

理学部生物学科／理学研究科生物学コース

第 20 回クロマチン代謝制御セミナーのお知らせ

日時：6月24日（月） 16：30～17：30

場所：理学部4号館2階 マルチメディア2

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Building chromatin histone variants and chaperones at work

Chromatin organization in the nucleus provides a large repertoire of information in addition to that encoded genetically. A major goal for my group involves understanding how histones, the major protein components of chromatin, the bricks, can mark functional regions of the genome through their variants or post-translational modifications, along with non-coding RNA and other chromatin regulators. Errors in the establishment and propagation of these chromatin components, possibly involving imbalance in their deposition pathways, can lead to mis-regulation of genome functions and pathological outcomes, such as cancer. The propagation of centromeric identity represents a model of choice for the study of epigenetic mechanisms. Our work has focused on histone chaperones, as architects of chromatin organization and key chromatin determinants of centromere identity. We will present our latest findings on this topic in the context of deregulation in cancer.

1. High-resolution visualization of H3 variants during replication reveals their controlled recycling. *Nat Commun.* **9**:3181, 2018
2. Functional activity of the HIRA histone chaperone complex requires trimerization of the HIRA subunit. *Nat Commun.*, **9**:3103,2018
3. Imaging Newly Synthesized and Old Histone Variant Dynamics Dependent on Chaperones Using the SNAP-Tag System. *Methods Mol Biol.* **1832**:207-221.
4. Chromatin plasticity: A versatile landscape that underlies cell fate and identity, *Science* 1332-1336. Review., 2018

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