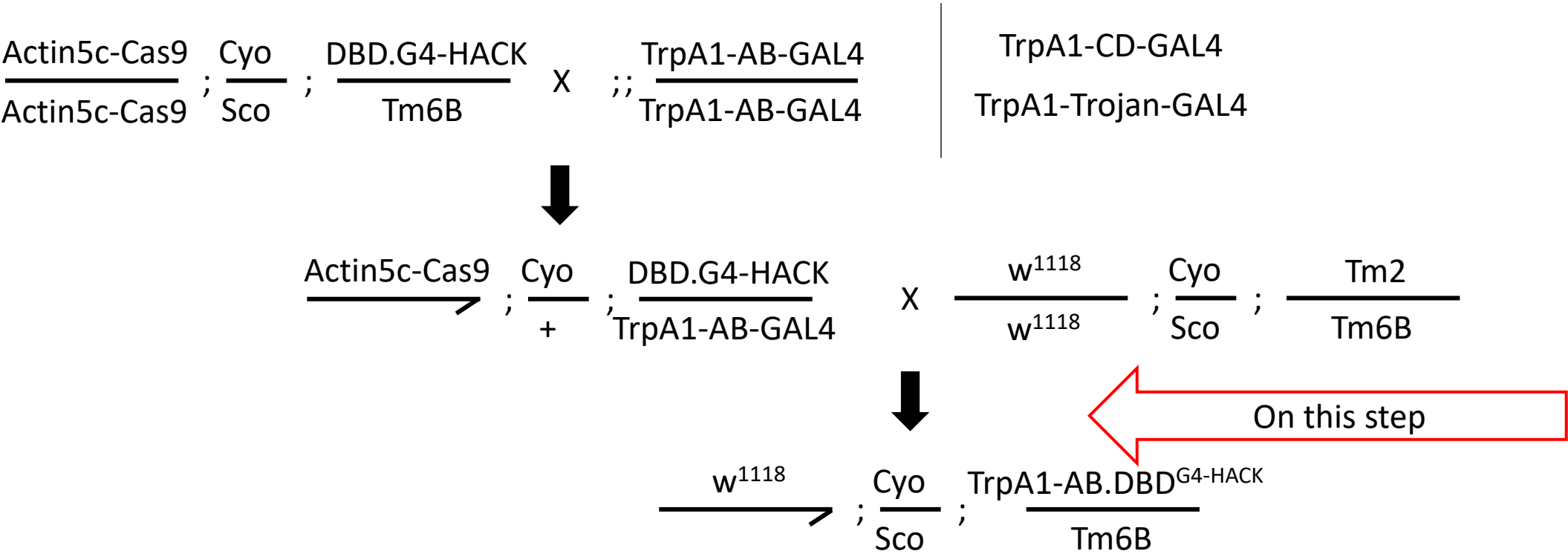
Signal form pressure?



0.02°C variation



2) With new effective reagents for trans-Tango and intersections, Stan is making progress towards narrowing down the contributions of individual cells.



