**IMAS MASTER Academic Year 2023 - 2024**

**Proposal of M1 Internship**

**PROJECT TITLE AND SUMMARY:**

**Innovative project to develop an *in Silico* method for determining the glycemic indexes of food products.**

The proposed internship project, as part of the IGBalance activity hosted by LaPEC, lies between academic research and technological innovation in the agri-food sector.

Driven by growing consumer demand, food manufacturers today have to consider the quantity and quality of the carbohydrates they use in food and beverage recipes. IGBalance provides a scientific solution within the framework of a defined protocol, enabling the glycemic index of recipes to be measured, before or after they are marketed.

**The aim of the internship is to participate in the development of an innovative approach to an *In Silico* model for estimating glycemic indexes based on the nutritional composition of solid or liquid foods offered by industry.**

In Silico refers to a method of study using computers (whose chips are mainly made of silicon) to analyze data and model phenomena, particularly in biology and bioinformatics.

Thus, you will need to be able to review the literature on the subject, as well as compile a large quantity of data from the literature in order to build a database. This database is the key to build the *In Silico* approach for glycemic index prediction.

In addition, you will be able to observe and/or take part in manipulations to measure glycemic index either in vitro (static digestion model) or in vivo (human clinical study), methods which are already in routine use.

**HOST UNIT:**

Laboratoire de Physiologie Expérimentale Cardiovasculaire UPR4278 ;

UFR-ip Sciences, Technologies, santé ;

Business Unit IGBalance

Campus INRAE –

Site Agroparc, 228 route de l'aérodrome,

84914 AVIGNON

**MAIN ACTIVITIES:**

- Literature review

- Scientific watch on the subject

- Building a database

- Statistical analysis

**EXPECTED SKILLS:**

- Motivation and capacity for individual work

- Enhanced data collection skills

- Strong command of Excel-type IT tools

- Knowledge of human nutrition and health

- Desired skills in statistical analysis or computer modeling-

**INDEMNISATION:**

- based on EUR Implanteus Standards

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Duration: 4 months or as expected

Dates: between February to June 2024

Level: Master 1

Internship profile: Research