

. Sabancı .  
Universitesi

Center of Excellence for  
**Functional SURfaces and Interfaces for  
Nano diagnostics (EFSUN)**

**RESEARCH  
CATALOGUE  
2016**

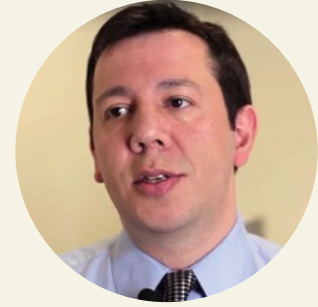


Center of Excellence for  
**Functional SURfaces**  
**and Interfaces for**  
**Nano diagnostics**  
**(EFSUN)**

*Co-Directors*



**Ali Koşar**



**Burç Mısırlıoğlu**

*Vice Director*



**Devrim Gözüaçık**

**Advisory Board Members**



**Sadık Esener**

Director, Nano-Tumor Center  
University of California at San Diego



**Mehmet Toner**

Professor of Bioengineering  
Harvard Medical School



**Yusuf Leblebici**

Director, Microelectronic Systems Laboratory  
EPFL



**Yoav Peles**

Mechanical Engineering Department Head  
University of Central Florida



**Pamir Alpay**

Materials Science Engineering Department Head  
University of Connecticut



**Zahra Zakeri**

President of International Cell Death Society  
Queens College of the City University of New York



**M. Pınar Mengüç**

Director, Centre for Energy, Environment and Economy  
Ozyegin University

## Introduction

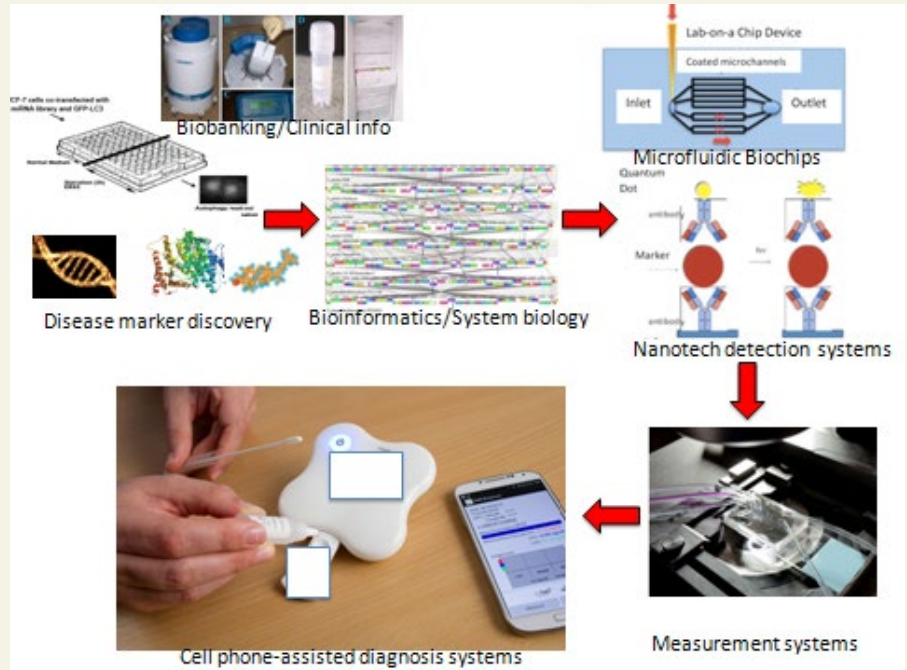
**The Center of Excellence for Functional Surfaces and Interfaces for Nano diagnostics (EFSUN)** was established in September 2016. The Center aims at the discovery of efficient tools for an early, efficient accurate, cheap and on-site diagnosis of important health problems using nanotechnology tools. Highly qualified local researchers in various fields, including medicine, molecular biology, genetics, pathology, chemistry, physics, engineering, nanotechnology and electronics were brought together in the center in order to generate original, innovative and patentable knowledge and produce high impact research. Moreover, interdisciplinary nature of the center facilitates coordinated interactions between members from different fields to reach a common goal of generation of high-tech nano-based diagnostic devices. The advisory board consists of outstanding and experienced researchers from the best institutes and universities in the US and in Europe. As such, EFSUN aims to become a center of reference in the fields of nanotechnology and medical diagnostics in Turkey, in the region, and it welcomes motivated researchers who would like to join forces to reach this goal.

In the EFSUN Center, using micron- and submicron-sized systems, researchers exploit cutting edge tools of medicine, molecular biology, bioinformatics, material science, nano technology, nano/microfluidics, physics, physical chemistry, electrics and electronics. Current activities of the center include research on clinical activities, biobanking, molecular biology, genetics and biochemistry of diseases, omics approaches, patient-centered, research on chemistry and material fundamentals, surface and interface interaction studies, power generation in small scale along with targeted device design.

The Center was founded by 5 scientists who were soon joined by 22 scientists being world-class experts in their respective fields. Contributing members are recipients of various prestigious national and international awards. Several joint grant applications have been already made. Collaborations with the industry are ongoing. High impact publications, invited talks, conference presentations and seminars increase visibility of the center.

This catalog is intended to provide a collection of the research activities of the center along with a short bio of contributing researchers.

## Research Activities in EFSUN



## Involved Institutions in EFSUN

### Sabancı University

Ali Koşar (Co-Director)  
Burç Mısırlıoğlu (Co-Director)  
Devrim Gözüaçık (Vice Director)  
Kürşat Sendur (Executive Board Member)  
Gözde İnce (Executive Board Member)  
Asif Sabanovic  
Hüveyda Başağa  
Özlem Kutlu  
Murat Kaya Yapıcı

### Koç University

Havva Funda Yağcı Acar

### Yeditepe University

Asiye Işın Doğan-Ekici

### Hisar International Hospital

Sinan Ekici

### TUBITAK-MAM

Koray Balcıoğlu  
Berrin Erdağ

### Gebze Technical University

Tunahan Çakır  
Pınar Pir  
Saliha Durmuş

### Council of Forensic Medicine

Arzu Akçay  
Kubilay Kınoğlu

### Çukurova University

Hikmet Akkız

### Marmara University

Tunç Laçın

### PHI Tech Bioinformatics Company

Saliha Durmuş

### Istanbul Yeni Yüzyıl University

Cenk Kığ

### Hacettepe University

Serap Dökmeci

## Expertise Areas of EFSUN researchers

### Surgeons/Medical Doctors

Hikmet Akkiz (Gastroenterology)  
Sinan Ekici (Urologist)  
Tunç Laçın (Thoracic surgeon)  
Kubilay Kınoğlu (Forensic medicine)

### Pathologists

Asiye Işın Doğan Ekici (Clinical pathologist)  
Arzu Akçay (Forensic pathologist)

### Molecular Biologists

Devrim Gözüaçık (Disease/cancer MB)  
Hüveyda Basağa (Atherosclerosis MB)  
Özlem Kutlu (Disease MB)  
Koray Balcıoğlu (Antibody design/preparation)  
Berrin Erdağ (Antibody design/preparation)  
Serap Dökmeçi (Disease MB)

### Bioinformatics/Computer Aided Biology

Tunahan Çakır (Systems biology)  
Pınar Pir (Systems biology, Mathematical modeling)  
Saliha Durmuş (Systems biology)

### Chemical/Materials Engineering

Hava Funda Yağcı Acar (Nanoparticle design)  
Gözde İnce (Polymers-Thin films)  
Burç Mısırlıoğlu (Surface microstructure properties)

### Physics/Mechatronics

Ali Koşar (Microfluidics, heat transfer, cavitation)  
Kurşat Şendur (Nano optics, electromagnetics, plasmonics)

