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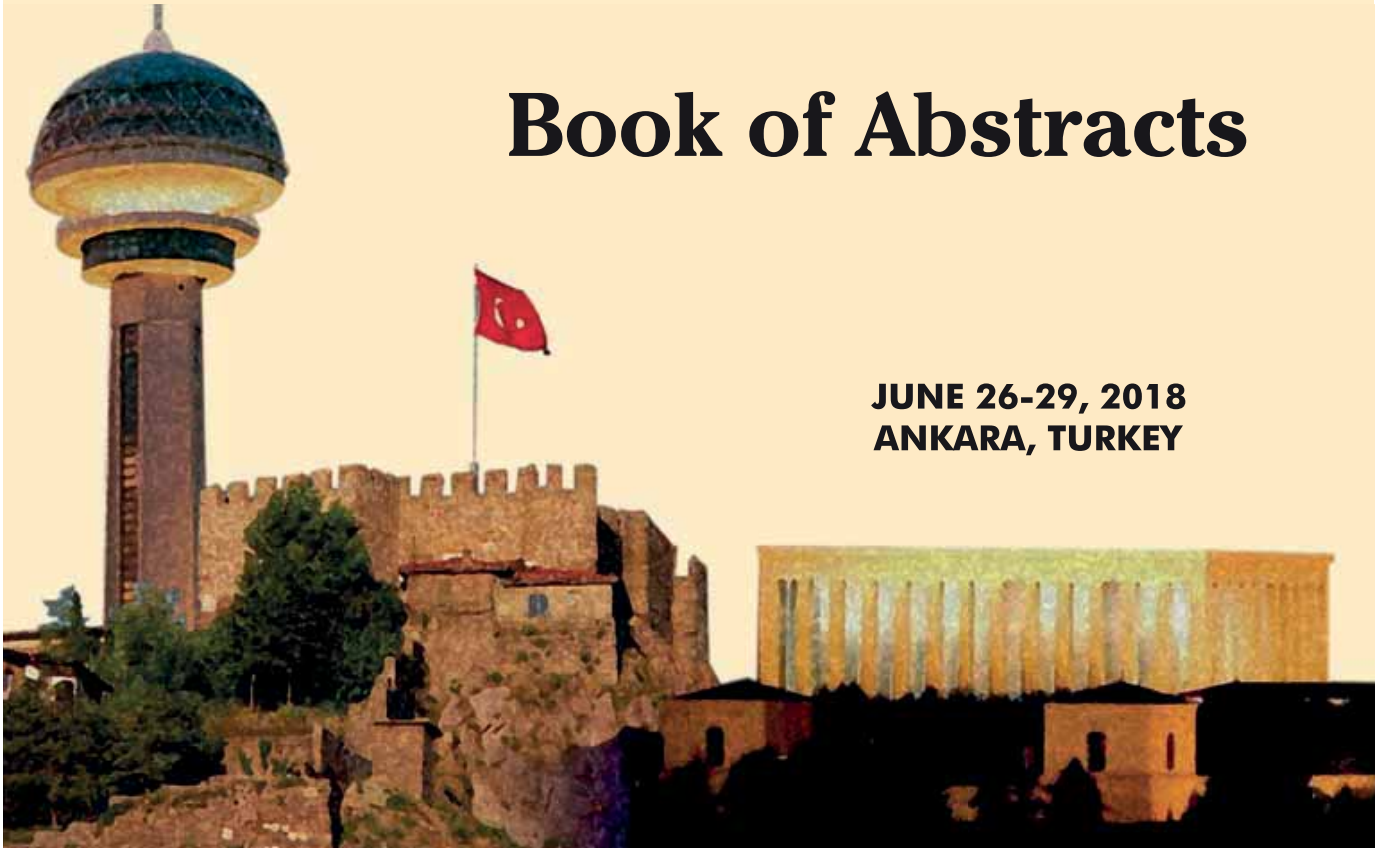
Book of Abstracts



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method for SLN production. On the other hand, lipid type was found to be important for obtaining stable SLNs. The obtained SLN formulations demonstrate suitable physicochemical properties for oral drug administration and further studies will be conducted to develop drug loaded SLNs for this purpose.

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P-318: FORMULATION AND EVALUATION OF SPRAY DRIED CHITOSAN NANOPARTICLES OF LEVOCETIRIZINE DIHYDROCHLORIDE FOR ANTIHISTAMINIC TREATMENT

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INTRODUCTION:

Levocetirizine dihydrochloride (LCD) is a third generation non-sedative antihistamine. LCD works by blocking histamine receptors. It does not prevent the actual release of histamine from mast cells, but prevents it binding to receptors. In addition, it is an important drug in the treatment of allergies and idiopathic urticaria (1). Chitosan (CS) is a natural biodegradable and biocompatible polysaccharide (2). In this study; LCD loaded CS nanoparticles prepared by spray-drying method for extended antihistaminic delivery of oral use was aimed in this study.

MATERIALS AND METHODS:

LCD is kind gift from Neutec Pharma (Sakarya/ Turkey). CS (LMW) purchased from Sigma, Germany. Spray drying technology (B-190, BUCHI) was used for the preparation of nanoparticles with an inlet temperature of 120°C ± 1°C and outlet temperature 60 °C ± 5 °C. Compositions of formulations prepared are summarized in Table 1. During the characterization studies particle size, polydispersity index, morphology, zeta potential and thermal analyses were performed.

Table 1. Compositions of formulations prepared

Code	Chitosan (g)	LCD (g)	Acetic acid solution (2%, v/v) (mL)	Methanol (mL)
Placebo	1	-	120	120
F-1	1	0.05	120	120
F-2	1	0.1	120	120

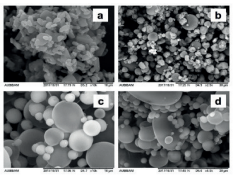
RESULTS:

Particle size, zeta potential measurements (Table 2), morphological analyses (Figure 1) were shown for the characterization of the systems prepared.

Table 2. Mean particle size, PI, zeta potential of formulations prepared (SE: Standard Error) (n=3)

Code	Particle size (nm) ± SE	PI ± SE	Zeta Potential (mV) ± SE
Placebo	487.42 ± 7.25	0.426 ± 0.085	24.3 ± 2.1
F-1	521.70 ± 8.50	0.512 ± 0.090	25.7 ± 1.8
F-2	538.46 ± 5.74	0.498 ± 0.074	25.9 ± 2.5

Figure 1. SEM Images of pure drug and formulations prepared (a: LCD, b: Placebo, c: F-1, d: F-2)



CONCLUSIONS:

LCD could be incorporated successfully into polymeric nanoparticles. Smaller particle size, cationic zeta potential indicated by characterization methods, possible LCD polymeric matrix interaction were determined to be a promising approach for extended delivery of LCD.

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P-319: NOVEL STRATEGIES TO SYNTHSESIS OF POLYMER-DRUG CONJUGATE BY CHARGE TRANSFER COMPLEX COPOLYMERIZATION

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INTRODUCTION:

Interdisciplinary research at the interface of polymer chemistry and the biomedical sciences has produced polymer-based nanomedicines for the diagnosis and treatment of cancer. Water-soluble hybrid materials as polymer-drug conjugates are designed for intravenous administration. 5- Fluorouracil (5-FU) with the wide range of usage and is one way the need as well as a single agent administered to the patient

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