ANNALS OF PHARMACY AND PHARMACEUTICAL SCIENCES
Volume 4 | Issue 1&2 | April & October, 2013 | 36-40

A REVIEW

Advances in resolution of racemic drugs

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ABSTRACT

Chiral separation also called racemic resolution is a procedure used to separate the two isomers of a racemic compound. In pharmaceutical analysis this topic is especially important as it is apparent from the proportion of drugs which are coming on the market are chiral and importance of chiality in many fields of natural and applied science is well established. Thus analytical methods for the chiral separation are paramount to a full understanding of enantioselective drug action and disposition. The body with its numerous homochiral compounds being amazingly chiral selector will interact with each racemic drug differently and metabolize each enantiomer by a separate pathway to generate different pharmacological activity. One isomer may produce the desired therapeutic activities, while other may be inactive or produce toxic effects. This review provides the information to understand the advances taking place in chiral separation. Chiral chromatography including HPLC, column chromatography, capillary electrophoresis and micro-chip capillary electrophoresis are most readily accomplished methods for the enantiomer resolution. HPLC is the most widely used of all the methods because of its simplicity and rapidity. Accounting for the growing development of chiral drugs as racemates and single enantiomers worldwide it is primordial to promote the chiral separation and its development.

Key words : Chirality, Racemic resolution, Electrophoresis, Chiral chromatography

How to cite this paper : Nerkar, Amit G., Tare, Bharati T. and Sawant, Sanjay D. (2013). Advances in resolution of racemic drugs. *Ann. Pharm. & Pharm. Sci.*, **4** (1&2) : 36-40.

Article chronicle : Received : *19.09.2013;* **Accepted :** *29.09.2013*

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