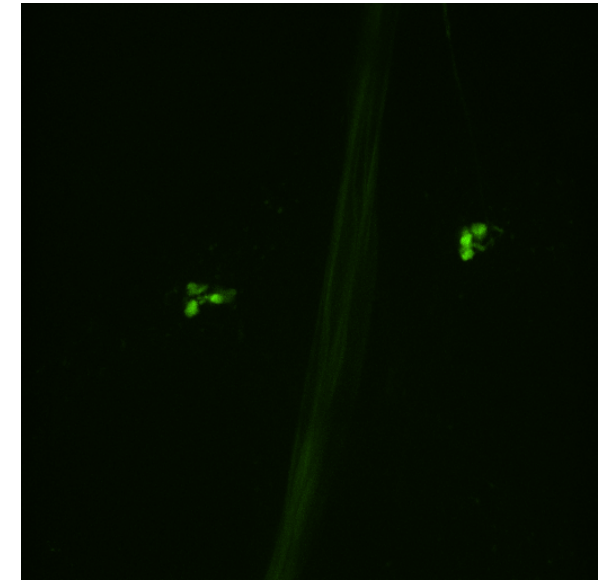
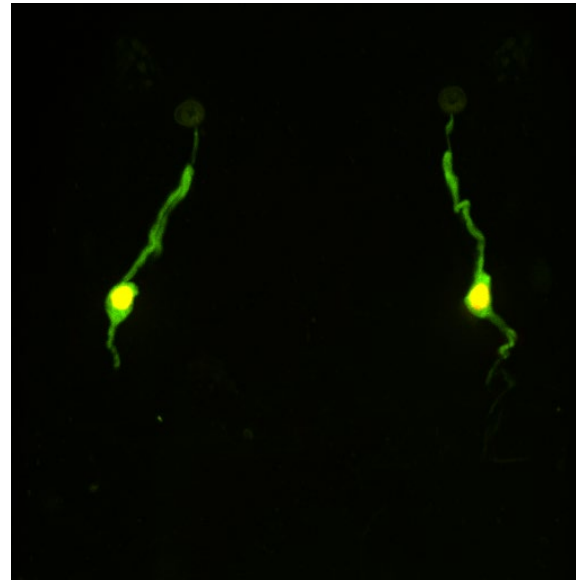
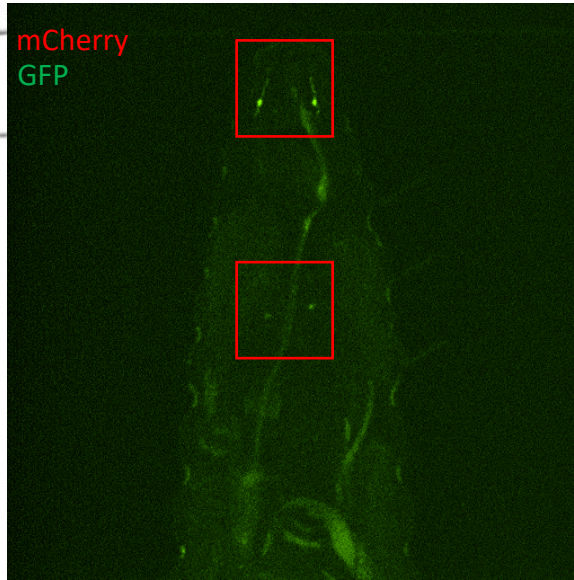
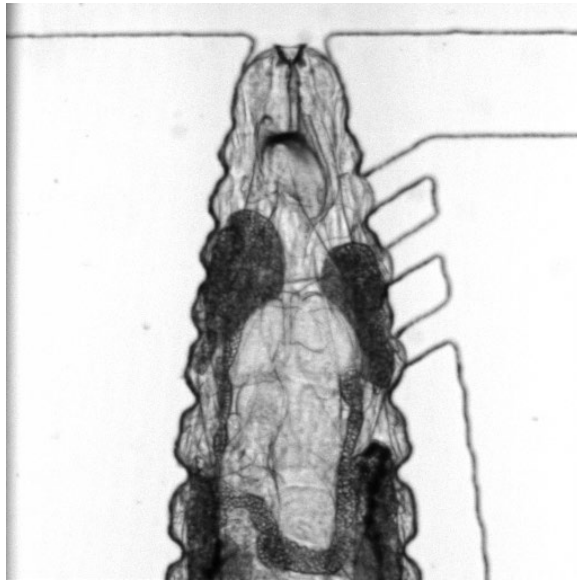
Finishing up split line: $;;\text{TrpA1-T2A-GAL4.DBD}$

