

## Assoc. Prof. ŞEFİK EVREN ERDENER

### Personal Information

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### Education Information

Post Doctorate, Boston University, College of Engineering (Biomedical Engineering), Neurophotonics Center, United States Of America 2017 - 2018

Post Doctorate, Massachusetts General Hospital, Martinos Center for Biomedical Imaging, Optics Division, United States Of America 2016 - 2017

Expertise In Medicine, Hacettepe Üniversitesi, Tıp Fakültesi, Nöroloji, Turkey 2009 - 2014

Doctorate, Hacettepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Nörolojik Ve Psikiyatrik Temel Bilimler, Turkey 2007 - 2012

Undergraduate, Hacettepe Üniversitesi, Tıp Fakültesi, Tıp (İng.), Turkey 2003 - 2009

### Foreign Languages

English, C1 Advanced

### Dissertations

Expertise In Medicine, Migren Atağı Sırasında Serum İnflamazom Aktivasyonu Belirteçlerinin Analizi, Hacettepe Üniversitesi, Tıp Fakültesi, Nöroloji, 2014

Doctorate, Kortikal Yayılan Depresyona Bağlı Trigeminovasküler Aktivasyonda Glia Limitansın Rolünün İncelenmesi, Hacettepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Nörolojik Ve Psikiyatrik Temel Bilimler, 2012

### Research Areas

Medicine, Health Sciences, Internal Medicine Sciences, Neurology, Life Sciences, Neurobiology, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Nörolojik Bilimler Ve Psikiyatri Enstitüsü, Nörolojik Ve Psikolojik Temel Bilimler A.B.D., 2018 - Continues

Research Assistant PhD, Hacettepe University, Tıp Fakültesi (İngilizce), Dahili Tıp Bilimleri Bölümü, 2009 - 2014

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

#### I. Choosing a model for laser speckle contrast

Liu C., Kilic K., Erdener S. E. , Boas D. A. , Postnov D. D.

BIOMEDICAL OPTICS EXPRESS, vol.12, no.6, 2021 (Journal Indexed in SCI)

