

Seminar in Microbiology

Monday, May 9, 2016

Salle de séminaire Salle E07.3347.a, CMU

11:30 – 12:30

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Chaperoning ribosome assembly

Ribosome assembly is a highly dynamic and complex process that involves the RNA and protein components of the mature ribosome but also over 100 transacting factors. These transacting factors, snoRNAs and proteins, help the modifications and assembly of the two ribosomal subunits in the nucleolus, in the nucleoplasm, and finally in the cytoplasm. Some of these factors are multitask proteins that are also involved in other processes and are guided by specificity factors to their place of action. Nicolas Leulliot is heading a structural biology group that made important contributions in understanding ribosome biogenesis.

Mitterer et al., 2016. Sequential domain assembly of ribosomal protein S3 drives 40S subunit maturation. *Nat Commun.* 2016 Feb 2;7:10336.

Madru et al., 2015. Chaperoning 5S RNA assembly. *Genes Dev.* 2015 Jul 1;29(13):1432-46.

Robert-Paganin et al., 2015. Regulation of DEAH/RHA helicases by G-patch proteins. *Biomed Res Int.* 2015;2015:931857.

Loc'h et al., 2014. RNA mimicry by the fap7 adenylate kinase in ribosome biogenesis. *PLoS Biol.* 2014 May 13;12(5):e1001860.

Walbott et al., 2011. The H/ACA RNP assembly factor SHQ1 functions as an RNA mimic. *Genes Dev.* 2011 Nov 15;25(22):2398-408.

Walbott et al., 2010. Prp43p contains a processive helicase structural architecture with a specific regulatory domain. *EMBO J.* 2010 Jul 7;29(13):2194-204.