Combine with

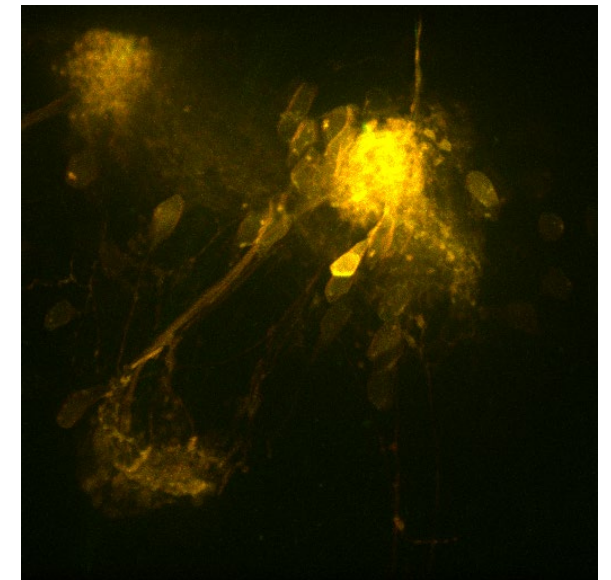
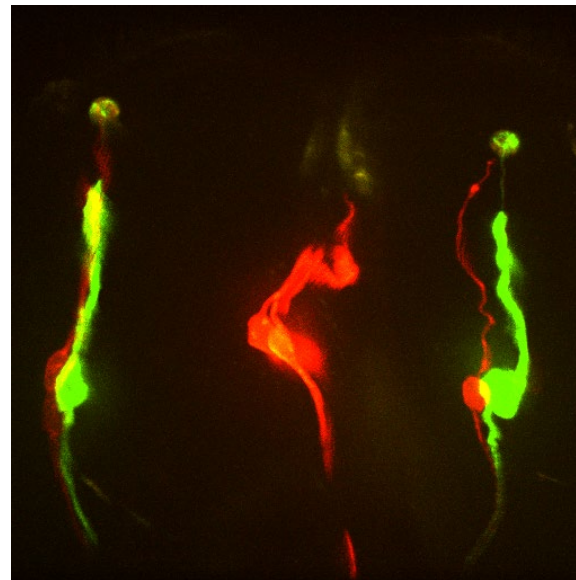
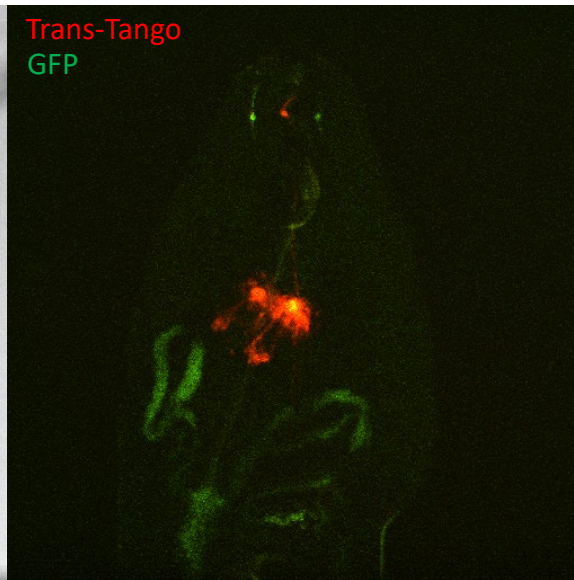
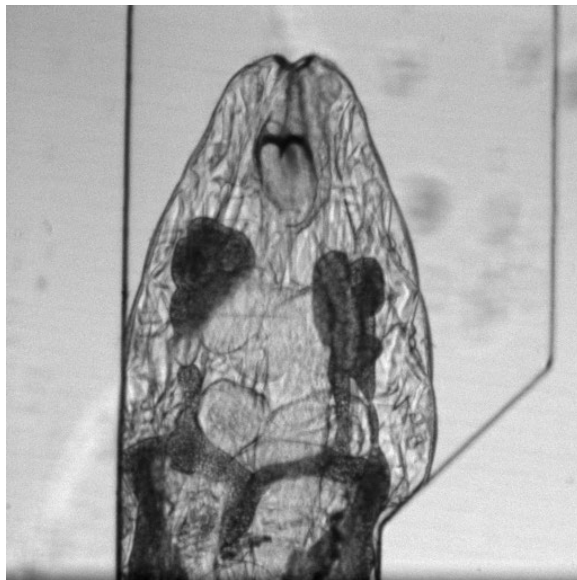
- ple(TH).p65AD – dopamine
- Ddc.p65AD – dopamine+serotonin
- Acetilcholine? Glutamate?

