20230707 Meeting Miro1 mice

Attendees : Manuel Buttini, Pierre Garcia, Giuseppe Arena, Rekjo Krüger, Axel Chemla

Miro1 R285Q k.i mice  data:

* loss dopaminergic neurons in substantia nigra at 15 months
* decreased rotarod performance in females on the first trial, indicating impaired motorl -learning/anterograde procedural memory at 21months
* Higher TH area in the striatum of 15months old mice
* No difference in striatal dopamine concentration

To do list short term experiment:

Only in youngest and oldest mice

**Rejko’s team:**

RT qPCR on midbrain for SNCA

WB for alpha synuclein in striatum

**Manuel’s team:**

Qualitative staining: 3females, 3males p)er group, for pan synuclein and phospho synuclein

At later stages/if needed:

Quantification of synuclein staining.

GSTP (glutathione s tranferase) in striatum WB for oxidative stress.

To do list organization:

Sample list to Pierre: slices and animal/genotypes for pan syn and phosphor syn staining

Sample list to Giuseppe and Alexandre: Already available RNA for RT qPCR, and list of mice/storage info for wb or additional RNA samples.

Miscellaneous:

We measured TH area in the striatum, the increase is indicative of axonal sprouting / counter intuitive when seeing the loss in substantia nigra. Pierre=> also seen in few other papers

Although not significant, due to low sample size/statistical power, at day 20, Miro1 mutant organoids have increased TH network complexity, and dopaminergic neuron death at later stages.