



SFB 1286 Quantitative Synaptology

“Computational design of proteins for translational oncology applications”

Speaker

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Time

Thursday, 13th April 2023
1 PM

Location

**Center for Biostructural Imaging of
Neurodegeneration (BIN)**
*Von-Siebold-Straße 3a, 37075 Göttingen
Seminar Room*

Abstract

In protein design, estimating the energy of a huge load of sequence-conformer perturbations is the central challenge. Improving the speed and accuracy of these calculations can profoundly improve design success rates and allow tackling more complex design problems. In this talk, I present our new design strategies and methods, and their applications in several translational oncology projects. Specifically, this covers our new approaches to template-based and de novo (i.e. template-free) binder design, and how we could create and pre-clinically develop different proteins to modulate key cytokines and growth factors. Many of the designed proteins show superior biophysical and functional properties for their respective applications, and demonstrate the generalisable potential of the design strategies