

# **2024 Activity Report**

## **Editorial**

Our intestine naturally hosts thousands of billions of microorganisms, which make up our intestinal microbiota. All over the world, research is progressing to gain a better understanding of the intestinal microbiota's role in and its effect on different diseases. This research leads to new hope: the potential to prevent or even treat these illnesses in a better way.

This is the purpose the Biocodex Microbiota Foundation has been dedicated to since its creation in 2017. Contributing to this research effort, by financing projects selected due to their scientific quality, is our sole objective. It is the reason why the Foundation has established various independent scientific committees made up of recognized experts in the field of microbiota. I would like to take this opportunity to thank them personally for participating in this project.

The 2024 target was reached, as 9 national research projects and 1 international project on the intestinal microbiota were awarded a research grant.

Furthermore, in 2021 the Foundation set up an award to reward innovative projects in countries with limited economic resources: the "Henri Boulard" award. In 2024, 4 of these grants were allocated.

I have absolutely no doubt that, over the years to come, new discoveries will enhance our knowledge about microbiota and I am convinced that the Foundation will be able to play a significant role in this progress.

Xavier Roux President of the Biocodex Microbiota Foundation

### A few words about the Foundation

Biocodex has played a key role in the sphere of microbiota for more than 70 years, with the discovery and worldwide marketing of the *Saccharomyces boulardii* CNCM I-745 probiotic.

It was only natural, therefore, that it decided to invest in research on microbiota by creating a company foundation, managed by an 8-member board of directors split into three committees (Founder's Committee, Biocodex Staff Representatives' Committee, Experts' Committee).

The Board of Directors has been reformed. It now comprises:

- Xavier ROUX, Director of Microbiology Department, Biocodex, Compiègne France
- Maxime PROST A LA DENISE, Medical Affairs Director France, Biocodex, Gentilly France
- Dirk CHARLIER, Medical Science Liaison Manager, Biocodex Benelux, Brussels- Belgium
- Karine BARROIS, Director of Global Training, Biocodex, Gentilly France
- David FONTANA, General Manager, Biocodex Vietnam, Ho Chi Minh City Vietnam
- Harry SOKOL, Gastroenterology Professor, Department of Gastroenterology, Saint-Antoine Hospital, Paris - France
- Lynne MCFARLAND, Infectious Disease Epidemiologist, Seattle USA
- Miriam ALVES, Investigative reporter and Science journalist, Oeiras Portugal

The updated list of members of the Board of Directors is in Appendix 1.

The Foundation has also changed address. It is now at 22 rue des Aqueducs, 94250 Gentilly, France. This modification was approved by the board of directors at its meeting held on 30<sup>th</sup> September 2024 and the Prefecture was informed of this by letter on 17<sup>th</sup> October 2024. This modification was approved by the Prefecture in its letter date 3<sup>rd</sup> December 2024 and published on the website of the Official Gazette on 17<sup>th</sup> December 2024. A copy of the publication in the Official Gazette is in Appendix 2.

Two types of calls for research projects are issued by the Foundation: national and international.

**Internationally**, a call for research projects is issued every year on a specific theme relating to the intestinal microbiota. The international scientific committee is firstly responsible for defining this theme, then for selecting, based on objective criteria, the project which will be supported and financed by the Foundation.

This committee comprises:

- Harry SOKOL, Gastroenterology Professor, Department of Gastroenterology, Saint-Antoine Hospital, Paris - France
- Joel DORE, Research and scientific director of the MetaGenoPolis service unit (INRA), Jouy-en-Josas - France
- Francisco GUARNER, Consultant of Gastroenterology, Barcelona Spain
- Christoph HÖGENAUER, Gastroenterologist, Head of endoscopy unit and IBD clinic, department of Gastroenterology and Hepatology, Medical University of Graz Austria
- Marie JOOSSENS, Professor of Microbiology, Ghent University, Ghent Belgium
- Nicola SEGATA, Professor and Head of the laboratory of computational Metagenomic, University of Trento, Trento - Italy
- Magnus SIMREN, Professor of gastroenterology, Senior Consultant, Gothenburg Sweden
- Elena VERDU, Associate Professor at the division of Gastroenterology, Dep of Medicine, McMaster University Canada
- Gary WU, Professor in Gastroenterology, Philadelphia USA

**Nationally**, calls for research projects have been put in place in a number of countries: Belgium, Canada, Nordics (Estonia, Finland, Latvia, Lithuania), France, Morocco, Mexico, Poland, Portugal, Russia, Türkiye, Ukraine and the USA. Local scientific committees made up of independent experts have been put in place in each of these countries and they are tasked with selecting the projects.

