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## Imaging and Quantification for ST

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**Protocol status:** Working

**We use this protocol and it's working**

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## Abstract

Protocol for Imaging, Cropping and  
Quantification in Striatum

## Imaging

- 1 Images scanned with Olympus VS200 (mode: projection intensity accumulation)
- 2 Sections viewed on OLYMPUS OlyVIA (3.4.1)

## Quantification (QuPath ver 0.4.3)

- 3 Images  
are cropped for sections following the Bregma range (0.98mm – 0.74mm)
- 4 Channels are renamed based on their antibody  
(DAPI, TH, mCherry,  $\alpha$ Syn)
- 5 Annotations are categorized in 4 quadrants for  
each side of Striatum as DL, DM, VL, VM.
- 6 Quadrants are annotated surrounding TH+ cells  
clusters and including the accumbens nucleus core landmark.
- 7 Two circular annotations of consistent size in  
cortical region of each section are created for background intensity values.  
(Neg1 and Neg2)

## Intensity measures

- 8 Compute intensity feature was used with the  
following parameters:
  - 8.1 a.  
Channels: TH/mCherry/ $\alpha$ Syn
  - b.  
Preferred pixel size: 2 $\mu$ m
  - c.  
Tile diameter for ROI: 25 $\mu$ m



d.

Area:  $X \mu\text{m}^2$  (depending on the size of the annotation)

e.

Perimeter:  $X \mu\text{m}$  (depending on the size of the annotation)

f.

Mean intensity: 2.00  $\mu\text{m}$  per pixel: (TH/ mCherry /  $\alpha\text{Syn}$ )

## Export measurement

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'Annotation measurement' results of each image are then exported to excel and arranged accordingly.