

## Assoc. Prof. GÜL İLBAY

### Personal Information

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### Education Information

Expertise In Medicine, Cukurova University, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, Turkey 1993 - 1996

### Foreign Languages

English, B2 Upper Intermediate

### Research Areas

Medicine, Human Physiology

### Academic Titles / Tasks

Associate Professor, Kocaeli University, Tıp Fakültesi, 2014 - Continues

### Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Effects of Postnatal Caffeine Exposure on Absence Epilepsy and Comorbid Depression: Results of a Study in WAG/Rij Rats**  
İLBAY G., Dogan Z. I. , Balikci A., ERDOĞAN S., Kahilogullari A. K.  
BRAIN SCIENCES, vol.12, no.3, 2022 (Journal Indexed in SCI)
- II. **Neonatal Tactile Stimulation does not Alter Susceptibility to Pentylenetetrazole (PTZ)-Induced Tonic-Clonic Convulsions in Adult WAG/Rij Rats**  
Balikci A., İLBAY G.  
ACTA PHYSIOLOGICA, vol.234, pp.70, 2022 (Journal Indexed in SCI)
- III. **Neonatal Tactile Stimulation Downregulates Dendritic Spines in Layer V Pyramidal Neurons of the WAG/Rij Rat Somatosensory Cortex**  
İLBAY G., Balikci A., KÖKTÜRK S., Yılmaz M., ATEŞ N., BAYDEMİR C., BALCI S.  
Neural plasticity, vol.2022, pp.7251460, 2022 (Journal Indexed in SCI)
- IV. **Spectrochemical and biochemical assay comparison study of the healing effect of the Aloe vera and Hypericum perforatum loaded nanofiber dressings on diabetic wound**  
Guleken Z., Depciuch J., Ege H., İLBAY G., Kalkandelen C., ÖZBEYLİ D., Bulut H., Sener G., Tarhan N., Kuruca S. E.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.254, 2021 (Journal Indexed in SCI)
- V. **Neonatal Tactile Stimulations Affect Genetic Generalized Epilepsy and Comorbid Depression-Like Behaviors**

Balikci A., İlbay G., Ateş N.

FRONTIERS IN BEHAVIORAL NEUROSCIENCE, vol.14, 2020 (Journal Indexed in SCI)

