

Life Science Seminar

How does nuclear envelope assemble from the endoplasmic reticulum and maintain its identity?

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Lecturer

Group Leader

Max Perutz Labs, Vienna, Austria

Date & Time

16:00, JUNE 27th (Thu.), 2024

Venue

**Seminar Room C/D, Building G
Faculty of Medicine Campus**

The nuclear envelope (NE) regulates nuclear functions, including transcription, nucleocytoplasmic transport, and protein quality control. While the outer membrane of the NE is directly continuous with the endoplasmic reticulum (ER), the NE has an overall distinct protein composition from the ER. During open mitosis in higher eukaryotes, the NE disassembles at mitotic entry and then reforms as a functional territory at the end of mitosis to reestablish nuclear-cytoplasmic compartmentalization. How the NE reassembles from the ER in late mitosis, and how NE identity is maintained within the continuous ER-NE endomembrane system in interphase, has been unclear. By combining live imaging with three-dimensional electron microscopy, we have visualized the dynamic change of the ER and NE during open mitosis at high spatiotemporal resolution in mammalian cells. The results that we obtained will be discussed in the seminar.

Contact

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