

Res. Asst. TANJU MERCAN

Personal Information

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Education Information

Doctorate, Akdeniz University, Faculty of Health Sciences, Biyofizik, Turkey 2015 - Continues

Postgraduate, Akdeniz University, Faculty of Health Sciences, Biyofizik, Turkey 2012 - 2015

Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Fizik, Turkey 2006 - 2012

Foreign Languages

English, C1 Advanced

Dissertations

Postgraduate, Difüz optik tomografide iki farklı geri-çatım tekniğiyle görüntü oluşturma ve elde edilen görüntüleri karşılaştırma, Akdeniz University, Biyofizik, 2015

Research Areas

Medicine, Health Sciences, Fundamental Medical Sciences, Biophysics

Academic Titles / Tasks

Research Assistant, Akdeniz University, Institute of Health Sciences , Biyofizik, 2014 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Differentiation of tumoral and non-tumoral breast lesions using back reflection diffuse optical tomography: A pilot clinical study**
ÜNCÜ Y. A., Sevim G., Mercan T., VURAL V., DURMAZ E., CANPOLAT M.
INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY, vol.31, no.4, pp.2023-2031, 2021 (SCI-Expanded)
- II. **Image reconstruction for diffuse optical tomography using bi-conjugate gradient and transpose-free quasi minimal residual algorithms and comparison of them**
Sevim G., ÜNCÜ Y. A., Mercan T., CANPOLAT M.
INTERNATIONAL JOURNAL OF IMAGING SYSTEMS AND TECHNOLOGY, vol.31, no.4, pp.1894-1905, 2021 (SCI-Expanded)
- III. **Ellagic Acid Prevents Ca²⁺ Dysregulation and Improves Functional Abnormalities of Ventricular**

Myocytes via Attenuation of Oxidative Stress in Pathological Cardiac Hypertrophy

YAMASAN B. E., Mercan T., ERKAN O., ÖZDEMİR S.

CARDIOVASCULAR TOXICOLOGY, vol.21, no.8, pp.630-641, 2021 (SCI-Expanded)

- IV. **Mexiletine-like cellular electrophysiological effects of GS967 in canine ventricular myocardium**
Hezso T., Naveed M., Dienes C., Kiss D., Prorok J., Arpadffy-Lovas T., Varga R., Fujii E., Mercan T., Topal L., et al.
SCIENTIFIC REPORTS, vol.11, no.1, 2021 (SCI-Expanded)
- V. **Rosuvastatin Reduces L-Type Ca²⁺ Current and Alters Contractile Function in Cardiac Myocytes via Modulation of beta-Adrenergic Receptor Signaling**
Ozturk N., USLU S., Mercan T., ERKAN O., ÖZDEMİR S.
CARDIOVASCULAR TOXICOLOGY, vol.21, no.5, pp.422-431, 2021 (SCI-Expanded)
- VI. **Acute effect of thymoquinone on action potential and ionic currents of rat cardiac myocytes**
MERCAN T., YAMASAN B. E., ERKAN O., ÖZDEMİR S.
BRATISLAVA MEDICAL JOURNAL-BRATISLAVSKE LEKARSKE LISTY, vol.122, no.6, pp.424-431, 2021 (SCI-Expanded)
- VII. **A novel biomarker for prediction of atrial fibrillation susceptibility in patients with celiac disease.**
KUCUKSEYMEN S., CEKIN A. H., BAYAR N., ARSLAN S., UYGUR KUCUKSEYMEN E., Mercan T., Ozdemir S.
PloS one, vol.13, 2018 (SCI-Expanded)
- VIII. **Dielectric Properties of HDOBAMBC Close to the Smectic A-Chiral Smectic C (AC*) Transition**
YURTSEVEN H. H., Mercan T.
FERROELECTRICS, vol.481, no.1, pp.10-20, 2015 (SCI-Expanded)
- IX. **Design and evaluation of a reflectance diffuse optical tomography system**
Kazanci H. Ö., Mercan T., CANPOLAT M.
OPTICAL AND QUANTUM ELECTRONICS, vol.47, no.2, pp.257-265, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Rosuvastatinin Sol Ventrikül Miyosit Kalsiyum ve Potasyum İyon Kanalları Üzerine Akut Etkisi**
ERKAN O., YAMASAN B. E., MERCAN T., ÖZDEMİR S.
Fırat Üniversitesi Sağlık Bilimleri Tıp Dergisi, vol.34, no.2, pp.161-166, 2020 (Peer-Reviewed Journal)
- II. **The Comparison of Reconstruction Algorithms for Diffuse Optical Tomography**
MERCAN T., SEVİM G., ÜNCÜ Y. A., USLU S., KAZANCI H. Ö., CANPOLAT M.
Süleyman Demirel Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi, vol.14, no.2, pp.285-295, 2019 (Peer-Reviewed Journal)
- III. **Design of Breast Laser Tomography System and Pilot Clinical Results**
CANPOLAT M., KAZANCI H. Ö., MERCAN T., ALİMOĞLU E.
AKDENİZ TIP DERGİSİ, vol.1, no.1, pp.58-63, 2015 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **A new approach to image processing in diffuse optical tomography and 3-D image**
Üncü Y. A., Mercan T., Canpolat M., Sevim G.
2017 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 24 - 26 November 2017, pp.1
- II. **Interpolation Applications in Diffuse Optical Tomography System**
Üncü Y. A., Mercan T., Sevim G., Canpolat M.
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 - 26 November 2017, pp.1
- III. **Comparison of Images Produced by Diffuse Optical Tomography with Two Different Backscatter Techniques**
Mercan T., Sevim G., Kazanci H. Ö., Üncü Y. A., Canpolat M.

