



7th International Molecular Biology and Biotechnology Congress



25-27 April 2018, Konya, Turkey
www.molbiotech.gen.tr



**7th INTERNATIONAL
MOLECULAR BIOLOGY and BIOTECHNOLOGY
CONGRESS**

CONGRESS PROGRAM



**NECMETTİN ERBAKAN
ÜNİVERSİTESİ**

25-27 April 2018
Necmettin Erbakan University
MOLBIOTECH 2018



7th International
Molecular Biology and Biotechnology
Congress
25-27 April 2018, www.molbiotech.gen.tr

14	Understanding the relationship between single cell morphology and colony pattern of <i>Pseudomonas pseudoalcaligenes</i>. Fatma Nur ALP, Suray PEHLİVANOĞLU, Gurbuz COMAK
15	Isolation and Molecular Characterization of Alkaliphilic and Alkali-tolerant Cellulase-degrading <i>Bacillus</i> strains. Sinan BAYRAM, Mehmet Nuri AYDOĞAN
16	How TrxR activity changes in an iron-overload mouse heart? Sevda ALTUN, Nurdan Gonul BALTACI, Harun BUDAK
17	The expression levels of matrix gla protein (mgp) in various cell lines Hamza Malik OKUYAN, Menderes Yusuf TERZİ, Ahmet ARSLAN
18	The Effect of Monosodium Glutamate Used in Childhood on Neurofilament and Dopamine Receptor D2 Expressions in Hippocampal Neurons Seren Gülşen GÜRGEN, Ayşe Tuç YÜCEL, Nurcan UMUR, Oya SAYIN, Gülce Naz YAZICI
19	Investigation of protein carbonyl groups as oxidative stress indicator on biological systems Serkan SUGEÇTİ, Kemal BÜYÜKGÜZEL
20	Ion exchange chromatography in protein isolation and purification Serpil KARA
21	Determination of Antimutagenic Effects of Some Plantago Extracts Using Ames/E.coli WP2 Test System Serpil METİN, Fatma ZİLİFDAR, Egemen FOTO, Yasin GENÇ, Nuran DIRİL
22	Development of genome specific microsatellite marker in <i>Cucurbita pepo</i> L. Şerife Eylül DUMAN, Ali Tefvik UNCU, Ahmet KAYRALDIZ
23	Use of Next Generation Discovery Technologies in Plants Şerife Eylül DUMAN, Ahmet KAYRALDIZ, Ali Tefvik UNCU
24	Synthesis of Some New Thiadiazine Derivatives and Their Biological Activities Şerife KAYMAKCI BULDU, Erdal KOCABAŞ, Fatih ERCİ, Ahmet Burak SARIGÜNEY, Ahmet COŞKUN
25	Determination of Protease Enzyme Production Potentials of Thermophilic Bacteria Isolated From Hot Water Springs Elanur TUYSUZ, Meryem DOYMUS, Sumeyya AKBULUT, Seyda ALBAYRAK, Hakan OZKAN, Mesut TASKİN, Ahmet ADİGUZEL, Gulsah CANAKCI ADİGUZEL
26	Quantitation of β-Sitosterol in <i>Crataegus orientalis</i> (Rosaceae) by Gas Chromatography-Mass Spectrometry Seyma BAKIRCI, Bilal YILMAZ, Mehmet Nuri AYDOĞAN, Hakan ASKİN
27	Determination with qRT-PCR of Expression Levels of some Antioxidative Enzymes in Safflower Types (<i>Carthamus tinctorius</i> L.) Applied by Boric Acid Şifanur SÜLÜŞ, Sema LEBLEBİCİ



**7th International
Molecular Biology and Biotechnology
Congress**
25-27 April 2018, www.molbiotech.gen.tr

ORGANIZING COMMITTEE

Honorary Chairman of the Congress

Prof. Dr. Muzaffer SEKER,
Rector of Necmettin Erbakan University, TURKEY

Chairman of the Congress

Prof. Dr. Mehmet KARATAS,
Dean of Faculty of Science, Necmettin Erbakan University, TURKEY

Congress Coordinators

Assoc. Prof. Dr. Merije ELEZI, University of Tetova, MACEDONIA
Assist. Prof. Dr. Asli DAGERI, Necmettin Erbakan University, TURKEY

Chairman of the Organizing Committee

Assoc. Prof. Dr. Muhammed AASIM, Necmettin Erbakan University, TURKEY

Organizing Committee Members

Assist. Prof. Dr. Ali Tevfik UNCU, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Asli DAGERI, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Ayse Ozgur UNCU, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Egemen FOTO, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Emine Nedime KORUCU, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Faysal SELIMOGLU, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Gurbuz COMAK, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Ilker AKIN, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Suray PEHLIVANOGLU, Necmettin Erbakan University, TURKEY
Assist. Prof. Dr. Tugba Nur ASLAN, Necmettin Erbakan University, TURKEY
Res. Asst. Dr. Ayse Suna BALKAN NALCAIYI, Necmettin Erbakan University, TURKEY
Res. Asst. Husnu KARA, Necmettin Erbakan University, TURKEY
Res. Asst. Seyma BAKIRCI, Necmettin Erbakan University, TURKEY

