

CoPGr CURRICULAR CHAMBER SUBJECTS PRESENTATION FORM

SUBJECT'S ACRONYM: **RNP5746**

SUBJECT'S NAME: Molecular Bases of Muscular Diseases

CURRICULUM/AREA: Neurology/17140

FOCAL AREA: Neurology

INITIAL VALIDITY (Year/Semester):

N. OF CREDITS: 04

Theoretical Classes: 02 Practical Classes, Seminars and Others: 08 Hours of Study: 05
DURATION IN WEEKS: 4

PROFESSOR(S) IN CHARGE:

USP Professor, n. 184041 – Claudia Ferreira da Rosa Sobreira

ACTUAL COSTS OF THE SUBJECT: BRL

(Presenting, if applicable, the budget foreseen for the year, as an attachment)

PROGRAM

OBJECTIVES:

- Discussing the physiopathological mechanisms of muscular diseases;
- deepening the knowledge on the molecular alterations in the skeletal muscles diseases;
- approaching study techniques of these molecular alterations.

JUSTIFICATION:

The technological development has enabled, in the last years, a growing advance in the knowledge on the molecular basis of the diseases attacking the human being. Particularly, the deep study of the physiopathology of muscular diseases is important for establishing the diagnosis on the determination of the action to be taken, including genetic counseling, and on the development of new forms of treatment, as well as the genes therapy.

The opportunity of discussing molecular bases of the muscular diseases, as well as the methods used for the understanding of the same with graduation students, physicians and non-physicians, can call the attention of the same to the development of researches which may contribute adding more knowledge to what is already known.

CONTENT (SYLLABUS):

THEORETICAL CLASSES:

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1. Myopathies: Definition and Clinical Manifestations
2. Instrumentation for the Investigation of the Physiopathology of the Muscular Diseases: from Histoenzymology to Molecular Biology.
3. Muscle Biopsy and Histoenzymology
4. Immunohistochemistry
5. Enzymatic Essays using Skeletal Muscle
6. Molecular Biology: PCR Techniques and DNA Sequencing
7. Molecular Biology: Southern Blot

8. Experimental Models in Muscular Diseases.

PRACTICAL CLASSES

1. Interpretation and discussion of results obtained by morphologic, histoenzymologic and biochemical of the skeletal muscle.
2. Discussion of results obtained by molecular analysis of muscular diseases.

SEMINARS

Three primary diseases of the skeletal muscles (A, B and C) will be selected for deepening the discussion. The selected myopathies can change from course to course, depending on the repercussion and importance of the most recent discoveries in the scientific context. Relevant aspects of the molecular bases of each one of the diseases, as well as the methodology used on the investigation of the physiopathology and scientific experimentation, will be analyzed and discussed in four consecutive seminars.

1. Clinical Aspects of Disease A.
2. Molecular Alterations in Disease A.
3. Repercussions of the Alterations Caused by the Disease A in the Structure and Function of the Striated Muscles.
4. Analysis of Experimental Models used in the Study of Disease A.
5. Clinical Aspects of Disease B.
6. Molecular Alterations in Disease B.
7. Repercussions of the Alterations Caused by the Disease B in the Structure and Function of the Striated Muscles.
8. Analysis of Experimental Models used in the Study of Disease B.
9. Clinical Aspects of Disease C.
10. Molecular Alterations in Disease C.
11. Repercussions of the Alterations Caused by the Disease C in the Structure and Function of the Striated Muscles.
12. Analysis of Experimental Models used in the Study of Disease C.

EVALUATION METHOD:

Performance and participation during the course;
-quality of the seminar presented;
-report on the theme of the seminar

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