### Electronics/Control Engineering

Murat Kaya Yapıcı (Microelectromechanical systems)  
Asif Sabanovic (Robotics, Micromanipulation)

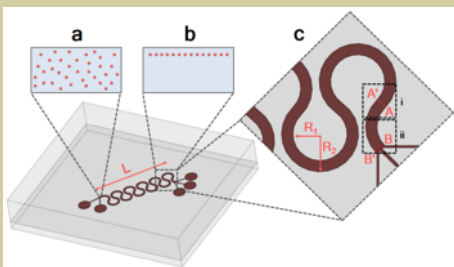
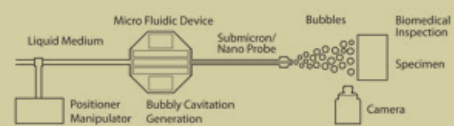
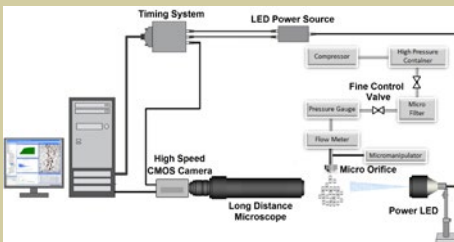
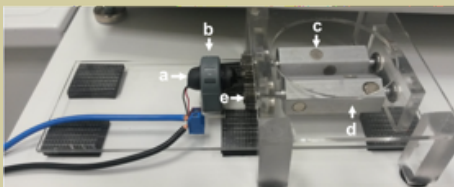


Fig. 1





**ALİ KOŞAR**

**Research Interests in EFSUN:**  
Functional Surfaces/Interfaces,  
Micro and Nanofluidics

**Employment:**

**2016-present** Co-Director of Center of Excellence for Functional Surfaces and Interfaces for Nano Diagnostics (EFSUN), Sabancı University, Istanbul, TURKEY

**November 2015-present** Full Professor, Mechatronics, Sabancı University, Istanbul, TURKEY

**Education:**

**2003-2006** Ph.D., Rensselaer Polytechnic Institute, Mechanical Engineering

**2001-2003** M.S., Rensselaer Polytechnic Institute, Mechanical Engineering

**1997-2001** B.S., Bogazici University (Bosphorus University), Mechanical Engineering

**Honors and Services (Selected):**

**2016-today** Associate Editor, Applied Thermal Engineering journal

**2015-today** Member of Global Young Academy

**2014-today** Member of the Scientific Council, International Centre for Heat and Mass Transfer (ICHMT)

**Awards (Selected):**

**2016** Sedat Simavi Foundation Award in Natural Sciences.

**2016** Elginkan Foundation Technology and Science Award.

**2015** Ten Outstanding Young Persons TOYP 2015 Turkey Award in Scientific Leadership JCI.

**2015** Newton Fund of Newton Research Collaboration Programme of Royal Academy of Engineering.

**2015** Young Scientist of the Year Award of the Science Heroes Association.

**2014** ASME (American Society of Mechanical Engineers) MEMS (Microelectromechanical System) Division Best Paper Award.

**2013** ASME (American Society of Mechanical Engineers) ICNMM (International Conference on Nanochannels, Microchannels and Minichannels) Early Career Award.

**2012** TUBITAK (The Scientific and Technological Research Council of Turkey) Incentive Award,

**Selected 5 publications:**

1. Ozbey, A. et al. "Inertial Focusing of Microparticles in Curvilinear Microchannels," Nature Scientific Reports, 6, 38809, 2016.
2. Ghorbani, M. et al. ," Ultrasonic versus Hydrodynamic Cavitation: Biomedical Applications," IEEE Reviews in Biomedical Engineering, 9, pp. 264-283, 2016.
3. Oral, O. et al. , "Effect of varying magnetic fields on targeted gene delivery of nucleic acid based molecules", Annals of Biomedical Engineering, Annals of Biomedical Engineering, 43(11), pp. 2816-2826, 2015.
4. Perk, O.Y. et al. , "Kidney Stone Erosion by Hydrodynamic Cavitation and Consequent Kidney Stone Treatment," Annals of Biomedical Engineering, 40, pp. 1895-1902, 2012.
5. Koşar, A. et al. "Bubbly Cavitating Flow Generation and Investigation of its Erosional Nature for Biomedical Applications", IEEE Transactions on Biomedical Engineering, 58, pp. 1337-1346, 2011.



## ARZU AKÇAY

### Research Interests in EFSUN:

Biobanking and clinical information, diagnosis at disease process (Cardiovascular, neurodegenerative, metabolic, immunologic, infectious diseases, intoxications and drug effects), discovery of novel markers for diagnosis.

### Employment:

- 2016-today Manager - Pathology Laboratory of Council of Forensic Medicine, İstanbul
- 2015-today Associate Professor of Pathology, Council of Forensic Medicine, İstanbul
- 2006-2008 Staff Pathologist , Council of Forensic Medicine, İstanbul

### Education:

- 2015 Ph.D. of Moleculer Medicine, University of Marmara, Institute of Health Sciences,İstanbul
- 2012 Specialist of Forensic Medicine. Council of Frensic Medicine, İstanbul
- 2005 Medical Doctor Degree. University of Istanbul, Cerrahpasa Medical Faculty, İstanbul

### Selected 5 publications:

1. Akçay A. From Macroscopic Morphology to genes: Sudden Cardiac Death. *Turkiye Klinikleri Adli Tip*, 2016
2. Akçay Turan A et al. Cardiac Injuries Caused by Blunt Trauma: an Autopsy-Based Assessment of the Injury Pattern”, *J Forensic Sci*, 2010
3. Özdemir Ç et al. Heart-type fatty acid binding protein and cardiac troponin I may have a diagnostic value in electrocution: A rat model, *Journal of Forensic and Legal Medicine*, 2016
4. Yagmur G et al . Postmortem diagnosis of cytomegalovirus and accompanying other infection agents by real-time PCR in cases of sudden unexpected death in infancy (SUDI) *Journal of Forensic and Legal Medicine*, 2016
5. Akçay Turan A et al. Sudden Death Due to Eosinophilic Endomyocardial Diseases: Three Case Report, *Am J Forensic Med Pathol*, 2008



**ASIF ŠABANOVIĆ**

**Research Interests in EFSUN:**

Mechatronics design, high accuracy control systems, micromanipulation

**Employment:**

- 2014-present** Sabancı University Faculty of Engineering and Natural Sciences, Mechatronics Program, Professor Emeritus
- 1999-2014** Sabancı University Faculty of Engineering and Natural Sciences, Mechatronics Program, Full Professor
- 1985-2011 (1996-2011) – 2008-2009** University of Sarajevo, Department of Electrical Engineering adjunct professor, Full Professor  
Keio University, Faculty of Science and Technology Research Fellow in GCOE Program, on Sabbatical leave from Sabancı University

**Education:**

- 1975-1979** Ph.D. Electronics and Automatic Control  
University of Sarajevo, Bosnia and Herzegovina
- 1973-1975** M.S. Electronics and Automatic Control  
University of Sarajevo, Bosnia and Herzegovina
- 1965-1970** B.S. Electronics and Automatic Control  
University of Sarajevo, Bosnia and Herzegovina

**Honors and Services (Selected):**

- 2015** The IEEE Transactions on Industrial Electronics, TIE, ISSN 0278-0046, IEEE Industrial Electronics Society, Institute of Electrical and Electronics Engineers, Associate Editor
- 2013** Head of "Knowledge Forum" Human Life Advancement Foundation, P.O Box 29 Suite 1B Level 5, Menara Dato' Onn, Putra World Trade Centre, 45 Jalan Tun Ismail, 50480 Kuala Lumpur Malaysia, www.hlaf.org.my
- 2015** Member of The Scientific Council of Bosnia and Herzegovina

