

## Assoc. Prof. MURAT TİMUR BUDAK

### Personal Information

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### Education Information

Doctorate, Gazi Üniversitesi, Tıp Fakültesi, Fizyoloji, Turkey 1994 - 2000

Under Graduate, Hacettepe Üniversitesi, Tıp Fakültesi, Turkey 1984 - 1991

### Dissertations

Doctorate, Epidermal büyüme faktörünün jel taşıyıcı içinde korneal kesi yarası oksidatif durumuna etkisi, Gazi Üniversitesi, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, 2000

### Research Areas

Medicine, Health Sciences, Fundamental Medical Sciences, Human Physiology

### Academic Titles / Tasks

Associate Professor, Hacettepe Üniversitesi, Tıp Fakültesi (ingilizce), Temel Tıp Bilimleri Bölümü, 2014 - Continues

Assistant Professor, Hacettepe Üniversitesi, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, 2012 - 2014

Expert, University Of Pennsylvania, Tıp, Cerrahi, 2006 - 2014

Assistant Professor, University Of Pennsylvania, Tıp, Cerrahi, 2010 - 2012

Expert, University Of Pennsylvania, Tıp, Cell And Developmental Biology, 2005 - 2006

Research Assistant, University Of Pennsylvania, Tıp, Cell And Developmental Biology, 2003 - 2005

Research Assistant, New York University, Tıp, Göz, 1999 - 2003

### Courses

FZY704 Moleküler Fizyolojide Temel Laboratuvar Teknikleri, Doctorate, 2016 - 2017

FZY703 İleri Hücre ve Vücut Sıvıları Fizyolojisi, Doctorate, 2016 - 2017

FZY714 Kas Fizyolojisi, Doctorate, 2016 - 2017

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

1. The effects of mesenchymal stem cell mitochondrial transplantation on doxorubicin-mediated

## **nephrotoxicity in rats**

Kubat G. B. , Ozler M., Ulger O., Ekinçi O., ATALAY Ö., Celik E., Safali M., BUDAK M. T.

JOURNAL OF BIOCHEMICAL AND MOLECULAR TOXICOLOGY, 2020 (Journal Indexed in SCI)

- II. **Investigation of the Effect of Melatonin Administration on Calpain-1 Expression and Atrophic Morphology in Atrophy of Mouse Myoblast Cell Line Exposed to Hydrogen Peroxide**  
Karimi N., KARTAL Y., BUDAK M. T.  
ACTA PHYSIOLOGICA, vol.227, pp.34, 2019 (Journal Indexed in SCI)
- III. **Electrophysiological Assessment of the Effects of Obstructive Sleep Apnea on Cognition**  
GELİR E., BASARAN C., BAYRAK S., Yagcioglu S., BUDAK M. T. , FIRAT H., UGAN P.  
PLOS ONE, vol.9, no.2, 2014 (Journal Indexed in SCI)
- IV. **The Relationship between CPAP Usage and Corneal Thickness**  
GELİR E., BUDAK M. T. , ARDIC S.  
PLOS ONE, vol.9, no.1, 2014 (Journal Indexed in SCI)
- V. **Intrinsic apoptosis in mechanically ventilated human diaphragm: linkage to a novel Fos/FoxO1/Stat3-Bim axis**  
Tang H., Lee M., Budak M. T. , Pietras N., Hittinger S., Vu M., Khuong A., Hoang C. D. , Hussain S. N. A. , Levine S., et al.  
FASEB JOURNAL, vol.25, no.9, pp.2921-2936, 2011 (Journal Indexed in SCI)
- VI. **Inactivity-induced diaphragm dysfunction and mitochondria-targeted antioxidants: New concepts in critical care medicine**  
Levine S., Budak M. T. , Dierov J., Singhal S.  
CRITICAL CARE MEDICINE, vol.39, no.7, pp.1844-1845, 2011 (Journal Indexed in SCI)
- VII. **Increased Proteolysis, Myosin Depletion, and Atrophic AKT-FOXO Signaling in Human Diaphragm Disuse**  
Levine S., Biswas C., Dierov J., Barsotti R., Shrager J. B. , Taitan Nguyen T. N. , Sonnad S., Kucharchzuk J. C. , Kaiser L. R. , Singhal S., et al.  
AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE, vol.183, no.4, pp.483-490, 2011 (Journal Indexed in SCI)
- VIII. **Identification of the Neuromuscular Junction Transcriptome of Extraocular Muscle by Laser Capture Microdissection**  
Ketterer C., Zeiger U., Budak M. T. , Rubinstein N. A. , Khurana T. S.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.51, no.9, pp.4589-4599, 2010 (Journal Indexed in SCI)
- IX. **Gene expression in the lamellar dermis-epidermis during the developmental phase of carbohydrate overload-induced laminitis in the horse**  
Budak M. T. , Orsini J. A. , Pollitt C. C. , Rubinstein N. A.  
VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, vol.131, pp.86-96, 2009 (Journal Indexed in SCI)
- X. **Influence of hyperthyroid conditions on gene expression in extraocular muscles of rats**  
Postler T. S. , Budak M. T. , Khurana T. S. , Rubinstein N. A.  
PHYSIOLOGICAL GENOMICS, vol.37, no.3, pp.231-238, 2009 (Journal Indexed in SCI)
- XI. **Transcriptional and functional differences in stem cell populations isolated from extraocular and limb muscles**  
Pacheco-Pinedo E. C. , Budak M. T. , Zeiger U., Jorgensen L. H. , Bogdanovich S., Schroder H. D. , Rubinstein N. A. , Khurana T. S.  
PHYSIOLOGICAL GENOMICS, vol.37, no.1, pp.35-42, 2009 (Journal Indexed in SCI)
- XII. **Mechanical ventilation and disuse atrophy of the diaphragm - Reply**  
Levine S., Budak M. T. , Shrager J. B.  
NEW ENGLAND JOURNAL OF MEDICINE, vol.359, no.1, pp.91-92, 2008 (Journal Indexed in SCI)
- XIII. **A Role for Forkhead Transcription Factors (FOXOs) in Disuse Atrophy of the Human Diaphragm (DIA) Associated with Mechanical Ventilation (MV)**  
Budak M. T. , Nguyen T., Zhu J., Rothenberg P., Shrager J., Levine S.  
FASEB JOURNAL, vol.22, 2008 (Journal Indexed in SCI)
- XIV. **Rapid disuse atrophy of diaphragm fibers in mechanically ventilated humans**