- II. **Dynamic capillary stalls in reperfused ischemic penumbra contribute to injury: A hyperacute role for neutrophils in persistent traffic jams**  
Erdener Ş. E. , Tang J, Kilic K, Postnov D, Giblin J. T. , Kura S, Chen I. A. , Vayisoglu T, Sakadzic S, Schaffer C. B. , et al.  
JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM, vol.41, no.2, pp.236-252, 2021 (Journal Indexed in SCI)
- III. **Stroke core revealed by tissue scattering using spatial frequency domain imaging**  
Sunil S, Erdener S. E. , Cheng X, Kura S, Tang J, Jiang J, Karrobi K, Kilic K, Roblyer D., Boas D. A.  
NEUROIMAGE-CLINICAL, vol.29, 2021 (Journal Indexed in SCI)
- IV. **Chronic Cranial Windows for Long Term Multimodal Neurovascular Imaging in Mice**  
Kilic K, Desjardins M., Tang J, Thunemann M., Sunil S, Erdener S. E. , Postnov D. D. , Boas D. A. , Devor A.  
FRONTIERS IN PHYSIOLOGY, vol.11, 2021 (Journal Indexed in SCI)
- V. **Dynamic light scattering imaging**  
Postnov D. D. , Tang J, ERDENER Ş. E. , Kilic K, Boas D. A.  
SCIENCE ADVANCES, vol.6, no.45, 2020 (Journal Indexed in SCI)
- VI. **F-actin polymerization contributes to pericyte contractility in retinal capillaries**  
Kureli G., Yilmaz-Ozcan S., Erdener Ş. E. , Donmez-Demir B., Yemisci M., Karatas H., Dalkara T.  
EXPERIMENTAL NEUROLOGY, vol.332, 2020 (Journal Indexed in SCI)
- VII. **Functional Ultrasound Speckle Decorrelation-Based Velocimetry of the Brain**  
Tang J, Postnov D. D. , Kilic K, Erdener Ş. E. , Lee B., Giblin J. T. , Szabo T. L. , Boas D. A.  
ADVANCED SCIENCE, vol.7, no.18, 2020 (Journal Indexed in SCI)
- VIII. **KCl-induced cortical spreading depression waves more heterogeneously propagate than optogenetically-induced waves in lissencephalic brain: an analysis with optical flow tools**  
Donmez-Demir B., ERDENER Ş. E. , KARATAŞ KURŞUN H., Kaya Z., ULUSOY İ., DALKARA T.  
SCIENTIFIC REPORTS, vol.10, no.1, 2020 (Journal Indexed in SCI)
- IX. **Awake chronic mouse model of targeted pial vessel occlusion via photothrombosis.**  
Sunil S, Erdener Ş. E. , Lee B., Postnov D., Tang J, Kura S, Cheng X, Chen I., Boas D., Kılıç K.  
Neurophotonics, vol.7, pp.15005, 2020 (Journal Indexed in SCI)
- X. **Small Vessels Are a Big Problem in Neurodegeneration and Neuroprotection.**  
Erdener Ş. E. , Dalkara T.  
Frontiers in neurology, vol.10, pp.889, 2019 (Journal Indexed in SCI)
- XI. **Spatio-temporal dynamics of cerebral capillary segments with stalling red blood cells.**  
Erdener Ş. E. , TANG J, SAJJADI A., KILİÇ K., KURA S., SCHAFFER C., BOAS D.  
Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism, vol.39, pp.886-900, 2019 (Journal Indexed in SCI Expanded)
- XII. **Normalized field autocorrelation function-based optical coherence tomography three-dimensional angiography**  
Tang J, Erdener S. E. , Sunil S., Boas D. A.  
JOURNAL OF BIOMEDICAL OPTICS, vol.24, no.3, 2019 (Journal Indexed in SCI)
- XIII. **Choosing a laser for laser speckle contrast imaging**  
Postnov D. D. , Cheng X, Erdener S. E. , Boas D. A.  
SCIENTIFIC REPORTS, vol.9, 2019 (Journal Indexed in SCI)
- XIV. **Cardiac pulsatility mapping and vessel type identification using laser speckle contrast imaging**  
Postnov D. D. , Erdener S. E. , Kilic K., Boas D. A.  
BIOMEDICAL OPTICS EXPRESS, vol.9, no.12, pp.6388-6397, 2018 (Journal Indexed in SCI)
- XV. **Improving Microcirculatory Reperfusion Reduces Parenchymal Oxygen Radical Formation and Provides Neuroprotection.**  
TASKIRAN-SAG A., YEMISCI M., GURSOY-OZDEMIR Y., ERDENER Ş. E. , KARATAS H., YÜCE D., DALKARA T.  
Stroke, vol.49, no.5, pp.1267-1275, 2018 (Journal Indexed in SCI Expanded)
- XVI. **Progressive anterior operculum syndrome due to frontotemporal lobar degeneration**  
Onder H., Erdener S. E. , SAKA E.  
NEUROLOGICAL SCIENCES, vol.39, no.2, pp.385-387, 2018 (Journal Indexed in SCI)

