



A 3-year PhD fellowship funded by the Fondation pour la Recherche Médicale (FRM) starting on October 1st 2023 is available in the **Mitotic regulation of chromosome partitioning and cell division** lab headed by **Simonetta Piatti** at the Research Center of Cell Biology in Montpellier (CRBM, <http://www.crbm.cnrs.fr/en/team/mitotic-regulation-of-chromosome-partitioning-and-cell-division/>) to work on

NOVEL MECHANISMS UNDERLYING ACCURATE CHROMOSOME SEGREGATION AND GENOME STABILITY

We seek a talented and highly motivated candidate having completed a Master in Biology or related disciplines and holding a strong interest in Cell Biology and Genetics. Candidates with experience on yeast molecular genetics and/or biochemistry will be favoured.

The PhD project aims at understanding the regulation of chromosome biorientation, the fundamental process through which the identical sister chromatids of each chromosome attach to opposite spindle poles in order to equally partition chromosomes to the two daughter cells. Defects in chromosome biorientation give rise to aneuploidy, a hallmark of cancer, and are therefore efficiently fought against by an error correction process and a checkpoint that halts mitotic progression until errors have been corrected. Through a genetic screen in budding yeast (Benzi et al., *EMBO Rep.* **21**: e50257. doi: 10.15252/embr.202050257), we have recently identified a ubiquitin ligase as a novel player in the control of chromosome biorientation and SAC signaling, presumably by promoting the degradation of one or more factor(s) that participate to the error correction pathway. Aim of this project is to identify the critical targets of this ubiquitin ligase in chromosome biorientation and dissect the underlying molecular mechanism, partly in collaboration with a team of structural biologists (CBS, Montpellier). The project will involve yeast genetics (to generate and characterize mutants), cell biology (live cell imaging), and biochemistry (protein extraction and purification).

Interested candidates should send their CV and a motivation letter to Simonetta Piatti (simonetta.piatti@crbm.cnrs.fr).