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

RESEARCH TRAINING PROGRAM

I. General Information

Title of the research project:
Tracking disease progression in neurodegenerative diseases

Name and address of the department:
Department of Translational Medicine, Section of Neurology, Maggiore Hospital, Novara and S. Andrea Hospital Vercelli, Italy
Student's supervisor:
Prof. Cristoforo Comi

II. Description of the project

(max 1500 characters, spaces included)
Background
Neurodegenerative diseases (NDs) are frequent and disabling conditions, whose progression cannot be currently arrested by pharmacological treatment.
Such overwhelming scenario calls for specific efforts aimed at ameliorating the standards of translational research in NDs. In this context, to establish an effective tracking of NDs evolution, taking advantage of both clinical and biological data collection, is of utmost importance to identify the molecular determinants on one side and potential pharmacological interventions on the other.
What is the aim of the project?
Our project is aimed at putting together clinical and biological data to get insights into NDs pathophysiology.
What techniques and methods are used?
Identification and collection of outcome measures; sample collection and storage; sample preparation and basic lab work.
When did the department start working on this project? (2006)

Type of research project:
☐ Basic science   ☐ Clinical research without lab work   x Clinical research with lab work

III. Student's involvement

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

What are the tasks expected to be accomplished by the student?
(max 500 characters, spaces included)

The student will learn patients' assessment, collection and recording of clinical data. Sample collection will also be involved. Acquisition of some basic laboratory techniques and a good level of communication and networking with lab staff will be mandatory.

What is expected from/what will be the general outcome of the student?
x 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?
x Subjects passed:
_Immunology and genetics required, neurology preferred

☐ Previous experience with:
_____

☐ Certificate of:
_____

☐ None

Are there any legal limitations 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:
1: Vecchio D, Crespi I, Virgilio E, Naldi P, Campisi MP, Serino R, Dianzani U, Bellomo G, Cantello R, Comi C. Kappa free light chains could predict early disease course in multiple sclerosis. Mult Scler Relat Disord 2019;30:81-84.

2: Kustrimovic N, Comi C, Magistrelli L, Rasini E, Legnaro M, Bombelli R, Aleksic I, Blandini F, Minafra B, Riboldazzi G, Sturchio A, Mauri M, Bono G, Marino F, Cosentino M. Parkinson's disease patients have a complex phenotypic and functional Th1 bias: cross-sectional studies of CD4+ Th1/Th2/T17 and Treg in drug-naïve and drug-treated patients. J Neuroinflammation. 2018 Jul 12;15(1):205.

3: Corrado L, De Marchi F, Tunesi S, Oggioni GD, Carecchio M, Magistrelli L, Tesei S, Riboldazzi G, Di Fonzo A, Locci C, Trezzi I, Zangaglia R, Cereda C, D'Alfonso S, Magnani C, Comi GP, Bono G, Pacchetti C, Cantello R, Goldwurm S, Comi C. The Length of SNCA Rep1 Microsatellite May Influence Cognitive Evolution in Parkinson's Disease. Front Neurol. 2018 Mar 29;9:213.

V. Schedule

Duration of the project:
x 1 month   x 2 months   x 3 months

There are approximately ___6___ hours of work per day.

Available months:
x January   x February   x March   x April   x May   x June
x July   x August   x September   x October   x November   x December

How many students can you accept to the project at the same time? ___2 Sep-May, 1 June-Aug_

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

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