

# Curriculum Vitae

## Agata Bąk, MSc

Date of birth: 02.02.1994  
Nationality: Polish  
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### EDUCATION

- 2019 - present **PhD program in Molecular Biosciences**  
Faculty of Medicine, Autonomous University of Madrid / Spanish National Center of Cardiovascular Research  
Group: Molecular Mechanics of the Cardiovascular System  
Supervisors: Jorge Alegre Cebollada, Elías Herrero Galán
- 2017 - 2018 **Master of Science**  
Faculty of Biology, University of Warsaw  
Field of Study: Biotechnology  
Specialization: Medical Biotechnology  
Title of the Master's Thesis: Obtaining a sample of human topoisomerase I and human SRSF1 protein for NMR spectroscopy  
Supervisor: Takao Ishikawa, PhD
- 2013 – 2017 **Bachelor of Science**  
Faculty of Biology, University of Warsaw  
Field of Study: Biotechnology  
Specialization: Molecular Biology  
Title of the Bachelor's Thesis: Human transmissible spongiform encephalopathies  
Supervisor: Takao Ishikawa, PhD

### TECHNIQUES

Cell Culture: Thawing, freezing, trypsinisation, counting, passaging, plating on different cell culture dish format, transfection

Biochemistry: Protein quantification, Western blotting, Thin layer chromatography, Column chromatography, Gel electrophoresis

Molecular Biology: Plasmid DNA isolation (mini, midi and maxi prep), Restriction enzyme digestion, DNA and RNA Quantification, PCR, Bacterial and yeast transformation

Atomic Force Microscopy, Immunohistochemistry, Immunocytochemistry, CRISPR

## RESEARCH EXPERIENCE

- 2019 - present Spanish National Center for Cardiovascular Research (CNIC), Madrid, Spain  
Predoctoral researcher  
Supervisors: Jorge Alegre – Cebollada, Elías Herrero Galán
- 2015 - 2018 Department of Molecular Biology, Faculty of Biology, University of Warsaw  
B.Sc. and M.Sc. workshop  
Supervisor: Takao Ishikawa  
Learning and practicing of molecular biology techniques. Realization of Master's thesis project using techniques like production and purification of recombinant proteins, plasmid DNA isolation, restriction enzyme digestion or Western blotting.
- 2018 Cajal Institute, CSIC, Neuroendocrinology Laboratory, Madrid, Spain  
Internship (two months)  
Practice Supervisor: Ignacio Torres  
Practice Guide: Jaime Pignatelli  
Performing immunocytochemical analyses (double staining) of orexin neurons in the lateral hypothalamus to relate them to behavioral outputs. Validation of antibodies using CRISPR technology. Practicing of immunohistochemistry, immunocytochemistry and cell culture methods.
- 2016 Karolinska Institutet, Cancer Center, Stockholm, Sweden  
Internship (two months)  
Practice Supervisor: Weng-Onn Lui  
Investigation of the mechanisms of PD-L1 expression in Merkel-cell carcinoma. Working on MCC tumor cells (counting, passaging, transfecting). Amplification of exons of PD-L1 gene by PCR. Evaluation of the effect of Merkel-cell polyomavirus (MCV) T-antigens regulation on PD-L1 expression using Western blot analyses.
- 2015 Mossakowski Medical Research Centre Polish Academy of Sciences, Neuromuscular Unit, Warsaw, Poland  
Internship (two months)  
Practice Supervisor: Andrzej Ziemia  
Practice Guide: Dagmara Kabzińska

## ACADEMIC ACTIVITIES

- 2014 – 2017 Member of the Scientific Society of Molecular Biology, University of Warsaw (board member)

## OTHER SKILLS

- IT: extensive knowledge of standard office software (MS Office), basic knowledge of Igor Pro
- Languages: Polish (native), English (advanced)

## COMPETITIVE FELLOWSHIPS

- FPI PhD Fellowship from the Spanish government