

# Drug interactions involving antibiotics: Do they care?

Briegas Morera, D<sup>1</sup>; Bonilla Galán, C<sup>1</sup>; Meneses Mangas, C<sup>1</sup>; Bravo García - Cuevas, LM<sup>1</sup>; Martín Clavo, S<sup>1</sup>; Rangel Mayoral, JF<sup>1</sup>; Romero Soria, L<sup>1</sup>; Medina Comas, R<sup>1</sup>.

<sup>1</sup>Servicio de Farmacia. Complejo Hospitalario Universitario de Badajoz. Avda. de Elvas, S/N. 06006 Badajoz (Spain)

## Background

A drug - drug interaction (DDI) happens when the effect of a certain drug is modified by another coadministered one. According to different studies (Ibáñez et al, 2008), interactions are present in almost half the prescriptions (8 - 43%, depending on the ward), but few (12 - 25%) are clinically relevant. Antibiotics are a wide group of drugs with a high prevalence of use in our environment (found in 49.77% of Extremadura inpatients according to the Spanish Study of Nosocomial Infection Prevalence, EPINE 2013), being involved in many and important DDIs. Having on account the relevance of each interaction and the patient's clinical status, pharmacists help doctors to manage them by writing an intervention on their digital clinical history.

## Purpose

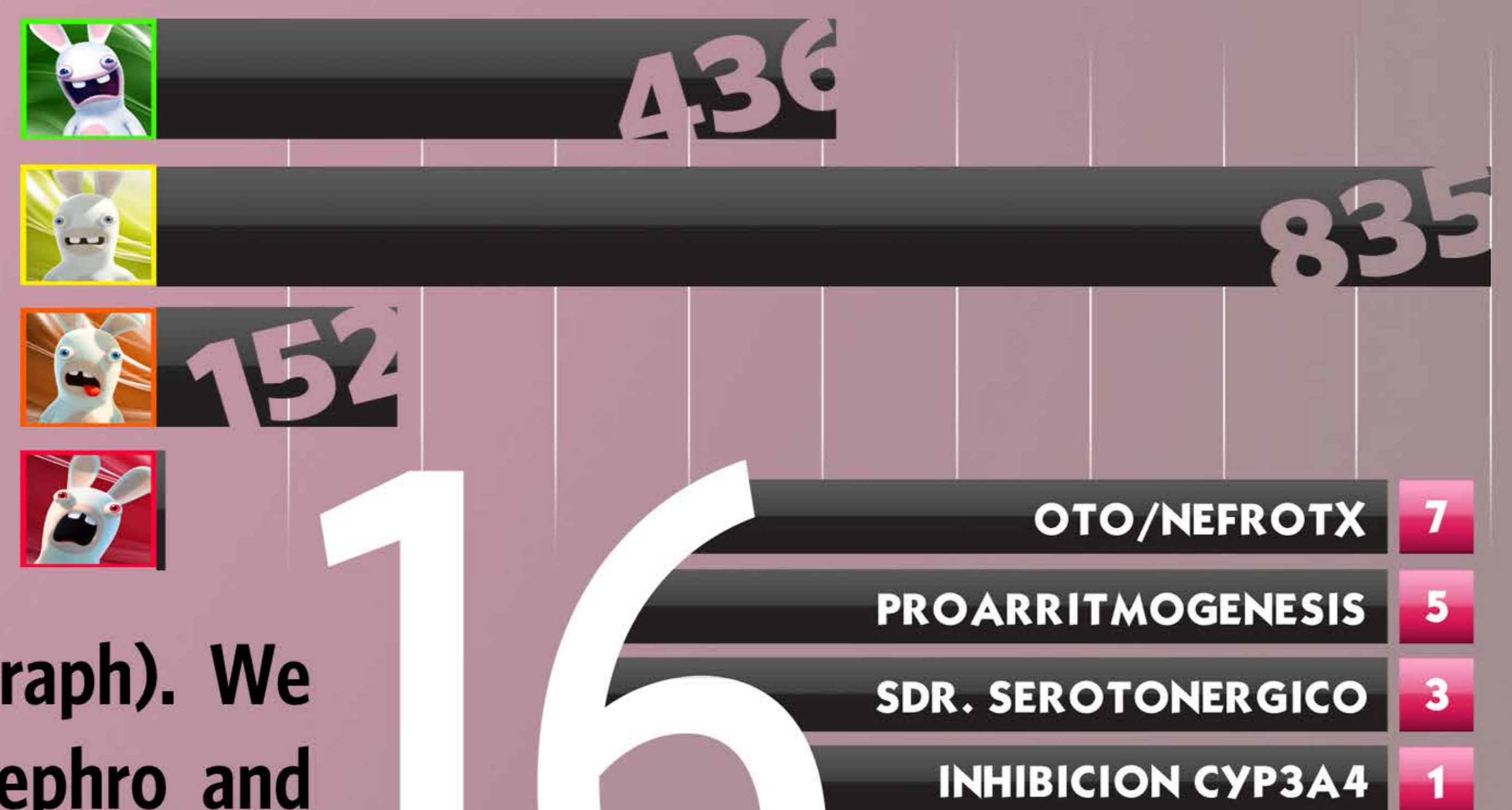
To quantitative and qualitative describe DDI in which antibiotics are involved among our patients, assessing their expected clinical impact and intervening on those which are relevant to evaluate if doctors modify their prescription after being noticed, and how do they do it.

## Material & Methods

Antibiotic - drug DDIs were searched in all available prescriptions of every ward at the screening moment. Medscape<sup>®</sup> for iPad app was used as screening tool, adopting their rating system, which classifies interactions as **minor**, **significant**, **serious** or **contraindicated**. Intervention were considered only in the relevant ones (all contraindicated, and those serious DDIs with clinical relevance because of patient clinical basis). SPSS<sup>®</sup> 20 was used for data coding and statistical processing. To improve intervention quality, additional data were reviewed in trusted sources, like LexInteract<sup>®</sup>.

## Results & Conclusions

We found antibiotics in 156 prescriptions, mostly penicilins (45), quinolones (35) and carbapenems (34). Of 1,415 DDIs detected (average per patient 9.07±9.29), only 271 (19.2%) involved antibiotics. Among those we found only 116 significant and a pair of contraindications (see graph). We decided for intervention in just 16 cases (mostly about nephro and ototoxicity, see graph). Only four prescriptions were modified after intervention. Six of them had the only purpose to remind the need of monitoring, so no action were expected. Considering this all, antibiotics does play an important role in interactions, despite few are dangerous and must be filtered before intervene. Despite their relevance, doctors seem to underestimate associated risks, ignoring our advices. To improve their knowledge an concerns about this topic, our Service held a course about DDIs (in general) for healthcare professionals on November 2014.



16 intervenciones