UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Chimica Biologica

1819-2-H4101D006-H4101D016M

Aims

The module main objective is to provide students with the concepts necessary for understanding biological phenomena and the energetic variation associated with them. The course will focus on how to place the molecular basis for understanding the complex processes underlying the metabolism of living creatures

Contents

Enzymology. Diagnostic use of enzymes and isoenzymes. Bioenergetics: respiratory chain and oxidative phosphorylation. Glucose metabolism: digestion, absorption. Aerobic and anaerobic glycolysis. Regulation of glycolysis. Glycogen synthesis and glycogenolysis and regulation. Galactose and fructose metabolism. Lipid metabolism: digestion and absorption. Catabolism of lipids. Citric acid cycle. Lipogenesis. Regulation of lipolysis and lipogenesis. Metabolism of cholesterol and its derivatives. Metabolism of ketone bodies. Lipoprotein metabolism of plasma lipoproteins. Protein metabolism: digestion, absorption, and transport of amino acids. General metabolism of amino acids. Urea cycle. Gluconeogenesis and its regulation. Purine and pyrimidine metabolism

Detailed program

Prerequisites

JS_ERR_COUNT = 0;JS_ERR_ARR = [];JS_LOADED = false;function _gtErr(e,url,line){if (++JS_ERR_COUNT > 10) {return;}var i=new Image();var err='e='+e.substr(0,1500)+',url='+url.substr(0,400)+',line='+line+',count='+JS_ERR_COUNT;JS_ERR_ARR.push(err);i.src='/gen204?jserr='+encodeURIComponent(err);i.onload=function(){i.onload=null;};}window.onerror=_gtErr; (function(){(function(){function e(a){this.t={};this.tick=function(a,c,b){this.t[a]=[void

0!=b?b:(new Date).getTime(),c];if(void 0==b)try{window.console.timeStamp("CSI/"+a)}catch(h){}};this.tick("start",null,a)}var a;if(window.performance)var d=(a=window.performance.timing)&&a.responseStart;var f=0c?1:0}; a:{var Za=_.m.navigator;if(Za){var $a=Za.userAgent;if($a){_.Ya=$a;break a}}_.Ya=""}var z=function(a){return-1!=_.Ya.indexOf(a)};var bb,db,eb,fb;_.ab=function(a,c,d){for(var e in a)c.call(d,a[e],e,a)};bb=function(a,c){for(var d in a)if(c.call(void 0,a[d],d,a))return!0;return!1};_.cb=function(a){var c=[],d=0,e;for(e in a)c[d++]=a[e];return c};db=function(a){var c=[],d=0,e;for(e in a)c[d++]=e;return c};eb=function(a,c){return null!==a&&c in a};fb="constructor hasOwnProperty isPrototypeOf propertyIsEnumerable toLocaleString toString valueOf".split(" "); _.gb=function(a,c){for(var d,e,f=1;f

Textbook and teaching resource

1. Devlin Biochimica V ed.– EDISES

2. Siliprandi and Tettamanti IV ed Biochimica Medica- Piccin.

3. Ferrier Le basi della Biochimica 2ed Zanichelli

Semester

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Office hours

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