**Awards (Selected):**

- 2016** The Elginkan Vakfı "10. Türk Kültürü Araştırma ve Teknoloji Ödülleri", as a member of the team developing the Sabancı University Tissue Ablating Bubles SU Tabancası Project.
- 1991** Silver Award of the University of Sarajevo for Professional Achievements
- 1985** Outstanding Paper Award, from IEEE Industrial Electronics Society for the paper "Sliding Mode Control of DC to DC converters"
- 1980** The State Award "July the 27<sup>th</sup>", for the contribution in the Power Electronics development, Sarajevo, (the highest award of the Republic Bosnia and Herzegovina)

**Selected 5 publications:**

1. Zhenishbek Zhakypov, et al. Modular and Reconfigurable Desktop Microfactory for High Precision Manufacturing, International Journal Advanced Manufacturing Technologies, First Online: 14 November 2016, DOI 10.1007/s00170-016-9689-7
2. Tarik Uzunovic, et al. Contouring Control of a Parallel Delta Robot: Comparison of Two Control Strategies  
Mechatronics, Volume 40, December 2016, Pages 178–193, <http://dx.doi.org/10.1016/j.mechatronics.2016.10.001>
3. Tarik Uzunovic, et al; Piezo LEGS Driving Principle Based on Coordinate Transformation In the Mechatronics, IEEE/ASME Transactions on (Volume:20 , Issue: 3 ), Page(s):1395 - 1405, ISSN :1083-4435, DOI:10.1109/TMECH.2014.2351272
4. Eray Baran; et al. Comparative Analysis of Selected DCT Based Compression Scheme for Haptic Data Transmission  
IEEE Transactions on Industrial Informatics, Year: 2016, Volume: 12, Issue: 3, Pages: 1146 - 1155, DOI: 10.1109/TII.2016.2555982
5. Eşref Emre Özsoy, et al; A Novel Current Controller Scheme for Doubly Fed Induction Generators Automatika Vol56, No 2, 2015, DOI: 10.7305/automatika.2015.07.766





## ASIYE IŞIN DOĞAN EKİCİ

Research Interests in EFSUN:  
Pathology

### Employment:

- 2015-today** Professor of Pathology, Yeditepe University, Medical Faculty, Department of Pathology, İstanbul, Turkey
- 2008-2015** Associate Professor of Pathology, Yeditepe University, Medical Faculty, Department of Pathology, İstanbul, Turkey
- 2004-2008** Assistant Professor of Pathology, Yeditepe University, Medical Faculty, Department of Pathology, İstanbul, Turkey
- 2003-2004** Pathology specialist, Hacettepe University, Medical Faculty, Department of Pathology, Ankara, Turkey

### Education:

- 1991-1997** Hacettepe University, Medical Faculty, Ankara, Turkey.
- 1998-2003** Research assistant of Pathology, Hacettepe University, Medical Faculty, Department of Pathology, Ankara, Turkey

### Awards (Selected):

- 15.05.2000** TÜBİTAK Bilimsel Yayınları Teşvik Programı teşvik ödülü
- 04.12.2006** TÜBİTAK Bilimsel Yayınları Teşvik Programı teşvik ödülü
- 2008** Türk Nöroşirürji Derneği 22. Bilimsel Kongresi “Yılın Bildirileri” Altıncılık Ödülü
- 2012** Yeditepe Üniversitesi Bilimsel Yayın Destek Ödülü (3 adet makale için)
- 2016** En iyi sözel sunu ödülü,
- 2015-2016** Yeditepe Üniversitesi eğitim, öğretim, bilimsel araştırma, yönetsel ve diğer faaliyetleri kapsayan Akademik değerlendirme sonucu üçüncülük ödülü.

### Selected 5 publications:

- Doğan Ekici AI, Eren B, Türkmen N, Çomunoğlu N, Fedakar R. “Clusterin expression in non-neoplastic adenohypophyses and pituitary adenomas: cytoplasmic clusterin localization in adenohypophysis is related to aging”, *Endocrine Pathology*, 19(1):47-53. (2008)
- Ekici S, Doğan Ekici AI, Öztürk G, Benli Aksungar F, Sinanoğlu O, Turan G, Lüleci N. “Comparison of melatonin and ozone in the prevention of reperfusion injury following unilateral testicular torsion in rats”. *Urology*. 80(4): 899-906 (2012)
- Çoban J, Doğan-Ekici I, Aydın AF, Betül-Kalaz E, Doğru-Abbasoğlu S, Uysal M. “Blueberry treatment decreased D-galactose-induced oxidative stress and brain damage in rats” *Metab Brain Dis*. 2015 Jun;30(3):793-802. doi: 10.1007/s11011-014-9643-z. Epub 2014 Dec 17
- Kokten N; Egilmez OK; Ekici A. I. Dogan; et al. “The effect of Nigella sativa oil on prevention of myringosclerosis in a Guinea pig model” *INTERNATIONAL JOURNAL OF PEDIATRIC OTORHINOLARYNGOLOGY*. 88: 52-57 Published: SEP 2016
- Itah Z, Oral O, Perk OY, Sesen M, Demir E, Erbil S, Dogan Ekici AI, Ekici S, Kosar A, Gozuacik D. “Hydrodynamic cavitation kills prostate cells and ablates benign prostatic hyperplasia tissue” *Exp Biol Med (Maywood)* 238 (11): 1242-1250 (2013)



## BERRİN ERDAĞ

**Research Interests in EFSUN:**  
Development of theranostic recombinant antibodies against novel markers discovered within the scope of EFSUN.

### Employment:

- 2000-today** Chief Senior Research Scientist, group leader of immunogenetic Laboratory at TUBITAK-Marmara Research Center Genetic Engineering and Biotechnology Institute, Gebze.
- 1989-2000** Research Scientist at TUBITAK-Marmara Research Center Genetic Engineering and Biotechnology Institute, Gebze.

### Education:

- 1999** Ph.D. of Medical Biology and Genetics, Marmara University, Istanbul.
- 1993** M.Sc. of Medical Biology and Genetics, Marmara University, Istanbul.
- 1989** B.Sc. of Biology, Hacettepe University, Ankara

### Honors and Services (Selected):

- 2014-today** Republic of Turkey, Ministry of Health, Biotechnological Drug Commission member.
- 2011-today** TUBITAK Animal Ethic Commission member.

### Awards (Selected):

- 2012** TUBITAK MRC, The Most Successful Research Team of the Year (2012)  
Topic: Development of Anti-VEGFR2 recombinant antibody structures
- 2006** TUBITAK MRC, Success and Encouragement Award (2006) with the project entitled "Achievement of in vitro applications on anti-angiogenic anti-cancer models and in vivo applications on transgenic mice models".
- 2002** ECZACIBASI Scientific Research Awards; ECZACIBASI Scientific Research and Award Foundation

### Selected 5 publications:

1. Balcioglu B et al. Cost Effective Filamentous Phage Based Immunization Nanoparticles Displaying a full-length hepatitis B virus surface antigen. *Advances in Bioscience and Biotechnology*, 2014.
2. Erdag B et al. Identification of novel neutralizing single-chain antibodies against vascular endothelial growth factor receptor 2. *Biotechnology and Applied Biochemistry*, 2011.
3. Aylin Ozdemir Bahadir A et al. Phage Displayed HBV Core Antigen with Immunogenic Activity. *Appl Biochem Biotechnol*, 2011.
4. Erdag et al. Novel short peptides isolated from phage display library inhibit vascular endothelial growth factor activity. *Molecular biotechnology*, 2007.
5. Erdag et al. Detection of phage displayed peptides with blocking ability in vascular endothelial growth factor (VEGF) model. In: *advances in experimental medicine and biology. Kluwer Academic/ Plenum Publishers*, 2003.



