

## Dr.Öğr.Üyesi GÖKHAN ÜNAL

### Kişisel Bilgiler

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### Eğitim Bilgileri

Post Doktora, The University of Manchester, Division of Pharmacy and Optometry, İngiltere 2020 - 2020

Doktora, Erciyes Üniversitesi, Sağlık Bilimleri Enstitüsü, Farmakoloji, Türkiye 2013 - 2017

Lisans, Erciyes Üniversitesi, Eczacılık Fakültesi, Türkiye 2007 - 2012

### Yabancı Diller

İngilizce, B2 Orta Üstü

### Yaptığı Tezler

Doktora, Siçanlarda MK-801 ile Oluşturulmuş Şizofreni Modelinde Nikotinik Alfa-7 Reseptörlerinin Şizofreninin Pozitif, Negatif ve Kognitif Semptomları Üzerine Olası Etkilerinin İncelenmesi, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Farmakoloji, 2017

### Araştırma Alanları

Tıp, Sağlık Bilimleri, Dahili Tıp Bilimleri, Psikiyatri, Eczacılık, Meslek Bilimleri, Farmakoloji

### Akademik Unvanlar / Görevler

Dr.Öğr.Üyesi, Erciyes Üniversitesi, Eczacılık Fakültesi, Eczacılık Meslek Bilimleri , 2018 - Devam Ediyor

Araştırmacı, The University of Manchester, Division of Pharmacy and Optometry, 2020 - 2020

Araştırma Görevlisi Dr., Erciyes Üniversitesi, Eczacılık Fakültesi, Eczacılık Meslek Bilimleri , 2018 - 2018

Araştırma Görevlisi, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Farmakoloji, 2013 - 2017

### Akademik İdari Deneyim

DEKAM Müdür Yardımcısı, Erciyes Üniversitesi, Eczacılık Fakültesi, Eczacılık Meslek Bilimleri , 2019 - Devam Ediyor

### SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

1. alpha 7 nicotinic receptor agonist and positive allosteric modulators differently improved

### **schizophrenia-like cognitive deficits in male rats**

ÜNAL G., ŞİRVANCI S., ARICIOĞLU F.

BEHAVIOURAL BRAIN RESEARCH, cilt.397, 2021 (SCI İndekslerine Giren Dergi)

