

Title: Mechanistic and structural studies of adenoviral DNA replication (NCN/OPUS)

Supervisor: Professor Marcin Nowotny

Institute: International Institute of Molecular and Cell Biology in Warsaw

Laboratory: Laboratory of Protein Structure

www: nowotny_lab

Project description:

The project focuses on the molecular mechanisms involved in adenovirus replication. These viruses are important human pathogens and are used in genome engineering and vaccine development research. The PhD student will purify and characterise biochemically the proteins involved in adenovirus replication. The next step will be to determine the high-resolution structures of these proteins and their complexes. This project combines protein biochemistry and assays of protein activity on nucleic acids with structural biology, using cryo-electron microscopy and crystallography.

Aim:

The understand the molecular mechanisms of the replication of adenoviruses through structural biology and protein biochemistry approaches.

Requirements:

- Master's degree in biology, biotechnology, biochemistry or related field
- Good knowledge of basics of molecular and cell biology
- Basic hands-on experience in at least one of the fields: molecular biology, protein biochemistry, protein activity assays
- Knowledge of structural biology methods will be an advantage
- Written and spoken fluency in English
- Willingness to learn and take new challenges, ability to work independently, analytical thinking
- Good interpersonal skills and a collaborative attitude

Number of positions available: 1

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