

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

**Researcher Catalog 2018**

## 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. 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 and in the region, and it welcomes motivated researchers who would like to join forces to reach this goal.

The Center was founded by 5 scientists who were soon joined by 29 scientists who are world-class experts in their respective fields. Contributing members are recipients of various prestigious national and international awards. Collaborations with the industry are ongoing. 43 Ph.D. students and 32 M.S. students as well as 9 Post Doctoral Research Associates are benefitting from the stimulating and collaborative environment of the Center.

Within a short time, the Center became a 'Research Powerhouse' at Sabanci University. The research efforts and collaborations in the Center led to more than 100 journal publications in top journals between 2017-2018 (such as International Journal of Heat and Mass Transfer, Microfluidics and Nanofluidics, Applied Physics Letters, Nature Scientific Reports, Optics Express, etc.). Significant large scale grants were also obtained from both national and international resources within a year (more than 5,000,000 Euro). The members are self sustaining the Center and providing high impact outputs within the framework of the Center without any substantial support from Sabanci University.

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

Ali Koşar      and      Burç Mısırlıoğlu- **Co-Directors**

## Executive Board Members



Ali Koşar



Burç Mısırlıoğlu- **Co-Directors**



Devrim Gözüaçık- **Vice Director**



Gözde İnce



Kürşat Şendur



Murat Kaya Yapıcı



Funda Acar Yağcı

## **Contact information**

### **Address:**

Sabanci University

Faculty of Engineering and Natural Sciences

Orhanli - Tuzla, 34956, Istanbul, Turkey

**Phone:** (+90) 216 483 96 00

### **Website:**

<http://efsun.sabanciuniv.edu/>

### **E-mail:**

Professor Ali Kosar (kosara@sabanciuniv.edu)

Professor Burc Misirlioglu, (burc@sabanciuniv.edu)

