

## POPULATION PHARMACOKINETICS OF MAVACOXIB AFTER ORAL ADMINISTRATION OF A SINGLE DOSE TO AFRICAN GREY PARROTS (*PSITTACUS ERITHACUS*)

**A. Montesinos, DVM<sup>1\*</sup>, M. Ardiaca, DVM<sup>1</sup>, S. De Baere, Pharm, PhD<sup>2</sup>, M. Devreese, DVM, PhD, Dipl. ECVPT<sup>2</sup>, G. Antonissen, DVM, PhD<sup>2,3</sup>**

**<sup>1</sup> Centro Veterinario los Sauces, Madrid, Spain, <sup>2</sup> Department of Pharmacology, Toxicology and Biochemistry, Faculty of Veterinary Medicine, Ghent University, Merelbeke, Belgium, <sup>3</sup> Department of Pathology, Bacteriology and Avian Diseases, Faculty of Veterinary Medicine, Ghent University, Merelbeke, Belgium**

The aim of this study was to describe the population pharmacokinetics of mavacoxib in African grey parrots (AGP). AGP were administered a single dose of mavacoxib (4 mg/kg BW) orally. Blood samples were drawn at several time-points after administration. Quantification of mavacoxib in plasma of AGP was carried out using a validated high-performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) method (Dhondt et al. 2017). Data was processed using the nonlinear mixed effects (NLME) approach. Similarly as in cockatiels (*Nymphicus hollandicus*) (Dhondt et al., 2017), mavacoxib is also in AGP characterized by a prolonged elimination half-life ( $T_{1/2el}$ = 115.89h, coefficient of variation (CV)%= 7.87). Mavacoxib was characterized by a high volume of distribution (3.29 L/kg, 7.05%) and a remarkably low clearance (0.020 L/h.kg, 10.84%). Based on the presented results, a less frequent dosing of mavacoxib is proposed compared to other frequently used NSAIDs in avian practice. However, pharmacodynamics and safety studies are necessary to further investigate the use of mavacoxib in AGP.