Trans-Tango – Test with OR42a

Or42a-Gal4 x mCherry_GC7b

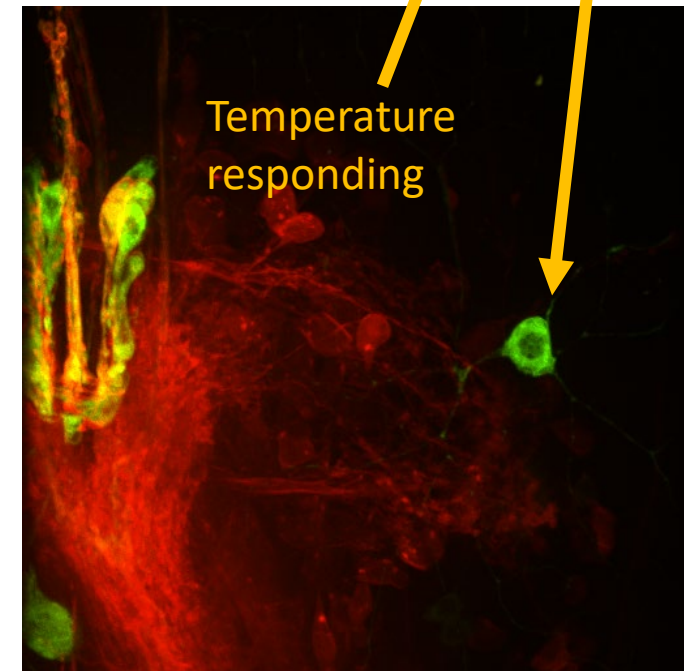
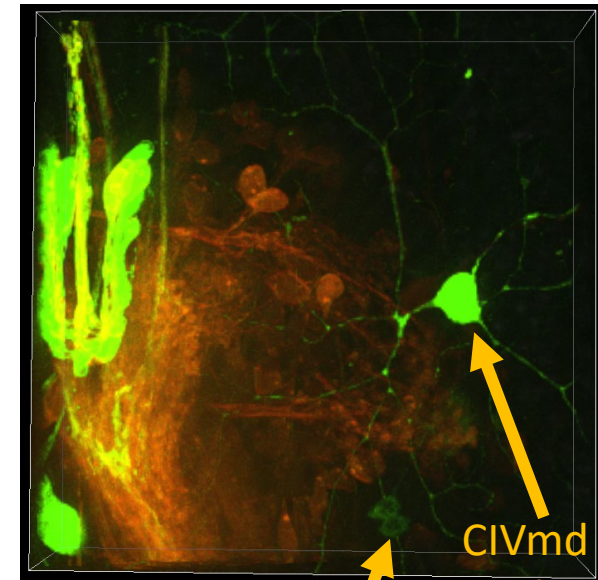
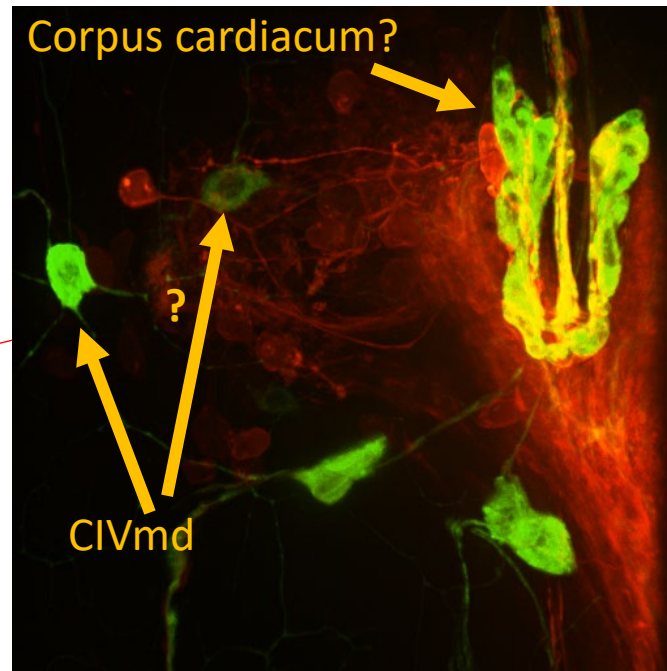
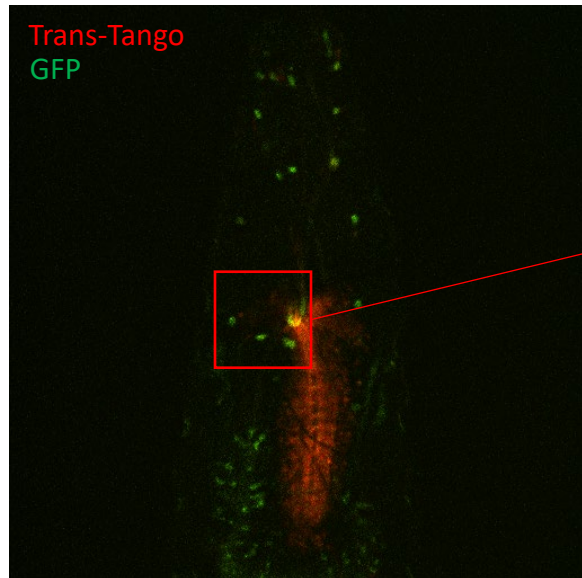
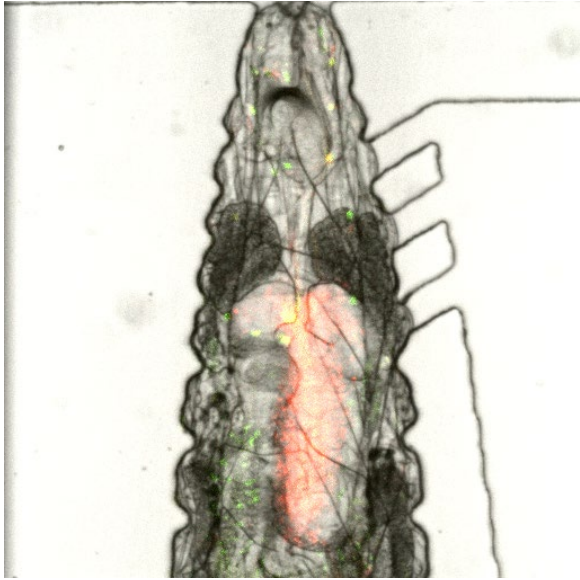


Or42a-Gal4 x UAS-GFP;Trans-Tango-MKII



Trans-Tango with TrpA1-C-T2A-Gal4

Trans-Tango



Trans-Tango

UAS-myrGFP QUAS-tdTomato hsFLP ; Trans-Tango

Swap for nuclear QUAS – for clarity?

4) Stan now has enough quantitative resolution with behavioral tracking to assign robust behavioral phenotypes to individual animals, so manipulating individual cells and characterizing their contributions is entirely doable.

Single CantonS larva in ~24C and ~29C