## BURÇ MISIRLIOĞLU

### Research Interests in EFSUN:

Solid/solid interfaces, semiconductors and related devices, functional oxides

### Employment:

- 2008-today Faculty member, Sabancı University, Istanbul.  
2007-2008 Post-doctoral researcher, Massachusetts Institute of Technology  
2006-2007 Post-doctoral researcher, Max Planck Institute of Microstructure Physics  
2001-2006 Graduate Researcher, University of Connecticut

### Education:

- 2006 Materials Science and Engineering, University of Connecticut, Storrs, CT, USA.  
2001 Materials Science, Istanbul Technical University, Istanbul  
1998 Metallurgy, Istanbul Technical University, Istanbul.

### Honors and Services (Selected):

- 2016 Editorial Board Member, Scientific Reports (Nature Publishing Group)  
2006 Alexander von Humboldt Fellowship, Max Planck Institute of Microstructure Physics

### Awards (Selected):

- 2014 Science Academy, BAGEP  
2013 TÜBİTAK Incentive Award  
2012 ODTÜ Prof. Mustafa Parlar Incentive Award  
2011 TÜBA GEBİP Award  
2008 Best Ph.D. Thesis Award, School of Engineering, University of Connecticut  
2005 Best Graduate Student, Materials Science and Engineering, University of Connecticut

### Selected 5 publications:

1. Misirlioglu I. B., Alpay, S. P., Compositionally graded ferroelectrics as wide band gap semiconductors: Electrical domain structures and the origin of low dielectric loss, *Acta Materialia*, 2017.
2. Janipour M., Misirlioglu I. B., Sendur K., Tunable Surface Plasmon and Phonon Polariton Interactions for Moderately Doped Semiconductor Surfaces, *Scientific Reports*, 2016.
3. Misirlioglu I. B., Sendur K., Ferroelectric/Semiconductor/Tunnel-Junction Stacks for Nondestructive and Low-Power Read-Out Memory, *IEEE Transactions on Electron Devices*, 2016.
4. Levanyuk A. P., Misirlioglu I. B., Strong influence of non-ideality of electrodes on stability of single domain state in ferroelectric-paraelectric superlattices, *Journal of Applied Physics*, 2016.
5. Misirlioglu I. B., Yildiz M., Sendur K., Domain control of carrier density at a semiconductor-ferroelectric interface, *Scientific Reports*, 2015.



**CENK KIĞ**

**Research Interests in EFSUN:**

Biological signaling in disease and cellular stress.

**Employment:**

- 2016-today Assoc. Prof., Istanbul Yeni Yuzyil University, Istanbul  
2014-2016 Post-doctoral researcher, Sabancı University, Istanbul  
2009-2014 Post-doctoral researcher, Katholieke University Leuven, Belgium  
2000-2008 Research assistant, Istanbul University, Istanbul

**Education:**

- 2000 B.S. Biology, Istanbul University, Istanbul.  
2003 M.Sc. of Molecular Biology and Genetics, Istanbul University, Istanbul.  
2008 Ph.D. of Molecular Biology and Genetics, Istanbul University, Istanbul.

**Honors and Services (Selected):**

- 2016-today Referee for Autophagy journal  
2016-today Member of editorial board, Molbigen Journal Istanbul University

**Awards (Selected):**

- 2015 Elginkan Foundation Technology Award

**Selected 5 publications:**

1. Erbil S. et al. RACK1 is an Interaction Partner of ATG5 and a Novel Regulator of Autophagy, *The Journal of Biological Chemistry*, 2016.
2. Beke L. et al. , MELK-T1, a small-molecule inhibitor of protein kinase MELK, decreases DNA-damage tolerance in proliferating cancer cells, *Bioscience Reports*, 2015.
3. Kig C. et al. , Maternal embryonic leucine-zipper kinase (MELK) reduces replication stress in glioblastoma cells, *The Journal of Biological Chemistry*, 2013.
4. Joshi K. et al., MELK-dependent FOXM1 Phosphorylation is Essential for Proliferation of Glioma Stem Cells, *Stem Cells*, 2013.
5. Kig C. and Temizkan G., Nitric oxide as a signaling molecule in the fission yeast *Schizosaccharomyces pombe*, *Protoplasma*, 2009.



## DEVRİM GÖZÜAÇIK

### Research Interests in EFSUN:

Discovery of novel markers for diagnosis of diseases (e.g. cancer, neurodegenerative and genetic diseases, infections).  
Validation and tests of detection systems in patient materials.

### Employment:

- 2016-today** Vice-Director, EFSUN Nanodiagnostics Center of Excellence.
- 2011-today** Associate Professor and Research Team Leader, Sabancı University, Istanbul.
- 2006** Assistant Professor and Research Team Leader, Sabancı University, Istanbul.
- 2001** Postdoctoral Researcher, Weizmann Institute of Science, Rehovot.

### Education:

- 2001** Ph.D. of Molecular Biology, Genetics and Cell Biology, Paris Pasteur Institute, Necker Children's Hospital and Paris-Sud University.
- 1997** MSc of Biochemistry, Ecole Polytechnique, Paris.
- 1995** Medical Doctor Degree, Hacettepe Faculty of Medicine (in Eng.), Ankara.
- 1994** Internship on Tumor Biology, Erasmus University, Rotterdam.

### Honors and Services (Selected):

- 2016-today** TR Ministry of Health, TÜSEB Biotechnology Institute, Scientific Advisory Committee Member.
- 2010-today** Board of Directors Member, International Cell Death Society.
- 2016-today** Associate Editor, Autophagy journal (SCI Impact Factor: 9,2)

### Awards (Selected):

- 2015** Elginkan Foundation Technology Award.
- 2014** Turkish Press Association, Sedat Simavi Health Sciences Award.
- 2014** Istanbul Kultur University, Prof. Onder Oztunali Science Award.
- 2008** Turkish Academy of Sciences (TÜBA) Outstanding Young Scientist Award.
- 2006** European Molecular Biology Organization (EMBO) SDIG Award.
- 2006** Hoffmann-La Roche Pharmaceuticals "Leading Bioscientists of the Next Decade"

### Selected 5 publications:

1. Bayraktar O et al. IBMPFD Disease-Causing Mutant VCP/p97 Proteins Are Targets of Autophagic-Lysosomal Degradation. PLOS ONE, 2016.
2. Erbil S et al. RACK1 is an Interaction Partner of ATG5 and a Novel Regulator of Autophagy. The Journal of Biological Chemistry, 2016.
3. Gozuacik D et al. Anticancer use of nanoparticles as nucleic acid carriers. Journal of Biomedical Nanotechnology, 2014.
4. Tekirdag KA et al. MIR181A regulates starvation- and rapamycin-induced autophagy through targeting of ATG5. Autophagy, 2013.
5. Korkmaz G et al. miR-376b controls starvation and mTOR inhibition-related autophagy by targeting ATG4C and BECN1. Autophagy, 2012.



## GÖZDE ÖZAYDIN INCE

### Research Interests in EFSUN:

Modification of surfaces with functional polymer thin films for sensor applications. Fabrication of stimuli responsive, polymer nanotubes with controlled release kinetics. Development of membrane systems with tunable permeabilities for delivery applications.

### Employment:

- 2016-today Founding Member, EFSUN Nanodiagnostics Center of Excellence.
- 2016-today Associate Professor and Research Team Leader, Sabancı University, Istanbul.
- 2010 Assistant Professor and Research Team Leader, Sabancı University, Istanbul.
- 2007 Postdoctoral Researcher, MIT, Cambridge, USA.

