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ABSTRACT BOOK

PREPARATION AND CHARACTERIZATION OF DEXKETOPROFEN TROMETHAMOL LOADED DYNASAN® 114 SOLID LIPID NANOPARTICLES (SLNs)

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Non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most widely prescribed medications in the World [1]. NSAIDs are used for the treatment of musculoskeletal disorders such as osteoarthritis and rheumatoid arthritis [2].

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

SLNs are colloidal carriers developed especially for the delivery of lipophilic compounds at the beginning of the 1990s as an alternative system to existing traditional carriers like emulsions, liposomes and polymeric nanoparticles [5].

Preparing and characterizing SLNs for oral controlled analgesic delivery was aimed in this study. Dynasan® 114 (Trimyristin/Glyceryl Trimyristate) was selected as the solid lipid. Dexketoprofen tromethamol loaded SLNs were prepared by hot homogenization method followed by probe ultrasonication and characterization was achieved by particle size/PDI and zeta potential measurements, DCS thermograms, SEM imaging FT-IR and NMR spectroscopic analyses.

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AUTHOR NAME	ABSTRACT PAGE
A. Ahmet Başaran	215
A. Murat Tuncer	123, 127
A. Ramanaviciene	18
A. Ramanavicius	18
A. Raşit Öztürk	127
A. Tanju Ozcelikay	58
Abbas Kaffashi	83
Abdelkader Mekhaldi	179
Abdelkrim Atmani	213
Abdoul Nzeyimana	176
Abdullah Can	212
Abdullah Eroğlu	137
Abdullah Uslu	74, 103, 104
Abdurrahman Olğaç	45, 206, 207
Afife Büşra Uğur	99
Agnes Noël	143
Ahmed Menad	178
Ahmet Alper Öztürk	62
Ahmet Aydın	22
Ahmet Cumaoglu	139
Ahmet Duran	171
Ahmet İLÇİM	160, 167, 168
Ahmet Sami Boşnak	41
Akkal Salah	181
Ali Esat Karakaya	121
Alp Giray Akdemir	185
Alper Gökbulut	162, 163
Alper Okyar	28
Alptuğ Eren Karaküçük	89
Amel Amrani	177
Amina Ghomri	213
Anatoli Dimoglo	187
Andrea Carotti	20, 45, 207
Andreas Peyrl	31
Anil Banagar	96
Anil Jadhav	96
Annabelle Ballesta	27
Antonio Macchiarulo	20, 36, 206, 207
Arzu Özel	175

AUTHOR NAME	ABSTRACT PAGE
Arzu Selen	14
Aslı Kara	83
Aslıhan Ekici	117
Aslıhan H. Algan	216
Asli Kara	69, 70, 71, 146
Asli Ozge Agkaya	139
Asma Mahmoudi	106
Asuman Bozkir	69, 70
Asuman Bozkir	
Asuman Karakaya	121
Atila Bozdağ	114
Audrone Maroziene	208
Ayca Aktas	122, 124
Ayça Çakmak Pehlivanli	129
Aydın Erenmemişoğlu	74
Ayla Kaya	151, 152
Aylin Elkama	121
Aylin Sepici Dinçel	137
Aymelek Gönenç	52
Aysel Bayhan Öktem	131
Aysel Berkkan	111, 116, 117
Aysun Hacışevki	138
Ayşe Mine Gençler Özkan	158
Ayşe Nalbantsoy	100
Ayşe Nur Oktay	89
Ayşe Selcen Alpan	182
Ayşegül Karataş	216
Azime Berna Özçelik	183, 184, 185
B. Berk	147
Barış Bani	169
Barkın Berk	63, 188, 197
Bart Crielaard	34
Basri Gülbakan	19
Başak Sevinç	114
Begüm Nurpelin Sağlık	193, 196
Belma Aslım	154, 170
Benaïssa Elmoualij	143
Benedetto Natalini	20
Bensu Karahalil	21