- II. **Alpha 7 nicotinic receptor agonist and positive allosteric modulators improved social and molecular deficits of MK-801 model of schizophrenia in rats**  
Ünal G., Bekci H., Cumaoğlu A., Yerer M. B. , Arıcıoğlu F.  
PHARMACOLOGY BIOCHEMISTRY AND BEHAVIOR, cilt.193, 2020 (SCI İndekslerine Giren Dergi)
- III. **Immunopharmacological management of COVID-19: Potential therapeutic role of valproic acid.**  
Unal G., Turan B., Balcioglu Y.  
Medical hypotheses, cilt.143, ss.109891, 2020 (SCI İndekslerine Giren Dergi)
- IV. **Famotidine has a neuroprotective effect on MK-801 induced toxicity via the Akt/GSK-3 $\beta$ / $\beta$ -catenin signaling pathway in the SH-SY5Y cell line.**  
Unal G., Dokumaci A., Ozkartal C., Yerer M. B. , Arıcıoğlu F.  
Chemico-biological interactions, cilt.314, ss.108823, 2019 (SCI Expanded İndekslerine Giren Dergi)
- V. **Lichen Based Synthesis of Zinc Oxide Nanoparticles and Evaluation of its Neurotoxic Effects on Human Neuroblastoma Cells**  
Koca F. D. , Ünal G., Halıcı M. G.  
JOURNAL OF NANO RESEARCH, cilt.59, ss.15-24, 2019 (SCI İndekslerine Giren Dergi)
- VI. **SYNTHESIS AND BIOLOGICAL EVALUATION OF SOME NEW HYDRAZONE DERIVATIVES BEARING PYRIMIDINE RING AS ANALGESIC AND ANTI-INFLAMMATORY AGENTS**  
Akdag K., ÜNAL G., TOK F., ARICIOĞLU F., Temel H. E. , KAYMAKÇIOĞLU B.  
ACTA POLONIAE PHARMACEUTICA, cilt.75, sa.5, ss.1147-1159, 2018 (SCI İndekslerine Giren Dergi)
- VII. **Agmatine-attenuated cognitive and social deficits in subchronic MK-801 model of schizophrenia in rats**  
Unal G., Ates A., Arıcıoğlu F.  
PSYCHIATRY AND CLINICAL PSYCHOPHARMACOLOGY, cilt.28, sa.3, ss.245-253, 2018 (SCI İndekslerine Giren Dergi)
- VIII. **A-582941, cholinergic alpha 7 nicotinic receptor agonist, improved cognitive and negative symptoms of the sub-chronic MK-801 model of schizophrenia in rats**  
Unal G., Arıcıoğlu F.  
PSYCHIATRY AND CLINICAL PSYCHOPHARMACOLOGY, cilt.28, sa.1, ss.4-13, 2018 (SCI İndekslerine Giren Dergi)
- IX. **Neuroinflammation in Schizophrenia: A Critical Review and The Future**  
Arıcıoğlu F., Ozkartal C. S. , Unal G., Dursun S., CETİN M., Mueller N.  
KLINIK PSIKOFARMAKOLOJİ BULTENİ-BULLETIN OF CLINICAL PSYCHOPHARMACOLOGY, cilt.26, sa.4, ss.429-437, 2016 (SCI İndekslerine Giren Dergi)
- X. **Regulation of GSK-3 Activity as A Shared Mechanism in Psychiatric Disorders**  
Sahin C., Unal G., Arıcıoğlu F.  
KLINIK PSIKOFARMAKOLOJİ BULTENİ-BULLETIN OF CLINICAL PSYCHOPHARMACOLOGY, cilt.24, sa.1, ss.97-108, 2014 (SCI İndekslerine Giren Dergi)
- XI. **pK(a) Constant of Varenicline**  
ÜNAL G., Yeloglu I., Anılanmert B., NARİN I.  
JOURNAL OF CHEMICAL AND ENGINEERING DATA, cilt.57, sa.1, ss.14-17, 2012 (SCI İndekslerine Giren Dergi)

### **Diğer Dergilerde Yayınlanan Makaleler**

- I. **Vortioxetine improved social and cognitive deficits in acute ketamine model of schizophrenia in rats**  
Ünal G., Taşkıran M.  
Journal of Research in Pharmacy, cilt.24, sa.8, ss.1-8, 2020 (ESCI İndekslerine Giren Dergi)
- II. **Neuroprotective effects of thymoquinone against ketamine -and MK-801-induced neurotoxicity in SH-SY5Y cells: From the perspective of glutamatergic dysfunction in schizophrenia**

- ÜNAL G., Erdogan B.  
CLINICAL AND EXPERIMENTAL HEALTH SCIENCES, cilt.10, sa.2, ss.178-182, 2020 (ESCI İndekslerine Giren Dergi)
- III. **Famotidine Improved Schizophrenia-Like Behaviors in Acute Ketamine Model of Schizophrenia in Rats**  
Ünal G., Arıcıoğlu F.  
Psychiatry and Behavioral Sciences, cilt.10, sa.2, ss.45-54, 2020 (ESCI İndekslerine Giren Dergi)
- IV. **Comparison of behavioural and molecular effects of two different schizophrenia models induced by subchronic MK-801 administration in rats**  
ÜNAL G., Arıcıoğlu F.  
MARMARA PHARMACEUTICAL JOURNAL, cilt.22, sa.2, ss.199-208, 2018 (ESCI İndekslerine Giren Dergi)
- V. **Deneysel Şizofreni Modelleri: Psikofarmakolojik Bakış**  
ÜNAL G., ARICIOĞLU F.  
Türkiye Klinikleri Laboratuvar Hayvanları Dergisi, cilt.1, ss.105-114, 2017 (Diğer Kurumların Hakemli Dergileri)
- VI. **POSSIBLE PROTECTIVE EFFECTS OF AGMATINE ANDFAMOTIDINE ON MK-801-INDUCED CYTOTOXICITY IN SHSY 5YCELL LINE**  
AYCAN M. B. , DOKUMACI A. H. , ÜNAL G., şahin c., ARICIOĞLU F.  
Journal of Cellular Neuroscience and oxidative stress, 2017 (Diğer Kurumların Hakemli Dergileri)
- VII. **The involvement of Akt and GSK 3 Two pathways two pathology**  
ŞAHİN C., ÜNAL G., ARICIOĞLU F.  
Journal of Marmara University Institute of Health Sciences, ss.1, 2014 (Diğer Kurumların Hakemli Dergileri)

