



Universidad
de Navarra

Research Rotation (F. Medicina)

Guía docente 2023-24

PRESENTACIÓN

Research

Rotation is offered to selected students from the 2nd academic year of the Medical Degree. Duration is offered in a research center or department of a national or foreign hospital or university.

The subject can be taken in three modes: I, II and III, which correspond to the number of months.

Teacher in charge of the subject: Dr. [Javier Gómez Ambrosi \(CV\)](#). (Researcher- Associate Professor) Metabolic Research Lab – Dpt. of Endocrinology and Nutrition at the Clínica Universitaria

Coordinator for the exchange program: Cristina Pérez Guembe (cpguembe@unav.es)

Duration: one, two or three months.

Number of ECTS credits: 3 ECTS (one month), 6 ECTS (two months), 9 ECTS (three months).

Number of hours of student work:

a minimum of 140 hours of practical experience per month. In addition, the student will have to

Requirements:

to be accepted by the School of Medicine of the University of Navarra for the program of practical

Type of subject: Elective.

Language for the course: the language of the receiving laboratory.

Degree: Medical Degree

Module: Module VI: Electives

Topic: Topic I: Electives

COMPETENCIAS

Basic competences



- BC1: Possess and understand knowledgeable facts that serve as a basis or opportunity for the development /or application of ideas, frequently within the context of research.
- BC2: The students will be able to apply acquired knowledge and problem solving abilities to
- BC3: The students will be able to integrate concepts and manage the complex task of drawing
- BC4: The students will learn to relay their conclusions - and the most recent facts and reasoning supporting said conclusions- to specialized persons
- BC5: The students will have acquired learning abilities that will permit them to continue studies in a directed and autonomous manner.

General competences

- GC1: Ability to deal with biomedical challenges in depth, from different viewpoints, identifying current day science.
- GC2: Identification of significant questions or hypotheses regarding biomedical issues or problems
- GC3: Possession of creative ability and originality in order to be able to respond to the questions
- GC5: Possession of technical ability to obtain precise and reproducible results which can be
- GC6: Possession of critical ability, both when reading scientific biomedical literature and when
- GC7: Ability to orally communicate biomedical research matters or data in a fluent way, in which the presentation is intended.
- GC8: Ability to write correct, precise and well-structured texts about different types of biomedical research work.
- GC9: Ability to work in a team with allocated tasks and participate in work meetings, contributing

Specific competences

- SC1: Knowledge of the ethical principles which govern biomedical research in order to be able to
- SC2: Knowledge of the tools and techniques for oral and written expression which are appropriate
- SC3: Acquisition of an overall view of the general methodology used in biomedical research laboratories.
- SC4: Knowledge of the legal framework that regulates the experimental use of the most widely used animal species and the acquisition of key skills for handling them, as well as for designing
- SC5: Application of the scientific method and acquisition of skills in dealing with legislation,

METODOLOGÍA

The objectives will be established with the student's supervisor on a daily or weekly basis at the assigned Laboratory (or Research Center). Laboratories (or Research Centers) can be focused on any biomedical research topic.

Students will have the same degree of responsibility and will have to adhere to the same attendance

Each student must select those areas of knowledge, skills and competencies that he/she wants to acquire in the rotation. Among other aspects, it is expected that student:

- Have the ability to review and interpret relevant data from the literature within their topic of research



Universidad
de Navarra

- Be able to formulate hypotheses, collect and critically evaluate information for problem solving.
- Know how to design a research project according to a hypothesis.
- Inform those who supervise their work in the laboratory about the progress of their experiment.
- Acquire basic training for research activity in the laboratory (if necessary).
- Carry out the techniques and develop the practical skills requested of them according to their knowledge.
- Understand and interpret the statistical analysis used in the scientific papers of their interest. Be able to make an oral presentation in public of scientific reports.

PROGRAMA

It will be detailed by the host center.

ACTIVIDADES FORMATIVAS

Those provided by the host center

EVALUACIÓN

To obtain a pass in this subject it is necessary to obtain a final grade of 5 (50%) or above.

For the evaluation of the subject, the following aspects will be taken into account:

- The evaluation obtained from the Laboratory (or Research Center) in which the basic rotation has been done (30% of the mark).
- The quality of the report (35% of the mark).
- The oral presentation of the report (30% of the mark).
- Other considerations (5% of the mark).

Documentation that must be provided on the date indicated:

Prior to the presentation of the report, students must provide, on the date given, the following:

- The certificate of attendance signed by the supervisor at the receiving Laboratory (or Research Center).



Universidad
de Navarra

- The evaluation sheet signed by the tutor in charge of the period of practical experience.

Grades:

9.0-10: SB

7.0-8.9: NT

5.0-6.9: AP

0-4.9: SS

Those students with a final grade of 9 or above are eligible for Honors.

The report

In the report there must be clear statement of the author (first name, surname (s), year and the name of the student's clinical tutor at the Universidad de Navarra), name of the /university and country where the rotation was made, and also the dates of the rotation.

The written report must be written in English or in Spanish with a minimum length of 20 pages .

Front Page: the title of the study, the name of the student and the supervisor /project manager, and signed with the approval of the latter.

Abstract: summary of the work with a maximum length of 300 words.

Introduction: include the working hypothesis and specific objectives.

Material and Methods: describing in detail all the techniques learned or the subjects and methodology used in the study.

Results:

this section contains the data collected during experimentation. Much of the information may be



Universidad
de Navarra

Discussion:

interpret the results, explaining them and comparing them to the results of other works report

Conclusions: focus on what is important about the research.

References: list of the scientific sources used in the report.

Self-Evaluation:

should indicate what the student have learnt and to what extent the stay has contributed to the

Bookbinding

: the memory of the research project must be submitted spiral bound with transparent plastic c

3 copies of the report of the project on paper should be delivered before the given date.

1 electronic copy of the report in pdf format must be also sent by email to: jagomez@unav.es

The documentation submitted in electronic format must exactly match the memory on paper.

Oral presentation of the report

The oral presentations of reports will take place at the beginning of 1st semester (September or

The oral defense will be held publicly before a Committee and may be made in Spanish or Engli
15 minutes to answer questions by members of the tribunal.

The classroom and the order of intervention of the students will be indicated at least two week:

For the evaluation of the written report and oral presentation a Committee will be appointed fo



Universidad
de Navarra

The following will be evaluated: formal and structural aspects (presentation, writing, spelling, or especially that which can be considered as plagiarism (copy and paste) directly from other sources

Marks

The subjects are annual, thus the final note appears in the corresponding period, when the exam is held.

HORARIOS DE ATENCIÓN

To contact with the professor ask for an appointment by e-mail: Javier Gómez-Ambrosi - jagomez@unav.es

BIBLIOGRAFÍA Y RECURSOS

Bibliography provided by the host center