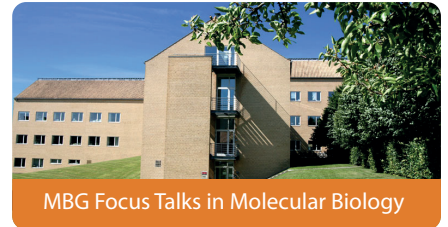


MBG FOCUS TALK

hosted by Erik Østergaard Jensen



Wednesday, March 20, 2019 at 1:15 - 2:00

Dept. Math. Aud. D2 (1531-119)

Chang Liu

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Spatial Organization of Plant Chromatin

Genome organization in 3D displays a hierarchical pattern, in which a chromosome can be dissected into structural and functional domains at multiple levels. In both the animal and plant fields, a large number of such chromatin domains have been identified and characterized recently, which range from hundreds of thousands of kb to small chromatin loops with sizes of several kb. With recent efforts in investigating plant genome packing and chromatin positioning patterns in nuclei, we have accelerated our journey to gain a better understanding of plant genomes beyond DNA sequences. I will present my work in three areas: 1) chromatin organization patterns at both chromosomal and local levels, 2) positioning of chromatin in the nuclear space, and 3) the development of molecular tools towards achieving precision in omics studies in plants. For the first part, I will talk about recently unveiled connections between plant chromatin packing and epigenomic features. For the second part, I will talk about how plant chromatin is distributed in a non-random manner with respect to nuclear compartments. Particularly, I will focus on the positioning of plant chromatin at the nuclear periphery. For the third part, I will describe our recently established platform for cell-lineage- and polyploidy-specific plant nuclei collection.