

# SYNTHESIS OF NEW BENGAMIDE ANALOGUES AND ENCAPSULATION INTO THERMO-RESPONSIVE MAGNETIC NANOPARTICLES

Porras-Alcalá, C.,<sup>1</sup> Cheng-Sánchez, I.,<sup>1</sup> Ortega-Rodríguez, A.<sup>1</sup>, Sarabia, F.,<sup>1</sup> López-Romero, J.M.,<sup>1</sup>

<sup>1</sup>Department of Organic Chemistry, Faculty of Science. University of Málaga, 29071, Málaga, Spain.

## ABSTRACT

The development and identification of new antitumoral drugs has become a research area of great interest and maximum priority. Firstly, to overcome the secondary effects frequently shown by current antitumorals and, secondly, to prevent the appearance of tumours resistance to these agents. Marine sponges corresponding to the *Jaspidae* family have proved to be a prolific source of bioactive natural products. Among these, the bengamides have showed an important biological profile, including antitumor, antibiotic and anthelmintic properties.

We describe here a study directed towards the total synthesis of bengamides including their encapsulation into temperature-sensitive microgels having magnetic Fe<sub>3</sub>O<sub>4</sub> cores. Magnetic nanoparticles were prepared by the coprecipitation method and show an acrylic acid surface functionalization. We chose poly(*N*-isopropylacrylamide) (PNIPAM) as polymeric material, which was grown by a free radical polymerization process.

Key words: bengamides, *Jaspidae*, Antitumoral, analogues, total synthesis, magnetic nanoparticles.

