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Education Information

Doctorate, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), Turkey 2015 - 2018

Postgraduate, Akdeniz University, Institute Of Health Sciences , Biyofizik (YI) (Tezli), Turkey 2010 - 2013

Undergraduate, Ege University, Faculty Of Science, Biyoloji Bölümü, Turkey 2005 - 2010

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Çinko-taşıyıcıları ve mitokondri ilişkisinin yaşlanmaya bağlı kalp fonksiyon bozukluğundaki rolünün incelenmesi, Ankara University, Sağlık Bilimleri Enstitüsü, Biyofizik (Dr) (Tıp), 2018

Postgraduate, Ellagik asidin sıçan kardiyomiyositlerinin kontraktilitesi ve kalsiyum akımları üzerine etkileri, Akdeniz University, Sağlık Bilimleri Enstitüsü, Biyofizik (YI) (Tezli), 2013

Research Areas

Health Sciences

Academic Titles / Tasks

Research Assistant, Ankara University, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, 2015 - Continues

Research Assistant, Ankara University, Ankara Tıp Fakültesi, 2012 - 2016

Published journal articles indexed by SCI, SSCI, and AHCI

1. Cardioprotective role of a magnolol and honokiol complex in the prevention of doxorubicin-mediated cardiotoxicity in adult rats

- Aktay I, BİTİRİM C. V., OLĞAR Y., DURAK A., TUNCAY E., BİLLUR D., AKÇALI K. C., TURAN B.
Molecular and Cellular Biochemistry, vol.479, no.2, pp.337-350, 2024 (SCI-Expanded)
- II. **NaV1.6 dysregulation within myocardial T-tubules by D96V calmodulin enhances proarrhythmic sodium and calcium mishandling**
Tarasov M., Struckman H. L., OLĞAR Y., Miller A., DEMİRTAŞ M., Bogdanov V., Terentyeva R., Soltisz A. M., Meng X., Min D., et al.
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- III. **Comparisons of pleiotropic effects of SGLT2 inhibition and GLP-1 agonism on cardiac glucose intolerance in heart dysfunction**
TURAN B., DURAK A., OLĞAR Y., TUNCAY E.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.477, no.11, pp.2609-2625, 2022 (SCI-Expanded)
- IV. **Intracellular Redistribution of Left Ventricular Connexin 43 Contributes to the Remodeling of Electrical Properties of the Heart in Insulin-resistant Elderly Rats**
BİLLUR D., OLĞAR Y., TURAN B.
Journal of Histochemistry and Cytochemistry, vol.70, no.6, pp.447-462, 2022 (SCI-Expanded)
- V. **Bimodal Effects of P2Y(12) Antagonism on Matrix Metalloproteinase-Associated Contractile Dysfunction in Insulin-Resistant Mammalian Heart**
