

**IQCB Seminar** October 2, 2024 10:30 AM

Lecture Hall (00.187) at BioZentrum I, Hanns-Dieter-Hüsch-Weg 15, 55128 Mainz

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## Tackling neurodegenerative diseases through small molecule corrections

Neurodegenerative diseases, such as Parkinson's and Huntington's, represent some of the most pressing challenges in modern medicine due to their complex pathologies and lack of effective treatments. Recent advancements in molecular simulations have opened new pathways for addressing these disorders by enabling the precise design of small molecule therapeutics.

In this talk, I will focus on how small molecules can be harnessed to correct dysfunctional pathways, specifically targeting disordered proteins and nucleic acids central to neurodegeneration. These computational approaches offer exciting potential for creating targeted therapies that can slow or even reverse disease progression. By simulating and predicting molecular interactions, we aim to identify compounds that stabilize misfolded proteins, modulate toxic RNA structures, and ultimately restore cellular function.