### **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

- I. **ACUTE and CHRONIC NMDA RECEPTOR ANTAGONIST MODELS of SCHIZOPHRENIA CAUSED DIFFERENT DISRUPTIONS on PREPULSE INHIBITION of ACUSTIC STARTLE RESPONSE TEST in RATS**  
ÜNAL G.  
5. Uluslararası Gevher Nesibe Sağlık Bilimleri Kongresi, 24 Nisan - 25 Mayıs 2020
- II. **SIÇANLARDA SUBKRONİK MK-801 UYGULAMASININKORKU KOŞULLAMA UZERİNE ETKİLERİNİNİNCELENMESİ**  
ÜNAL G.  
1.UluslararasıSağlık Bilimleri ve İnovasyon Kongresi, 10 - 12 Nisan 2020
- III. **Nigella sativa oil improved cognitive symptoms in subchronic MK-801 model of schizophrenia in rats**  
ÜNAL G., Zortul H., ARICIOĞLU F.  
11th International Congress on Psychopharmacology 7th International Symposium on Child and Adolescent Psychopharmacology, 18 - 21 Nisan 2019
- IV. **A comparison of two schizophrenia models induced by MK-801: Possible involvement of phosphodiesterase 4A and glycogen synthase kinase 3 beta**  
Yerer M. B. , ÜNAL G., Bekci H., CUMAOĞLU A., Arıcıoğlu F.  
31st Congress of the European-College-of-Neuropsychopharmacology (ECNP), Barcelona, İspanya, 6 - 09 Ekim 2018, cilt.29
- V. **Identification of the possible downstream path-ways related to alpha7 nicotinic acetylcholine receptor in MK-801 induced schizophrenia model in rats**  
CUMAOĞLU A., ÜNAL G., Bekci H., Yerer M. B. , ARICIOĞLU F.  
31st Congress of the European-College-of-Neuropsychopharmacology (ECNP), Barcelona, İspanya, 6 - 09 Ekim 2018, cilt.29
- VI. **Effects of agmatine on Akt/GSK-3beta/betacatenin signaling pathway in SH-SY5Y cell culture: Relevance to schizophrenia**  
ÜNAL G., ARICIOĞLU F., Dokumaci A. H. , Yerer-Aycan M. B. , Ozkartal-Sahin C.  
ECNP Workshop on Early Career Scientists in Europe, Nice, Fransa, 7 - 10 Mart 2019, cilt.29
- VII. **Agmatine attenuated sensorimotor gating deficit in schizophrenia model in rats: Combination of**

**neonatal MK-801 and isolation rearing**

ÜNAL G., ARICIOĞLU F., Zortul H., ÖZBEYLİ D.

