



QUIMICA BIOLOGICA II

Programa teórico

Metabolismo del Hemo y enfermedades relacionadas

Biosíntesis del hemo, enzimas involucradas, propiedades y mecanismos de reacción. Regulación de la biosíntesis del hemo en células hepáticas y eritroides. Catabolismo del hemo: rol de la Hemo oxigenasa y sus productos de reacción. Hemoproteínas. Control de los niveles intracelulares de hemo, transportadores. Efectos pleiotrópicos del hemo sobre diferentes eventos biológicos. Hemo como regulador de la homeostasis celular. Enfermedades relacionadas con el camino biosintético del Hemo: Porfirias. Biología Molecular y Farmacogenética de las Porfirias. Sistema metabolizante de drogas: Polimorfismos del citocromo P450 y su relación con el desencadenamiento de las porfirias.. Porfiria experimental: modelos farmacológicos y genéticos. El laboratorio de las porfirinas.

Cinética enzimática

Cinética del estado estacionario. Reacciones uni y bireactantes. Modelos de velocidades iniciales, de inhibición por producto, producto alterno, dead-end y sustrato. Modelos de intercambio isotópico. Efecto del pH y la temperatura sobre la actividad enzimática.

Regulación de la actividad enzimática. Enzimas alostéricas: Modelos. Efectos Homotrópicos y Heterotrópicos. Cooperatividad positiva, negativa y mixta. Reactividad de la mitad de los sitios. Mecanismo Flip-Flop. Cooperatividad en enzimas monoméricas. Aplicación a casos reales.

Cáncer

Bioquímica y biología de la célula tumoral. Angiogénesis. Invasión y metástasis. Oncogenes y genes supresores tumorales. Terapias anticancerígenas: Quimioterapia, Bioterapia, Terapia fotodinámica. Nuevos tratamientos y perspectivas futuras. Proteómica: técnicas utilizadas y su aplicación en el diagnóstico y tratamiento del cáncer.

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Universidad de Buenos Aires
Facultad de Ciencias Exactas y Naturales

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Buenos Aires, 26 AGO 2013

VISTO:

la nota presentada por la Dra. Adali Pecci, Directora del Departamento de Química Biológica, mediante la cual eleva la información y el programa del curso de posgrado **Química biológica II**, que fue dictado durante el **primer cuatrimestre de 2013** (desde el 19/03/2013 al 05/07/2013), por la Dra. María Victoria Rossetti y colaboradores,

CONSIDERANDO:

Lo actuado por la Comisión de Doctorado de la FCEN el 06/08/2013,
lo actuado por la Comisión de Enseñanza, Programas, Planes de Estudio y Posgrado
lo actuado por este cuerpo en Sesión Ordinaria realizada en el día de la fecha,
en uso de las atribuciones que le confiere el Artículo N° 113° del Estatuto Universitario,

**EL CONSEJO DIRECTIVO DE LA FACULTAD DE CIENCIAS EXACTAS Y NATURALES
RESUELVE:**

Artículo 1°: Dar validez al dictado del curso de posgrado **Química biológica II** de 280 hs. de duración.

Artículo 2°: Aprobar el programa del curso de posgrado **Química biológica II** obrante de fs 43 a 50 del expediente de la referencia.

Artículo 3°: Aprobar un puntaje máximo de CINCO (5) puntos para la Carrera del Doctorado.

Artículo 4°: Aprobar un Arancel de 20 Módulos. Disponer que los montos recaudados serán utilizados conforme a lo dispuesto por la Resolución CD N° 072/03.

Artículo 5°: Comuníquese a la Dirección del Departamento de Química Biológica, a la biblioteca de la FCEN y a la Subsecretaría de Postgrado (con fotocopia del programa incluida fs 43 a 50). Cumplido, archívese.

1956

Resolución CD N° _____
SP/med/13/08/2013


Dra. MARIA ISABEL GASSMANN
SECRETARIA ACADEMICA ADJUNTA


Dr. JORGE ALIAGA
DECANO