OLĞAR Y., TUNCAY E., BİLLUR D., Turan B.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.200, no.5, pp.2195-2204, 2022 (SCI-Expanded)
- VI. **STIM1-Orai1 interaction mediated calcium influx activation contributes to cardiac contractility of insulin-resistant rats**
DURAK A., OLĞAR Y., Genc K., TUNCAY E., AKAT F., DEĞİRMENCİ S., Turan B.
BMC CARDIOVASCULAR DISORDERS, vol.22, no.1, 2022 (SCI-Expanded)
- VII. **Insulin acts as an atypical KCNQ1/KCNE1-current activator and reverses long QT in insulin-resistant aged rats by accelerating the ventricular action potential repolarization through affecting the beta(3)-adrenergic receptor signaling pathway**
OLĞAR Y., DURAK A., Bitirim C. V., TUNCAY E., Turan B.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.237, no.2, pp.1353-1371, 2022 (SCI-Expanded)
- VIII. **Ticagrelor alleviates high-carbohydrate intake induced altered electrical activity of ventricular cardiomyocytes by regulating sarcoplasmic reticulum-mitochondria miscommunication**
OLĞAR Y., DURAK A., Degirmenci S., TUNCAY E., BİLLUR D., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.476, no.10, pp.3827-3844, 2021 (SCI-Expanded)
- IX. **Interrelated In Vitro Mechanisms of Sibutramine-Induced Cardiotoxicity**
Alyu F., OLĞAR Y., DEĞİRMENCİ S., Turan B., ÖZTÜRK Y.
CARDIOVASCULAR TOXICOLOGY, vol.21, no.4, pp.322-335, 2021 (SCI-Expanded)
- X. **Olive oil attenuates oxidative damage by improving mitochondrial functions in human keratinocytes**
YAZIHAN N., Akdas S., OLĞAR Y., Biriken D., Turan B., ÖZKAYA M. T.
JOURNAL OF FUNCTIONAL FOODS, vol.71, 2020 (SCI-Expanded)
- XI. **Ageing-associated increase in SGLT2 disrupts mitochondrial/sarcoplasmic reticulum Ca(2+)homeostasis and promotes cardiac dysfunction**
OLĞAR Y., TUNCAY E., Degirmenci S., BİLLUR D., Dhingra R., Kirshenbaum L., Turan B.
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE, vol.24, no.15, pp.8567-8578, 2020 (SCI-Expanded)
- XII. **MitoTEMPO provides an antiarrhythmic effect in aged-rats through attenuation of mitochondrial reactive oxygen species**
OLĞAR Y., BİLLUR D., TUNCAY E., Turan B.
EXPERIMENTAL GERONTOLOGY, vol.136, 2020 (SCI-Expanded)
- XIII. **Tetrodotoxin-Sensitive Neuronal-Type Na⁺ Channels: A Novel and Druggable Target for Prevention of Atrial Fibrillation**
Munger M. A., OLĞAR Y., Koleske M. L., Struckman H. L., Mandrioli J., Lou Q., Bonila I., Kim K., Mondragon R. R., Priori S. G., et al.
JOURNAL OF THE AMERICAN HEART ASSOCIATION, vol.9, no.11, 2020 (SCI-Expanded)