31th Congress European College of Neuropsychopharmacology, 6 - 09 Ekim 2018

- VIII. **Alpha-7 nicotinic acetylcholine receptor agonist and positive allosteric modulators improved receptor deficits induced by MK-801 model of schizophrenia in rats**  
ÜNAL G., ARICIOĞLU F.  
ISBS Translational Biological Psychiatry Symposium, 23 Mayıs 2018
- IX. **Alpha-7 nicotinic acetylcholine receptor positive allosteric modulators improved GABAergic deficits of schizophrenia in subchronic MK-801 model of rats**  
ÜNAL G., ARICIOĞLU F.  
10th International Congress on Psychopharmacology and 6th International Symposium on Child and Adolescent Psychopharmacology, 25 - 29 Nisan 2018
- X. **Nigella sativa extract improved sensorimotor gating deficit on acute ketamine model of schizophrenia in rats**  
ÜNAL G., KELEŞ R. M., TAŞKIN T., ARICIOĞLU F.  
30th Congress European College of Neuropsychopharmacology (ECNP), 2 - 05 Eylül 2017
- XI. **Nicotinic alpha7 receptor agonist and modulators improved social but not sensorimotor deficits on subchronic MK-801 model of schizophrenia in rats.**  
ÜNAL G., Zortul H., YAVUZ A. N., ARICIOĞLU F.  
30th Congress European College of Neuropsychopharmacology (ECNP), 2 - 05 Eylül 2017
- XII. **Effect of nicotinic alpha 7 receptor agonist and positive allosteric modulators on cognitive symptoms in subchronic MK-801 model of schizophrenia in rats**  
ÜNAL G., ARICIOĞLU F., YAVUZ A. N., Zortul H.  
British Association of Psychopharmacology (BAP) Summer Meeting, 23 - 26 Temmuz 2017
- XIII. **Cholinergic alpha 7 nicotinic receptor agonism improved cognitive and negative symptoms of MK-801-induced schizophrenia in rats.**  
ÜNAL G., ARICIOĞLU F., YAVUZ A. N.  
9th International Congress on Psychopharmacology and 5th International Symposium on Child and Adolescent Psychopharmacology, 26 - 30 Nisan 2017
- XIV. **Olanzapine Reversed MK-801 Induced Cell Damage via Akt/GSK-3  $\beta/\beta$  -Catenine Signaling Pathway in SH SY5Y Cell Culture**  
ÜNAL G., DOKUMACI A. H., AYCAN M. B., ÖZKARTAL C., ARICIOĞLU F.  
9th International Congress on Psychopharmacology and 5th International Symposium on Child and Adolescent Psychopharmacology, 26 - 30 Nisan 2017, cilt.27, ss.57
- XV. **Famotidine: Is it a potential new candidate for the treatment of schizophrenia by inhibiting GSK-3 beta?**  
Unal G., DOKUMACI A. H., Hazar-Yavuz A. N., AYCAN M. B., Sahin C., Keles R., Aricioglu F.  
29th Congress of the European-College-of-Neuropsychopharmacology (ECNP), Vienna, Avusturya, 17 - 20 Eylül 2016, cilt.26
- XVI. **Antidepressant like effect of hydro alcoholic extract of nigella sativa in tail suspension test in mice**  
YAVUZ A. N., KELEŞ R. M., ÜNAL G., TAŞKIN T., ARICIOĞLU F.  
29th Congress European College of Neuropsychopharmacology (ECNP), Vienna, Avusturya, 17 - 20 Eylül 2016
- XVII. **Famotidine Is it a potential new candidate for the treatment of schizophrenia by inhibiting GSK 3beta**  
ÜNAL G., Dokumacı A. H., Hazar Yavuz A. N., AYCAN M. B., Şahin C., Keleş R., ARICIOĞLU F.  
29th ECNP congress, 17 - 20 Eylül 2016
- XVIII. **Famotidine reverses social withdrawal but not fear conditioning deficits induced by acute ketamine model in rats**  
ARICIOĞLU F., ÜNAL G., YAVUZ A. N., ÖZKARTAL C., KELEŞ R. M.  
7 th European Congress of Pharmacology (EPHAR2016), İstanbul, Türkiye, 26 - 30 Temmuz 2016
- XIX. **The combination of sub effective doses of agmatine and ketamine reduces obsessive compulsive like behavior of mice in marble burying test**

KELEŞ R. M. , YAVUZ A. N. , ÖZKARTAL C., ÜNAL G., ARICIOĞLU F.

