

# OPTIMIZATION OF THE DOSAGE REGIMEN OF LONG-ACTING INJECTABLE ARIPIRAZOLE THROUGH MONTE CARLO SIMULATIONS

Enrique Bandín-Vilar<sup>1,2,3\*</sup>, Francisco Toja-Camba<sup>1,2,3</sup>, María Vidal-Millares<sup>4</sup>, María José Durán-Maseda<sup>4</sup>, Marta Pou Álvarez<sup>4</sup>, Ana Castro-Balado<sup>1,2</sup>, Olalla Maroñas<sup>5</sup>, Almudena Gil-Rodríguez<sup>5</sup>, Ángel Carracedo<sup>5</sup>, Irene Zarra-Ferro<sup>1,2</sup>, Dolors Soy<sup>6</sup>, Anxo Fernández-Ferreiro<sup>1,2</sup>, Víctor Mangas-Sanjuan<sup>7</sup>, Cristina Mondelo-García<sup>1,2</sup>

<sup>1</sup>Pharmacy Department, University Clinical Hospital of Santiago de Compostela (SERGAS), Santiago de Compostela, Spain

<sup>2</sup>FarmaCHUSLab, Health Research Institute of Santiago de Compostela (IDIS), Santiago de Compostela, Spain

<sup>3</sup>Pharmacology, Pharmacy and Pharmaceutical Technology Department, Faculty of Pharmacy, University of Santiago de Compostela (USC), Santiago de Compostela, Spain

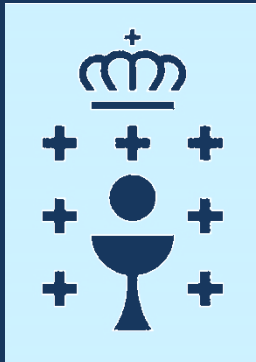
<sup>4</sup>Psychiatry Department, University Clinical Hospital of Santiago de Compostela (SERGAS), Santiago de Compostela, Spain

<sup>5</sup>Galician Foundation of Genomic Medicine, Foundation of Health Research Institute of Santiago de Compostela (FIDIS), SERGAS, Santiago de Compostela, Spain

<sup>6</sup>Pharmacy Department, Division of Medicines, Hospital Clinic of Barcelona, University of Barcelona, Barcelona, Spain

<sup>7</sup>Department of Pharmacy and Pharmaceutical Technology and Parasitology, University of Valencia, Valencia, Spain

\*enrique.jose.bandin.vilar@sergas.es



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GALEGO  
DE SAÚDE

## INTRODUCTION

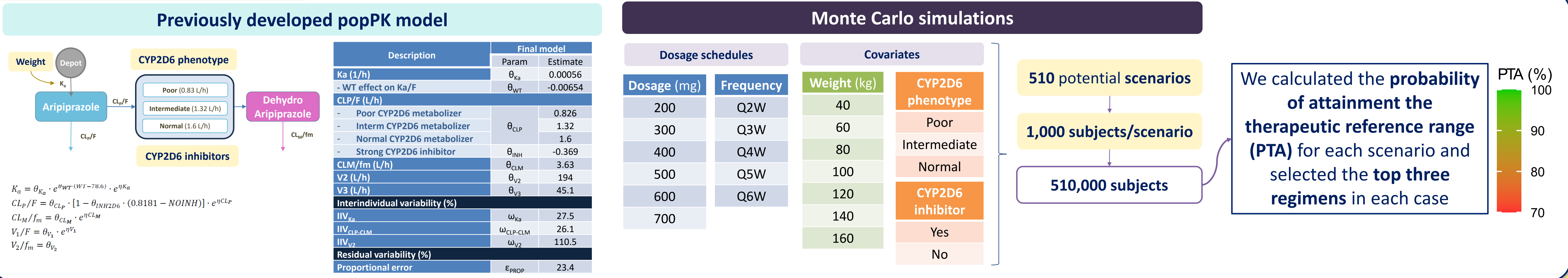
Aripiprazole (ARI) is an antipsychotic whose metabolism is mainly carried out by hepatic biotransformation, mediated by CYP2D6 and, to a lesser extent, by CYP3A4. Dehydroaripiprazole (DHA) is its main active metabolite and accounts for 40% of its plasma exposure [1,2,3].

