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From Capability to Confidence: RNA Mass Spectrometry as a Criterion for Digital Twins

Thursday, 5 March 2026 11:20 (20 minutes)

Digital twins in structural cell biology critically depend on experimental data quality and interpretability. RNA is a central molecular layer, yet its mass spectrometric analysis remains analytically fragile. I will discuss why RNA-MS cannot be treated as an extension of proteomics and how intrinsic ambiguity, redundancy, and modification complexity challenge confidence. I argue that explicit analytical control and RNA-aware validation criteria are essential for integrating RNA into mechanistically meaningful digital twins.

Presenter: Prof. KAISER, Stefanie (Goethe University)

Session Classification: Short Talk