Lastly, the Henri Boulard International Award is judged by an independent panel comprising:

- Patrick DE BOEVER (Belgium), Director of Research and Valorization at the University of Hasselt
- Vanessa CARTER (South Africa), AMR patient survivor and One Health Advocate
- Robert SEBBAG (France), Doctor of Medecine, Department of infectious diseases, Hôpital de la Salpétrière

The Foundation, which was set up in 2017 for a duration of 6 years, was extended in 2022 for another 3 years, covering the period 2023 to 2025.

### Activity in 2024

### 2024 International Call for Projects

The call for international projects, issued in July 2023 by way of an email sent to targeted learned societies, research laboratories or researchers deemed likely to be interested in the selected theme for this call for projects (*"Rôle of gut microbiota in the mechanisms of pain"*) led to the Foundation receiving, as of 30<sup>th</sup> November 2023, 48 compliant applications, from 24 different countries.



The International Scientific Committee, gathered in person and by teleconference in Prague on 4<sup>th</sup> March 2024, selected **Dr Nicolas CENAC**'s project, which will take place over three years.

This researcher from the Digestive Health Research Institute at INSERM U1220 (Toulouse, France) is researching the subject *"Functional microbiota dysbiosis induces visceral pain : role of maternal milk on microbiota implantation under stress condition"*.

His project, therefore, receives a grant of  $\pounds$ 200,000, paid in 3 respective instalments of 100,000 Euros (initial payment), then 50,000 Euros after 12 months and 50,000 Euros after 24 months. The last two payments are on condition of receipt of an annual activity report demonstrating the study's progress.



The Foundation's Board of Directors, meeting via videoconference on 7<sup>th</sup> March 2024, approved this selection.

### 2024 National Call for Projects

Nationally, 9 calls for research projects were issued in Belgium, Canada, Nordics (Estonia, Finland, Latvia, Lithuania), France, Mexico, Poland, Portugal, Russia, Ukraine and the USA:

- 9 applications were selected and received research grants
- No research grant could be offered in Russia given the geopolitical situation. Exceptionally, Morocco and Türkiye were not able to organize the awarding of grants in 2024.

In total, 119 research projects were submitted in 2024.

The 2024 winners of these calls for projects, as well as the amounts of the corresponding grants, are listed in the table below.

Information concerning calls for projects is also available on social media.



https://www.linkedin.com/company/biocodexmicrobiotafoundation/

https://www.biocodexmicrobiotafoundation.com/national-research-grant

### List of winners of 2024 calls for national projects

| Country  | €      | Nb | Winner  | Project  |
|----------|--------|----|---|--|
| Nordics  | 40 000 | 35 | <b>Dr. Oliver AASMETS</b> University of Tartu, Finland  | Multi-omic integration for improving the risk estimation of type 2 diabetes  |
| France   | 25 000 | 22 | <b>Dr. Drago CIOCAN,</b> Hôpital Antoine-<br>Béclère Paris  | Role of intestinal microbiota in disorders caused by alcohol misuse  |
| Portugal | 25 000 | 6  | <b>Pr. Ana MARGARIDA ALMEIDA</b><br>Instituto de Medicina Molecular João Lobo<br>Antunes (iMM) Lisbonne   | AGEWISE: Unravelling the gut-hormone axis in Women's Ageing  |
| Belgium  | 25 000 | 7  | <b>Dr. Sarah AHANNACH</b><br>Department of Bioscience Engineering,<br>University of Antwerp   | Towards a better understanding of a Gut-Vagina Axis by investigating the effects of Ramadan fasting on Gut and Vaginal Microbial Communities                           |
| Poland   | 25 000 | 9  | Associate Professor dr. hab. Agnieszka<br>ZABŁOCKA<br>Ludwik Hirszfeld Institute of Immunology<br>and Experimental Therapy, Polish<br>Academy of Sciences | Innovative Neuroprotection: The Impact of Extracellular<br>Vesicles from Commensal Bifidobacterium Strains on<br>Blood-Brain Barrier Protection in Inflammation        |
| Ukraine  | 10 000 | 15 | <b>Volodymyr DIDENKO</b><br>Institute of Gastroenterology of the<br>National Academy of Medical Sciences of<br>Ukraine                                    | Features of the intestinal microbiome and its metabolites in patients with metabolic-associated steatotic liver disease depending on the immune response to SARS-CoV-2 |

