

Faculty of Medicine



FARM2110 Inorganic Pharmaceutical Chemistry

[30h] 3 credits

This course is taught in the 1st and 2nd semester

Teacher(s): Bernard Gallez
Language: French
Level: Second cycle

Aims

The aim of this lecture is to introduce the field of inorganic chemistry. Particularly, the lecture will give the fundamentals notions to understand the use of radiolabelled compounds and metal complexes in pharmaceutical and biomedical field.

Main themes

Several aspects of inorganic pharmaceutical chemistry will be covered with a special emphasis in toxicology, therapeutics and diagnostics.

Content and teaching methods

Radionuclides in pharmacy and medicine : elements of nuclear physics, radioactive decays, interactions with the matter, detection of radiations, radiobiology, radiotoxicology, preparation of radioisotopes for biomedical use, in vitro applications (RIA), in vivo applications (nuclear medicine), and comparison with other imaging modalities
 Metal complexes in pharmacy and medicine : description of the interaction metal-ligand, diagnostic applications (contrast agents), therapeutic applications (anti-cancer, anti-acids, anti-bacterial activities, mineral supplements), toxicity of metals (lead, mercury, cadmium, manganese) and chelation therapies, elements of bioinorganic chemistry

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Run of general chemistry (level candidature) and of physics of the radiations (level candidature) Oral examination + "elementary" evaluation during seminars (to oblige the students to have read their articles and to stimulate the interactivity). Copy transparencies (lecture), copy of articles for the active part of work personnel.

Other credits in programs

FARM21	Première année du grade de pharmacien	(3 credits)	Mandatory
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