UCL Université catholique de Louvain

WMDS1222

2014-2015

Biochimie humaine pathologique

5.0 credits	50.0 h	2q

Teacher(s) :	Lemaigre Frédéric (coordinator) ; Van Schaftingen Emile ;
Language :	Français
Place of the course	Bruxelles Woluwe
Inline resources:	Slides
Prerequisites :	General biochemistry and molecular biology Knowledge of french, active and passive, oral and written Knowledge of english, passive
Main themes :	The course follows up on the courses on general biochemistry and molecular biology (WMDS1109 and WMDS1212 for medical students; WSBIM1226 and WSBIM1227 for biomedical students) The course describes the control of gene expression, metabolism of glucids and lipids, nitrogen metabolism, and integrated biochemistry, in health and disease.
Aims :	The student should be able to : - Demonstrate his/her capacity to summarize and integrate various biochemical informations into a coherent set of knowledge - Explain how a disease can result from abnormal gene expression - Explain how molecular and metabolic anomalies lead to cancer - Know the principles of glucose homeostasis - Describe the regulation of synthesis and degradation of glucose, glycogen, ethanol, fructose and galactose, in health and disease - Describe the structure and function of proteoglycans and glycoproteins - Describe the regulation of synthesis and degradation of fatty acids, triglycerids, ketone bodies, and complex lipids, in health and disease - Integrate hepatic, muscle, adipose and nervous metabolism in terms of metabolic fluxes in the fed and starved states - Describe the regulation of synthesis and degradation of cholesterol and bile salts, in relation with gastrointestinal tract anatomy - Describe the regulation of synthesis and degradation of plasma lipoproteins - Know the principles of nitrogen and protein turnove, in health and disease - Describe the key reactions of urea and aminoacid metabolism - Describe purine and pyrimidine metabolism and understand how this interferes with drug metabolism - Describe folic acid and Vitamin B12 metabolism, in relation with gastrointestinal tract anatomy - Explain principles of abnormal oxygen transport by hemoglobin in disease - Describe absorption, transport and storage of iron, in health and disease - Describe syntesis and degradation of heme, in healthand disease and in relation with gastrointestinal tract anatomy *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods :	Multiple choice and free dissertation
Teaching methods :	The course is taught in auditoria
Bibliography :	Support: Manuels de biochimie. Références: - Biochemistry, Champe P.C., Harvey R.A, Ferrier D.R., Lippincott's Illustrated Reviews, Lippincott Williams & mp; Wilkins - Principles of Biochemistry, Horton R.H., Prentice Hall
Cycle and year of study :	> Bachelor in Biomedicine > Bachelor in Medecine
Faculty or entity in charge:	MED