- VI. **Analysis of rat blood plasma upon acute epileptic seizures by infrared spectroscopy with chemometrics**  
Turker-Kaya S., İlbay G.  
VIBRATIONAL SPECTROSCOPY, vol.109, 2020 (Journal Indexed in SCI)
- VII. **The Effects of Neonatal Tactile Stimulation and Deep Touch Pressure on Absence Epilepsy and Comorbid Depression Like Behaviors in Adult Wistar-Albino-Glaxo Rijswijk (Wag/Rij) Rats**  
Balikci A., İLBAY G., ATEŞ N.  
ACTA PHYSIOLOGICA, vol.225, pp.20-21, 2018 (Journal Indexed in SCI)
- VIII. **The Effects of Neonatal Caffeine Administration on Absence Epilepsy and Brain Tissue Membranes on Adult Wistar - Albino -Glaxo Rijswijk (Wag/Rij) Rats**  
Dogan Z. I. , İLBAY G., Kaya S. T. , Balikci A., ATEŞ N.  
ACTA PHYSIOLOGICA, vol.225, pp.20, 2018 (Journal Indexed in SCI)
- IX. **Side-Effects of Convulsive Seizures and Anti-Seizure Therapy on Bone in a Rat Model of Epilepsy**  
Ustaoglu S. G. , EVİS Z., İLBAY G., Boskey A. L. , Severcan F.  
APPLIED SPECTROSCOPY, vol.72, no.5, pp.689-705, 2018 (Journal Indexed in SCI)
- X. **Prevention of Epineural Fibrosis in Rats by Local Administration of Mitomycin C or Daunorubicin**  
Vural E., Yilmaz M., İlbay K., İLBAY G.  
TURKISH NEUROSURGERY, vol.26, no.2, pp.291-296, 2016 (Journal Indexed in SCI)
- XI. **Investigation of Compositional, Structural, and Dynamical Changes of Pentylenetetrazol-Induced Seizures on a Rat Brain by FT-IR Spectroscopy**  
Turker S., İLBAY G., Severcan M., Severcan F.  
ANALYTICAL CHEMISTRY, vol.86, no.3, pp.1395-1403, 2014 (Journal Indexed in SCI)
- XII. **Migration of a Lumbar Rod to Posterior Sacral Region: An Extremely Unusual Complication of Spinal Instrumentation**  
İlbay K., Yasa N., İLBAY G., ETUŞ V.  
JOURNAL OF NEUROLOGICAL SCIENCES-TURKISH, vol.31, no.1, pp.209-212, 2014 (Journal Indexed in SCI)
- XIII. **Epileptic seizures induce structural and functional alterations on brain tissue membranes**  
Turker S., Severcan M., İLBAY G., Severcan F.  
Biochimica et Biophysica Acta - Biomembranes, vol.1838, no.12, pp.3088-3096, 2014 (Journal Indexed in SCI Expanded)
- XIV. **Investigation of the effects of different epileptic activities on cell membrane proteins reveals diagnostic information**  
Turker S., Severcan M., İlbay G., Severcan F.  
AMINO ACIDS, vol.41, 2011 (Journal Indexed in SCI)
- XV. **Effect of pentylenetetrazole and sound stimulation induced single and repeated convulsive seizures on the MDA, GSH and NO levels, and SOD activities in rat liver and kidney tissues**  
DİLLİOĞLUGİL M. Ö. , Kir H., Demir C., İLBAY G., ŞAHİN D., DİLLİOĞLUGİL Ö., BAMBAL G., MEKİK H., ATEŞ N.  
BRAIN RESEARCH BULLETIN, vol.83, no.6, pp.356-359, 2010 (Journal Indexed in SCI)
- XVI. **Diagnosis of Airway Obstruction or Restrictive Spirometric Patterns by Multiclass Support Vector Machines**  
ŞAHİN D., Ubeyli E. D. , İLBAY G., Sahin M., Yasar A. B.  
JOURNAL OF MEDICAL SYSTEMS, vol.34, no.5, pp.967-973, 2010 (Journal Indexed in SCI)
- XVII. **Recurrent Neural Networks for Diagnosis of Carpal Tunnel Syndrome Using Electrophysiologic Findings**  
İlbay K., Ubeyli E. D. , İLBAY G., Budak F.  
JOURNAL OF MEDICAL SYSTEMS, vol.34, no.4, pp.643-650, 2010 (Journal Indexed in SCI)
- XVIII. **Differentiation of Two Subtypes of Adult Hydrocephalus by Mixture of Experts**  
Ubeyli E. D. , İlbay K., İLBAY G., ŞAHİN D., AKANSEL G.  
JOURNAL OF MEDICAL SYSTEMS, vol.34, no.3, pp.281-290, 2010 (Journal Indexed in SCI)