- 2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 - 26 November 2017, pp.1
- IV. **A new reconstruction technique used in Diffuse Optical Tomography System**
Sevim G., Mercan T., Üncü Y. A., Canpolat M.
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- V. **A new approach to image processing in diffuse optical tomography and 3-D image**
ÜNCÜ Y. A., MERCAN T., CANPOLAT M., SEVİM G.
2017 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, pp.1
- VI. **Interpolation Applications in Diffuse Optical Tomography System**
ÜNCÜ Y. A., MERCAN T., SEVİM G., CANPOLAT M.
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, pp.1
- VII. **A new reconstruction technique used in Diffuse Optical Tomography System**
SEVİM G., MERCAN T., ÜNCÜ Y. A., CANPOLAT M.
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, pp.1
- VIII. **Comparison of Images Produced by Diffuse Optical Tomography with Two Different Backscatter Techniques**
MERCAN T., SEVİM G., KAZANCL H. Ö., ÜNCÜ Y. A., CANPOLAT M.
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, pp.1
- IX. **Interpolation applications in diffuse optical tomography system Diffüz optik tomografi sisteminde interpolasyon uygulamaları**
ÜNCÜ Y. A., Mercan T., SEVİM G., CANPOLAT M.
21st National Biomedical Engineering Meeting, BIYOMUT 2017, İstanbul, Turkey, 24 - 26 November 2017
- X. **Comparison of images produced by diffuse optical tomography with two different backscatter techniques Difüz Optik Tomografide İki Farklı Geri-Çatım Tekniğiyle Görüntü Oluşturma Ve Elde Edilen Görüntülerin Karşılaştırılması**
Mercan T., SEVİM G., KAZANCL H. Ö., ÜNCÜ Y. A., CANPOLAT M.
21st National Biomedical Engineering Meeting, BIYOMUT 2017, İstanbul, Turkey, 24 - 26 November 2017
- XI. **A new reconstruction technique used in Diffuse Optical Tomography System Difüz Optik Tomografi Sisteminde Kullanılan Yeni Geri Çatım Tekniği**
SEVİM G., Mercan T., ÜNCÜ Y. A., CANPOLAT M.
21st National Biomedical Engineering Meeting, BIYOMUT 2017, İstanbul, Turkey, 24 - 26 November 2017
- XII. **Akut Rosuvastatin Uygulamasının Sıçan Sol Ventrikül Miyositleri Üzerine Etkisi**
YAMASAN B. E., MERCAN T., ÇELEN M. C., ÖZDEMİR S.
28-29. Ulusal Biyofizik Kongresi, İstanbul, Turkey, 6 - 09 September 2017
- XIII. **Acute effects of thymoquinone on electrophysiological parameters of rat ventricular myocytes**
MERCAN T., YAMASAN B. E., ERKAN O., ÖZDEMİR S.
34th Meeting of the ISHR-ES, Hamburg, Germany, 24 - 27 July 2017, pp.14-15
- XIV. **Acute effects of thymoquinone on electrophysiological parameters of rat ventricular myocytes**
MERCAN T., YAMASAN B. E., ERKAN O., ÖZDEMİR S.
34th Meeting of the ISHR-ES, Hamburg, Germany, 24 - 27 July 2017, pp.14-15
- XV. **Acute effects of thymoquinone on electrophysiological parameters of rat ventricular myocytes**
MERCAN T., YAMASAN B. E., ERKAN O., ÖZDEMİR S.
34th Meeting of the ISHR-ES, Hamburg, Germany, 24 - 27 July 2017, pp.14-15
- XVI. **A new approach to image processing in diffuse optical tomography and 3-D image Diffüz optik tomografide görüntü işleme için yeni yaklaşım ve 3 Boyutlu görüntü oluşturulması**
ÜNCÜ Y. A., Mercan T., CANPOLAT M., SEVİM G.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
- XVII. **A New approach to image processing in diffuse optical tomography and 3-D image**
ÜNCÜ Y. A., Mercan T., CANPOLAT M., Sevim G.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XVIII. **A new reconstruction technique used in Diffuse Optical Tomography System**
Sevim G., Mercan T., ÜNCÜ Y. A., CANPOLAT M.

