Title: Study of synthetic methods for oxabicycles.

Student:Joana Martínez MartínezDate:June 2020Supervisor/s:Dr. Ángel Manuel Montaña Pedrero
Departament of Inorganic and Organic Chemistry.

Nowadays, the study of natural and non-natural products containing oxabicyclic framework has been extensively studied due to the important biological activity shown by most of these molecules as biocides and/or against some types of cancer. The development of both new strategies and efficient synthetic reactions to construct this kind of oxamacrobicycle frameworks is a very important challenge in organic chemistry nowadays.

The main objective of this present work is the study of organic synthetic methods to obtain oxabicycles, and specially, oxamacrobicycles. The study of these synthetic methods has been carried out through an extensive bibliographic on the scientific literature published in this field along last decades.

This review project will focus on:

-General synthetic methodologies for oxabicycles, and especially for oxamacrobicycles.

-Comparative studies evaluating the main advantages and disadvantages of each methodology.

- Search for natural and non-natural products that contain oxamacrobicycles skeleton and having biological activity or any other added value, due to their properties and/or activities.

The search for the scientific literature has been carried out on databases, like Reaxys (Elsevier), Scifinder (CAS), Science of Synthesis (Thieme), PubMed/Medline (National Library of Medicine), etc.

Keywords: oxabicycles, synthetic methods.