- XIV. **Ticagrelor reverses the mitochondrial dysfunction through preventing accumulated autophagosomes-dependent apoptosis and ER stress in insulin-resistant H9c2 myocytes**
OLĞAR Y., TUNCAY E., BİLLUR D., DURAK A., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.469, no.1-2, pp.97-107, 2020 (SCI-Expanded)
- XV. **Altered mitochondrial metabolism in the insulin-resistant heart**
Makrecka-Kuka M., Liepinsh E., Murray A. J., Lemieux H., Dambrova M., Tepp K., Puurand M., Kaambre T., Han W. H., de Goede P., et al.
ACTA PHYSIOLOGICA, vol.228, no.3, 2020 (SCI-Expanded)
- XVI. **Azoramide improves mitochondrial dysfunction in palmitate-induced insulin resistant H9c2 cells**
Okatan E. N., OLĞAR Y., TUNCAY E., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.461, no.1-2, pp.65-72, 2019 (SCI-Expanded)
- XVII. **beta(3)-adrenergic receptor activation plays an important role in the depressed myocardial contractility via both elevated levels of cellular free Zn²⁺ and reactive nitrogen species**
TUNCAY E., OLĞAR Y., DURAK A., Degirmenci S., BİTİRİM C. V., Turan B.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.234, no.8, pp.13370-13386, 2019 (SCI-Expanded)
- XVIII. **Mitochondria-Targeting Antioxidant Provides Cardioprotection through Regulation of Cytosolic and Mitochondrial Zn²⁺ Levels with Re-Distribution of Zn²⁺-Transporters in Aged Rat Cardiomyocytes**
OLĞAR Y., TUNCAY E., Turan B.
INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, vol.20, no.15, 2019 (SCI-Expanded)
- XIX. **A sodium-glucose cotransporter 2 (SGLT2) inhibitor dapagliflozin comparison with insulin shows important effects on Zn²⁺-transporters in cardiomyocytes from insulin-resistant metabolic syndrome rats through inhibition of oxidative stress**
OLĞAR Y., Turan B.
CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, vol.97, no.6, pp.528-535, 2019 (SCI-Expanded)
- XX. **Zn²⁺-transporters ZIP7 and ZnT7 play important role in progression of cardiac dysfunction via affecting sarco(endo)plasmic reticulum-mitochondria coupling in hyperglycemic cardiomyocytes**
TUNCAY E., BİTİRİM C. V., OLĞAR Y., DURAK A., Rutter G. A., Turan B.
MITOCHONDRION, vol.44, pp.41-52, 2019 (SCI-Expanded)
- XXI. **Zinc Signaling in Aging Heart Function**
Turan B., BİLLUR D., OLĞAR Y.
ZINC SIGNALING, 2ND EDITION, pp.139-164, 2019 (SCI-Expanded)
- XXII. **A SGLT2 inhibitor dapagliflozin suppresses prolonged ventricular-repolarization through augmentation of mitochondrial function in insulin-resistant metabolic syndrome rats**
DURAK A., OLĞAR Y., Degirmenci S., AKKUŞ E., TUNCAY E., Turan B.
CARDIOVASCULAR DIABETOLOGY, vol.17, 2018 (SCI-Expanded)
- XXIII. **Aging related functional and structural changes in the heart and aorta: MitoTEMPO improves aged-cardiovascular performance**
OLĞAR Y., DEĞİRMENCİ S., DURAK A., BİLLUR D., CAN B., KAYKI MUTLU G., Arioglu-Inan E., Turan B.
Experimental Gerontology, vol.110, pp.172-181, 2018 (SCI-Expanded)
- XXIV. **An Investigation on Molecular Basis of the Effects of SGLT2 İnhibitor Dapagliflozin on Hyperglycemia-Associated Heart Dysfunction***
DURAK A., OLĞAR Y., DEĞİRMENCİ S., Ertürk N., akbaş M. t., aygün a., deniz m. c., erciyas m. f., yazar b. t., yılmaz m. s., et al.
JOURNAL OF CELLULAR PHYSIOLOGY, vol.71, 2018 (SCI-Expanded)
- XXV. **Increased free Zn²⁺ correlates induction of sarco(endo)plasmic reticulum stress via altered expression levels of Zn²⁺-transporters in heart failure**
OLĞAR Y., DURAK A., TUNCAY E., BİTİRİM C. V., ÖZÇINAR E., İNAN M. B., TOKCAER KESKİN Z., AKÇALI K. C., AKAR A. R., Turan B.
JOURNAL OF CELLULAR AND MOLECULAR MEDICINE, vol.22, no.3, pp.1944-1956, 2018 (SCI-Expanded)
- XXVI. **Induction of endoplasmic reticulum stress and changes in expression levels of Zn²⁺-transporters in hypertrophic rat heart**

