*Title:* **A bibliographic review on Uridyl Peptide Antibiotics**

*Student:* Sergio Frutos Frechoso

*Date:* 01/2019

*Supervisor/s:* Dr. Jordi Robles Brau
*Department of Inorganic and Organic Chemistry*

Bacterial pathogens inevitably develop severe resistance to antibacterials so is an urgent matter finding new drugs. Multi-drug-resistant *Pseudomonas aeruginosa* is one of the most problematic bacteria because there are limited effective antibiotics. In this context, a novel class of natural antibacterials which are active against *Pseudomonas* are uridyl peptides antibiotics (UPA). These are a closely related family of bacterial metabolites formed by mureidomycins, napsamycins, pacidamycins and sansanmycins, which are characterized by a uridine moiety linked to a peptide.

This review will focus on pacidamycins, one of the most potential antibacterials of UPA family. This report will first explain how pacidamycins act against bacteria, what is known on the biosynthesis of these metabolites, and the function of the enzymes involved. After that, it will be reviewed the organic synthesis of pacidamycin derivates which show improved properties when compared with wild pacidamycins.