

Bilge Güvenç Tuna



Work

Assistant Professor
Yeditepe University, Department of Biophysics,
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Education

Ph.D. student - Department of Biomedical Engineering and Physics, 2014.
Academic Medical Center, Amsterdam, The Netherlands.

M.Sc. - Department of Biophysics, 2008
Hacettepe University Faculty of Medicine, Ankara, Turkey.

B.S. - Department of Physics, 2003.
Middle East Technical University, Ankara, Turkey

Work Experience

- **Assistant Professor (2014-present)**
Department of Biophysics, Faculty of Medicine, Yeditepe University, İstanbul, Turkey
- **Ph.D. student- Marie Curie Fellow (2010-2014)**
Department of Biomedical Engineering and Physics, 2014. Academic Medical Center, Amsterdam, The Netherlands.
- **Research Assistant (2009-2010)**
Department of Biophysics, Hacettepe University Faculty of Medicine, TURKEY.
- **Visiting Scientist – Dr. Frank Brozovich (2009)**
Mayo Clinic, Department of Cardiovascular Disease, Rochester, MN
A Dynamic Approach Reveals Nonmuscle Myosin Influences the Overall Smooth Muscle Cross-bridge Cycling Rate.
- **Research Project – Prof. Dr. Necla Ozturk**
Department of Biophysics, Hacettepe University Faculty of Medicine, TURKEY
Effects of organophosphate insecticides on mechanical properties of rat aorta.
- **Medi-Kim, Medical Laser Equipments (2006-2007).**
Science Officer: Training, Technical support and Marketing of Laser Equipment.

Publications (SCI & SSCI & Arts and Humanities)

1. **Tuna BG**, Atalay PB, Altunbek M, Kalkan BM, Dogan S Effects of Chronic and Intermittent Calorie Restriction on Adropin Levels in Breast Cancer. *Nutr Cancer*. 2017 Sep 18:1-8. doi: 10.1080/01635581.2017.1359314.
2. Ercan M, Ozalp VC, **Tuna BG**. Genotyping of single nucleotide polymorphism by probe-gated silica nanoparticles. *Anal Biochem*. 2017 Sep 8. pii: S0003-2697(17)30370-6. doi: 10.1016/j.ab.2017.09.004.
3. Kõks S, Dogan S, **Tuna BG**, González-Navarro H, Potter P, Vandenbroucke RE. Mouse models of ageing and their relevance to disease. *Mech Ageing Dev*. 2016 Oct 4. pii: S0047-6374(16)30214-7. doi: 10.1016/j.mad.2016.10.001.
4. Borsa B.A., **Tuna B.G.**, Hernandez F.J., Hernandez L.I., Bayramoglu G., Arica M.Y., Ozalp V.C. Staphylococcus aureus detection in blood samples by silica nanoparticle-oligonucleotides conjugates. *Biosensors and Bioelectronics*. 2016 Dec 15; 86:27-32. Epub 2016 Jun 10
5. **Tuna, BG.**, Lachkar N., de Vos J., Bakker EN., VanBavel E.; Cerebral Artery Remodeling in Rodent Models of Subarachnoid Hemorrhage *J Vasc Res*. 2015 ;52:103–115
6. VanBavel E., **Tuna, BG.**; Integrative Modeling of Small Artery Structure and Function Uncovers Critical Parameters for Diameter Regulation. *PLoS One*. 2014; 9(1): e86901.
7. **Tuna, BG.**, Schoorl,MJ., Bakker EN., de Vos J., VanBavel E.; Smooth Muscle Contractile Plasticity in Rat Mesenteric Small Arteries: Sensitivity to Specific Vasoconstrictors, Distension and Inflammatory Cytokines. *J Vasc Res*. 2013 Jul 2; 50(3):249-262.
8. **Tuna, BG.**, Bakker EN., VanBavel E.; Relation between active and passive biomechanics of small mesenteric arteries during remodeling. *J Biomech*. 2013 May 31; 46(8):1420-6.
9. del Campo L., **Guvenc Tuna B.**, Ferrer M., VanBavel E., Bakker EN.; Testosterone and β -estradiol prevent inward remodeling of rat small mesenteric arteries. *Clinical Science (London)* 2013 Jun; 124(12):719-28.
10. Matlung HL., Neele AE., Groen HC., van Gaalen K., **Tuna BG.**, van Weert A., Wentzel JJ., Hoogenboezem M., van Buul JD., VanBavel E., BakkerEN.; Transglutaminase activity regulates atherosclerotic plaque composition at locations exposed to oscillatory shear stress. *Atherosclerosis* 2012 Oct; 224(2):355-62.
11. van den Akker J., **Tuna BG.**, Pistea A., Sleutel AJ., Bakker EN., VanBavel E.; Vascular smooth muscle cells remodel collagen matrices by long-distance action and anisotropic interaction. *Med Biol Eng Comput*. 2012 Jul; 50 (7): 701-15.
12. **Tuna, BG.**, Bakker EN., VanBavel E.; Smooth muscle biomechanics and plasticity: relevance

for vascular caliber and remodeling. *Basic Clin Pharmacol Toxicol.* 2012; 110 (1): 35-41.

13. van den Akker J., VanBavel E., van Geel R., Matlung HL., **Guvenc Tuna B.**, Janssen GM., van Veelen PA., Boelens WC., De Mey JG., Bakker EN.; The Redox State of Transglutaminase 2 Controls Arterial Remodeling. *PLoS One.* 2011; 6(8):e23067.
14. **Guvenc Tuna B.**, Ozturk N., Comelekoglu U., Coskun Yılmaz B.; Effects of organophosphate insecticides on mechanical properties of rat aorta. *Physiol Res* 60: 39-46 (2011).
15. **Guvenc B.**, Ustunel C., Ozturk N., Brozovich F; A dynamic approach reveals non-muscle myosin influences the overall smooth muscle cross-bridge cycling rate. *FEBS Letters* 584: 2862–2866 (2010).

Research Grants

1. TÜBİTAK 3501 Kariyer Geliştirme Programı (115S233): Yürütücü
Hücre Kültürü ateroskleroz Modelinde Transglutaminaz İnhibitörünün Hedefli ve Kontrollü Salınımı
2. TUBİTAK 3001 Başlangıç AR-GE Projeleri Destekleme Programı (215S052): Yürütücü
Altın Nanoparçacıkların ve Modifikasyonlarının Nöronal Fonksiyonlar Üzerine Etkilerinin Farelerde Araştırılması
3. Bilim, Sanayi ve Teknoloji Bakanlığı Teknogirişim Sermayesi Desteği 2015: Yürütücü
Görüntü İşleme Tabanlı Basınç Miyografi Tasarımı
4. TUBİTAK 2209 2015/1: Danışman
Meme kanserine karşı koruyucu etkisi bulunan kalori kısıtlamasının transglutaminaz 2 ekspresyonu üzerine etkisi
5. TÜBİTAK 3501 Kariyer Geliştirme Programı (117M275): Araştırmacı
Performans Giysi Tasarımında Bilgisayar Destekli Nakış Üretim Yönteminin Giyilebilir Elektromiyografi (EMG) Elektrotu Geliştirilmesi İçin Optimizasyonu