Secretariat

Res. Asst. Dr. Ayse Suna BALKAN NALCAIYI, Necmettin Erbakan University, TURKEY
Res. Asst. Behic Selman ERDOGDU, Necmettin Erbakan University, TURKEY
Res. Asst. Esra TANHAS, Necmettin Erbakan University, TURKEY
Res. Asst. Fatih ERCI, Necmettin Erbakan University, TURKEY
Res. Asst. Husnu KARA, Necmettin Erbakan University, TURKEY
Res. Asst. Sedef AKCAALAN, Necmettin Erbakan University, TURKEY
Res. Asst. Seyma BAKIRCI, Necmettin Erbakan University, TURKEY





**7th International
Molecular Biology and Biotechnology
Congress**
25-27 April 2018, www.molbiotech.gen.tr

SCIENTIFIC COMMITTEE

- Prof. Dr. Anil Prakash MATHUR, Barkatullah University, INDIA
Prof. Dr. Erdal DINC, Ankara University, TURKEY
Prof. Dr. Esra MARTIN, Necmettin Erbakan University, TURKEY
Prof. Dr. Federico MARINI, University of Rome "La Sapienza", ITALY
Prof. Dr. Kasim BAJROVIC, University of Sarajevo, BOSNIA and HERZEGOVINA
Prof. Dr. Nasir BEXHETI, University of Tetova, MACEDONIA
Prof. Dr. Nexhbedin BEADINI, University of Tetova, MACEDONIA
Prof. Dr. Novo PRZULJ, University of Banja Luka, BOSNIA and HERZEGOVINA
Prof. Dr. Sezai TURKEL, Uludag University, TURKEY
Prof. Dr. Shahid MANSOOR, National Institute of Biotechnology and Genetic Engineering, PAKISTAN
Prof. Dr. Tayyab HUSNAIN, University of the Punjab, PAKISTAN
Prof. Dr. Yildiz AKA KACAR, Cukurova University, TURKEY
Prof. Dr. Yusuf OZTURK, Anadolu University, TURKEY
Assoc. Prof. Dr. Ali Raza AWAN, University of Veterinary and Animal Sciences, PAKISTAN
Assoc. Prof. Dr. Ashok K SHAKYA, Al-Ahliyya Amman University, JORDAN
Assoc. Prof. Dr. Attila KARSI, Mississippi State University, USA
Assoc. Prof. Dr. Ceyda OZFIDAN KONAKCI, Necmettin Erbakan University, TURKEY
Assoc. Prof. Dr. Emrah TORLAK, Necmettin Erbakan University, TURKEY
Assoc. Prof. Dr. Mustafa YONTEM, Necmettin Erbakan University, TURKEY
Assoc. Prof. Dr. Nisar AHMED, Centre of Agricultural Biochemistry and Biotechnology, PAKISTAN



**7th INTERNATIONAL
MOLECULAR BIOLOGY and BIOTECHNOLOGY
CONGRESS**

ABSTRACT BOOK



**NECMETTİN ERBAKAN
UNIVERSITY**



**25-27 April 2018
Necmettin Erbakan University
MOLBIOTECH 2018**



Poster Presentation

Determination with qRT-PCR of expression levels of some antioxidant enzymes in safflower types (*Carthamus tinctorius* L.) applied by boric acid

Sifanur Sülüs¹, Sema Leblebici^{2,3}

¹Department of Biotechnology, Graduate School of Science, Bilecik Şeyh Edebali University, Bilecik, Turkey

²Department of Molecular Biology and Genetics, Faculty of Arts and Sciences, Bilecik Şeyh Edebali University, Bilecik, Turkey

³Biotechnology Application and Research Center, Bilecik Şeyh Edebali University, Bilecik, Turkey

sifanurgungor@gmail.com

Abstract

Today fossil based primary energy resources like coal, petrol and natural gas have been depleting and these energy resources have ecological harm. For these reasons, new renewable energy sources are preferred in recent years. Animal fats and herbal products like soy beans, corn and sunflower are used to obtain renewable energy. Safflower (*Carthamus tinctorius* L.) is the leading among those herbal products. It is an enduring herbal because of its high tolerance to cold and hot; its tolerance to salinity and weeds. This fact arises the idea that its reaction to different stress factors should be analysed. Changes on three different safflower type (Balıcı, Dinçer and Remzibey) brought by APX, GR, CAT and SOD enzyme activities of boric acid in different concentrations at expression level are found. Though the element boron is one of the micro elements absolutely necessary for the growing of the plants, too much boron found in the soil is a stress factor which limits the plant growth and productivity. In this study, total RNAs are isolated from the leaves of three safflower types (Balıcı, Dinçer and Remzibey) grown in different boric acid concentrations (0: control, 5, 10, 15, 20 mM). These RNA samples are transformed into first strand complementary DNA (cDNA). APX, GR, CAT and SOD gene expression levels is identified with qRT-PCR as a result of normalisation with GAPDH which is determined as reference gene. Difference on gene expression levels of antioxidant enzymes based on increasing boric acid concentration in three safflower types.

Keywords: *Carthamus tinctorius*, boric acid, seedling, RealTime-PCR