- XIX. **Analysis of spike-wave discharges in rats using discrete wavelet transform**  
Ubeyli E. D. , Ilbay G., ŞAHİN D., ATEŞ N.  
COMPUTERS IN BIOLOGY AND MEDICINE, vol.39, no.3, pp.294-300, 2009 (Journal Indexed in SCI)
- XX. **Vagus Nerve Stimulation Suppresses Generalized Seizure Activity and Seizure-Triggered Postictal Cardiac Rhythm Changes in Rats**  
ŞAHİN D., İLBAY G., İmal M., Bozdogan O., ATEŞ N.  
PHYSIOLOGICAL RESEARCH, vol.58, no.3, pp.345-350, 2009 (Journal Indexed in SCI)
- XXI. **Immunocytochemistry of neuron specific enolase (NSE) in the rat brain after single and repeated epileptic seizures**  
Yardimoglu M., Ilbay G., DALÇIK C., DALÇIK H., ŞAHİN D., ATEŞ N.  
INTERNATIONAL JOURNAL OF NEUROSCIENCE, vol.118, no.7, pp.981-993, 2008 (Journal Indexed in SCI)
- XXII. **Effects of the adenosinergic neuromodulatory system on absence epilepsy and cerebrovascular permeability**  
Sahin D., Ilbay G., Ates N.  
ACTA PHARMACOLOGICA SINICA, vol.27, pp.112, 2006 (Journal Indexed in SCI)
- XXIII. **Suppression of generalized seizures activity by intrathalamic 2-chloroadenosine application**  
Ates N., Ilbay G., Sahin D.  
EXPERIMENTAL BIOLOGY AND MEDICINE, vol.230, no.7, pp.501-505, 2005 (Journal Indexed in SCI)
- XXIV. **Topical application of mitomycin C prevents epineural scar formation in rats**  
Ilbay K., Etus V., Yildiz K., Ilbay G., Ceylan S.  
NEUROSURGICAL REVIEW, vol.28, no.2, pp.148-153, 2005 (Journal Indexed in SCI)
- XXV. **Theophylline, a methylxanthine derivative, suppresses absence epileptic seizures in WAG/Rij rats**  
Ates N., Sahin D., Ilbay G.  
EPILEPSY & BEHAVIOR, vol.5, no.5, pp.645-648, 2004 (Journal Indexed in SCI)
- XXVI. **Changes in blood-brain barrier permeability during hot water-induced seizures in rats**  
Ilbay G., Sahin D., Ates N.  
NEUROLOGICAL SCIENCES, vol.24, no.4, pp.232-235, 2003 (Journal Indexed in SCI)
- XXVII. **Changes in the blood-brain barrier permeability and in the brain tissue trace element concentrations after single and repeated pentylentetrazole-induced seizures in rats**  
Sahin D., Ilbay G., Ates N.  
PHARMACOLOGICAL RESEARCH, vol.48, no.1, pp.69-73, 2003 (Journal Indexed in SCI)
- XXVIII. **Effects of adenosine administration on spike-wave discharge frequency in genetically epileptic rats.**  
Ilbay G., Sahin D., Karson A., Ates N.  
Clinical and experimental pharmacology & physiology, vol.28, no.8, pp.643-6, 2001 (Journal Indexed in SCI Expanded)
- XXIX. **Blood pressure and vascular reactivity to endothelin-1, phenylephrine, serotonin, KCl and acetylcholine following chronic alcohol consumption in vitro**  
Utkan T., Yildiz F., Ilbay G., Ozdemirci S., Erden B. F. , Gacar N., Ulak G.  
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- XXX. **Blood pressure and vascular reactivity to endothelin-1, phenylephrine, serotonin, KCl and acetylcholine following chronic alcohol consumption in vitro.**  
Utkan T., Yildiz F., Ilbay G., Ozdemirci S., Erden B. F. , Gacar N., Ulak G.  
Fundamental & clinical pharmacology, vol.15, pp.157-65, 2001 (Journal Indexed in SCI)
- XXXI. **Absence epilepsy and regional blood-brain barrier permeability: The effects of pentylentetrazole-induced convulsions**  
Ates N., Esen N., Ilbay G.  
PHARMACOLOGICAL RESEARCH, vol.39, no.4, pp.305-310, 1999 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Botulinum toxin in the treatment of lingual dystonia induced by speaking**  
BUDAK F., Aydın E., Koçkaya A., İLBAY G.  
Case Reports in Neurology, vol.5, no.1, pp.18-20, 2013 (Refereed Journals of Other Institutions)
- II. **Light and Electron Microscopic Examinations in the Hippocampus of the Rat Brain Following PTZ Induced Epileptic Seizures. Journal of Applied Biological Sciences**  
YARDIMOĞLU YILMAZ M., İLBAY G., KÖKTÜRK S., DURMAZ ONAR F., ŞAHİN D., ALKAN F., DALÇIK H.  
Journal of applied Biological Sciences (JABS), vol.1, pp.97-106, 2007 (Refereed Journals of Other Institutions)
- III. **Immunohistochemistry of neuron specific enolase NSE in the rat brain after single and repeated pentylenetetrazol PTZ induced epileptic seizures**  
YARDIMOĞLU YILMAZ M., İLBAY G., DALÇIK C., DALÇIK H., ŞAHİN D., ATEŞ N.  
5nd National Congress of Neuroscience (V.Ulusal Sinirbilimleri Kongresi, Neuroanatomy Abstract Book, vol.5, pp.23-24, 2006 (Other Refereed National Journals)
- IV. **Light and electron microscopic examinations in the hippocampus of the rat brain following epileptic seizures**  
YARDIMOĞLU YILMAZ M., İLBAY G., KÖKTÜRK S., DURMAZ ONAR F., ŞAHİN D., ALKAN F., DALÇIK H.  
5nd National Congress of Neuroscience (V.Ulusal Sinirbilimleri Kongresi, Neuroanatomy Abstract Book, vol.5, pp.24, 2006 (Other Refereed National Journals)
- V. **Effects of granulocyte colony-stimulating factor (g-csf) on neutrophil phagocytosis during experimental obstructive jaundice.**  
Aldemir B., Canturk Z., İlbay G., Sahin D., Dulger M.  
Ulusal travma dergisi = Turkish journal of trauma & emergency surgery : TJTES, vol.8, pp.137-41, 2002 (Refereed Journals of Other Institutions)
- VI. **Effects of granulocyte colony stimulating factor g csf on neutrophil phagocytosis during experimental obstructive jaundice**  
ALDEMİR B., İLBAY G., ŞAHİN D., DÜLGER M.  
Ulusal travma dergis, vol.8, pp.137-141, 2002 (Other Refereed National Journals)
- VII. **Steroids for the spinal cord injuries Spinal kord travmalarında steroidler**  
İlbay K., CEYLAN S., İLBAY G.  
SENDROM, vol.9, no.7, pp.45-48, 1997 (Refereed Journals of Other Institutions)