- XVII. **Shear-induced diffusion of red blood cells measured with dynamic light scattering-optical coherence tomography**  
Tang J., Erdener S. E. , Li B., Fu B., Sakadzic S., Carp S. A. , Lee J., Boas D. A.  
JOURNAL OF BIOPHOTONICS, vol.11, no.2, 2018 (Journal Indexed in SCI)
- XVIII. **Capillary red blood cell velocimetry by phase-resolved optical coherence tomography**  
Tang J., Erdener S. E. , Fu B., Boas D. A.  
OPTICS LETTERS, vol.42, no.19, pp.3976-3979, 2017 (Journal Indexed in SCI)
- XIX. **Reflex Seizures Triggered by Exposure to Characters With Numerical Value: A Case With Right Temporal Cortical Dysplasia**  
ERDENER Ş. E. , TEZER F. I. , OGUZ K. K. , KAMIŞLI Ö., ERGUN E. L. , SOYLEMEZOĞLU F., SAYGI S.  
CLINICAL EEG AND NEUROSCIENCE, vol.47, no.3, pp.220-223, 2016 (Journal Indexed in SCI)
- XX. **Brachial Diparesis due to Motor Neuronopathy as One of the Predominant Presenting Signs of Occult Small Cell Lung Carcinoma**  
ERDENER Ş. E. , VURAL A., TEMUÇİN Ç. M. , Ozdamar S. E. , NURLU G., VARLI K., DERİCİOĞLU N.  
INTERNAL MEDICINE, vol.55, no.12, pp.1641-1643, 2016 (Journal Indexed in SCI)
- XXI. **Rituximab in Turkish neuromyelitis optica patients with limited response to other immunosuppressants**  
ERDENER Ş. E. , KURNE A. T. , DIKER S., KARABUDAK R.  
JOURNAL OF THE NEUROLOGICAL SCIENCES, vol.359, pp.106-107, 2015 (Journal Indexed in SCI)
- XXII. **Lacrimation as an Ictal Autonomic Event in a Patient With Seizures Originating From the Right Hemisphere**  
ERDENER Ş. E. , DERİCİOĞLU N., ERGUN E. L. , SAYGI S.  
CLINICAL EEG AND NEUROSCIENCE, vol.46, no.3, pp.243-246, 2015 (Journal Indexed in SCI)
- XXIII. **Poloxamer-188 and citicoline provide neuronal membrane integrity and protect membrane stability in cortical spreading depression**  
YILDIRIM T., EYLEN A., Lule S., Erdener Ş. E. , VURAL A., Karatas H., Ozveren M. F. , DALKARA T., GURSOY-OZDEMIR Y.  
INTERNATIONAL JOURNAL OF NEUROSCIENCE, vol.125, no.12, pp.941-946, 2015 (Journal Indexed in SCI)
- XXIV. **Modelling headache and migraine and its pharmacological manipulation**  
Erdener S. E. , DALKARA T.  
BRITISH JOURNAL OF PHARMACOLOGY, vol.171, no.20, pp.4575-4594, 2014 (Journal Indexed in SCI)
- XXV. **REMISSION WITH FINGOLIMOD IN A CASE OF DEMYELINATING POLYNEUROPATHY**  
ERDENER Ş. E. , NURLU G., GÖÇMEN R., Erdem-Ozdamar S., KURNE A.  
MUSCLE & NERVE, vol.50, no.4, pp.615-617, 2014 (Journal Indexed in SCI)
- XXVI. **Brain MRI evolution of metronidazole intoxication.**  
Erdener S., KANSU T., ARSAVA E. M. , DERİCİOĞLU N.  
Neurology, vol.80, pp.1816-7, 2013 (Journal Indexed in SCI Expanded)
- XXVII. **Spreading Depression Triggers Headache by Activating Neuronal Panx1 Channels**  
KARATAS H., ERDENER Ş. E. , GURSOY-OZDEMIR Y., Lule S., EREN-KOCAK E., Sen Z. D. , DALKARA T.  
SCIENCE, vol.339, no.6123, pp.1092-1095, 2013 (Journal Indexed in SCI)
- XXVIII. **Paradoxical Air Microembolism Induces Cerebral Bioelectrical Abnormalities and Occasionally Headache in Patent Foramen Ovale Patients With Migraine**  
SEVGI E. B. , ERDENER Ş. E. , Demirci M., TOPÇUOĞLU M. A. , DALKARA T.  
JOURNAL OF THE AMERICAN HEART ASSOCIATION, vol.1, no.6, 2012 (Journal Indexed in SCI)
- XXIX. **Neuro-ophthalmology of subacute sclerosing panencephalitis: two cases and a review of the literature**  
COLPAK A. I. , ERDENER Ş. E. , OZGEN B., ANLAR B., KANSU T.  
CURRENT OPINION IN OPHTHALMOLOGY, vol.23, no.6, pp.466-471, 2012 (Journal Indexed in SCI)
- XXX. **Daytime polysomnography recording in LIG1 --related limbic encephalitis.**  
Tezer F. I. , Erdener E., Sel C. G. , Mehdikanova L., SAYGI S., Topcuoglu M. A.  
Archives of neurology, vol.69, no.1, 2012 (Journal Indexed in SCI Expanded)