### Education:

- 2007 Ph.D. of Mechanical Engineering, Boston University, Boston.
- 2001 B.S. in Physics, Boğaziçi University, Istanbul.

### Awards (Selected):

- 2014 Science Academy – Young Scientist Award (BAGEP)
- 2012 Turkish Academy of Sciences (TÜBA) Young Scientist Award
- 2012 L'Oréal Turkey Young Women Scientist Fellowship
- 2010 Best Young Scientist Talk Award (2010), ICMR School on Nanoscale Science of Biological Interfaces
- 2004 Best Poster Award in Material Research Society Meeting

### Selected 5 publications:

1. E. Armagan, G. Ozaydin Ince, "Coaxial nanotubes of stimuli responsive polymers with tunable release kinetics", *Soft Matter*, 2015.
2. A. Tufani, G. Ozaydin Ince, "Permeability of small molecules through vapor deposited polymer membranes", *Journal of Applied Polymer Science*, 2015.
3. 3) R. Demiryurek, M. Kassim Ali, G. Ozaydin Ince, "A facile method for fabrication of responsive micropatterned surfaces", *Smart Mater. Struct.*, 2014.
4. G. Ozaydin-Ince, K. K. Gleason, M. C. Demirel, "A stimuli-responsive coaxial nanofilm for burst release", *Soft Matter*, 2011.
5. G. Ozaydin-Ince, M. Dubach, K. K. Gleason, H. A. Clark, "Microworm optode sensors limit particle diffusion to enable in vivo measurements", *PNAS*, 2011.



## HAVVA FUNDA YAĞCI ACAR

### Research Interests in EFSUN:

Material development  
(QDOT, SPION, tagging, etc.)

### Employment:

- 2004-today Assoc. Prof., KOÇ UNIVERSITY, İstanbul.  
2000-2004 Lead scientist, GE Global Research, Niskayuna, USA.

### Education:

- 1999 Ph.D., Polymer Science and Engineering, USM, Mississippi.  
1995 M.S. Chemistry, Boğaziçi University, İstanbul  
1993 B.S. Chemistry, Boğaziçi University, İstanbul

### Awards (Selected):

- 2016 Elginkan Technology Reward  
2015 OPET-Inventram-Koc University Collaboration rewarded as the most successful partnership within Koc group  
2008 L`Oreal Turkey Women in Science National Fellowship Material Science  
2002 Whitney Technical Achievement Reward-2002

### Selected 5 publications:

1. Asik, D., Yagci, M. B., Yagci Acar, H. " One step emission tunable synthesis of PEG coated Ag<sub>2</sub>S NIR quantum dots and the development of receptor targeted drug delivery vehicles thereof", J. Mat. Chem. B, 2016, 4, 1941-1950.
2. Duman, F. D., Hocaoglu, I., Ozturk, D. G., Gozuacik, D., Kiraz, A., Yagci Acar, H., "Highly luminescent and cytocompatible cationic Ag<sub>2</sub>S NIR-emitting quantum dots for optical imaging and gene transfection ", *Nanoscale*, 2015, 7, 11352-11362.
3. Hocaoglu, I, Asik, D., Ulusoy, G., Grandfils, C., Ojea-Jimanez, I., Rossi, F., Kiraz, A., Dogan, N., Yagci Acar, H. "Cyto/hemocompatible magnetic hybrid nanoparticles (Ag<sub>2</sub>S-Fe<sub>3</sub>O<sub>4</sub>) with luminescence in the near-infrared region as promising theranostic materials" *Colloids and Surfaces B: Biointerfaces*. 2015, 133-198-207.
4. D. Gozuacik, H. F. Yagci Acar, Y. Akkoc, A. Kosar, A. I. Dogan Ekici, S. Ekici, "Anticancer Use of Nanoparticles as Nucleic Acid Carriers", J. *Biomedical Nanotechnology*, Vol 10, 1-33, 2014.
5. Hocaoglu, N. Cizmeciyan, R. Erdem, C. Ozen, A. Kurt, A. Sennaroglu, H. Yagci Acar\*, "Development of Highly luminescent and Cytocompatible Near-IR-Emitting Aqueous Ag<sub>2</sub>S Quantum Dots", *Journal of Materials Chemistry*, 22, 14674-14681, 2012.



**HİKMET AKKIZ**

**Research Interests in EFSUN:**

Molecular pathogenesis of hepatocellular carcinoma

**Employment:**

Today Prof.Dr. Çukurova University, Medical Faculty,  
Department of Gastroenterology, Adana

**Education:**

1978 Medical Doctor degree, Çukurova University,  
Medical Faculty

1992-1993 Research Fellow, Harvard University,  
Massachusetts General Hospital, Department of  
Gastroenterology, HBV precore mutation

1995 Inserm Institute, HCV genotype

**Awards (Selected):**

Between 2001 and 2015, 17 awards in hepatology

**Selected 5 publications:**

1. Akkiz et al, expressin of apoptosis and vitamin D pathway – related genes in hepatocellular carcinoma, *Digestion* 2013
2. Akkiz et al. the association of pre-micro RNA-146a rs 2910164 polymorphism and the risk of HCC development . *Gene* 2011
3. A functional polymorphism in pre-micro RNA 196a-2 contributes to the susceptibility of HCC. *J Viral Hepat* 2011
4. Akkiz et al. Functional polymorphisms of cyclooxygenase – 2 gene and risk for HCC. *Mol Cell Biochem* 2012
5. Akkiz et al. Relationship between functional polymorphism in the Aurora A gene and susceptibility HCC. *J Viral Hepat* 2010.





**KORAY BALCIOĞLU**

**Research Interests in EFSUN:**

Development of theranostic recombinant antibodies against novel markers discovered within the scope of EFSUN.

**Employment:**

- 2012-today** Senior Research Scientist at TUBITAK-Marmara Research Center Genetic Engineering and Biotechnology Institute, Immunogenetics Laboratory, GEBZE.
- 2000-2012** Research Scientist at TUBITAK-Marmara Research Center Genetic Engineering and Biotechnology Institute, Immunogenetics Laboratory, GEBZE.

**Education:**

- 2014** Ph.D. of Molecular Biology-Genetics and Biotechnology, Istanbul Technical University, Istanbul.
- 2003** M.Sc. of Medical Biology and Genetics, Marmara University, Istanbul.
- 1999** B.Sc. of Cell Biology and Physiology, Claude Bernard University, Lyon.

**Honors and Services (Selected):**

- 2015-today** TUBITAK, MAM Genetic Engineering and Biotechnology Institute Board member.
- 2014-today** Immunogenetics Laboratory responsible's assistant at TUBITAK, MAM Genetic Engineering and Biotechnology Institute

**Awards (Selected):**

- 2012** TUBITAK MRC, The Most Successful Research Team of the Year (2012)  
Topic: Development of Anti-VEGFR2 recombinant antibody structures
- 2006** TUBITAK MRC, Success and Encouragement Award (2006) with the project entitled "Achievement of in vitro applications on anti-angiogenic anti-cancer models and in vivo applications on transgenic mice models".

**Selected 5 publications:**

1. Balcioğlu B et al. Cost Effective Filamentous Phage Based Immunization Nanoparticles Displaying a full-length hepatitis B virus surface antigen. *Advances in Bioscience and Biotechnology*, 2014.
2. Erdag B et al. Identification of novel neutralizing single-chain antibodies against vascular endothelial growth factor receptor 2. *Biotechnology and Applied Biochemistry*, 2011.
3. Aylin Ozdemir Bahadır A et al. Phage Displayed HBV Core Antigen with Immunogenic Activity. *Appl Biochem Biotechnol*, 2011.
4. Erdag et al. Novel short peptides isolated from phage display library inhibit vascular endothelial growth factor activity. *Molecular biotechnology*, 2007.
5. Erdag et al. Detection of phage displayed peptides with blocking ability in vascular endothelial growth factor (VEGF) model. In: advances in experimental medicine and biology. *Kluwer Academic/ Plenum Publishers*, 2003.