| Mexico | 25 000   | 12 | <b>Dra. Kirvis Janneth TORRES POVEDA</b><br>National Institute of Public Health<br>(Instituto Nacional de Salud Pública                      | Role of <i>Fusobacterium spp</i> in HPV-Mediated<br>Carcinogenesis   |
|--------|----------|----|--|--|
| USA    | \$50 000 | 15 | <b>Dr. Alexis LEVEE</b><br>City of Hope Comprehensive Cancer<br>Center Hematology & Medical Oncology   | Fecal microbiome and association with clinical outcome<br>and the tumor microenvironment in patients receiving pre-<br>operative pembrolizumab with radiation therapy in early-<br>stage triple-negative breast cancer |
| Canada | 25 000   | 9  | <b>Dr. Emerson KROCK</b><br>The Royal Institution for the Advancement<br>of Learning, Faculty of Dental Medicine<br>and Oral Health Sciences | Painful autoantibody cross-reactivity with the gut microbiome in fibromyalgia  |

| Country | €      | Nb  | Winner |     | Project |  |
|---------|--------|-----|--------|-----|---------|--|
| Morocco | 10 000 | N/A |        | N/A |         |  |
| Turkey  | 25 000 | N/A |        | N/A |         |  |
| Russia  | 25 000 | N/A |        | N/A |         |  |

### Presentation of some 2024 national grants to winners

# France



# Belgium





Mexico

# Nordics





# Canada

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### 2025 call for international projects

At its meeting on 4<sup>th</sup> March 2024, the Scientific Committee chose the theme that would be the subject of the 2025 international call for projects: *"Transformation of bile acids by the gut microbiota : functional implications for the host and consequences for human health"*.



This call was issued within the scientific community using the same method as for previous calls for projects: email and letters sent in a targeted manner to learned societies, research laboratories or researchers who would be liable to be interested in the theme.

At the same time, the terms and conditions of applying were published on the Foundation's website:

www.biocodexmicrobiotafoundation.com

As of the closure date for submissions, 30<sup>th</sup> November 2024, 71 applications from 31 different countries had been submitted. The International Scientific Committee is tasked with assessing them and choosing the winner at its annual meeting, scheduled in March 2025.

#### **The Henri Boulard Award**

For the Henri Boulard Award, 4 projects from the following geographical areas can receive a grant: Asia, Africa/Middle East and Latin America.

In 2024, 18 applications were received:

- 10 from Africa (Cameroon, Kenya and Nigeria)
- 5 from Latin America (Colombia and Mexico
- 3 from Asia (Vietnam and Thailand)

13 of these applications met the eligibility criteria for the Boulard Award.

The judging panel met in person in Paris on 14<sup>th</sup> November 2024 and awarded grants to the 4 following applications:

- 1. Dr Alle GBENGA, Nigeria for his project entitled: "De-normalizing metronidazole use as first line treatment of acute diarrhoea in Nigeria".
- 2. Dr Luz de Maria BRETON-DEVAL, Mexico for her project entitled: "Metagenomic approach to monitoring pathogens and antibiotic resistance genes in public wastewater system in Mexico".

- 3. Dr Thuy HA DANG, Vietnam for his project entitled: "Orchestrating microbiome in pediatrics : a paradigm shift from maternal health to lifelong wellness via early-life interventions".
- 4. Pr Lucky NEGBOSI NWIDU, for his project entitled: "Restoring gut health in Nigeria's vulnerable children: the power of Ogi as a probiotic solution".

All information concerning this award is available at :

https://www.biocodexmicrobiotafoundation.com/henri-boulard-award

## New initiatives planned in 2025

### Creation of a new call for international projects dedicated to women's health

In 2025, the Biocodex Microbiota Foundation hopes to broaden its work by rewarding research projects relating to the involvement of microbiota in women's health. This major public health issue is subject to increasing interest within the scientific and medical community, but research work remains limited due to the amount of investment required.

The Foundation has chosen, therefore, to support this area of scientific research by creating an annual award of 200,000 Euros, whose aim is to gain a better understanding of the role microbiota play in conditions such as infertility, recurrent bacterial infections, endometriosis or complications during pregnancy.

This award will be open, without any geographical restrictions, to researchers, doctors or pharmacists working in gynecology, obstetrics, microbiology, infectiology, internal medicine or oncology.

#### 2025 call for national projects

Nationally, a call for projects will be issued in Romania, in addition to the 11 existing calls for projects (Belgium, Canada, Nordics (Estonia, Finland, Latvia, Lithuania), France, Morocco, Mexico, Poland, Portugal, Türkiye, Ukraine and the USA.

No grant will be on offer in Russia due to the geopolitical situation.