生命分子化学セミナー

演者：杉山 智康
（上海科技大学生命科学与技術学院, Assistant Professor）

演題：RNA degradation factors that localize to nuclear bodies regulate gene expression and chromatin dynamics
（核内構造体に存在する RNA 分解装置による遺伝子発現および染色体制御）

日時：平成３０年７月２６日（木）１７時００分～１８時００分
場所：北海道大学理学部 7 号館 3-10 号室
共催： 日本生化学会・北海道支部
要旨：

In the eukaryotic nucleus, there are many kinds of unique structures called nuclear bodies, which are primarily composed of proteins and RNAs. It is believed that the multiple proteins involved in a particular biological process gather and form a nuclear body so that they can complete the process efficiently. However, the components, functions, and assemblies of nuclear bodies are not fully understood yet.
To address these questions, we started to investigate nuclear bodies using the fission yeast *Schizosaccharomyces pombe* 10 years ago. We have found several proteins that show specific localization patterns in the nucleus and have studied their functions[1-7]. In this presentation, I will describe two RNA degradation complexes that localize to nuclear bodies and their roles in gene expression and chromatin dynamics, in particular, heterochromatin assembly and UPD (uniparental disomy). Also, I would like to discuss the possibility that the functions of these factors identified in fission yeast are evolutionarily conserved in higher eukaryotes.

参考文献

1. Folco et al., (2017). *Nature*, **543**(7643):126-130.
2. Sugiyama et al., (2016). *Mol. Cell*, **61**(5): 747-759.
3. Zhou et al., (2015). *Nat. Commun.*, **6**: 7050.
4. Sugiyama et al., (2013). *Nucleic. Acids. Res.*, **41**(13): 6674-6686.
5. Sugiyama et al., (2012). *PLoS One*, **7**(8): e42962.
6. Sugioka-Sugiyama and Sugiyama. (2011). **406**(3): *BBRC*, 444-448.
7. Sugiyama and Sugioka-Sugiyama. (2011). *EMBO J.*, **30**(6): 1027-1039.

連絡先：北海道大学大学院理学研究院化学部門生物有機化学研究室
村上洋太（電話：011-706-3813、e-mail:yota@sci.hokudai.ac.jp）