## Books & Book Chapters

- I. **Neonatal Caffeine Administration Causes Biomolecular Alterations in Cerebellum Brain Region in Epileptic Rats**  
Şentürk D., TÜRKER KAYA S., İLBAY G.  
in: INSAC Academic Studies on Natural and Engineering Sciences, Ruşen Aydın, Yıldız Sadık, Editor, Gece Kitaplığı, Ankara, pp.171-186, 2021
- II. **Comparative Analysis of Different Regions of Rat Brain Tissue by FT-IR Spectroscopy**  
TÜRKER KAYA S., Dağcı K., Yıldırım D., Şentürk D., İLBAY G.  
in: ADVANCES IN HEALTH AND NATURAL SCIENCES, , Editor, NOVA Science Publishers Inc. , pp.183-190, 2019

## Refereed Congress / Symposium Publications in Proceedings

- I. **Şıçanlarda Epinöral Yapışıklığın Önlenmesinde Kafeik Asit Fenetil Ester (CAPE)'in Etkilerinin Araştırılması**  
KAYA N. S. , GENÇ M. H. , İLBAY G., YAPRAK BAYRAK B., YARDIMOĞLU YILMAZ M., İLBAY M. K.  
CHIARI MALFORMASYONLARI E ISSN 2148-0842 SPİNAL KÖKENLİ BEL VE BACAĞI AĞRISI SEMPOZYUMU, İstanbul, Turkey, 27 June 2021, vol.3, pp.61
- II. **INFRARED IMAGING OF HIPPOCAMPUS AND CORTEX BRAIN REGIONS OF RATS UPON EPILEPTIC**

## SEIZURES

TÜRKER KAYA S., İLBAY G., HUCK C.

