

RECRUITING AND TRAINING PHYSICIANS-SCIENTISTS TO EMPOWER TRANSLATIONAL RESEARCH
A MULTILEVEL TRANSDISCIPLINARY APPROACH
FOCUSSED ON METHODOLOGY, ETHICS AND INTEGRITY IN BIOMEDICAL RESEARCH



RESEARCH TRAINING PROGRAM

I. General Information

Title of the research project:

Soy-Induced Intestinal Inflammation in Zebrafish: A New Approach to the Study of Chronic Inflammatory Bowel Diseases

Name and address of the department:

Department of Medicine and Surgery

Student's supervisor:

Prof Giovanni Porta

II. Description of the project

(max 1500 characters, spaces included)

Background

Chronic inflammation represents a tissue response to low but persistent harmful stimuli, such as remnants of infection, autoantigens, tumors, and chronic metabolic diseases. It is therefore clear that the problem of chronic inflammation does not arise when the inflammatory state is initiated, but when it loses the ability to resolve. We obtain in zebrafish an animal model of Bowel disease in order to investigate the relationship between gut tissues gene expression and the microbioma in Bowel pathogenesis.

The aim of the project is to evaluate the interaction between the molecular response of the gene expression of the intestine's tissues and the microbioma in a chronic gut infection.

The techniques employed include DNA extraction and real-time PCR to assess gene expression in the gut, as well as NGS methods to explore the 16S microbiome taxonomy

The Department start working on this project at the end of the 2023.

Type of research project:

☐ Basic science ☐ Clinical research without lab work ☒ Clinical research with lab work

III. Student's involvement

The student will mainly observe	<input type="checkbox"/> YES <input type="checkbox"/> NO
The student will observe the experiments but will be involved in data analysis	<input type="checkbox"/> YES <input type="checkbox"/> NO
The student will take active part in experiments ("lab work")	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
The student will take active part in clinical examination (clinical research)	<input type="checkbox"/> YES <input type="checkbox"/> NO
The student will be allowed to work with patients	<input type="checkbox"/> YES <input type="checkbox"/> NO

What are the tasks expected to be accomplished by the student?

(max 500 characters, spaces included)

What is expected from/what will be the general outcome of the student?

☒ To prepare a poster / presentation / scientific report / abstract

☐ The student's name will be mentioned in a future publication

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-
- ☐ Opportunity to present together with the supervisor the results on a conference
☐ No specific outcome is expected

IV. Requirements

What skills are required from the student?

The student will be required to learn the basic skills in molecular biology
(max 500 characters, spaces included)

Is there any special knowledge or a certain level of studies needed?

☐ Subjects passed:

☐ Previous experience with:

☐ Certificate of:

x None

Are there any legal limitatons in the student's involvement in the project?

☐ YES x NO

If yes, what are the limitations?

For the use of students considering participating in the project, further information can be found from the following references: Prof Giovanni Porta

Giovanni.porta@uninsubria.it

348-7630619

Via Dunant 5,

Secondo piano

21100

Varese

(please add specific references, max 3)

V. Schedule

Duration of the project:

☐ 1 month ☐ 2 months x 3 months

There are approximately 3 hours of work per day.

Available months: ALL

☐ January ☐ February ☐ March ☐ April ☐ May ☐ June
☐ July ☐ August ☐ September ☐ October ☐ November ☐ December

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How many students can you accept to the project at the same time? 3

Special remarks:

(e.g., students should bring a stethoscope and a white coat, any vaccinations required, etc.)

Lab coat

NOTE: a scientific report is required at the end of the program