Due to its interindividual variability, changes in the initially prescribed dosage according to the SmPC are very common to achieve an optimal clinical response with minimal adverse effects. The consensus guidelines establish a therapeutic reference range for minimum concentrations of 100-350 ng/mL for aripiprazole and 150-500 ng/mL for the sum of aripiprazole and dehydroaripiprazole, which is known as the active moiety [4].

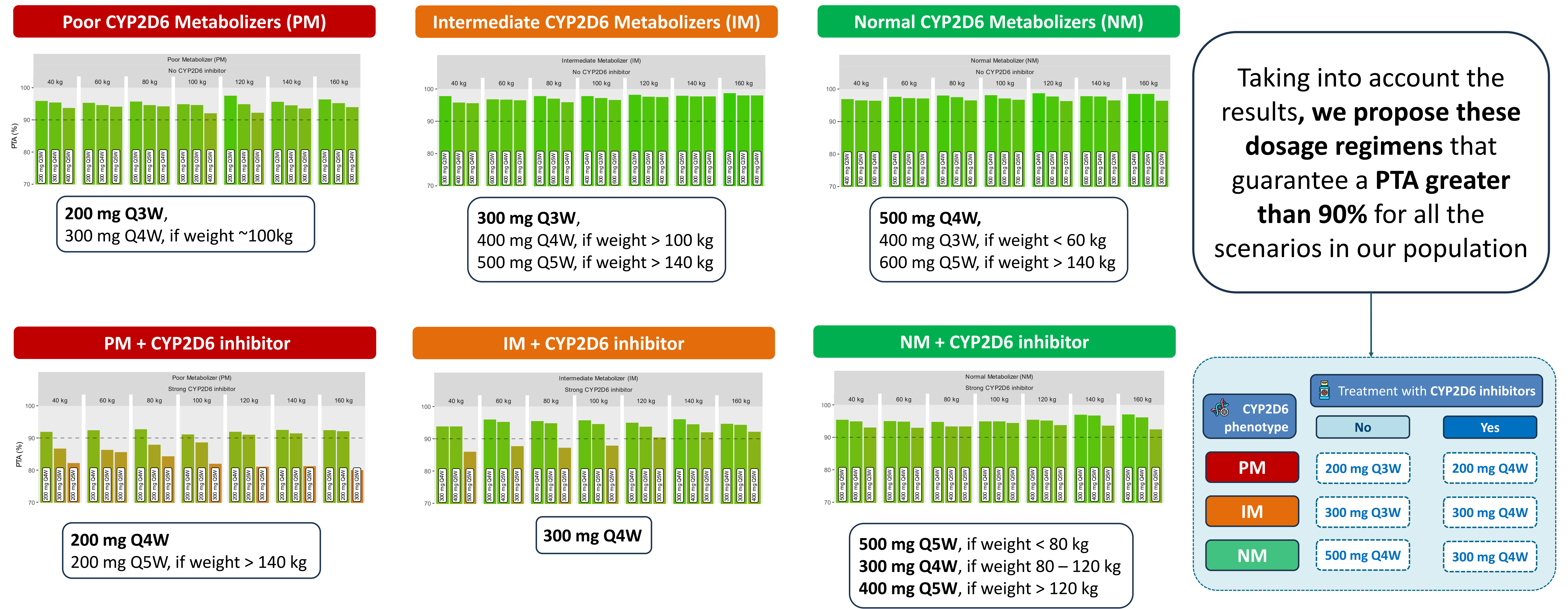
## OBJECTIVE

- The objective of this work is to determine the optimal dosage regimens of LAI aripiprazole across different subgroup of patients, based on a previously developed population pharmacokinetic model.

## METHODS



## RESULTS



## CONCLUSIONS

The Monte Carlo simulations carried out with our own model show that the dosages indicated in the summary of product characteristics are not those with the greatest probability of reaching the therapeutic reference range in our population. The optimal regimens proposed for our study population that guarantee a PTA > 90% are 200 mg Q3W for PM, 200 mg Q4W for PM plus inhibitor, 300 mg Q3W for IM, 300 mg Q4W for IM plus inhibitor, 500 mg Q4W for NM and 300 mg Q4W for NM plus inhibitor.

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