

First year PhD exam Nanoscience

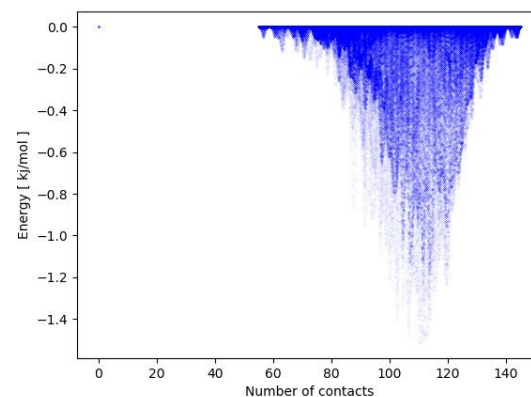
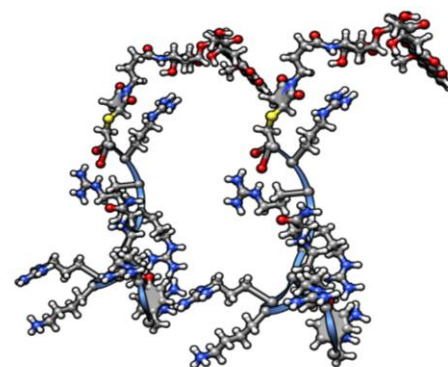
NEST



SCUOLA
NORMALE
SUPERIORE

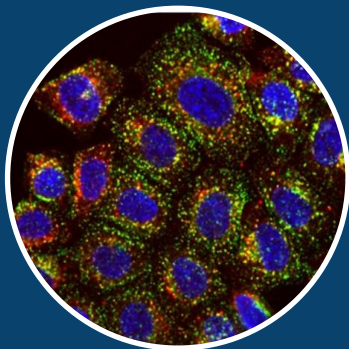
Mario Bernardi

Supervisor: Francesco Cardarelli
A.Y. 2019/2020



National Enterprise for nanoScience and nanoTechnology

NEST



Exams

- Fundamentals of Biophysics at the Nanoscale
- Biophysical Sciences Seminars
- Physics of the Living Cell

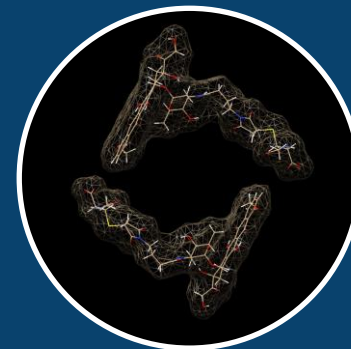
Prof. Ranieri Bizzarri
Prof. Francesco Cardarelli
Prof. Stefano Luin
Prof. Gian Michele Ratto



Wet Laboratory

- Peptide synthesizer
- HPLC purification

Tutor – Claudia Boccardi



Dry Laboratory

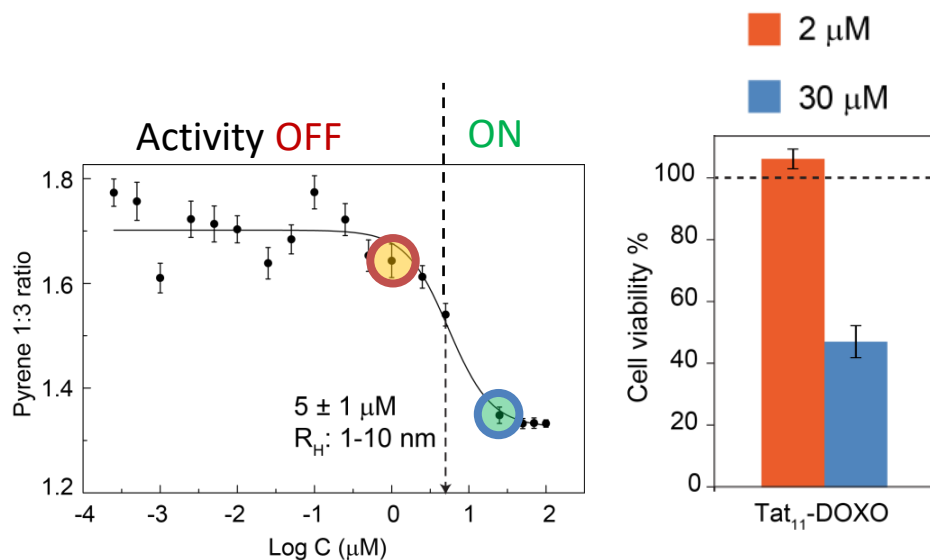
- Molecular Dynamics
- Metadynamics
- Scientific Data Analysis School

Tutor – Riccardo Nifosì

Peptide self-aggregation importance in drug delivery

Side-project goal:

- Investigate aggregate structures
- Determine activity switch concentration
- Provide permeability explanation



Work in progress:

- Dimeric structure MD simulations
- Wrap-up of a manuscript

