

## FUNDEPAG SELECTION PROCESS No. 03/2021

### NOTICE OF SELECTION PROCESS FOR POST-DOCTORAL FELLOWSHIP FOR BIOTECHNOLOGICAL PLATFORM OF HEALTHY INGREDIENTS (PBIS)

#### PD Fellowship Special Lipids

**Duration: 24 months**

**Area of knowledge:** Food Science and Technology

**FAPESP process number:** 2020/07015-7

**Project title:** Synthesis, chemical and nutritional characterization of low-calorie structured lipids for application in foods

**Number of vacancies: 1**

**Main researcher:** Profa.Dra. Gabriela Alves Macedo

**Unit/Institution:** Faculty of Food Engineering - UNICAMP

**Deadline for registration:** November 30

**Posted in:** October 27

**Location:** FEA/UNICAMP - Cidade Universitária Zeferino Vaz - Barão Geraldo, Campinas - SP, 13083-970, Brazil

**Registration email:** [pbis.fa@ital.sp.gov.br](mailto:pbis.fa@ital.sp.gov.br), cc. [macedoga@gmail.com](mailto:macedoga@gmail.com)

#### 1. Summary and objectives:

The Agriculture Research & Development Foundation (FUNDEPAG) makes public the opening of applications for a post-doctoral fellowship associated to the Center for Research Targeted to Problems in State of São Paulo (NPOP), Biotechnological Platform for Healthy Ingredients (PBIS) – supported by FAPESP in partnership with a consortium of industries and coordinated by the Institute of Food Technology (ITAL/SAA, Campinas-SP).

The candidate will collaborate with researchers from the NPOP-PBIS. This project will be developed at the Faculty of Food Engineering at UNICAMP, with the objectives of establishing and improving four integrated biotechnology platforms (PBI) aimed at the production of ingredients and healthy foods, by reducing the caloric value, reducing the risk of degenerative diseases and inserting functional health-promoting ingredients, during 24 months.

Summary of the program and projects can be found on [https://ital.agricultura.sp.gov.br/emkt/download/NPOP\\_PBIS.pdf](https://ital.agricultura.sp.gov.br/emkt/download/NPOP_PBIS.pdf)

The researcher will contribute in line with the main objectives of the project:

1. Develop processes for the production of structured lipids (LE) with different matrices, with the appropriate scaling of this production, ensuring desired technological and nutritional properties defined by the type of lipid application and for total caloric reduction.

3. Carry out in vivo tests of lipid absorption and performance regarding the acute and chronic effect on obesity and processes associated with inflammatory diseases, comparing with data already obtained in the literature.
2. Characterization of the lipids obtained in terms of melting and crystallization profiles and oxidative stability for industrial application in different types of food products, in order to reduce the caloric content;
4. Develop technology to incorporate these lipids in food, through encapsulation, nanoemulsification, drying or atomization;

## **2. Requirements and skills required for the candidate:**

- Have completed a doctorate, and obtained the title of doctor in the last 7 years;
- Graduation in Pharmacy, Nutrition, Biology, Biotechnology, Food Engineering, Chemical Engineering or related fields;
- Ability to work independently and in collaboration with a multidisciplinary research group;
- Knowledge of the English language for reading, scientific writing and conversation;
- Scientific production in indexed journals (be the first author in at least three scientific publications in indexed journals);
- Preferably experience abroad;

### **Experience in:**

- Preparation of enzymatic and chemical reactions for the interesterification of oils and fats;
- Main techniques for characterization of oils and fats (DSC, NMR, HPSEC, Texture);
- Bench reactor operation, kinetic studies and chemical and enzymatic interesterification reaction mechanisms;
- Analytical techniques (GC; HPLC; MS; etc.).
- Tests with laboratory animals;

## **3. Documents, deadlines and form of submission:**

The documents listed below must be sent electronically (**in a single PDF**) to the evaluation committee, to the e-mails [pbis.fa@ital.sp.gov.br](mailto:pbis.fa@ital.sp.gov.br), in copy [macedoga@gmail.com](mailto:macedoga@gmail.com), with the title "**Post Doctorate – NPOP-PBIS – Special Lipids Platform**":

- a) Curriculum summary in the FAPESP model (maximum of 4 pages), according to the recommendations available at <http://www.fapesp.br/5266>.
- b) Motivation letter showing your adherence to the prerequisites and skills required in item 2 (maximum of 500 words).
- c) Doctoral degree

The vacancy is open to Brazilians and foreigners candidates. The assessment will be based on the curriculum and proof of the required experiences.

Any questions or clarifications about the notice, get in touch through the aforementioned emails.

The deadline for applications is **November 30, 2021**. The final result of the selection process will be communicated to candidates by email.

FUNDEPAG Scholarship in the amount of **R\$ 7,373.10/month**.

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