

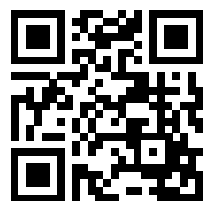


# Everything for **bees**



**Prof. Aneta A. Ptaszyńska**  
**Team Leader**

## Contact



**Prof. UMCS Aneta A. Ptaszyńska**  
aneta.ptaszynska@poczta.umcs.lublin.pl

**Maria Curie-Skłodowska University**  
Faculty of Biology and Biotechnology,  
Institute of Biological Sciences,  
Department of Immunobiology  
19 Akademicka St., 20-033 Lublin  
Poland

**[bee-research.umcs.pl](http://bee-research.umcs.pl)**

**Api Lab UMCS PPI/PZA/2019/1/00039**

The Project is financed by  
the Polish National Agency for Academic Exchange  
under the Foreign Promotion Programme



**POLISH** NATIONAL AGENCY  
FOR ACADEMIC EXCHANGE



**Bee-Research**



## Our main goals



### Research

We offer our research facilities and experience in all types of studies into live bees in the laboratory and into honeybee colonies in apiaries. We also study the physicochemical characteristics, pollen spectrum and antimicrobial properties of honeys.

### Education

We educate people about the essential role of bees in our ecosystem. We organise workshops for beekeepers and young people about bees and their diseases.



## Education

We offer interactive lectures, seminars, workshops, and tutorials about honeybees, wild pollinators and their role in our ecosystem.

### Pro-ecological action

Green Week in Lublin: Air, Earth and Water – a walk through elements.



## Research



### Main achievements

New therapeutics for the treatment of nosemosis and other bee diseases.

#### I. Microbes should match bees' microbiome

Using our probiotic bacterial strains, dedicated to honeybees (Patent PL233794):

- improves the condition of bee colonies, extends bee lifespan
- inhibits the growth of *Paenibacillus larvae* – the major honeybee pathogen
- supports microflora in bees.

#### II. Eleutherosides benefit honeybees

The main advantages of our preparations based on adaptogenic plant extracts (Patent PL232685):

- natural constituents
- high effectiveness against the *Nosema*-infection
- improved bees' immunity owing to an increase in the activity of phenoloxidase (the enzyme taking part in the bee immune response)
- no side effects.

#### III. Porphyrins inactivate *Nosema* spores

- Our preparations based on the heterocyclic organic compounds decrease levels of *Nosema*-infection (Nature Scientific Reports 2018; Patent PL231692).

#### IV. Cannabinoids protect honeybees from pesticides

- Our preparations based on *Cannabis* extracts protect honeybees against the harmful effects of neonicotinoids and prolong honeybee lifespan (Patent applications No. P.433702, P.433703).

## Awards



NAWA Archive/Alicja Szulc

- **Award of the Polish Minister of Science and Higher Education.<sup>1</sup>**

- **Silver medal awarded on the 70th International Fair "Ideas, Inventions, New Products" iENA<sup>2</sup> in Nuremberg for patent application No. P.415155.**

- **Winner of the 9th national competition "Innovation is a Woman" organised by the Polish Women's Foundation, aimed at selecting innovative solutions.**

- **International EIFFEL Prize<sup>3</sup> awarded by the French Federation of Inventors at the 117th International Fair of Inventions, CONCOURS LÉPINE 2018 in Paris for patent application No. P.423363.**

- **Gold Medal awarded by World Invention Intellectual Property Associations (WIIPA) at the Euroinvent European Exhibition of Creativity and Invention in Iasi, Romania, for patent application No. P.423363.**

