

RECRUITING AND TRAINING PHYSICIANS-SCIENTISTS TO EMPOWER TRANSLATIONAL RESEARCH
A MULTILEVEL TRANSDISCIPLINARY APPROACH FOCUSED ON METHODOLOGY, ETHICS AND INTEGRITY IN
BIOMEDICAL RESEARCH - 2018-2023



FONDAZIONE
MONDINO
Istituto Neurologico Nazionale
e Centro Scientifico IRECCS

RESEARCH TRAINING PROGRAM

I. General Information

Title of the research project:

MED-PARK Trial: Randomized study on the effect of the Mediterranean Diet on Parkinson's disease

Name and address of the department:

Centro di Ricerca in Farmacologia Medica, Polo di Ricerca Biomedica Monte Generoso, Via Monte Generoso n. 71, Varese

Student's supervisor:

Franca Marino

Student's tutor:

Elenamaria Pirovano

II. Description of the project

(max 1500 characters, spaces included)

Background

Parkinson's disease is the second most frequent neurodegenerative disease and the prevalence is increasing. Currently, there are no disease-modifying treatments available and symptomatic treatment consists of substitution therapy with dopaminergic agents. Therefore, it is imperative to identify interventions easily applicable by the patients to alter the course of the disease. The Mediterranean diet might reduce the symptoms of the disease.

What is the aim of the project?

The project's aim is to evaluate the safety and efficacy of the Mediterranean diet in ameliorating motor and non-motor patient-reported symptoms. Moreover, an investigation into the relationship between diet, symptomatology, immunophenotype and microbiome is planned.

What techniques and methods are used?

This is an interventional, non-pharmacological, superiority, randomised, controlled, masked study with two parallel groups: the control group will be asked to maintain the usual diet, whilst the intervention group will be instructed to follow a Mediterranean dietary pattern for six months. Additionally, the following questionnaires will be administered: the MDS-UPDRS, the Non-Motor Symptoms Scale, the 36-Item Short Form Health Survey, the Saltin-Grimby Physical Activity Level Scale, and the Patient Assessment of Constipation Quality of Life.

When did the department start working on this project? (year)

2023

Type of research project:

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

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III. Student's involvement

- The student will mainly observe YES NO
- The student will observe the experiments but will be involved in data analysis YES NO
- The student will take active part in experiments ("lab work") YES NO
- The student will take active part in clinical examination (clinical research) YES NO
- The student will be allowed to work with patients YES NO

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

(max 500 characters, spaces included)

The student will learn how to manage and organize a clinical trial. S/he will be involved in study's organization, taking active part in clinical examination of PD patients and collaborating in collecting and recording patients' clinical data. S/he will also learn to analyse and interpret data and formulate his/her first scientific report.

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
- 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?

(max 500 characters, spaces included)

Ability to work in team, collaboration and communication skills, knowledge of Scientific English.

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

- Subjects passed:
Pharmacology (required), Neurology (required)

Previous experience with:

Certificate of:

None

Are there any legal limitatons in the student's involvement in the project? YES NO

If yes, what are the limitations?

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

(please add specific references, max 3)

Cosentino, M., Comi, C., & Marino, F. (2019). **The vermiform appendix in Parkinson's disease: At the crossroad of peripheral immunity, the nervous system and the intestinal microbiome.** *Autoimmunity Reviews*, 18(9), 102357-102357.

Kustrimovic, N., Comi, C., Magistrelli, L., Rasini, E., Legnaro, M., Bombelli, R., ... & Cosentino, M. (2018). **Parkinson's disease patients have a complex phenotypic and functional Th1 bias: cross-sectional studies of CD4+ Th1/Th2/T17 and Treg in drug-naive and drug-treated patients.** *Journal of neuroinflammation*, 15(1), 1-17.

Paknahad, Z., Sheklabadi, E., Moravejolahkami, A. R., Chitsaz, A., & Hassanzadeh, A. (2022). **The effects of Mediterranean diet on severity of disease and serum Total Antioxidant Capacity (TAC) in patients with Parkinson's disease: a single center, randomized controlled trial.** *Nutritional neuroscience*, 25(2), 313-320.

V. Schedule

Duration of the project:

1 month 2 months 3 months

There are approximately 5 hours of work per day.

Available months:

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

How many students can you accept to the project at the same time? 1

Special remarks:

Students should bring a white coat. Vaccination against tetanus and HCV are strongly recommended.

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