

PROJECT PROPOSITION - Lab1- 2023

(M1, second semester)

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Hosting lab: CBS

Period of proposed project (put ☒ instead of ☐):

☒ Only 1st slot

☐ Only 2nd slot

☐ One slot, but I have no preference on which groups)

☐ Both slots (with different

1st slot: 12 days to be selected later between 1/16/2023 to 2/24/2023- see next page for info

2nd slot: 12 days to be selected later between 3/6/2023 to 5/12/2023- see next page for info

EXPLORING THE CONFORMATIONS OF A G-PROTEIN COUPLED RECEPTOR WITH SINGLE MOLECULE FRET

Subject (5 lines max for the description)

The objective of the project is to use single molecule FRET to explore the conformational dynamics of a G-protein receptor. Several mutants with different labeling position will be tested, and the effect of different drugs on the receptor conformation will be explored.

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Technical tools to be used:

Cell culture. Production and labeling of the receptor with fluorescent dyes on unnatural amino acids.

Single molecule FRET experiments, data analysis and interpretation

Objectives:

Test several labeling positions on the receptor.

Measure distance between the fluorophores and compare them with those expected from the cryoEM structure of the receptor.

| | | Lundi | Mardi | Mercredi | Jeudi | Vendredi |
|-----------|----------------|-------|-------|----------|-------|----------|
| Periode 1 | 16 au 20/01 | | | | | |
| | 23 au 27/01 | | | | | |
| | 30/01 au 03/02 | | | | | |
| | 06 au 10/02 | | | | | |
| | 13 au 17/02 | | | | | |
| | 20 au 24/02 | | | | | |
| | | | | | | |
| | | Lundi | Mardi | Mercredi | Jeudi | Vendredi |
| Periode 2 | 06 au 10/03 | | | | | |
| | 13 au 17/03 | | | | | |
| | 20 au 24/03 | | | | | |
| | 27 au 31/ 03 | | | | | |
| | 03 au 07/04 | | | | | |
| | 10 au 14/04 | | | | | |
| | 17 au 21/04 | | | | | |
| | 24 au 28/04 | | | | | |
| | 02 au 05/05 | | | | | |
| | 08 au 12/05 | | | | | |
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