



Faculté de médecine

MD

RPR2330

Utilisation des radioisotopes et des molécules marquées en biologie

[15h+15h exercices]

Teacher(s): Bernard Gallez, Max Lonneux
Language: french
Level: 2nd cycle course

Aims

Answer to three fundamental questions : why and how to use a radioactive isotope, and how to prepare it ?

Main themes

Introduction to the use of radioisotopes : tracer, applications in vitro (pharmacology, RIA) and in vivo (with comparison to other imaging modalities)

Preparation of radiolabelled molecules : nuclear reactions (neutron activation, charged particles, fission, generators), radiochemistry

Two examples illustrated from the nuclear reaction, radiochemistry, pharmaceutical conditioning, quality controls, and use in nuclear medicine (+ comparison/integration of other modalities for the diagnosis assessment) :

- ^{99m}Tc generator, diphosphonate kits for the use in bone scintigraphy
- ^{18}F -fluorodeoxyglucose and applications in PET oncology

Other credits in programs

ESP31DS/RP	Première année du diplôme d'études spécialisées en santé publique (Physique d'hôpital)	Mandatory
ESP3DS/TI	Diplôme d'études spécialisées en santé publique (santé au travail - toxicologie industrielle)	
RPR9CE/R	Certificat universitaire en radioprotection et en application des rayonnements ionisants (Radiopharmacie)	Mandatory