

## Faculty of Medicine

**FARM1310 Inorganic drugs with use diagnosis and therapeutic**

[30h] 3 credits

**Teacher(s):** Bernard Gallez  
**Language:** French  
**Level:** First 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