21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017

XIX. Interpolation Applications in Diffuse Optical Tomography System

ÜNCÜ Y. A., Mercan T., Sevim G., CANPOLAT M.

21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017

XX. Comparison of Images Produced by Diffuse Optical Tomography with Two Different Backscatter Techniques

Mercan T., Sevim G., KAZANCI H. Ö., ÜNCÜ Y. A., CANPOLAT M.

21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017

XXI. Meme Lazer Diffüz Optik Tomografi Sisteminin Geliştirilmesi ve Pilot Klinik Deney Sonuçları

CANPOLAT M., MERCAN T., Sevimli G., ALİMOĞLU E., KAZANCI H. Ö.

27. Ulusal Biyofizik Kongresi, Malatya, Turkey, 29 - 03 September 2016, pp.11-14

XXII. Meme Lazer Diffüz Optik Tomografi Sisteminin Geliştirilmesi ve Pilot Klinik Deney Sonuçları

CANPOLAT M., MERCAN T., Sevimli G., ALİMOĞLU E., KAZANCI H. Ö.

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CANPOLAT M., mercan t., sevimli g., alimoğlu e., KAZANCI H. Ö.

27. Ulusal Biyofizik Kongresi, Malatya, Turkey, 29 September - 03 October 2015, pp.11-14

XXIV. Meme Lazer Diffüz Optik Tomografi Sisteminin Geliştirilmesi ve Pilot Klinik Deney Sonuçları

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27. Ulusal Biyofizik Kongresi, Malatya, Turkey, 29 September - 03 October 2015, pp.11-14

XXV. Comprasion of linear reconstruction technique for diffuse optic tomography in in-vitro experiment

MERCAN T., KAZANCI H. Ö., CANPOLAT M.

SPIE Photonics West Optical Tomography and Spectroscopy of Tissue XI, San-Francisco, United States Of America, 7 - 12 February 2015, vol.9319, pp.79

XXVI. Diffuse optical tomography system design and reconstruction of tail fat of sheep as a breast phantom

MERCAN T., KAZANCI H. Ö., CANPOLAT M.

SPIE Photonics West Optical Tomography and Spectroscopy of Tissue XI, San-Francisco, United States Of America, 7 - 12 February 2015, vol.9319, pp.80

XXVII. Diffuse optical tomography system design and reconstruction of tail fat of sheep as a breast phantom

MERCAN T., KAZANCI H. Ö., CANPOLAT M.

