**PROJECT PROPOSITION - Lab1** (M1, second semester)

Supervisor(s): …Christine DOUCET……………………………..

Contact email: ……christine.doucet@cbs.cnrs.fr…………………………..

Hosting lab: …CBS……………………………..

Period of proposed project (put **x** instead of ロ) :

x Only 1st slot ロ Only 2nd slot

ロ One slot, but I have no preference on which ロ Both slots (with different groups)

1st slot: thursdays and fridays, from 3/2/2021 to 18/3/2021

2nd slot: thursdays and fridays (except for the last 2 weeks), from 31/3/2021 to 6/5/2021

PROJECT’S TITLE

Nuclear Pore Structure and composition by STORM

Subject (5 lines max for the description)

Nuclear Pore Complexes (NPCs) are the largest protein complexes in cells. With their 100nm size, they have often been used as model systems for super-resolution microscopies. Here we will use STORM to compare the structure and composition of NPCs in normal cells and cells from patients with a rare NPC mutation.

Technical tools to be used:

Cell culture, immuno-labeling, STORM imaging, image reconstruction, image analysis.

Objectives:

Understand and get autonomous with sample preparation for microscopy, STORM acquisition and analysis. Critical reading and thinking, develop hypotheses and design experimental strategies to test them.