

Title: **Syntheses of Fe^{III} coordination clusters derived from pyridylalcohols.
Magnetic study.**

Student: Laura Roc Gamundi

Date: January 2019

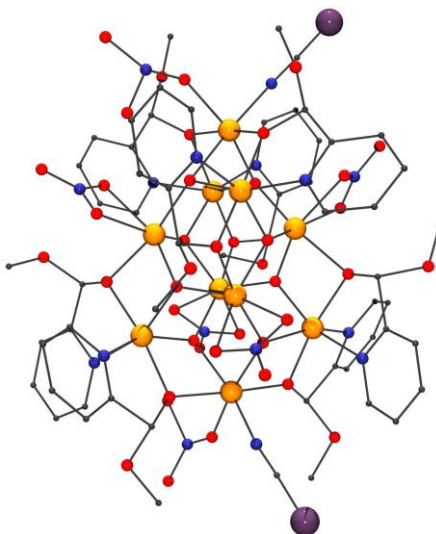
Supervisor/s: Prof. Albert Escuer Fite

Departament de Química Inorgànica i Orgànica (secció Q. Inorgànica)

Fe^{III} compounds are very important in fields such as bioinorganic chemistry and molecular magnetism due to the properties that this metal contributes. In this project, the compounds of iron with chiral ligands belonging to Schiff bases have been studied since there are very few registered compounds.

In the first structural results it was found that Schiff's base had broken, and the coordinate ligand was a derivative of pyridylalcohol. The project focuses on the study of the new compounds and the new ligand.

Three slightly different Fe₁₀ clusters have been obtained with a particular internal geometry. A structural study of the three compounds and a magnetic study of the first two compounds had been performed.



Keywords: Iron clusters, Schiff bases, structural characterization, magnetism.