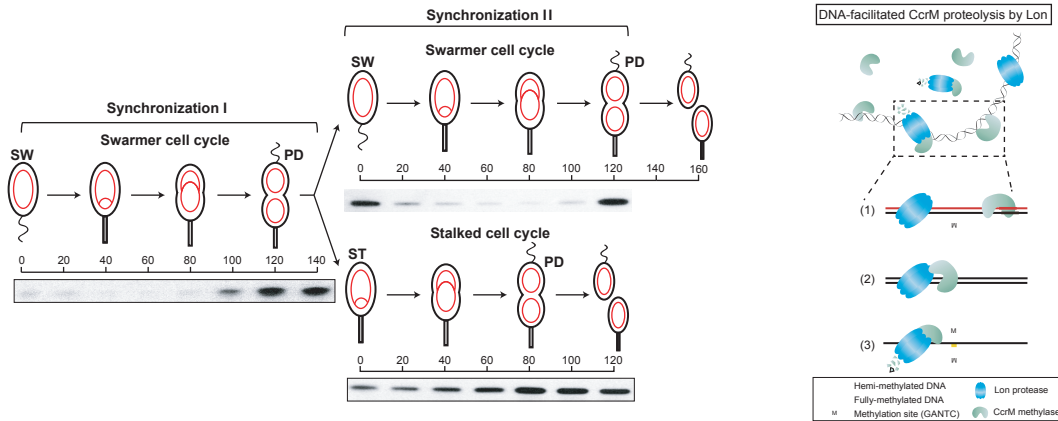
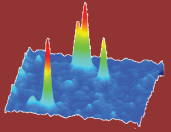


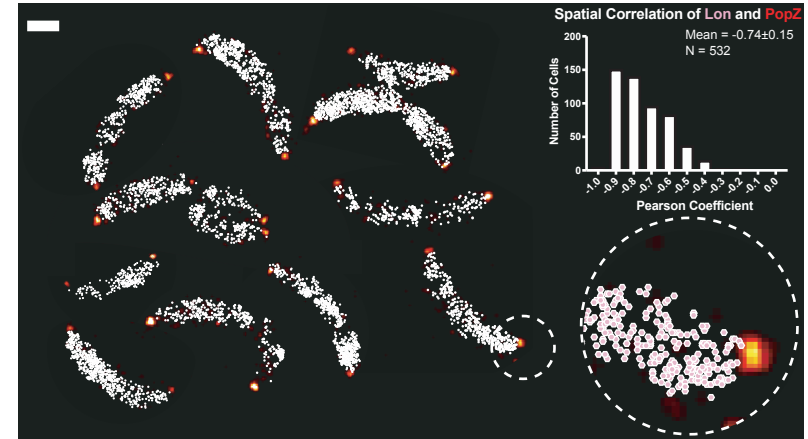


Asymmetric division yields progeny cells with distinct modes of regulating cell cycle-dependent chromosome methylation

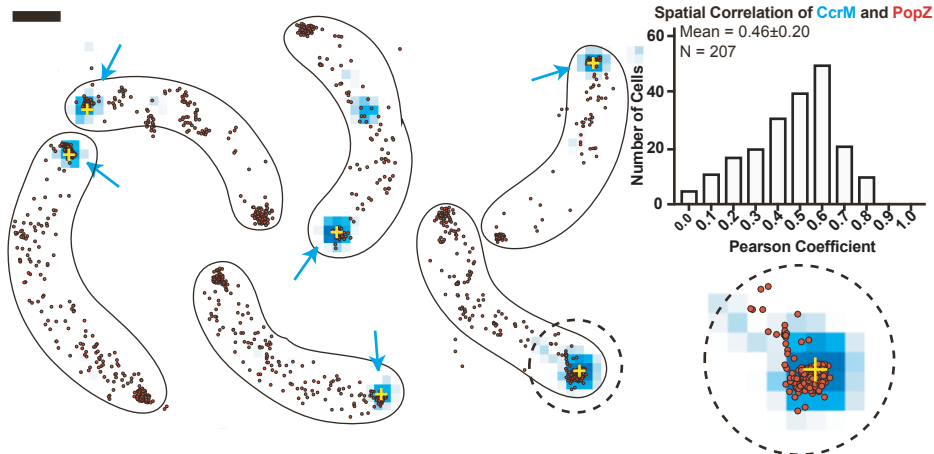
Moerner Lab



A progeny stalk cell does not have enough time to degrade methyltransferase CcrM before chromosome replication. To avoid the detrimental effect of premature DNA methylation, inherited CcrM is sequestered to the pole opposite to the stalk.



Single-molecule localization microscopy shows that the Lon protease never enters the PopZ domain, likely due to its high affinity to the chromosome.



Single-molecule localization microscopy shows the sequestered CcrM sits within the PopZ domain, hence does not have access to DNA.

Cell-pole sequestration of CcrM prevents physical contact with chromosomal DNA