**KUBİLAY KINOĞLU**

**Research Interests in EFSUN:**

Biobanking and clinical information, diagnosis at disease process (Cardiovascular, neurodegenerative, metabolic, immunologic, infectious diseases, intoxications and drug effects), discovery of novel markers for diagnosis, Forensic Genetic.

**Employment:**

2008-today Council of Forensic Medicine, İstanbul  
2006-2008 Cardiology Hospital, Van, Ministry of Health

**Education:**

2015- Today Ph.D. of Molecular Medicine, University of İstanbul, Institute of Health Sciences, İstanbul  
2012-2015 Specialist of Forensic Medicine. Council of Forensic Medicine, İstanbul  
2005-2012 Medical Doctor Degree. University of İstanbul, Cerrahpasa Medical Faculty, İstanbul



**MURAT KAYA YAPICI**

**Research Interests in EFSUN:**

Development of micro/nano scale devices, MEMS for disease diagnosis and monitoring, micro/nanofabricated tools to aid translational research in biomedical sciences. Microfluidic biochips, nanotech detection and measurement systems, cell-phone assisted diagnosis.

**Employment:**

- 2016-today** Assistant Professor and Director SU-MEMS Lab, Sabancı University, Istanbul.
- 2016-today** Affiliate Assistant Professor, University of Washington—Seattle, WA, USA.
- 2012** Assistant Professor, Khalifa University, Abu Dhabi, UAE.
- 2009** Postdoctoral Research Associate, Texas A&M University—College Station, TX, USA.

**Education:**

- 2009** Ph.D. Electrical & Computer Eng., Texas A&M University—College Station, TX, USA.
- 2004** BS, Electrical & Computer Eng., Texas A&M University—College Station, TX, USA.

**Honors and Services (Selected):**

- 2013** TPC Member – IEEE Int. Conf. on Electronics, Circuits, and Systems.
- 2013-16** TPC Member – IEEE Int. Conf. on Design & Technology of Integrated Systems.
- 2013** Session Chair-Emerging Devices and Applications, IEEE DTIS. Reviewer for the following journals: Sensors and Actuators A. Physical, IEEE Sensors, Sensors Review, IEEE Transactions on VLSI Systems, MDPI-Sensors, Micromachines.

**Awards (Selected):**

- 2007** Finalist, Best Student Paper, IEEE Nano'07, Hong Kong.
- 2007** Transducers 2007 Student Travel Award, Transducer Research Foundation, San Diego.
- 2007** International Education Study Grant, Texas A&M University.
- 2004** Friends of EE Graduate scholarship, Department of Electrical Engineering, TAMU.
- 2005-2009** TEES Research Assistantship.
- 2004** Fellow of the Undergraduate Research Awards Program (REU).
- 2010** Who's Who in America 2010, 64<sup>th</sup> Edition (pub. 2009).

**Selected 5 publications:**

1. Yapici et al. Graphene-clad textile electrodes for electrocardiogram monitoring, 2015, *Sensors and Actuators B*.
2. Yapici et al. Parallel acoustic delay lines for photoacoustic tomography, 2012, *Journal of Biomedical Optics*.
3. Garcia-Urbe et al. High-Transmission-Efficiency and Side-Viewing Micro OIRS Probe for Fast and Minimally Invasive Tumor Margin Detection, 2011, *IEEE Sensors Journal*.
4. Yapici et al. A novel micromachining technique for the batch fabrication of scanning probe arrays with precisely defined tip contact areas, 2008, *Journal of Micromechanics and Microengineering*.
5. Yapici et al. Development and experimental characterization of micromachined electromagnetic probes for biological manipulation and stimulation applications, 2008, *Sensors and Actuators A*.



## ÖZLEM KUTLU

### Research Interests in EFSUN:

Molecular Mechanism of Human Diseases (Cancer, Alzheimer, Parkinson etc.), Drug Delivery Research with Biodegradable Nanoparticles, Biomedical Applications of Medical Devices.

### Employment:

- 2015-present** Assistant Professor, Sabancı University, Nanotechnology Research and Application Center
- 2012- 2015** Postdoctoral Fellow, Sabancı University, Nanotechnology Research and Application Center
- 2009-2012** Postdoctoral Fellow, Sabancı University, Molecular Biology, Genetics and Bioengineering Program, Istanbul, TURKEY
- 2008-2009** Project Advisor, Sabancı University, Molecular Biology, Genetics and Bioengineering Program, Istanbul, TURKEY
- 2003- 2008** Research Assistant, Kumamoto University, Department of Material and Life Science, JAPAN
- 2002-2003** Visiting Scientist, Istanbul University, Department of Genetics, Institute for Experimental Medicine (DETAE), Istanbul, TURKEY

### Education:

- 2008** Ph.D. Kumamoto University / Department of Material and Life Science/ Molecular Biology and Genetics, JAPAN
- 2005** M.Sc. Kumamoto University / Department of Systems in Natural Environment/ Molecular Reproductive Biology, JAPAN
- 2002** B.Sc. Ege University / Department of Biology, TURKEY

### Awards, Honors and Services (Selected):

- 2016** Received. V. International Lysosomal Disease Congress, 3<sup>rd</sup> best oral presentation award
- 2015** Elginkan Foundation Technology Award
- 2011-2015** Received Sabancı University, Nanotechnology Research and Application Center and Sabancı University Faculty of Engineering and Natural Science, Postdoctoral Research Fellow
- 2009-2011** Received National Government Scientific and Technological Research Council (TUBITAK) Post-doctoral Fellow
- 2003-2008** Received Japanese Government Ministry of Education Scholarship-MONBUKAGAKUSHO-for Master and Doctoral Courses
- 2002** Graduation with Honor from Ege University, ranked 2<sup>nd</sup> place among Department of Biology Bachelor of Science Students
- 1997-2002** Undergraduate Fellowship from the Ministry of Education, Turkey, during the Bachelor of Science Study in Ege University

### Selected 5 publications:

1. Erbil Seçil, Oral Ozlem, Mitou Geraldine, Timuçin Emel, Maiorov Emine, Gülaçtı Ferah, Gökçe Gökçen, Dengjel Jörn, Gozuacik Devrim. RACK1 Is an Interaction Partner of ATG5 and a Novel Regulator of Autophagy. Journal of Biological Chemistry, 291(32), 16753-16765, 2016.
2. Oznur Bayraktar, Ozlem Oral, Nur Mehpare Kocaturk, Yunus Akkoç, Karin Eberhart, Ali Kosar, Devrim Gozuacik. IBMPFD Disease-Causing Mutant VCP/p97 Proteins Are Targets of Autophagic-Lysosomal Degradation. PLOS ONE, 11(10), 164864, 2016.
3. Ozlem Oral, Taha Çikim, Merve Zuvin, Ozlem Unal, Funda Yagci-Acar, Devrim Gozuacik, Ali Kosar. Effect of Varying Magnetic Fields on Targeted Gene Delivery of Nucleic-Acid Based Molecules. Annals of Biomedical Engineering, 43(11):2816-26, 2015.
4. Itah Z, Oral O, Perk OY, Sesen M, Demir E, Erbil S, Dogan-Ekici AI, Ekici S, Kosar A, Gozuacik D. Hydrodynamic cavitation kills prostate cells and ablates benign prostatic hyperplasia tissue. Experimental Biology and Medicine, 238(11): 1242-1250, 2013.
5. Ozlem Oral, Devrim Oz-Arslan, Zeynep Itah, Atabak Naghavi, Remziye Deveci, Sabire Karacali, Devrim Gozuacik. Cleavage of Atg3 protein by caspase-8 regulates autophagy



**PINAR PİR**

**Research Interests in EFSUN:**

Bioinformatics and Systems Biology, Mathematical modelling, Stem cells, Epigenetics, Biofuel.

during receptor-activated cell death, *Apoptosis* 17:810-820, 2012.