30th World International College of Neuropsychopharmacology (CINP) Congress, Seoul, Güney Kore, 3 - 05 Temmuz 2016, cilt.19, ss.24-25

- XX. **Possible protective effects of agmatine and famotidine on MK 801 induced cytotoxicity in SHSY 5Y cell line**  
AYCAN M. B. , Dokumacı A. H. , ÜNAL G., ÖZKARTAL C., ARICIOĞLU F.  
6th World Congress of Oxidative Stress, Calcium Signaling and TRP Channels, Isparta, Türkiye, 24 - 27 Mayıs 2016
- XXI. **Possible protective effects of agmatine and famotidine on MK 801 induced cytotoxicity in SHSY 5Y cell line 6th World congress of Oxidative stress calcium signaling and TRP channels**  
AYCAN M. B. , DOKUMACI A. H. , ÜNAL G., Şahin C., ARICIOĞLU F.  
6th World congress of Oxidative stress, calcium signaling and TRP channels., 24 - 27 Mayıs 2016
- XXII. **Possible neuroprotective effects of agmatine via GSK3 beta protein expression in SHSY5Y cell line**  
DOKUMACI A. H. , ÜNAL G., AYCAN M. B. , Şahin C., ARICIOĞLU F.  
8. Uluslararası Psikofarmakoloji Kongresi, 20 - 24 Nisan 2016
- XXIII. **Famotidine reverses learning and memory deficits induced by acute ketamine model of schizophrenia in novel object recognition test in rats**  
YAVUZ A. N. , ÜNAL G., ÖZKARTAL C., KELEŞ R. M. , KRAUS M., ARICIOĞLU F.  
8th International Congress on Psychopharmacology and 4th International Symposium on Child and Adolescent Psychopharmacology, Antalya, Türkiye, 20 - 24 Nisan 2016
- XXIV. **Agmatine potentiates the antidepressant effect of ketamine in forced swimming test of rats**  
KELEŞ R. M. , YAVUZ A. N. , ÖZKARTAL C., ÜNAL G., ARICIOĞLU F.  
8th International Congress on Psychopharmacology and 4th International Symposium on Child and Adolescent Psychopharmacology, Antalya, Türkiye, 20 - 24 Nisan 2016
- XXV. **Agmatine treatment prevents MK 801 induced neurodegeneration in cell culture**  
ÜNAL G., DOKUMACI A. H. , AYCAN M. B. , ÖZKARTAL C., ARICIOĞLU F.  
8th International Congress on Psychopharmacology and 4th International Symposium on Child and Adolescent Psychopharmacology, Antalya, Türkiye, 20 - 24 Nisan 2016
- XXVI. **Possible neuroprotective effects of agmatine via GSK3 protein expression in SH SY5Y cell line**  
DOKUMACI A. H. , ÜNAL G., AYCAN M. B. , ÖZKARTAL C., ARICIOĞLU F.  
8th International Congress on Psychopharmacology and 4th International Symposium on Child and Adolescent Psychopharmacology, Antalya, Türkiye, 20 - 24 Nisan 2016
- XXVII. **Agmatine attenuates cecal ligation induced sickness behavior in rats**  
ARICIOĞLU F., ŞAHİN C., ÜNAL G., UTKAN T.  
4th World Psychiatric Association International Congress, 18 - 22 Kasım 2015, ss.446
- XXVIII. **Bioactive beta carbolines harman and norharman attenuate oxidative damage in sub chronic stress model in rats**  
ARICIOĞLU F., ŞAHİN C., ÜNAL G., ARKAN G.  
4th World Psychiatric Association International Congress, 18 - 22 Kasım 2015
- XXIX. **The effect of acute ketamine administration on NLRP3 inflammasome activation in a sub chronic stress model of rats**  
ÜNAL G., TERZİOĞLU G., ŞAHİN C., YANIKKAYA DEMİREL G., ARICIOĞLU F.  
28th European Congress of Neuropsychopharmacology (ECNP), Amsterdam, Hollanda, 29 Ağustos - 01 Eylül 2015, cilt.25, ss.226-227
- XXX. **Acute administration of ketamine inhibited stress induced pro inflammatory cytokines in hippocampus of rats**  
ÜNAL G., Terzioğlu G., ŞAHİN C., Yanikkaya Demirel G., ARICIOĞLU F.  
7th International Congress on Psychopharmacology and 3rd International Symposium on Child and Adolescent Psychopharmacology, Antalya, Türkiye, 15 - 19 Nisan 2015
- XXXI. **Synthesis and antinociceptive activities of some hydrazide hydrazones of ethyl 4-chloro-2-methylthio-5-pyrimidine carboxilate**  
Akdağ K., KAYMAKÇIOĞLU B., ÖZKARTAL C., ÜNAL G., ARICIOĞLU F.

