INTERNATIONAL MULTIDISCIPLINARY SYMPOSIUM ON DRUG RESEARCH & DEVELOPMENT

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ABSTRACT BOOK

Republic of Turkey
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Anadolu University Atatürk Culture and Arts Center
Eskişehir - TÜRKİYE

15-17 October 2015

P141 PREPARATION and CHARACTERIZATION of DEXKETOPROFEN TROMETHAMOL LOADED EUDRAGIT®RL 100 NANOPARTICLES

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Nonsteroidal anti-inflammatory drugs (NSAIDs) were successfully used for the alleviation of pain, fever and inflammation for at least 3500 years and continue to be used daily by millions of patients worldwide [1]. NSAIDs are widely used for the treatment of musculoskeletal disorders such as osteoarthritis and rheumatoid arthritis [2].

Dexketoprofen trometamol (DT) is the dextrorotatory enantiomer of ketoprofen formulated as the tromethamine salt [3]. DT's distribution and elimination half-lives are 0.35 and 1.65 hrs, respectively [4].

Eudragit polymers which are acrylic/metacrylic acid esters act as polyelectrolytes regulated by percentage of cationic (quaternary ammonium) and non-ionized (ether) groups in their structures. Some of them can be considered as polycations (Eudragit type E, RL, RS and NE) and the others as polyanions (Eudragit types L and S) [5, 6]. Eudragit RL100 is a well-known polymer commonly used as a pharmaceutical excipient for enteric and controlled-release dosage forms [7].

Over the past few decades, there was considerable interest in developing biodegredable nanoparticles as effective drug delivery systems [8]. Preparing and characterizing polymeric nanoparticles for oral controlled analgesic delivery was aimed in this study. Spray-drying was used as the preparation method and characterization was achieved by particle size/PDI and zeta potential measurements, DCS thermograms, SEM imaging and FT-IR and NMR spectroscopic analyses.

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