Levine S, Nguyen T, Taylor N, Friscia M. E. , Budak M. T. , Rothenberg P., Zhu J., Sachdeva R., Sonnad S., Kaiser L. R. , et al.

NEW ENGLAND JOURNAL OF MEDICINE, vol.358, no.13, pp.1327-1335, 2008 (Journal Indexed in SCI)

- XV. **Ets-2 repressor factor silences extrasynaptic utrophin by N-box-mediated repression in skeletal muscle**  
Perkins K. J. , Basu U., Budak M. T. , Ketterer C., Baby S. M. , Lozynska O., Lunde J. A. , Jasmin B. J. , Rubinstein N. A. , Khurana T. S.  
MOLECULAR BIOLOGY OF THE CELL, vol.18, no.8, pp.2864-2872, 2007 (Journal Indexed in SCI)
- XVI. **Form-deprivation myopia in chick induces limited changes in retinal gene expression**  
McGlenn A. M. , Baldwin D. A. , Tobias J. W. , Budak M. T. , Khurana T. S. , Stone R. A.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.48, no.8, pp.3430-3436, 2007 (Journal Indexed in SCI)
- XVII. **Comparative analysis of human conjunctival and corneal epithelial gene expression with oligonucleotide microarrays**  
Turner H. C. , Budak M. T. , Akinci M. A. M. , Wolosin J. M.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.48, no.5, pp.2050-2061, 2007 (Journal Indexed in SCI)
- XVIII. **Identification of the A(3) adenosine receptor in rat retinal ganglion cells**  
Zhang M., Budak M. T. , Lu W., Khurana T. S. , Zhang X., Laties A. M. , Mitchell C. H.  
MOLECULAR VISION, vol.12, pp.937-948, 2006 (Journal Indexed in SCI)
- XIX. **Definition of the unique human extraocular muscle allotype by expression profiling**  
Fischer M., Budak M. T. , Bakay M., Gorospe J., Kjellgren D., Pedrosa-Domellof F., Hoffman E., Khurana T.  
PHYSIOLOGICAL GENOMICS, vol.22, no.3, pp.283-291, 2005 (Journal Indexed in SCI)
- XX. **Ocular surface epithelia contain ABCG2-dependent side population cells exhibiting features associated with stem cells**  
Budak M. T. , Alpdogan O., Zhou M., Lavker R., Akinci M., Wolosin J.  
JOURNAL OF CELL SCIENCE, vol.118, no.8, pp.1715-1724, 2005 (Journal Indexed in SCI)
- XXI. **Layer-specific differences of gene expression in extraocular muscles identified by laser-capture microscopy**  
Budak M. T. , Bogdanovich S., Wiesen M., Lozynska O., Khurana T., Rubinstein N.  
PHYSIOLOGICAL GENOMICS, vol.20, no.1, pp.55-65, 2004 (Journal Indexed in SCI)
- XXII. **Ocular surface epithelial and stem cell development**  
Wolosin J., Budak M. T. , Akinci M.  
INTERNATIONAL JOURNAL OF DEVELOPMENTAL BIOLOGY, vol.48, pp.981-991, 2004 (Journal Indexed in SCI)
- XXIII. **Different cell sizes in human limbal and central corneal basal epithelia measured by confocal microscopy and flow cytometry**  
Romano A., Espana E., Yoo S., Budak M. T. , Wolosin J., Tseng S.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.44, no.12, pp.5125-5129, 2003 (Journal Indexed in SCI)
- XXIV. **Changes in connexin43 in early ocular surface development**  
Wolosin J., Schutte M., Zieske J., Budak M. T.  
CURRENT EYE RESEARCH, vol.24, no.6, pp.430-438, 2002 (Journal Indexed in SCI)
- XXV. **Effects of epidermal growth factor in artificial tear on vitamin C levels of corneal wounded eye tissues**  
Gonul G., Kaplan B., Bilgihan K., Budak M. T.  
EYE, vol.15, pp.213-216, 2001 (Journal Indexed in SCI)