Joining Forces in Pharmaceutical Analysis and Medicinal Chemistry, 25 - 26 Ağustos 2014

**XXXII. Investigation of Cytotoxic Effects of Pelargonium endlicherianum Extracts and Related Phenolic Compounds Esculetin and Scopoletin**

DOKUMACI A. H. , ÜNAL G., ŞEKER KARATOPRAK G., AYCAN M. B.

2nd Anticancer Agent Congress, Bodrum, Türkiye, 23 - 27 Nisan 2014

**XXXIII. Investigation Of Cytotoxic Effects Of Pelargonium Endlicherianum Extracts And Related Phenolic Compounds: Esculetin And Scopoletin.**

DOKUMACI A. H. , ÜNAL G., ŞEKER KARATOPRAK G., AYCAN M. B.

2nd Anticancer Agent Congress, Muğla, Türkiye, 23 - 25 Nisan 2014, ss.100

**XXXIV. Acute P2X7 receptor blockade by Brilliant Blue G (BBG) does not result in antidepressant-like activity in rats**

ÖZKARTAL C., GÜDEN D. S. , ÜNAL G., ARICIOĞLU F.

6th International Congress on Psychopharmacology and 2nd Symposium on Child and Adolescent

Psychopharmacology, 16 - 20 Nisan 2014

## **Desteklenen Projeler**

ÜNAL G., ARICIOĞLU F., AYCAN M. B. , Yükseköğretim Kurumları Destekli Proje, SH-SY5Y hücrelerinde MK-801 ile indüklenen hücre hasarına karşı agmatinin koruyucu etkisinin araştırılması, 2018 - 2019

AYCAN M. B. , ARICIOĞLU F., ÜNAL G., Yükseköğretim Kurumları Destekli Proje, SIÇANLARDA MK801 İLE OLUŞTURULMUŞ ŞİZOFRENİ MODELİNDE NİKOTİNİK ALFA7 RESEPTÖRLERİNİN ŞİZOFRENİNİN POZİTİF, NEGATİF VE KOGNİTİF SEMPTOMLARI ÜZERİNE OLASI ETKİLERİNİN İNCELENMESİ, 2018 - 2018

## **Bilimsel Dergilerdeki Faaliyetler**

PSYCHIATRY AND CLINICAL PSYCHOPHARMACOLOGY, Editörler Kurulu Üyesi, 2020 - Devam Ediyor

## **Akademik Dolaşım Faaliyetleri**

Diğer, Doktora Sonrası Araştırma, The University of Manchester, İngiltere, 2020 - 2020

## **Atıflar**

Toplam Atıf Sayısı (WOS):31

h-indeksi (WOS):3

## **Burslar**

2219 - Yurtdışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2021 - 2022