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PHARMACOKINETIC DETERMINATION ATENOLOL ENANTIOMER IN RABBIT PLASMA BY REVERSE PHASE UFLC TECHNIQUE

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The present work describes the pharmacokinetic profile of (R)- and (S)-Atenolol (ATL) enantiomer in rabbits using rapid and selective liquid chromatography with liquid-liquid extraction (LLE) method. The ATL enantiomers were extracted from plasma by means of LLE using and were analyzed on a Lux cellulose i5 segment (150×4.6 mm, 5µ) column with ultraviolet detection at 225 nm. Atenolol enantiomers indicated great determination with a retention time (tR) of 2.7 min and 3.10 min individually. The lower limit of quantification of the ATL enantiomers in plasma was 2 µg/ml. The validated method was successfully applied to chiral pharmacokinetic studies of oral administration of racemic ATL to rabbits. (S)-ATL showed almost similar AUC, Tmax, and Cmax and same half-life compared (R)-ATL, indicating similar bioavailability of the both isomer.

BIOGRAPHY

BM Gurupadayya working as the professor in the department of Pharmaceutical chemistry at JSS College of Pharmacy, JSS Academy of Higher Education & Research, Mysuru, India. The current area of his interest lies in the field of bioanalytical method developments, chiral drug analysis and drug and herbal drug interactions. He has authored and co-authored over a hundred research papers on pharmaceutical analysis and pharmaceutical chemistry. He was awarded Dr PD Sethi Annual award' for best research paper on application of TLC/HPTLC. I have received several research grants from AICTE, UGC, VGST and DST funding agencies. He has guided more than 30 students in their master's program and 7 PhD degrees.

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