GLUTOSCOPE
An innovative Tool for neurotransmitter research

HEALTH: Innovative Research Tool

Ref : MA00546

G02 Ligand + mVGLUT1 Ab

Confocal

STED

500nm

250nm
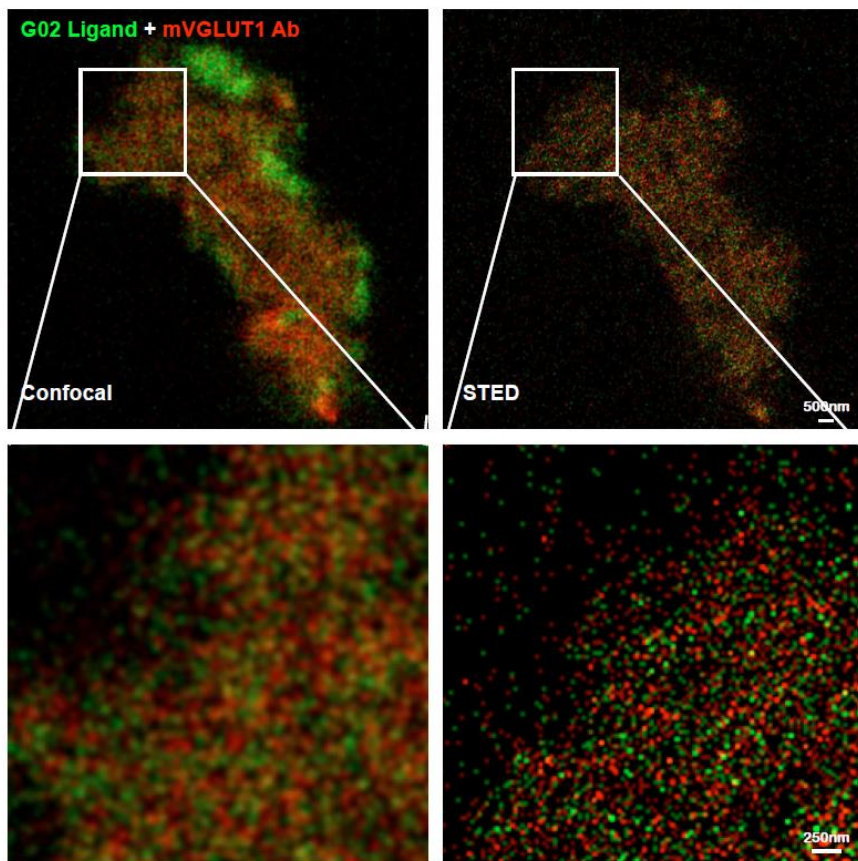
MARKET CHALLENGES

IMMUNOHISTOCHEMISTRY (IHC) is a classic anatomical method. Using a specific antibody coupled to staining or fluorescence detection is critical to localize a target protein.

Antibodies have their limit such as: size, signal strength, steric hindrance. Synaptic vesicles are very small and consequently, are very difficult to visualize and follow. Our technology will allow to circumvent this biological limitation and to **track vesicles with the neurotransmitter interacting with VGLUT transporters.**

SUGGESTED APPLICATIONS

- This technology can be applied to brain research about pathologies involving **glutamatergic transmission** such as **Epilepsy, Alzheimer or Parkinson ...**

- In Vitro screening of chemical molecules from proprietary database **able to interact with VGLUT transporters.**

- After further development, his technology could be used in both **Treatment, Brain imaging (PET) or Diagnosis.**

DEVELOPMENT STATUS

- Characterization of Fluorescent Ligand properties has been performed.

- **A co-maturation partner is required for further steps**

INNOVATIVE SOLUTION

These fluorescent ligands will allow to follow glutamatergic vesicles and VGLUTs with **High Resolution Microscopy (HRM)** and **almost in Real Time.**

COMPETITIVE ADVANTAGES

This technology

- **Gives the HRM more accurate signals** than classic fluorescent immunospot observed in IHC.

- Offers a solution to the limitation of vesicle size.

- Is an **alternative to Fixed Tissue IHC.**

- **Ready to Use False Fluorescent Neurotransmitter (FFN)**

- **Does not require a long time of development (Small Molecules VS Antibodies)**

- Offers new perspectives in Research like **Ex Vivo Tracking.**

IP RIGHTS

Patent pending 2021 (PCT/FR2021/052112)