4TH MEETING OF
MEDICINAL
BIOTECHNOLOGY

BOOK OF ABSTRACTS

P.PORTO
ESCOLA SUPERIOR DE SAÚDE

4TH MEETING OF MEDICINAL BIOTECHNOLOGY

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POLITÉCNICO DO PORTO

4TH MEETING OF MEDICINAL BIOTECHNOLOGY

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POSTER 42

Antibacterial activity of Ionic Liquids Based on Beta-lactam antibiotics Against Resistant Bacteria

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The cases of antibiotic resistance are increasing and becoming more and more common, giving rise to a new problem for public health. Therefore, the discovery of new antibiotics is important and necessary.
Active pharmaceutical ingredient-ionic liquid (API-IL) concept could be a new strategy to fight antibiotic resistance. Recently, a buffer neutralization method was developed and applied for the synthesis of ampicillin-based API-ILs. In this work we show the application of the buffer neutralization method on synthesis of ionic liquids derived from β-lactam antibiotics (amoxicillin and penicillin) as well as their activity against sensitive (*Escherichia coli* and *Staphylococcus aureus*) and resistant bacteria (MRSA, *E. coli* CTX M9 and *E. coli* CTX M2). To evaluate the antibacterial activity we used the broth microdilution method. Results showed that these compounds could be active against resistant bacteria and be a good alternative to traditional methods

Keywords: Ionic Liquids, antibiotic resistance, antibiotics, Active Pharmaceutical Ingredients