



Metal Cations and RNA - A Highly Charged Problem with a Dynamic Future

Positively charged cations are essential for the folding and function of ribonucleic acid (RNA), two interlinked and vitally important processes. In particular, metal cations guide the folding of RNA into functional structures, control catalytic activity, or act as a trigger for self-assembly. Here, we use molecular dynamics simulations to gain atomistic insight into the fundamental interplay of metal cations and RNA. Enhanced sampling techniques are used to cover the broad spectrum of timescales involved, ranging from femtoseconds to minutes and hours. Subsequently, we investigate the role of metal cations in systems of increasing complexity ranging from basic structural motifs to large regulatory RNA macromolecules.

Dr. Nadine Schwierz-Neumann,
MPI of Biophysics, Frankfurt

room P 603, Thu. 29.11.2018, 15:15