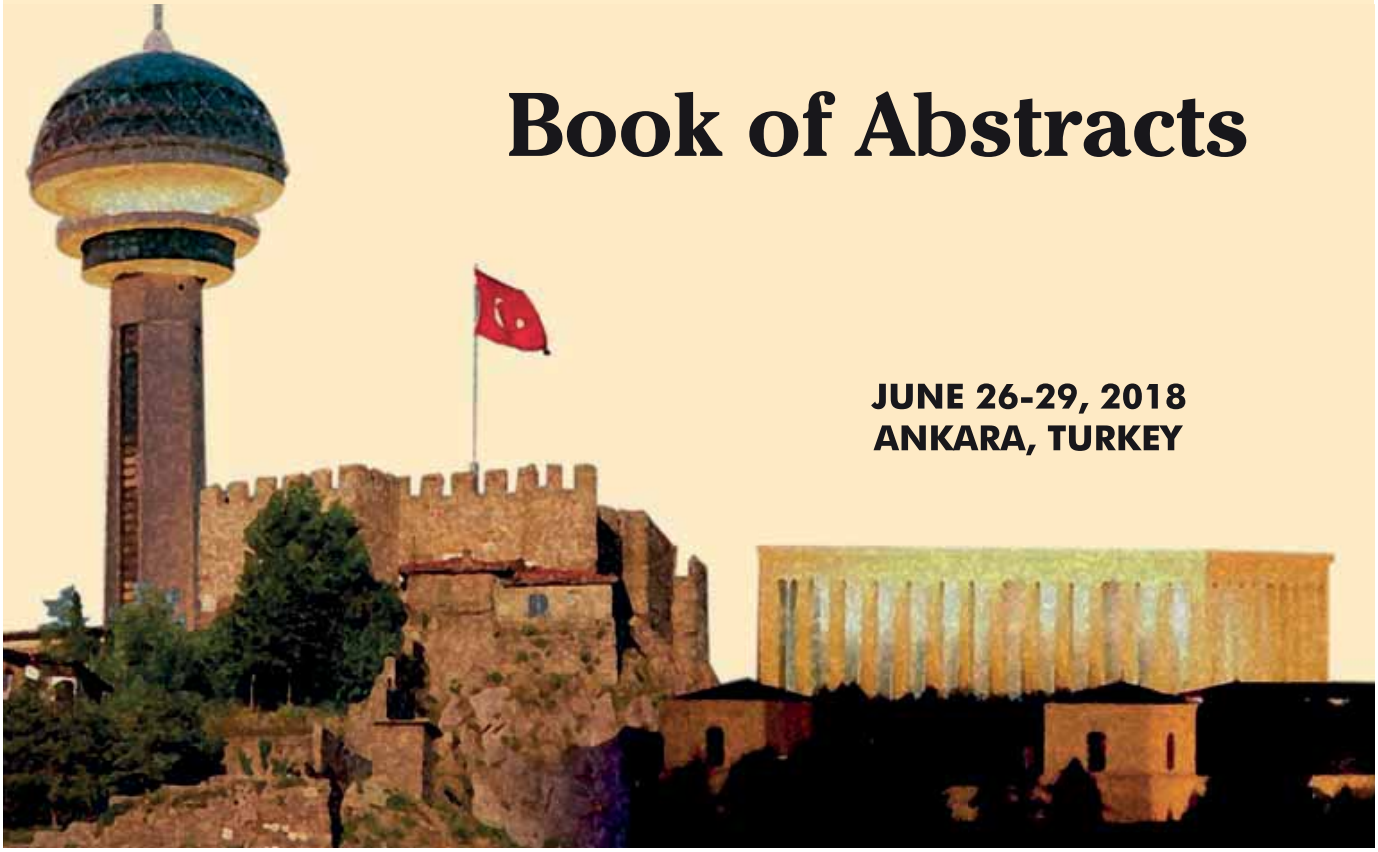
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FACULTY OF PHARMACY

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Book of Abstracts



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CONCLUSIONS:

It has been found that the membrane permeation of the mirtazapine-containing tablet formulations of the appropriate physicochemical properties is negligible, so that liquid chromatographic methods may be preferred for quantitative analysis, on the other hand USP Apparatus II is considered to be sufficient for dissolution studies.

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P-282: EXTENDED RELEASE PLGA NANOPARTICLES FOR CHRONIC PAIN

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INTRODUCTION:

The pain situation has a very important effect on the biological, psychological, sociological and economic situation of the patient (1). Dexketoprofen trometamol (DT) has been developed as a water-soluble trometamine salt. DT is a rapidly acting analgesic agent in the treatment of painful musculoskeletal disorders such as back pain and osteoarthritis (2). In this study; DT loaded PLGA Nanoparticles (NPs) formulated with Double emulsions Solvent evaporation method which is the most suitable method for preparing PLGA NPs for hydrophilic drugs.

MATERIALS AND METHODS:

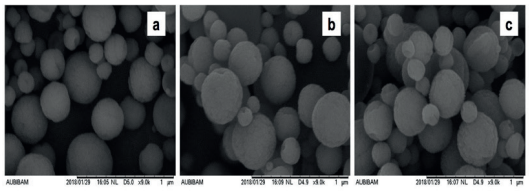
PLGA-based NPs were prepared by following the 'Double Emulsification Solvent Evaporation Technique'. Structures of nanoparticles were characterized by particle size (PS) and zeta potential (ZP) measurements, morphology, thermal analysis (DSC), X-ray difraction (XRD) , FTIR and 1H-NMR.

RESULTS:

Table 1. Result of particle size, PDI, zeta potantial

Code	PS(nm)±SD	PDI±SD	ZP(mV)±SD	EE%±SD
Alp-blank	295.7 ± 2.9	0.101 ± 0.015	-29.59 ± 0.23	-
Alp-5	243.8 ± 5.3	0.062 ± 0.024	-27.26 ± 0.92	64.194 ± 0.484
Alp-10	251.9 ± 2.8	0.075 ± 0.020	-26.48 ± 0.63	49.239 ± 1.129

Figure 1. SEM images of PLGA NPs a: Alp-blank b: Alp-5 c: Alp-10



CONCLUSIONS:

NPs were prepared for chronic pain by Double Emulsification Solvent Evaporation Technique'. The PS, PDI, ZP, DSC, XRD, FT-IR and 1H-NMR analysis of formulations justified that DT was incorporated into PLGA NPs successfully.

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