- OLĞAR Y., ÖZDEMİR S., Turan B.
MOLECULAR AND CELLULAR BIOCHEMISTRY, vol.440, no.1-2, pp.209-219, 2018 (SCI-Expanded)
- XXVII. **Cytosolic increased labile Zn²⁺ contributes to arrhythmogenic action potentials in left ventricular cardiomyocytes through protein thiol oxidation and cellular ATP depletion**
DEĞİRMENCİ S., OLĞAR Y., DURAK A., TUNCAY E., Turan B.
JOURNAL OF TRACE ELEMENTS IN MEDICINE AND BIOLOGY, vol.48, pp.202-212, 2018 (SCI-Expanded)
- XXVIII. **Rho-kinase inhibition reverses impaired Ca²⁺ handling and associated left ventricular dysfunction in pressure overload-induced cardiac hypertrophy**
OLĞAR Y., Celen M. C., Yamasan B. E., ÖZTÜRK ERBOĞA N., Turan B., ÖZDEMİR S.
CELL CALCIUM, vol.67, pp.81-90, 2017 (SCI-Expanded)
- XXIX. **Onset of decreased heart work is correlated with increased heart rate and shortened QT interval in high-carbohydrate fed overweight rats**
DURAK A., OLĞAR Y., TUNCAY E., Karaomerlioglu I., Mutlu G., ARIOĞLU İNAN E., Altan V. M., Turan B.
CANADIAN JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, vol.95, no.11, pp.1335-1342, 2017 (SCI-Expanded)
- XXX. **Changes of auditory event-related potentials in ovariectomized rats injected with D-galactose: Protective role of rosmarinic acid**
KANTAR GÜL D., Hidisoglu E., ER H., Acun A. D., OLĞAR Y., Yargicoglu P.
NEUROTOXICOLOGY, vol.62, pp.64-74, 2017 (SCI-Expanded)
- XXXI. **Effects of Aging And Exercise Training on Carbon Monoxide Relaxation Response in Skeletal Muscle Feed Artery**
Kocer G., Ulker S. N., OLĞAR Y., ÖZTÜRK ERBOĞA N., ÖZDEMİR S.
ACTA PHYSIOLOGICA, vol.221, pp.31, 2017 (SCI-Expanded)
- XXXII. **Mitochondrial localization and function of Zn²⁺-transporters ZIP7 and ZnT7 in mammalian heart**
Tuncay E., Bitirim V. C., OLĞAR Y., Durak A., Rutter G. A., Turan B.
JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, vol.109, pp.62, 2017 (SCI-Expanded)
- XXXIII. **Expression levels of zinc transporters in human failing heart**
Durak A., OLĞAR Y., Tuncay E., Bitirim C. V., Ozcinar E., Inan M. B., Akcali K. C., Akar A. R., Turan B.
JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, vol.109, pp.2, 2017 (SCI-Expanded)
- XXXIV. **Increased cytosolic free Zn²⁺ alters action potential parameters via activation of KATP-channels in rat ventricular cardiomyocytes**
Degirmenci S., OLĞAR Y., Tuncay E., Turan B.
JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, vol.109, pp.14, 2017 (SCI-Expanded)
- XXXV. **The Zn²⁺ transporters in hypertrophied rat heart**
OLĞAR Y., Durak A., Tuncay E., Ozdemir S., Turan B.
JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, vol.109, pp.3, 2017 (SCI-Expanded)
- XXXVI. **Swimming exercise reverses aging-related contractile abnormalities of female heart by improving structural alterations**
Ozturk N., OLĞAR Y., ER H., KÜÇÜK M., ÖZDEMİR S.
CARDIOLOGY JOURNAL, vol.24, no.1, pp.85-93, 2017 (SCI-Expanded)
- XXXVII. **Interplay Between Cytosolic Free Zn²⁺ and Mitochondrion Morphological Changes in Rat Ventricular Cardiomyocytes**
BİLLUR D., TUNCAY E., Okatan E. N., OLĞAR Y., Durak A., DEĞİRMENCİ S., CAN B., Turan B.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.174, no.1, pp.177-188, 2016 (SCI-Expanded)
- XXXVIII. **Effects of magnesium supplementation on electrophysiological remodeling of cardiac myocytes in L-NAME induced hypertensive rats**
ÖZTÜRK ERBOĞA N., OLĞAR Y., AYDIN ASLAN M., ÖZDEMİR S.
JOURNAL OF BIOENERGETICS AND BIOMEMBRANES, vol.48, no.4, pp.425-436, 2016 (SCI-Expanded)
- XXXIX. **2.1 GHz electromagnetic field does not change contractility and intracellular Ca²⁺ transients but decreases beta-adrenergic responsiveness through nitric oxide signaling in rat ventricular myocytes**
OLĞAR Y., Hidisoglu E., Celen M. C., Yamasan B. E., Yargicoglu P., ÖZDEMİR S.
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, vol.91, no.10, pp.851-857, 2015 (SCI-Expanded)