- XXXI. **Thrombotic distal middle cerebral artery occlusion produced by topical FeCl<sub>3</sub> application: A novel model suitable for intravital microscopy and thrombolysis studies**  
KARATAS H., ERDENER Ş. E. , GURSOY-OZDEMİR Y., GURER G., SOYLEMEZOĞLU F., DUNN A. K. , DALKARA T.  
Journal of Cerebral Blood Flow and Metabolism, vol.31, no.6, pp.1452-1460, 2011 (Journal Indexed in SCI Expanded)
- XXXII. **Lysosomal rupture, necroapoptotic interactions and potential crosstalk between cysteine proteases in neurons shortly after focal ischemia**  
Kilinc M., Gursoy-Ozdemir Y., GURER G., ERDENER Ş. E. , Erdemli E., Can A., DALKARA T.  
NEUROBIOLOGY OF DISEASE, vol.40, no.1, pp.293-302, 2010 (Journal Indexed in SCI)
- XXXIII. **What is behind smoking among pharmacy students: A quantitative and qualitative study from Turkey**  
YEGENOĞLU S., ASLAN D., Erdener S., ACAR A., BİLİR N.  
SUBSTANCE USE & MISUSE, vol.41, no.3, pp.405-414, 2006 (Journal Indexed in SCI)

### Articles Published in Other Journals

- I. **Seeking predictors for paroxysmal atrial fibrillation in stroke with an online clinical database**  
ERDENER Ş. E.  
NORTHERN CLINICS OF ISTANBUL, 2019 (Other Refereed National Journals)
- II. **Distinguishing Acute Motor Axonal Neuropathy from Hypokalemia Induced Paralysis: Add 15 Minutes for an Exercise Test**  
ERDENER Ş. E. , YILDIZ F., ARSAVA E. Y. , TEMUÇİN Ç. M.  
TURKISH JOURNAL OF NEUROLOGY, vol.23, no.3, pp.127-129, 2017 (Journal Indexed in ESCI)
- III. **Tumefactive Brain Demyelination Accompanying Multifocal Acquired Demyelinating Sensory and Motor Neuropathy**  
ERDENER Ş. E. , TEMUÇİN Ç. M. , SOYLEMEZOĞLU F., GÖÇMEN R., KURNE A. T.  
TURKISH JOURNAL OF NEUROLOGY, vol.21, no.3, pp.98-101, 2015 (Journal Indexed in ESCI)
- IV. **Şaşırtıcı bir şekilde prezente olan bir subakut sklerozan panensefalit vakası**  
evren e., TEZER FİLİK F. İ.  
Olgularla Epilepsi, 2013 (Other Refereed National Journals)

### Books & Book Chapters

- I. **Fizyopatoloji Temelinde Migren Tedavisi**  
ERDENER Ş. E. , DALKARA T.  
in: BAŞAĞRISI TANI VE TEDAVİ GÜNCEL YAKLAŞIMLAR, , Editor, Türk Nöroloji Derneği, 2018
- II. **The Now and Tomorrow of Migraine Treatments**  
ERDENER Ş. E. , DALKARA T.  
in: Frontiers in Clinical Drug Research - CNS and Neurological Disorders, , Editor, Bentham Science, 2015

### Refereed Congress / Symposium Publications in Proceedings

- I. **DİNAMİK KONTRAST MR PERMEABİLİTE GÖRÜNTÜLEMENİN NÖROMYELITİS OPTİKA SPEKTRUM HASTALARINDA AQUAPORİN KANAL DİSFONKSİYONUNUN GÖSTERİLMESİNDE YERİ OLABİLİR Mİ ?**  
OKAR S. V. , GÖÇMEN R., PARLAK Ş., ERDENER Ş. E. , KARLI OĞUZ H. K. , KARABUDAK R., TUNCER M. A.  
55. ULUSAL NÖROLOJİ KONGRESİ, Antalya, Turkey, 15 - 21 November 2019
- II. **Dinamik Kontrast MR Permeabilite Görüntülemenin Nöromyelitis Optika Spektrum Hastalarında Aquaporin Kanal Disfonksiyonunun Gösterilmesinde Yeri Olabilir mi**  
Okar S., GÖÇMEN R., PARLAK Ş., ERDENER Ş. E. , KARLI OĞUZ H. K. , KARABUDAK R., TUNCER M. A.

