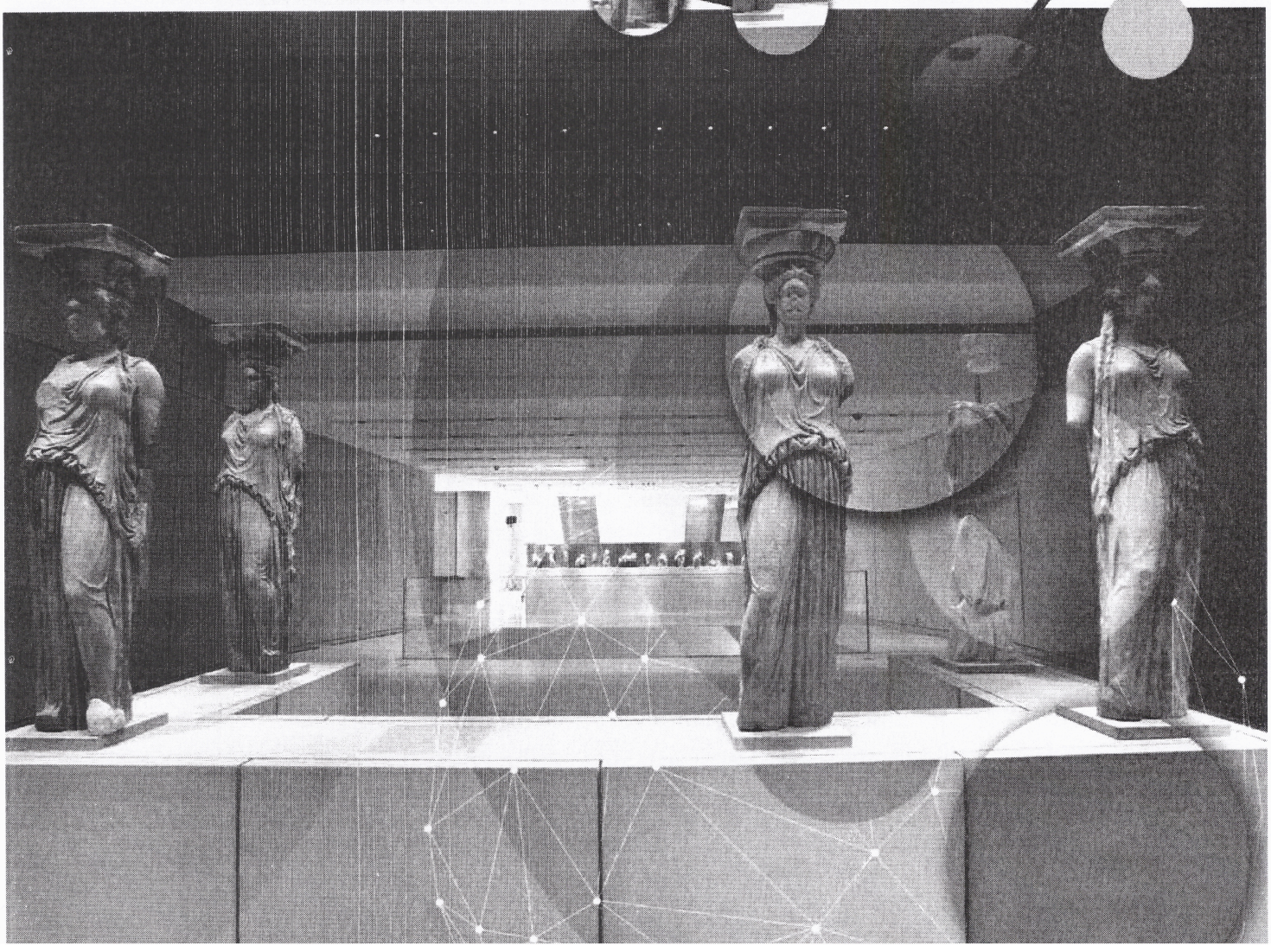
EUFEPS
European Federation for Pharmaceutical Sciences

EUFEPS Annual Meeting 2018

Crossing Barriers for Future Medicines

24-26 May 2018 Titania Hotel Athens, Greece

Final Program



EP54

KETOPROFEN LYSINE LOADED POLY-LACTIC-CO-GLYCOLIC ACID (PLGA) NANOPARTICLES BY DOUBLE EMULSION SOLVENT EVAPORATION METHOD

Akın Elmaskaya[1], A. Alper Öztürk[2], Evrim Yenilmez[2]
[1]*Anadolu University, Graduate School of Health Sciences, Department of Pharmaceutical Technology, Eskişehir, Turkey,*
[2]*Anadolu University, Faculty of Pharmacy, Department of Pharmaceutical Technology, Eskişehir, Turkey*

Objectives: The aim of this study was to formulate and characterize ketoprofen lysine salt (KLS) which is a water-soluble lysine salt of antiinflammatory agent ketoprofen as PLGA nanoparticles (1, 2).
Methods: KLS is a kind gift from Berko İlaç (Istanbul/Turkey). PLGA (Resomer® RG 504, PLGA 50:50) was obtained from Sigma(Germany). Formulations were prepared by double emulsion solvent evaporation method. Particle size (PS), poly dispersity index (PDI) and zeta potential (ZP) measurements were performed on freshly prepared samples using a Malvern analyzer. The entrapment efficiency (EE%) and dissolution study of each formulation was performed with HPLC with reversed-phase column (4.6mmx150 mm, C18 Gravity, 3 µm). In vitro release study of the formulations was investigated over 15 days and performed in phosphate buffer (pH 7.4). Release kinetics of formulations were investigated using DDSolver software program.
Results:
Figure 1. In vitro dissolution profile of formulations and pure KLS
Table 1. Result of PS, PDI, ZP and EE% (n=3)
Conclusions: According to the characterization studies we can conclude that this polymeric system seems to be promising for controlled and sustained delivery of KLS for pain treatment.

Acknowledgements
This study was supported by Anadolu University Scientific Research Project No: 1708S471

References:

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