

Project Preludium BIS 3 NCS „ *Whether, how and which EVs derived from follicular cells can affect boar sperm?*

**Supervisor: dr hab. Aneta Andronowska**

The aim of this project is to evaluate whether EVs derived from the porcine ovarian granulosa, theca and/or cumulus oocyte complex (COC) are capable to affect porcine morphological and functional sperm changes/characteristic. In the framework of this project it is assumed to perform the following research tasks: 1/ characterisation of EVs derived from FF (small, medium and large follicles), granulosa cells, theca interna cells and COCs; 2/ influence of EVs on morphological and functional characteristic of boar spermatozoa; 3/ Functional properties of boar spermatozoa after its incubation with EVs.

The work will include: planning and performing experiments, laboratory and statistical analyzes, interpreting the obtained results, as well as preparing scientific presentations and announcements, writing scientific publications on the conducted research and presenting research results during scientific conferences.

Implementation of the project will include: ongoing analysis of the scientific literature, planning and execution of experiments and laboratory and statistical analyses, interpretation of obtained results, conclusions, as well as preparation and presentation of research results at scientific conferences, and writing the scientific publications from ongoing research.

**Requirements:**

1. Higher education (completed upper second degree) in agricultural sciences in the discipline biological sciences (biotechnology, biology) or related;
2. Strong motivation to work in science, the ability to think analytically, good organization of work, the ability to work individually and in a team;
3. Basic knowledge of biology and physiology;
4. Knowledge of basic methods of molecular biology techniques (e.g. RT-PCR, qPCR, Western blot, flow cytometry), in vitro cell culture and statistical analysis. Lack of knowledge of any of the above analyses does not exclude the candidate from employment.
5. Availability: readiness to work in the field while collecting material for research;
6. Availability: willingness to complete a six-month research internship in a foreign research centre;
7. Good written and oral communication skills in English;

**Highly regarded scientific enthusiasm!**

**Conditions of employment:**

1. The selected candidate must be a participant in the Interdisciplinary Doctoral School in Agricultural Sciences co-run by the IRZBŻ PAN in Olsztyn. The recruitment schedule and

rules are available at Recruitment 2021 - Institute of Animal Reproduction and Food Research, Polish Academy of Sciences in Olsztyn;

2. Planned start date of the project: 1 October 2022 (start of the academic year 2022/2023 at the PhD school);

3. Place of work: Department of Hormonal Action Mechanisms, Institute of Animal Reproduction and Food Research, Polish Academy of Sciences in Olsztyn, Bydgoska 7 Street, 10- 748 Olsztyn;

4. The amount of the doctoral scholarship: 4276 PLN gross (approximately 3800 PLN net) per month, after two years the scholarship amount is increased according to the regulations of the Prelude Bis3 project;

5. Maximum duration of the scholarship: 48 months;

6. Performance of a six-month scientific internship in a foreign scientific centre.

### **Required documents:**

1. Cover letter;

2. Curriculum vitae (CV), including: a. education, b. scientific achievements, including scientific publications, popular science articles, conference proceedings, c. achievements in scientific research, scholarships, awards, scientific experience, scientific workshops and trainings and participation in research projects, d. competence to perform the tasks provided for in the project;

3. Document confirming the completion of second-cycle studies;

4. Opinion of the thesis supervisor confirming possession of skills necessary to conduct research work;

5. Other documents specified in the announcement published on the website of the Interdisciplinary Doctoral School in Agricultural Sciences at the Polish Academy of Sciences (Appendix no. 1 to the Recruitment Rules).

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