- XL. **Effects of Ticagrelor on Ionic Currents and Contractility in Rat Ventricular Myocytes**
KÜÇÜK M., Celen M. C., Yamasan B. E., OLĞAR Y., ÖZDEMİR S.
CARDIOVASCULAR DRUGS AND THERAPY, vol.29, no.5, pp.419-424, 2015 (SCI-Expanded)
- XLI. **Ellagic Acid Reduces L-type Ca²⁺(+) Current and Contractility Through Modulation of NO-GC-cGMP Pathways in Rat Ventricular Myocytes**
OLĞAR Y., ÖZTÜRK ERBOĞA N., USTA C., Puddu P. E., ÖZDEMİR S.
JOURNAL OF CARDIOVASCULAR PHARMACOLOGY, vol.64, no.6, pp.567-573, 2014 (SCI-Expanded)
- XLII. **Sodium Tungstate Administration Ameliorated Diabetes-Induced Electrical and Contractile Remodeling of Rat Heart without Normalization of Hyperglycemia**
AYDEMİR M., ÖZTÜRK ERBOĞA N., Dogan S., AYDIN ASLAN M., OLĞAR Y., ÖZDEMİR S.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.148, no.2, pp.216-223, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **Beneficial Effect of a Mitochondrial-targeted Antioxidant Mitotempo in Insulin-resistant Mammalian Cardiac Dysfunction**
Bitirim C. V., Olğar Y., Billur D., Akçalı K. C., Turan B.
Ankara Üniversitesi Tıp Fakültesi Mecmuası, vol.74, no.2, pp.252-258, 2021 (Peer-Reviewed Journal)
- II. **Age-related Alterations in Cardiac Function and miRNA**
OLĞAR Y., BİLLUR D., TURAN B.
Journal of Ankara University Faculty of Medicine, vol.74, no.2, pp.239-244, 2021 (Peer-Reviewed Journal)
- III. **The effect of aging and exercise training on carbon monoxide relaxation response in thoracic aorta and gastrocnemius feed artery Yaşlanma ve yüzme egzersizinin, torasik aorta ve gastroknemius iletim arterlerinde karbon monoksit gevşeme yanıtına etkisi**
Koçer G., Nasircılar-Ülker S., OLĞAR Y., Öztürk N., ÖZDEMİR S.
Türk Hijyen ve Deneysel Biyoloji Dergisi, vol.77, no.4, pp.449-458, 2020 (Scopus)
- IV. **MitoTEMPO Increases the Gastrointestinal Motility in Aged Rats**
Koc E., OLĞAR Y., Turan E.
CYPRUS JOURNAL OF MEDICAL SCIENCES, vol.4, no.1, pp.24-27, 2019 (ESCI)
- V. **Pioglitazonun Metabolik Sendromlu Sıçan Kalp Fonksiyonuna Etkisinin Elektrofizyolojik Yöntemlerle İncelenmesi**
DURAK A., TUTAR SELÇUK M. F., OLĞAR Y., OKATAN E. N., DEĞİRMENCİ S., aksu s., bıçakçı e., bıçakçı e., DOĞAN M., TUNCAY E., et al.
Ankara Üniversitesi Tıp Fakültesi Mecmuası, 2015 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Zinc Signaling in Aging Heart Function**
TURAN B., BİLLUR D., OLĞAR Y.
in: Zinc Signaling, Toshiyuki Fukada, Taiho Kambe, Editor, Springer Nature Singapore Pte Ltd, pp.139-164, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **Estrogen induces the regenerative capacity of Sca1+cardiac progenitor cells**
Genc K., OLĞAR Y., BİTİRİM C. V.
24th World Congress of the International-Society-for-Heart-Research, Berlin, Germany, 12 - 15 June 2022

Supported Projects

Olğar Y., TUNCAY E., TUBITAK Project, İnkretin Aracılı Tedavilerde Mitokondri Proteostazını Etkileyen Yeni Biyo-Belirteçlerin İncelenmesi, 2023 - 2026

Olğar Y., TUNCAY E., TUBITAK Project, Yaşlı Farelere Uygulanan Akut İnkretin-Temelli Tedavinin Kazein Kinaz-2 ile İlişkisinin İncelenmesi, 2023 - 2024

Kaykı Mutlu G., Arioğlu İnan E., Olğar Y., TUBITAK Project, G protein reseptör kinaz 2 S-nitrozilasyonunun mitokondri fonksiyonuna etkisinin iskemi- reperfüzyon modelinde değerlendirilmesi, 2022 - 2024

Bitirim C. V., OLĞAR Y., TUBITAK Project, Östrojenin Kardiyak Progenitör Hücre Farklılaşması Üzerindeki Rolünün In Vivo Ve In Vitro İncelenmesi, 2021 - 2023

Metrics

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