**Employment:**

- Oct. 2015-present:** Gebze Technical University, Department of Bioengineering , Assistant Professor.
- Oct. 2012-October 2015** Babraham Institute, Signalling ISP: Le Novère Group, Senior Research Associate.
- April 2012-Sept. 2012** University of Cambridge, Cambridge Systems Biology Center: SG Oliver Group, Research Associate.
- April 2011-March 2012** BioSyntha Technology Lim. (Novacta Biosystems Lim., Industrial Biotechnology Team), Bioinformatician
- Sept. 2007-March 2011** University of Cambridge, Cambridge Systems Biology Center: SG Oliver Group, Research Associate,
- Jan. 2006-Aug. 2007** University of Manchester, Faculty of Life Sciences: SG Oliver Group, Research Associate.
- 2001-2004** Boğaziçi University, Department of Chemical Engineering, Teaching and Research Assistant

**Education:**

- 2001-2005** Ph.D., Boğaziçi University, Department of Chemical Engineering
- 1998-2001** M.Sc. Boğaziçi University, Department of Chemical Engineering
- 1993-1998** B.sc. Boğaziçi University, Department of Chemical Engineering
- 1990-1993** İstanbul Atatürk Highschool of Science

**Honors and Services (Selected):**

- 2006** Ph.D. Thesis Award (Institute for Graduate Studies in Science and Engineering - Boğaziçi University)
- 1993** 4<sup>th</sup> rank among 1.2 million attendants in Central Entrance Test for Universities (ÖSS Sayısal)
- 1990** 97<sup>th</sup> rank among 60 thousand attendants in Central Entrance Test for Highschools of Science

**Selected 5 publications:**

1. Pir, P. and N. Le Novère, “Mathematical Models of Pluripotent Stem Cells: At the Dawn of Predictive Regenerative Medicine,” in **Systems Medicine: Methods and Protocols**, Springer
2. Alcasabas, A. A. , P. I. Darley , P. Pir, 2014 , “Novel Yeast Strains”, US patent WO2014102201 A1
3. Pir P., A. Gutteridge, J. Wu, B. Rash, D.B. Kell, N. Zhang, S.G. Oliver, 2012, “The genetic control of growth rate: A systems biology study in yeast”, *BMC Systems Biology*, 6,4
4. Mülleder M., F. Capuano, P. Pir, S. Christen, U. Sauer, S. G. Oliver, M. Ralser, 2012, “A prototrophic deletion mutant collection for yeast metabolomics and systems biology”, *Nature Biotechnology*, 30, 12, 1176-1178.
5. King, R.D., J. Jowland, S.G. Oliver, M. Young, W. Aubrey, E. Byrne, M. Liakata, M. Markham, P. Pir, L.N. Soldatova, A. Sparkes, K.E. Whelan, A. Clare, 2009, “The Automation of Science”, *Science*, 324, 5923, 85-89.



**SALİHA DURMUŞ**

**Research Interests in EFSUN:**

Bioinformatics and  
Computational Systems  
Biology.

**Employment:**

- 2013-today** Assistant Professor, Department of Bioengineering, Gebze Technical University, Kocaeli.
- 2013-today** General Manager, PHI Tech Bioinformatics R&D Ltd., Kocaeli.
- 2004-2013** Research/Teaching Assistant, Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Education:**

- 2013** Ph.D., Biosystems Engineering Research Lab., Department of Chemical Engineering, Boğaziçi University, İstanbul.
- 2007** MSc., Biosystems Engineering Research Lab., Department of Chemical Engineering, Boğaziçi University, İstanbul.
- 2004** B.Sc. Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Awards (Selected):**

- 2015** 14<sup>th</sup> National Congress of Medical Biology and Genetics, Young Researcher Award
- 2013** Boğaziçi University, Best Ph.D. Dissertation Award
- 2012** İşteBU – Innovative & Entrepreneurial Project Competition, Grand Prize
- 2012** FEBS (Federation of European Biochemical Societies), YSP (Young Scientists Program) Fellowship

**Selected 5 publications:**

1. Durmuş S et al. Comparative Interactomics for Virus-Human Protein-Protein Interactions: DNA Viruses versus RNA Viruses. *FEBS Open Bio*, 2017.
2. Nourani E et al. Computational Prediction of Virus-Human Protein-Protein Interactions using Embedding Kernelized Heterogeneous Data. *Molecular BioSystems*, 2016.
3. Durmuş S et al. A Review on Computational Systems Biology of Pathogen-Host Interactions. *Frontiers in Microbiology*, 2015.
4. Durmuş S et al. PHISTO: Pathogen-Host Interaction Search Tool. *Bioinformatics*, 2013.
5. Durmuş S et al. Infection Strategies of Bacterial and Viral Pathogens through Pathogen-Host Protein-Protein Interactions. *Frontiers in Microbiology*, 2012.



**SERAP DÖKMEÇİ**

**Research Interests in EFSUN:**

Discovery of the mechanisms of lysosomal storage diseases. Validation and tests of detection systems in patient materials.

**Employment:**

- 2003- today** Professor and Research Team Leader, Hacettepe Faculty of Medicine, Ankara.
- 1998-2003** Assoc. Professor and Research Team Leader, Hacettepe Faculty of Medicine, Ankara.
- 1992-1998** Assist. Professor and Research Team Leader, Hacettepe Faculty of Medicine, Ankara.

**Education:**

- 1989** Ph.D. of Medical Biology, Hacettepe Faculty of Medicine, Ankara.
- 1984** M.Sc. of Medical Biology, Hacettepe Faculty of Medicine, Ankara.
- 1980** B.Sc. Hacettepe Faculty of Science, Ankara.

**Honors and Services (Selected):**

- 2016** Head of Dept. of Medical Biology, Hacettepe Faculty of Medicine, Ankara

**Awards (Selected):**

- 1994** WYETH Price

**Selected 5 publications**

1. Nur B.G, Gencpinar P, Yüzbaşıoğlu A ,Emre SD, Mihci E. Chanarin-Dorfman syndrome: A family report and review of the literature. *European Journal of Medical Genetics*.DOI:10.1016/2015
2. Yuçe, A; Hizarcioglu-Gulsen, H Demir, H ; Emre, SD; Gurakan F, Skeletal manifestations of children with Gaucher disease type I and type III. *Mol. Genet.Metabol* 2015, Volume: 114 Issue: 2 Pages: S128
3. Çamlar, S.A., Gençpinar, P., Makay, B., Yüzbaşıoğlu, A., Arslan, N. Dökmeçi, S.E., Anall, Ö., Köse, G. Chanarin-dorfman syndrome with mul -system involvement in t o siblings Çoklu organ tutulumu olan chanarin dorfman sendromlu iki kardeş]. *Turkish Journal of Hematology*.2013, Vol 30: 72-75
4. Arikan-Ayyildiz, Z., Yüçe, A., Emre, S., Baysoy, G., Saltik-Temizel, I.N., Gürakan, F. Outcome of enzyme replacement therapy in Turkish patients with Gaucher disease: Does late intervention affect the response? *Turkish Journal of Pediatrics*.2011, Vol:53: 499-507
5. Emre S, Unver N, Evans SE, Yüzbaşıoğlu A, Gürakan F, Gümrük F, Karaduman A Molecular analysis of Chanarin-Dorfman syndrome (CDS) patients: Identification of novel mutations in the ABHD5 gene. *Eur J Med Genet*. 2010 53(3):141-4.



