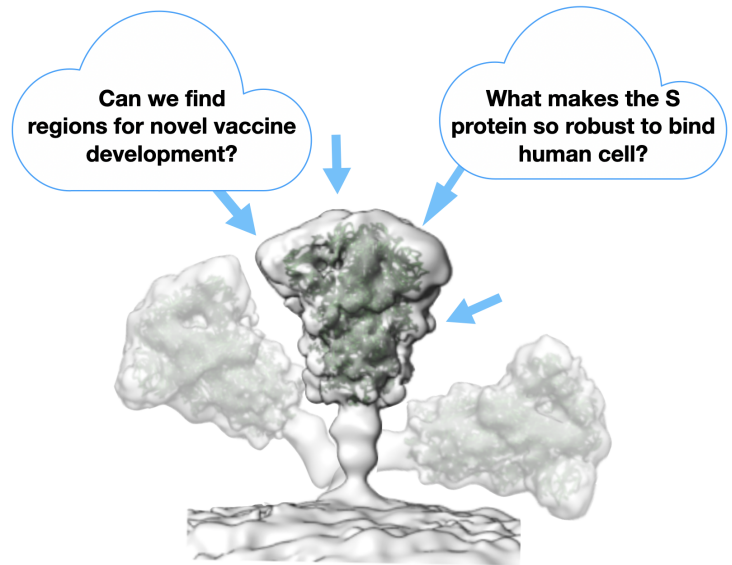


PhD Student position

“Molecular biomechanics of the SARS-CoV-2 variants: The virus-host cell attachment and immune evasion”

Intitution: IPPT-PAN
Position: PhD student
Scientific discipline: Comput. Biophysics
Deadline: 30-09-2023
Result of competition: 15-10- 2023
Expected start: As soon as possible
Scholarship duration: 39 months
Project leader: Dr. Adolfo Poma



Biomechanics of SARS-CoV-2 Spike (S) protein

Project Description

This research will focus on the foundation of the molecular biomechanics of the SARS-CoV-2. Here we plan to investigate the spike (S) protein and its interaction with the human angiotensin-converting enzyme 2 (hACE2) receptor and neutralising antibodies (Ab) responsible for the immune evasion. This work will employ state-of-the-art coarse-grained models of proteins and single-molecule force spectroscopy (SMFS) data for the improvement of the computational model. The selected person will participate in ongoing research in the field of the nanomechanics of proteins as well as in the development of new physical-based strategies to inhibit the virus-cell interaction.

Profile of candidate/Requirements

- having the status of a PhD student at the doctoral school for the entire duration of the contract
- experience with molecular dynamics (MD)
- background in biophysics/computational physics or chemistry or similar fields
- programming skills (c++, python, Lua, etc)

We offer

- Budget for the scholarship from the NCN OPUS-23 project: PLN 5,000
- Contract for a period of 39 months.
- Opportunity to apply for a doctoral scholarship

Required documents

- Cover letter and CV including: publications / conferences
- MSc diploma in physics/biophysics or a related branch of science
- 1 recommendation letter

Please submit the documents to: apoma@ippt.pan.pl