55. Ulusal Nöroloji Kongresi, Turkey, 15 - 21 November 2019

- III. **Chronic mouse imaging: From optical systems to functional ultrasound**  
Kılıç K., Tang J., ERDENER Ş. E. , Sunil S., Giblin J., Lee B., Postnov D. D. , Chen A., Boas D. A.  
Society for Neuroscience 2019, Chicago, United States Of America, 19 - 23 October 2019
- IV. **Confocal reflectance microscopy for metal and lipid nanoparticle visualization in the brain**  
ÇAKIR AKTAŞ C., ERDENER Ş. E. , Teke B., PEHLİVAN S., Kaya Z., TAŞKIRAN SAĞ A., DALKARA T., MUT AŞKUN M.  
Society for Neuroscience 2019, 19 - 23 October 2019
- V. **Auditory-visual speech perception in bipolar disorder: behavioural data and physiological predictions**  
ERDENER V. D. , ERDENER Ş. E. , Yordamlı A.  
AVSP 2019 (International Conference on Auditory-Visual Speech Processing), 10 - 11 August 2019
- VI. **Ultrasound speckle decorrelation-based velocimetry of entire rodent brain for stroke study**  
Tang J., ERDENER Ş. E. , Kılıç K., Postnov D. D. , Boas D. A.  
BRAIN BRAIN PET 2010, 4 - 07 July 2019
- VII. **Dynamic capillary stalls in ischemic penumbra: persistent traffic jams become therapeutic candidates**  
ERDENER Ş. E. , Tang J., Kılıç K., Postnov D. D. , Chen A., Giblin J., Sakadzic S., Schaffer C. B. , Boas D. A.  
BRAIN BRAIN PET 2019, 4 - 07 July 2019
- VIII. **Dynamic laser speckle imaging: beyond the contrast**  
Postnov D. D. , ERDENER Ş. E. , Tang J., Boas D. A.  
SPIE Photonics West, 2 - 07 February 2019
- IX. **İskemik penumbrada mikrodolaşımın dinamik sorunları**  
ERDENER Ş. E.  
17. Ulusal Sinirbilim Kongresi, Turkey, 4 - 07 April 2019
- X. **Measurement of shear-induced diffusion of red blood cells using dynamic light scattering-optical coherence tomography**  
Tang J., Erdener S. E. , Li B., Fu B., Sakadzic S., Carp S. A. , Lee J., Boas D. A.  
Conference on Neural Imaging and Sensing, San-Francisco, Costa Rica, 29 - 30 January 2018, vol.10481
- XI. **Can MR Permeability and Contrast Enhanced (CE)-FLAIR demonstrate AQP4 Channel Dysfunction in NMOSD Patients?: Work in Progress**  
OKAR S. V. , GÖÇMEN R., TUNCER M. A. , KARLI OĞUZ H. K. , ERDENER Ş. E. , KARABUDAK R.  
MS Paris 2017 7th JointECTRIMS-ACTRIMS Meeting, Paris, France, 25 - 28 October 2017
- XII. **Can MR permeability and contrast enhanced (CE)-FLAIR demonstrate AQP4 channel dysfunction in NMOSD patients? Work in progress**  
OKAR S. V. , GÖÇMEN R., KARLI-OGUZ K., TUNCER M., Erdener S. E. , KARABUDAK R.  
7th Joint European-Committee-for-Treatment-and-Research-in-Multiple-Sclerosis (ECTRIMS)-Americas-Committee-for-Treatment-and-Research-in-Multiple-Sclerosis (ACTRIMS), Paris, France, 25 - 28 October 2017, vol.23, pp.819-820
- XIII. **Rituximab experience in neuromyelitis optica: data from a single center in Turkey**  
ERDENER Ş. E. , DIKER S., KARABUDAK R., KURNE A. T.  
Joint Congress of European Neurology, İstanbul, Turkey, 31 May - 03 June 2014, vol.21, pp.454

## Supported Projects

ERDENER Ş. E. , BOAS D. A. , Project Supported by Higher Education Institutions, Kurtarılabılır iskemik penumbrada uzaysal-zamansal mikrooksijenizasyon profilinin ve lökosit akım disfonksiyonunun ilişkileri, 2019 - 2020

## Scientific Research / Working Group Memberships

Translasyonel Nörobilim Çalışma Grubu, Türk Nöroloji Derneği, Turkey, 2019 - Continues

## **Citations**

Total Citations (WOS):488

h-index (WOS):9

## **Awards**

Erdener Ş. E. , Teşvik Ödülü, Hacettepe Üniversitesi, September 2019

ERDENER Ş. E. , BAGEP Genç Araştırmacı Ödülü, BAGEP, April 2019

## **Non Academic Experience**

Other Public Institution, Artvin Devlet Hastanesi