**SINAN EKICI**

**Research Interests in EFSUN:**

Urology, oncurology, bladder cancer, prostate cancer, kidney cancer diagnosis.

**Employment:**

Urology Department Head, Hisar International Hospital.

**Education:**

- 1999 Urology Specialist, Hacettepe Faculty of Medicine, Ankara
- 1995 Medical Doctor Degree, Hacettepe Faculty of Medicine (in Eng.), Ankara.

**Awards (Selected):**

- 2015 Elginkan Foundation Technology Award.

**Selected 5 publications:**

1. Sinanoglu O, Ekici S, Balci MC, Hazar AI, Nuhoglu B. Comparison of plasmakinetic transurethral resection of the prostate with monopolar transurethral resection of the prostate in terms of urethral stricture rates in patients with comorbidities. *Prostate Int.* 2014 Sep;2(3):121-6.
2. Guzel E, Karatas OF, Semercioz A, Ekici S, Aykan S, Yentur S, Creighton CJ, Ittmann M, Ozen M. Identification of microRNAs differentially expressed in prostatic secretions of patients with prostate cancer. *Int J Cancer.* 2015 Feb 15;136(4):875-9.
3. Sinanoglu O, Dogan Ekici I, Ekici S. Comparison of intravesical application of chondroitin sulphate and colchicine in rat protamine/lipopolysaccharide induced cystitis model. *Urol J.* 2014 Mar 4;11(1):1296-300.
4. Sinanoglu O, Yener AN, Ekici S, Midi A, Aksungar FB. The protective effects of spirulina in cyclophosphamide induced nephrotoxicity and urotoxicity in rats. *Urology.* 2012 Dec;80(6):1392.e1-6. doi: 10.1016/j.urology.2012.06.053.
5. Ekici S, Doğan Ekici AI, Öztürk G, Benli Aksungar F, Sinanoğlu O, Turan G, Lüleci N. Comparison of melatonin and ozone in the prevention of reperfusion injury following unilateral testicular torsion in rats. *Urology.* 2012 Oct;80(4):899-906. doi: 10.1016/j.urology.2012.06.049.





**TUNAHAN ÇAKIR**

**Research Interests in EFSUN:**

Bioinformatics and  
Computational Systems  
Biology (application to  
neurodegenerative diseases,  
cancer, infectious diseases,  
biomarker and drug target  
identification.)

**Employment:**

- 2009- today** Assistant Professor, Department of Bioengineering, Gebze Technical University, Kocaeli.
- 2013-today** R&D Expert, PHI Tech Bioinformatics R&D Ltd., Kocaeli.
- 2007-2008** Post-doctoral Researcher, Swammerdam Institute of Life Sciences, University of Amsterdam, Amsterdam.
- 2007-2008** Post-doctoral Researcher, Department of Metabolic and Endocrin Diseases, University Medical Center Utrecht, Utrecht.
- 2001-2006** Research/Teaching Assistant, Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Education:**

- 2006** Ph.D., Biosystems Engineering Research Lab., Department of Chemical Engineering, Boğaziçi University, İstanbul.
- 2004/2005** Visiting Ph.D. Student, Center for Microbial Biotechnology, University of Denmark, Lyngby
- 2001** B.Sc. Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Honors and Services (Selected):**

- 2015-today** Advisory Board Member, Molecular Biosystems Journal.

**Awards (Selected):**

- 2015** Turkish Academy of Sciences (TÜBA) Outstanding Young Scientist Award.
- 2007** Boğaziçi University, Best Ph.D. Dissertation Award

**Selected 5 publications**

1. Özcan E & Çakır T. Reconstructed metabolic network models predict flux-level metabolic reprogramming of glioblastoma. *Frontiers in Neuroscience*, 2016.
2. Durmuş S et al. A Review on Computational Systems Biology of Pathogen-Host Interactions. *Frontiers in Microbiology*, 2015.
3. Çakır T. Reporter pathway analysis from transcriptome data: Metabolite-centric versus Reaction-centric approach. *Scientific Reports*, 2015
4. Sertbaş M et al. Systematic Analysis of Transcription-Level Effects of Neurodegenerative Diseases on Human Brain Metabolism by a Newly Reconstructed Brain-Specific Metabolic Network. *FEBS Open Bio*, 2014.
5. Çakır T et al. Integration of metabolome data with metabolic networks reveals reporter reactions. *Molecular Systems Biology*, 2006.



**TUNÇ LAÇIN**

**Research Interests in EFSUN:**

Early diagnosis tests for lung cancer, electrochemical and electrophysiological signaling, imaging techniques of tissues, human-machine integration in surgery.

**Employment:**

- 2013- today Assistant Prof of Thoracic Surgery, Faculty of Medicine, Marmara University, Istanbul
- 2011-2013 Clinical Fellow, Thoracic Surgery, Brigham and Women's Hospital, Harvard University, Boston, USA

**Education:**

- 2005- today Ph.D. of Biochemistry, Faculty of Pharmacology, Marmara University, Istanbul
- 1999-2006 Thoracic Surgery, Marmara University, Istanbul
- 1998 M.D. degree, Cerrahpaşa Medical Faculty, English Division, Istanbul University

**Honors and Services (Selected):**

- 2015-today European Association of Cardiothoracic Surgery, Thoracic Domain Member
- 2005 ECFMG certificate, USA

**Awards (Selected):**

- 2011 European Society of Thoracic Surgery, Dutch Travel Award

**Selected 5 publications:**

1. Laçın T, et al. Whole lung lavage for pulmonary alveolar proteinosis: still the most up-to-date treatment. *Turkish Journal of Thoracic and Cardiovascular Surgery*, 2016.
2. Alpay L, et al. Is Video-Assisted Thoracoscopic Surgery Adequate in Treatment of Pulmonary Hydatidosis? *The Annals of Thoracic Surgery*, 2015.
3. Okur HK, et al. Detection of reactive oxygen metabolites in malignant and adjacent normal tissues of patients with lung cancer. *World J Surg Oncol*, 2013.
4. Lacin T, Swanson S. Current costs of video-assisted thoracic surgery (VATS) lobectomy. *J Thorac Dis*, 2013
5. Sönmez H, et al. Sol akciğer üst lob veya santral yerleşimli küçük hücreli dışı akciğer kanserlerinde extended servikal mediastinoskopinin yeri. *Türkiye Klinikleri Akciğer Arşivi*, 2013.

## Openings

- ◆ EFSUN invites applications for Ph.D. students, post-doctoral research associate positions and technical staff.
- ◆ Candidates having experience on biology of diseases, material fundamentals, surface and interface interactions, power generation in small scale along with targeted device design are welcome.
- ◆ Please send a curriculum vitae, publication list, names and e-mail addresses of at least three referees and a motivation letter electronically to Professor **Devrim Gözüaçık** ([dgozuacik@sabanciuniv.edu](mailto:dgozuacik@sabanciuniv.edu))  
Professor **Burc Mısırlıoğlu** ([burc@sabanciuniv.edu](mailto:burc@sabanciuniv.edu))  
or Professor **Ali Koşar** ([kosara@sabanciuniv.edu](mailto:kosara@sabanciuniv.edu)).

## CONTACT INFORMATION

📍 Sabancı University 34956 Orta Mah. Orhanlı, Tuzla, Istanbul-Turkey

☎ +90 216 483 9000 🌐 [www.sabanciuniv.edu](http://www.sabanciuniv.edu)