

The Roquette Foundation for Health Announces the Winner of Its 3rd Research Prize in the Field of Health Prevention

La Madeleine (France), October 8, 2024 - The Roquette Foundation for Health has awarded its 3rd Research Prize to scientist Delphine Payros and her team, for their work on the toxicity of multiple dietary exposures involving mycotoxins in digestive pathophysiology. Since its creation in 2020, the Roquette Foundation Research Prize supports and honors medical research about food, nutrition, health prevention and the food of the future, with €25,000 per project.

The study rewarded by the 2024 Research Prize

Delphine Payros is an INRAE researcher at the Food Toxicology Laboratory in Toulouse in the Mycotoxin Biosynthesis and Toxicity team. She was awarded the 2024 Research Prize for her project entitled *"Food exposome: toxicity of multiple exposures involving mycotoxins – consequences for digestive health."*

The food chemical exposome refers to human exposure to a wide range of food contaminants and neo-formed products, in particular mycotoxins, which are very common on our plates.

The aim of the project supported by the Roquette Foundation for Health is therefore to identify the contaminants or neo-formed products in our food supply for which the health risk is exacerbated by deoxynivalenol (DON), one of the mycotoxins most frequently found in our meals. The project's goal is to understand the issues surrounding multiple exposures on our digestive health.

Thanks to interdisciplinary approaches (physiopathology, toxicology and molecular, epidemiology, clinical, etc.), the interactions between mycotoxins and other compounds in our food are being assessed in pathologies of the gastrointestinal tract: cancers but also chronic inflammatory bowel diseases (IBD). The discovery of signaling pathways common to the different mixtures studied will provide a better understanding of the mechanisms involved and could ultimately produce new paths for developing remediation strategies, as it is already the case for animal health.

Examining co-exposure to two or more contaminants or food products and the host thus represents a new scientific front that will enable innovative views in understanding the role of the food exposome, in a context of global warming responsible for the increase in mycotoxins exposure.

"We are extremely proud to receive this prize, which rewards the work of several years and many people – researchers, students, engineers and technicians – without whom the project would not have been able to reach such a scale. Thank you to the Roquette Foundation for Health for supporting this work and giving it a whole new dimension." – Delphine Payros, winner of the 3rd Roquette Foundation for Health Research Prize.

Previous winners of the award (2020 and 2022)

For its first edition in 2020, the Roquette Foundation for Health Research Prize was awarded to **Dr. Laurent Reber for his work on food allergies** – a public health issue affecting 10% of the world population, especially children. Based on the key role of the IgE (Immunoglobulin E) molecule in food allergies and the production of antibodies capable of blocking this molecule, Dr. Reber's work aims to develop a new therapeutic approach: a vaccine designed to improve the quality of life of thousands of people who have food allergies.

Four years later, the project has resulted in the **validation of the vaccine's proof of concept, demonstrating both its efficacy and its durability: capable of protecting against anaphylactic shock for at least a year, it will make it possible to avoid reinjecting antibodies every 2 to 4 weeks, as is currently the case, and will reduce its cost.** The

vaccine has now been patented and an exclusive licensing agreement has been signed with an industrial partner to develop it at the clinical level.

The Roquette Foundation for Health Research Prize has been a real lever in the development of this project, as it has enabled access to more substantial European funding for further research.

In 2022, the project by **Clémentine Hugol Gential, Deputy Director of the CIMEOS Laboratory**, won an award for her work on the **impact of social networks on teenagers' eating habits**. The aim of the project, which was developed in partnership with the target audience, was to better understand and characterize the content of social networking sites. The aim was to develop tools tailored to teenagers in order to prevent, inform and raise awareness of food and health issues on social networks, in partnership with local players and schools in particular.

The €25,000 allocated to the project was used to **fund field surveys** in 7th and 8th grade classes, to **understand how teenagers use social networks, their practices and the impact of their content consumption on their diet, as well as their purchases in terms of food and sport**. The polls revealed the **impact of social networks on their eating and sports habits**, and raised some real issues, particularly in relation to grossophobia and eating disorders. Analysis of these results led to the **creation of an awareness-raising tool for secondary school students: a comic strip covering a wide range of themes**, including body shaming, fake diets, cosmetic surgery, filters on social networks, and so on. The comic is intended to be distributed widely to students, as well as to people working in the field of education.

Based on these initial results, the project has since obtained an extra €100,000 in funding for a thesis on the subject and now wants to extend the program to high schoolers.

Thanks to funding from the Roquette Foundation for Health, these three projects have significantly advanced research in understanding the links between nutrition and health. With their innovative approach, they have explored various themes to better address the challenges of our diet. The Roquette Foundation for Health is pleased to support these works that contribute to promoting a healthy and balanced diet for our well-being.

About the Roquette Foundation for Health

Created in November 2017, under the aegis of the Fondation de France, the Roquette Foundation for Health supports innovative or educational projects in the fields of food and nutrition. Through the projects it supports, the Foundation's mission is to primarily act in favor of children and young adults across three areas of intervention: facilitating access to healthy and sustainable food for the most vulnerable, improving knowledge on the links between food and health, promoting sustainable eating habits that are beneficial to health. To know more, click here on [the link](#).

About INRAE

INRAE, the French National Research Institute for Agriculture, Food and the Environment, is a major player in research and innovation. The institute brings together a community of 12,000 people, with 272 research, service and experimentation units located in 18 centers throughout France. As a targeted research institute, it is one of the world's leading research bodies in agricultural and food sciences, plant and animal sciences, and environmental ecology. It is the world's leading research organization specializing in agriculture, food and the environment. INRAE's ambition is to be a key player in the transitions needed to meet the world's major challenges.

Faced with a growing population and the challenge of food security, climate change, increasing scarcity of resources and declining biodiversity, the Institute has a major role to play in developing solutions and supporting the necessary acceleration in agricultural, food and environmental transitions.

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