



**3<sup>rd</sup> INTERNATIONAL CONFERENCE ON SCIENCE  
ECOLOGY AND TECHNOLOGY  
(ICONSETE'2017 )  
Rome, ITALY  
August 14-16, 2017**

# **ABSTRACT BOOK**





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## CONFERENCE INFORMATION

### Conference Date

The ICONSETE'2017 – Rome conference is held between August 14-16, 2017.

### Conference Venue

Yunus Emre Enstitüsü Rome/ITALY

### Language

The official language of the conference is English.

### Conference Website

Further information and updates about the conference can be found at  
[http:// http://www.2017.iconsete.org](http://www.2017.iconsete.org)

### About Presentations:

#### Oral Presentations

A slide projector and a computer will be available in the presentation rooms. Each presenter will have 10 minutes for his/her presentation and 5 minutes for discussions.

#### Poster Presentations

Poster should be prepared according to the poster template (80 cm width and 120 cm height). The poster presenters are kindly requested to stand in front of their own posters during the poster sessions to answer arising questions. The posters should be hanged/withdrawn by the presenters.

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## INVESTIGATION OF EXPRESSION LEVELS OF BRAIN DERIVED NEUROTROPHIC FACTOR, NEUROTROPHIN-3 AND NEUROTROPHIN-4 IN PATIENT WITH MAJOR DEPRESSION

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### ABSTRACT

Major depression (MD) is a common neuropsychiatric disorder in worldwide. Until now, most of the data related to the etiopathogenesis of MD have been based on brain studies, and the roles of biological factors of the disease continue to be increasingly studied. Brain-Derived Neurotrophic Factor (BDNF), Neurotrophin-3 (NT-3) and Neurotrophin-4 (NT-4) are neuronal growth factors, which play important roles in neuronal survival, differentiation, growth and the regulation of plasticity. The aim of this study was to evaluate the relationship between MD and the expression levels of BDNF, NT-3 and NT-4 mRNAs.

It included 51 volunteer patients and 75 control subjects in the age range of 18 to 65 years whose Hamilton Depression Rating Scale (HDRS) scores were at least 16 and who were diagnosed with MD according to the DSM-V. RNA isolation was performed by taking 15 ml of peripheral blood from the patient and control group subjects. The expression levels of BDNF, NT-3, and NT-4 were then determined by qRT-PCR.

The results of this study showed that the BDNF expression levels of MD patients were significantly greater than those of the control group ( $p=0.004$ ). There was no statistically significant difference between the groups in terms of NT-3 ( $p=0.30$ ) and NT-4 ( $p=0.53$ ). Within the patient group, there was no statistically significant difference between the gender groups in terms of BDNF, NT-3 and NT-4 values ( $p=0.76$ ;  $p=0.97$ ;  $p=0.98$ ). Within the control group, a statistically significant difference was found between the gender groups in terms of BDNF, NT-3 and NT-4 values ( $p<0.001$ ;  $p<0.001$ ;  $p<0.001$ ).

The neuro-endocrinological and genetic linkage of neurotrophic factors need to be examined to clarify the psychobiology of mental disorders and to develop new and effective treatment methods. It is believed that this study will provide an insight into new studies in the relevant field.

**Keywords:** Major Depression, Brain Derived Neurotrophic Factor, Neurotrophin-3, Neurotrophin-4, Real Time PCR