- XXVI. **Expansion of clonogenic cell pool in explants of rabbit limbus.**  
Budak M. T. , Xiong X., Wolosin J.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.42, no.4, 2001 (Journal Indexed in SCI)
- XXVII. **Species dependent expression of connexin50 in the corneal epithelium.**  
Xiong X., Budak M. T. , Wolosin J.  
INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, vol.41, no.4, 2000 (Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **"Hidrojen Peroksite Maruz Kalan Fare Miyoblast Hücre Hattında Oluşan Atrofiye, Melatonin Uygulanmasının Kalpain-1 İfadelenmesine ve Atrofik Morfolojiye Etkisinin İncelenmesi"**  
KARTAL Y., BUDAK M. T.  
"Türk Fizyolojik Bilimler Derneği 45. Ulusal Fizyoloji Kongresi", Aydın, Turkey, 31 October 2019
- II. **Identification and characterization of stem cells in extraocular muscle (EOM)**  
Budak M. T. , Rubinstein N., Khurana T.  
Meeting of the Association-for-Research-in-Vision-and-Ophthalmology (ARVO 2005), Florida, United States Of America, 1 - 05 May 2005, vol.46
- III. **Identification of the A(3) adenosine receptor in rat retinal ganglion cells**  
Zhang M., Budak M. T. , Lu W., Khurana T., Zhang X., Laties A., Mitchell C.  
Meeting of the Association-for-Research-in-Vision-and-Ophthalmology (ARVO 2005), Florida, United States Of America, 1 - 05 May 2005, vol.46
- IV. **Ocular surface epithelial cells express the MDR transporter ABCG2 and thus can be isolated as a side population following staining with bisbenzimidazole**  
Budak M. T. , Akinci M., Wolosin J.  
Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology, FT LAUDERDALE, FLORIDA, 01 May 2003, vol.44
- V. **Identification of limbal genes by differential display**  
Akinci M., Budak M. T. , Wolosin J.  
Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology, FT LAUDERDALE, FLORIDA, 01 May 2003, vol.44
- VI. **Downregulation of Cx43 identifies earliest stages of limbo-corneal, conjunctival and stem cell development**  
Wolosin J., Budak M. T.  
42nd Annual Meeting of the American-Society-for-Cell-Biology, San-Francisco, Costa Rica, 14 - 18 December 2002, vol.13
- VII. **Delayed proliferative start allows isolation of epithelial stem cells**  
Budak M. T. , Alpdogan S., Wolosin J.  
42nd Annual Meeting of the American-Society-for-Cell-Biology, San-Francisco, Costa Rica, 14 - 18 December 2002, vol.13
- VIII. **Effect of phorbol ester on clone initiation by corneal and limbal epithelial cells**  
Budak M. T. , Wolosin J.  
Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology, FT LAUDERDALE, FLORIDA, 5 - 10 May 2002, vol.43

## Supported Projects

BUDAK M. T. , Karimi Sakhvidi N., KARTAL Y., Project Supported by Higher Education Institutions, Hidrojen Peroksite Maruz Kalan Fare Miyoblast Hücre Hattında Oluşan Atrofiye Melatonin Uygulanması ve Kalpain1 İnhibisyonunun Etkisinin Morfolojik İncelenmesi, 2017 - 2019

BUDAK M. T. , Project Supported by Higher Education Institutions, Hidrojen Peroksite Maruz Kalan Fare Miyoblast Hücre Hattında Oluşan Atrofiye Melatonin Uygulanması ve Kalpain1 İnhibisyonunun Etkisinin Morfolojik İncelenmesi 2, 2017 - 2018

## Citations

Total Citations (WOS):1572

h-index (WOS):15