IV. INTERNATIONAL ISTANBUL SCIENTIFIC RESEARCH CONGRESS, İstanbul, Turkey, 2 - 04 April 2021, vol.1, pp.233-234

- III. **Analysis of rat blood plasma after acute epileptic seizures by infrared spectroscopy**  
TÜRKER KAYA S., İLBAY G.  
IV. International Scientific and Vocational Studies-Science and Health, Turkey, 7 - 10 November 2019
- IV. **6 Aylık Wistar Ve WAG/Rij (Absans Epilepsili) sıçanların beyin bokularının FT-IR spektroskopisi ile karşılaştırılması olarak incelenmesi**  
DAĞCI K., İLBAY G., TÜRKER KAYA S.  
24. Ulusal Biyoloji kongresi, Turkey, 10 - 14 September 2018
- V. **Kafeinin Sıçan Beyni Hipokampus Ve Serebellum Bölgelerinde Meydana Getirdiği Moleküler Değişikliklerin FT-IR Spektroskopisiyle İncelenmesi**  
Şentürk D., Türker-Kaya S., İlbay G.  
24. Ulusal Biyoloji Kongresi, Manisa, Turkey, 10 September 2018, pp.119
- VI. **Tonik-klonik epileptik nöbetlerin sıçan sağ ve sol beyin hemisferlerindeki etkilerinin FT-IR spektroskopisi ile incelenmesi**  
Yıldırım D., Türker-Kaya S., İlbay G.  
24. Ulusal Biyoloji Kongresi, Manisa, Turkey, 10 September 2018, pp.113
- VII. **SCIATALGIA CAUSED BY EPIDURAL AIR AFTER EXTRADURAL SPINAL MASS EXCISION: A CASE REPORT**  
MALÇOK Ü. A. , ÇAKLILI M., İLBAY G., İLBAY M. K.  
Servikal ve Torakal Dejenarif Omurga Sempozyumu, Turkey, 21 - 24 September 2017
- VIII. **Investigation of Age-Related Effects of Absence Seziures: an FTIR study**  
TÜRKER KAYA S., İLBAY G.  
International Conference on Biochemistry and Molecular Biology, Munich, Germany, 3 - 05 April 2017
- IX. **Investigation of the effects of different epileptic activities on cell membrane proteins reveals diagnostic information**  
Turker S., Severcan M., İlbay G., Severcan F.  
12th International Congress on Aminoacids, Peptides and Proteins, Beijing, China, 01 August 2011, vol.41, pp.28
- X. **The side-effects of convulsive epileptic seizures and Carbamazepine therapy on bone tissues of genetically-induced epileptic rats: An FTIR imaging and biomechanical study**  
Garip S., EVİS Z., İLBAY G., Boskey A. L. , Severcan F.  
Experimental Biology Meeting 2011, Washington, Kiribati, 9 - 13 April 2011, vol.25
- XI. **Genetik Olarak İndüklenmiş Epilepsinin Moleküler Etkilerin FTIR spektroskopisi ile İncelenmesi**  
Türker Görgülü S., İlbay G., Severcan F.  
20. Ulusal Biyofizik Kongresi Özet Kitabı, Mersin, Turkey, 22 October 2008, vol.1, pp.51-52
- XII. **Discrete Wavelet Transform for Analysis of Spike-Wave Discharges in Rats**  
Uebeyli E. D. , İlbay G., ŞAHİN D., ATEŞ N.  
30th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Vancouver, Canada, 20 - 24 August 2008, pp.4680-4681
- XIII. **The investigation of early molecular consequences of chemically induced epileptic activity**  
Gorgulu S. T. , Kara N., Gunes Z., Ates N., İlbay G., Severcan F.  
60th Annual Meeting of the American-Epilepsy-Society, California, United States Of America, 1 - 05 December 2006, vol.47, pp.234
- XIV. **An FTIR approach to investigate molecular changes induced by epilepsy**  
TÜRKER KAYA S., ATEŞ N., İLBAY G., güneş z., Kara N., SEVERCAN F.  
WSEAS TRANSACTIONS on BIOLOGY and MEDICINE, Greece, 20 - 22 September 2005, vol.2, pp.355-358
- XV. **Epilepsinin hücre membranı üzerine etkisi**  
Turker Gorgulu S., İlbay G., Severcan F.  
IV. Ulusal Sinirbilimleri Kongresi, Turkey, 29 March 2005, vol.4, pp.6-7

## Supported Projects

İLBAŸ G., Project Supported by Higher Education Institutions, NEONATAL DÖNEMDE KAFEİN UYGULANIMININ NÖBET MODELLERİNDE DAVRANIŞSAL, ELEKTROENSEFALOGRAFİK, NÖROANATOMİK ETKİLERİNİN ARAŞTIRILMASI, 2017 - 2018

İLBAŸ G., Project Supported by Higher Education Institutions, Normal ve epilepsili sıçanlarda taktıl uyaranların nöroanatomik, davranışsal ve elektrofizyolojik etkilerinin araştırılması, 2014 - 2016

## Citations

Total Citations (WOS):327

h-index (WOS):12