SPIE Photonics West Optical Tomography and Spectroscopy of Tissue XI, San-Francisco, United States Of America, 7 - 12 February 2015, vol.9319, pp.80

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SPIE Photonics West Optical Tomography and Spectroscopy of Tissue XI, San-Francisco, United States Of America, 7 - 12 February 2015, vol.9319, pp.80

XXX. Lazer Meme Tomografi Sisteminin geliştirilmesi ve In-vitro Deneyler

KAZANCI H. Ö., MERCAN T., CANPOLAT M.

26. Ulusal Biyofizik Kongresi, Tokat, Turkey, 9 - 12 September 2014, pp.1

XXXI. Developing and testing a multi-source and detector reflectance diffuse optical tomography system

CANPOLAT M., KAZANCI H. Ö., MERCAN T.

SPIE Photonics West, San-Francisco, United States Of America, 1 - 06 February 2014, pp.216

XXXII. Developing and testing a multi-source and detector reflectance diffuse optical tomography system

CANPOLAT M., KAZANCI H. Ö., MERCAN T.

- SPIE Photonics West, San-Francisco, United States Of America, 1 - 06 February 2014, pp.216
- XXXIII. **Developing and testing a multi-source and detector reflectance diffuse optical tomography system**
CANPOLAT M., KAZANCI H. Ö., MERCAN T.
SPIE Photonics West, San-Francisco, United States Of America, 1 - 06 February 2014, pp.216
- XXXIV. **Diffüz Optik Tomografi sistemi ile ışığın doku benzeri yapı içerisinde aldığı derinliğin belirlenmesi**
MERCAN T., KAZANCI H. Ö., CANPOLAT M.
25. Ulusal Biyofizik Kongresi, Trabzon, Turkey, 24 September - 27 August 2013, pp.1
- XXXV. **Diffüz Optik Tomografi sistemi ile ışığın doku benzeri yapı içerisinde aldığı derinliğin belirlenmesi**
MERCAN T., KAZANCI H. Ö., CANPOLAT M.
25. Ulusal Biyofizik Kongresi, Trabzon, Turkey, 24 September - 27 August 2013, pp.1
- XXXVI. **Geri Yansıma Optik Tomografi Sisteminin Tasarımı ve Test Edilmesi**
CANPOLAT M., KAZANCI H. Ö., MERCAN T.
20. İstatistiksel Fizik Günleri, Kayseri, Turkey, 27 - 29 June 2013, pp.1

Supported Projects

ÖZDEMİR S., MERCAN T., ERKAN O., Project Supported by Higher Education Institutions, Doksorubisin ile kalp yetmezliği oluşturulan sıçanlarda timokinonun kardiyoprotektif etkilerinin araştırılması, 2018 - 2021

ÖZDEMİR S., YAMASAN B. E., MERCAN T., Project Supported by Higher Education Institutions, ELLAGİK ASİDİN KARDİYAK HİPERTOFİ ÜZERİNDEKİ ETKİSİNİN ELEKTROFİZYOLOJİK OLARAK İNCELENMESİ, 2017 - 2020

ÖZTÜRK ERBOĞA N., ÖZDEMİR S., YAMASAN B. E., MERCAN T., Project Supported by Higher Education Institutions, Kardiak Miyositlerde Kasılma Fonksiyon Bozukluklarında Sitozolik Serbest Magnezyum Konsantrasyon Değişimlerinin Rolü, 2017 - 2020

ÖZDEMİR S., ERKAN O., MERCAN T., YAMASAN B. E., Project Supported by Higher Education Institutions, Rosuvastatinin sol ventrikül miyosit iyon kanalları üzerine akut etkisi, 2018 - 2018

Metrics

Publication: 48
Citation (WoS): 31
Citation (Scopus): 38
H-Index (WoS): 2
H-Index (Scopus): 2

Congress and Symposium Activities

International Society of Heart Research 2018, Attendee, Amsterdam, Netherlands, 2018

21. Biyomedikal Mühendisliği Ulusal Toplantısı, Attendee, İstanbul, Turkey, 2017

International Society of Heart Research 2017, Attendee, Hamburg, Germany, 2017

25. Ulusal Biyofizik Kongresi, Attendee, Trabzon, Turkey, 2013