



KEMIJSKI INŠTITUT

Vabilo na Forum40 / Invitation to the Forum40

Dr. Ajasja Ljubetič

D12, Department of Synthetic Biology and Immunology

Četrtek / Thursday, 10.2.2022 ob / at 13:00 / on WEBEX

<https://ki-ljubljana.webex.com/ki-ljubljana/j.php?MTID=maf45f975dbe2b3d1fee0b98dde74a7a>

Meeting password: februarKI2022

Completely *de-novo* designed random protein walker/roller

Molecular machines could revolutionize drug delivery and smart materials engineering. De novo proteins (those whose entire sequence was designed) could play a major role as they are thermostable and easy to produce. I will present a de novo random protein walker capable of moving along a protein fiber. I have designed long protein fibers with covalently attached heterodimer protomers that serve as attachment points. The other half of the heterodimer was linked onto de novo cyclic oligomers, creating rollers/walkers with 2 to 8 feet. Movement was measured using single molecule fluorescence microscopy.

The walker demonstrates construction of a complex de novo assembly.



Vljudno vabljeni / Kindly invited