

公開セミナー

Structural flexibility of the eukaryotic stalk facilitates protein translation

演者: Kam-Bo WONG 教授

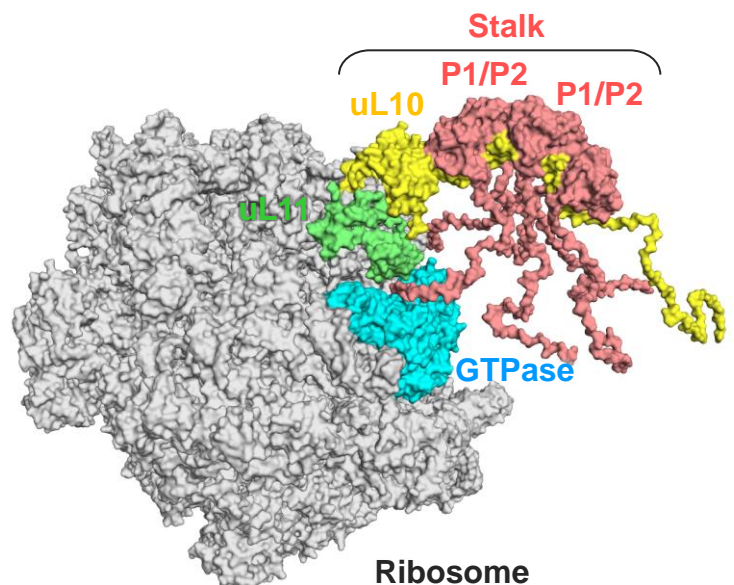
School of Life Sciences, The Chinese University of Hong Kong

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言語: 英語

概要: Protein synthesis requires the recruitment of translation GTPase to the GTPase-associated center of ribosomes, which is constituted by the lateral stalk and ribosomal protein uL11. In eukaryotic ribosomes, the lateral stalk is consisted of a pentameric P-complex of uL10(P1/P2)₂. We have previously determined the NMR structure of P1/P2 heterodimers and deduced the structural organization of eukaryotic stalk. We showed that P1/P2 contains flexible C-terminal tails, which can reach ~125 Å from the dimerization domain, that interact with and recruit ribosome-inactivating proteins such as Trichosanthin to the ribosomes. We also determined the NMR structures of the protuberant domain of uL10 (uL10ext) and uL11. Combining structural, mutagenesis and simulation studies, we showed that the flexible N-terminal residue of uL11 is responsible for interacting with the uL10ext and help to fetch and fix the uL10 into a position ready for recruiting incoming translation GTPases and facilitate protein synthesis.



どなたでも参加できます。皆様のご来聴をお待ちしております。
連絡先: 理学部 生物学プログラム 伊東 孝祐 (k-ito@bio.sc.niigata-u.ac.jp)