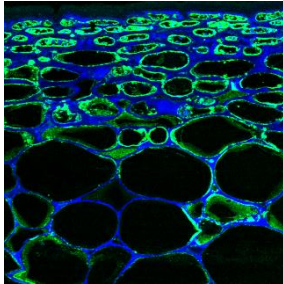


The Institute of Agrophysics, Polish Academy of Sciences, Department of Microstructure and Mechanics of Biomaterials is looking for PhD student in the Doctoral School of Quantitative and Natural Sciences. PhD student will receive a scholarship (48 months) in the amount of PLN 5,000 / month (gross).

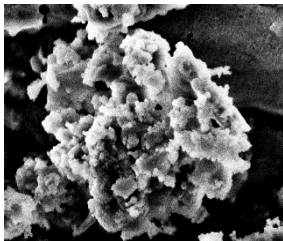
PhD thesis proposal: Arabinogalactan proteins (AGPs) as significant components of cell wall during the ripening process

Keywords: arabinogalactan proteins, cell wall, immunochemistry, microscopy, molecular biology



Project aims: The project focuses on the arabinogalactan proteins (AGPs), which are regarded to be one of the less known proteoglycans of plant cell wall. In turn, tomato is a preeminent model system for molecular and genetic studies in plants, and thus general goal of the PhD project is characterization of AGPs in the tomato fruit during ripening process.

Research topics cover the wide area of structural biology, molecular and cell biology. PhD project includes analysis of the distribution and structure of AGPs in fruit (1), and then elucidation of the AGPs effect on the whole cell wall structure, mainly on spatial-temporal localization of the other cell wall constituents during fruit ripening process (2).



PhD project will give opportunity to carry out the comprehensive microscopic studies using CLSM, SEM, and TEM as well as to use modern approaches such as immunolabelling, and molecular biology methods. Additionally, international cooperation is planned in the project, giving the possibility of short-term scholarships for training in molecular biology and genetics in laboratories in Greece.

Terms and conditions:

- The PhD project will take place for 48 months (from 01.10.2021) at the Department of Microstructure and Mechanics of Biomaterials, Institute of Agrophysics, Polish Academy of Sciences, Lublin, Poland under PhD supervision of prof. dr hab. Artur Zdunek a.zdunek@ipan.lublin.pl
- **The PhD project is financed within the NCN project SONATA. Studentship is ensured during the PhD project**
- For application details (documents, procedures, deadlines) please go to website of the Doctoral School of Quantitative and Natural Sciences
- Language of PhD course and thesis: English or Polish

Qualification requirements:

- The PhD candidate should meet skills in molecular biology and plant physiology
- Master Degree completed before the contract starting date is required
- Other formal requirements at: <https://www.umcs.pl/pl/wymogi-formalne,19437.htm>

References:

- Leszczuk A., Kalaitzis P., Blazakis K., Zdunek A. 2020. The role of arabinogalactan proteins (AGPs) in fruit ripening - a review. Horticulture Research, 7: 176.
- Leszczuk A., Zając A., Kurzyna-Szklarek M., Cybulska J., Zdunek A. 2020. Investigations of changes in the arabinogalactan proteins (AGPs) structure, size and composition during the fruit ripening process. Scientific Reports, 10: 20621.

In case of any question related to the PhD project please contact with Agata Leszczuk PhD a.leszczuk@ipan.lublin.pl