UNIVERSITAT DE BARCELONA

Facultat de Medicina
Plan Docent de la Asignatura 2: "Erythrocyte membrane defects"
Màster en Competencies Mèdiques Avançades - Anemias Raras i síndromes relacionados

GENERAL DATA

Subject: 2. ERYTHROCYTE MEMBRANE DEFECTS

Code:

Type: Optional

Schedule: To be defined

Departments involved: Medicine

Coordinator:
Joan-LLuis Vives Corrons (Departament de Medicina, Universitat de Barcelona, Unidad de Patología Eritrocitaria)

Academia:

1. Patricia Aguilar Martinez
2. Achille Iolascon
3. Paola Bianchi
4. Mariane de Montalembert
5. Béatrice Gulbis
6. David Rees
7. Immacolata Andolfo
8. Régis Peffault de la Tour
9. Antonio Risitano
10. Jecko Thachil

Subject Coordinador: Patricia Aguilar

Credits ECTS: 3

Subject total teaching time (in hours):75

- **Presential (teacher): 50**
- **Autonomous (student): 25**

Requirements for subject learning

Skills to be developed

TRANSVERSAL SKILLS

- Being able to interact with other medical specialists to advise them
- Ability to work in interdisciplinary teams and collaborate with other researchers together, act independently and use initiative
- Ability to teach and disseminate knowledge in the social environment in both expert and non-expert audiences, clearly and in different languages
- Ability to integrate knowledge and ways to deal with the complexity and formulate judgments based on limited information, but so thoughtful, considering social and ethical repercussions of the trials
- To keep up to date knowledge exposed in the field of the international scientific community, that is, to seek, obtain and interpret information obtained in biomedical databases and other sources
- Being able to know the principles of bioethics and medico-legal research and professional activities in the field of biomedicine

SPECIFIC SKILLS

- Knowing the epidemiological, pathogenic, clinical and therapeutic advances of RBC membrane defects.
- Know the most advanced and complementary clinical diagnostic examinations of major RBC membranopathies.
- Be able to recognize and properly interpret laboratory tests and/or procedures for the diagnosis of RBC membrane defects associated with or without characteristic morphological abnormalities.
- To develop, implement and evaluate practical clinical guidelines for patients with hereditary RBC membranopathies.

Subject Learning Objectives

A. General Objectives

The main objective of the course is to help training clinicians and researchers in the field of major RBC membrane abnormalities and congenital or acquired defects. In a very well defined unit of patient's care and excellence for translational research. RBC membrane defects are increasing their incidence due to immigration and their severe forms are associated with high morbidity.

B. Specific Objectives

To know in depth the RBC membrane and its defects, their etiological mechanism/s and their main clinical manifestations and research possibilities. Furthermore, to assess the results of clinical trials in the international development of new biological treatments cost-effectiveness studies.

Teaching programme

Subject 2: "Erythrocyte membrane defects"

Date	Topic	Chapter	Professor	Language
	2.1 Overview of the erythrocyte	2.1.1 Erythrocyte membrane structure (2h)	Patricia Aguilar Martinez	English
		2.1.2 Structural and functional proteins	Patricia Aguilar Martinez	English
		2.1.3 Genetics of erythrocyte membrane proteins (3h)	Achille Iolascon	English
		2.1.4 Classification of membranopatías (2h)	Achille Iolascon	English
	2.2	2.2.1 Clinical and laboratory diagnosis in	Paola Bianchi	English
		2.2.2 Molecular diagnosis (3h)	Achille Iolascon	English
		2.2.3 Treatment and clinical follow (3h)	Mariane de Montalembert	English
		2.2.4 Genetic counseling and prenatal diagnosis (3h)	Béatrice Gulbis	English
	2.3 Elliptocytosis	2.3.1 Clinical and laboratory diagnosis in children and adults (2h)	David Rees	English
		2.3.2 Molecular diagnosis (3h)	David Rees	English
		2.3.3 Treatment and clinical follow (2h)	David Rees	
		2.3.4 Genetic counseling and prenatal diagnosis (2h)	Achille Iolascon	English
	2.4	2.4.1 Clinical and laboratory diagnosis in	Immacolata Andolfo	English
		2.4.2 Molecular diagnosis (2h)	Immacolata Andolfo	English
		2.4.3 Treatment and clinical follow (2h)	David Rees	English
		2.4.4 Genetic counseling and prenatal diagnosis (2h)	Achille Iolascon	English
	2.5 Paroxysmal nocturnal	2.5.1 Pathophysiological and molecular bases (2h)	Régis Peffault de la Tour	
		2.5.2 Clinical diagnosis (3h)	Régis Peffault de la Tour	English
		2.5.3 Laboratory diagnosis. Peripheral blood and bone marrow (3h)	Régis Peffault de la Tour	English
		2.5.4 Investigations. Imaging techniques. Hemosiderinuria (2h)	Antonio Risitano	English

Methodology and General Organisation

A. **Main Lectures**: They will have a duration of 60 minutes; The first 40 minutes will be devoted to the exhibition of the teaching topic by the teacher and the remaining 20 minutes will be devoted to the interaction between students and teacher on the key issues of teaching topic theme (18 lectures= 18 hours).

B. **Interactive Seminars**: Will last 60 minutes and they will present case studies that the approach to analyze diagnostic and therapeutic evolution of patients with major erythropoietic defects (5 seminars = 5 hours).

C. **Student supervised task**: Students will prepare for approximately 1 hour each of the teaching classes / seminars and, for this, the teacher will provide a minimum of 2 articles in PDF format on the topic of the corresponding subject (class or seminar) (25 x 1 hour classes / seminars = 25 hours).

D. **Self Assessment** : At the end of the course (maximum two weeks after the last lecture), students must submit a portfolio summarizing skills acquired in this course (Independent task = 25 hours).

Attendance and degree of participation in lectures and interactive seminars (40%)
Realization of autonomous work, presentation and discussion with the teacher (60%)

Essential information resources

RELEVANT BIBLIOGRAPHY