## 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



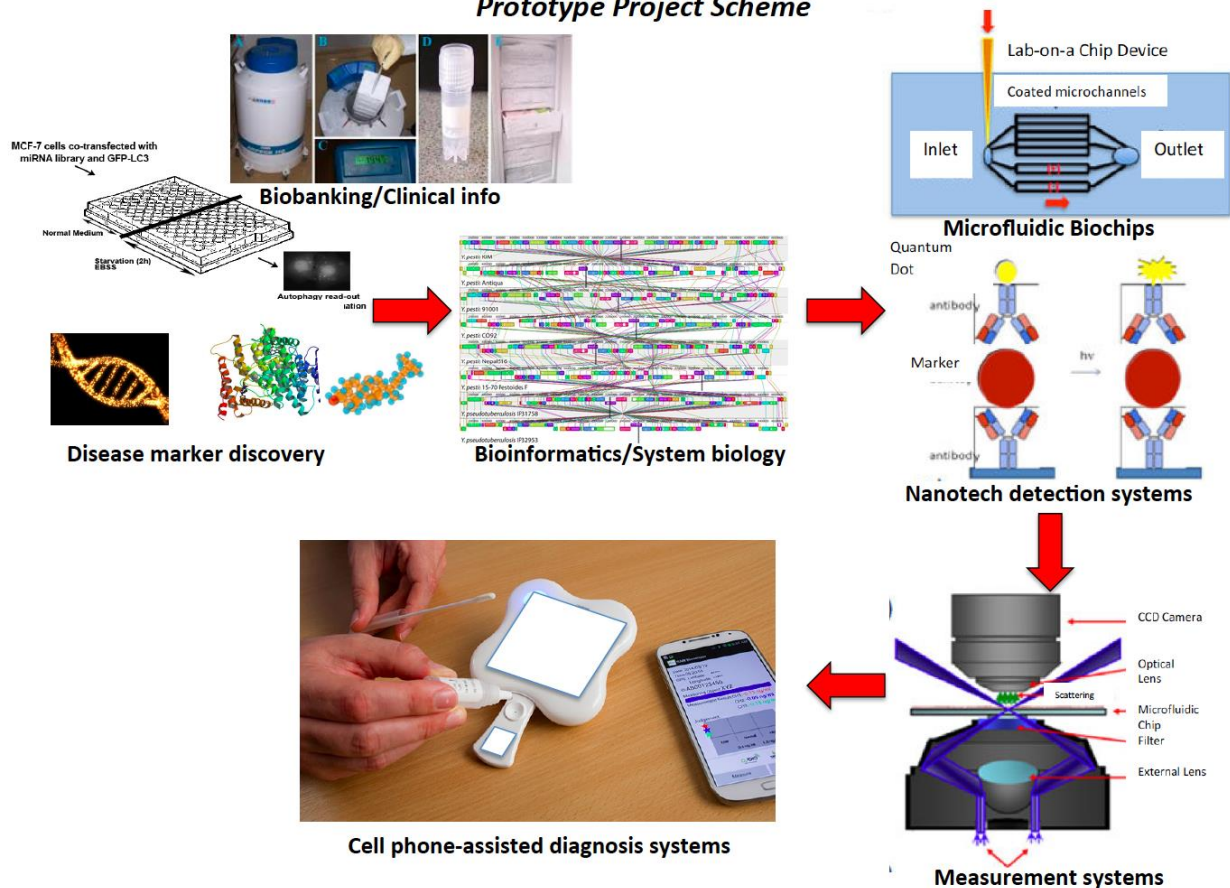
**M. Pinar Mengüç**

Director, Centre for Energy, Environment and Economy,  
Ozyegin University

# Research Activities in EFSUN

EFSUN - Center of Excellence on Nano Diagnostics (<http://efsun.sabanciuniv.edu>)

## Prototype Project Scheme



**The Prototype Project Scheme:** Collaborative efforts of EFSUN Researchers who are experts in their respective fields, will allow creation of a cell phone-assisted platform for quick, cheap and accurate on-site detection and diagnosis of diseases. Clinical materials (tumors, various tissues, blood, urine, saliva etc) that are collected by clinical medical doctors, are analyzed using molecular tools (omics approaches, molecular biology, genetics, cell biology, biochemistry) and novel disease markers are discovered. Experts of bioinformatics and computational biology analyze the results of high-throughput omics approaches. Currently at least 5 protein and 5 RNA new and patentable markers of cancer were already discovered by EFSUN researchers, others are in the pipeline. Innovative microfluidic biochips are used in order to enrich, purify or separate cells and biomolecules in clinical materials. Using home-made antibodies, specially designed and functionalized nanoparticles and innovative physico-chemical detection approaches, EFSUN researchers are able to detect femto to subfemtomolar concentrations of disease markers. Signal detection is achieved using a home-made and patentable detection devices that process information in a cell phone and Cloud-assisted manner, and operating with a custom-designed application. Therefore, all components and parts of EFSUN Cell Phone-Assisted Diagnosis Systems are a result of cutting-edge science and technology.

EFSUN Center of Excellence: ***Fascination of science and technology, excellence in surfaces , interfaces and diagnostics.***

## Members and Involved Institutions in EFSUN

### Sabancı University:



Ali Kosar



Burc Misirlioglu



Devrim Gozuacik



Kursat Sendur



Gozde Ince



Asif Sabanovic



Huveyda Basaga



Ozlem Kutlu (Oral)





Murat Kaya Yapici



Alper Kiraz



Meltem Sezen

**Yeditepe University**



Işın Doğan-Ekici



Feray Bakan

**Koç University**



Havva Funda Yağcı Acar

**Hisar International Hospital**



Sinan Ekici

**TÜBİTAK-MAM**



Koray Balcioglu

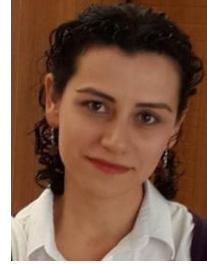


Pinar Pir



Berrin Erdag

**Kültür University**



Saliha Durmuş



Elif Damla Arısan



Nurcan Doğan

**TR Forensic Medicine Institution**

**Gebze Technical University**



Tunahan Cakir



Arzu Akcay



Kubilay Kınoglu,

**Çukurova University**



Hikmet Akkiz

**Marmara University**



Tunc Lacin

**Yeni Yüzyıl University**



Cenk Kig

**Hacettepe University**



Serap Dokmeci (Emre)

**Middle East Technical University**



Haluk Klah

## Expertise Areas of EFSUN researchers

### Surgery / Interventional Medicine:



Hikmet Akkiz (Gastroenterology)



Sinan Ekici (Urology)



Tunc Lacin (Thoracic Surgery)



Kubilay Kinoglu (Forensic Medicine)

### Pathology:



Işın Dogan Ekici (Clinical Pathology)



Arzu Akcay (Forensic Pathology)

### Molecular Biology, Genetics, Biochemistry:



Devrim Gozuacik (Molecular Medicine, Cell Biology, Biochemistry)



Huveyda Basaga (Molecular Biology, Cell Biology)



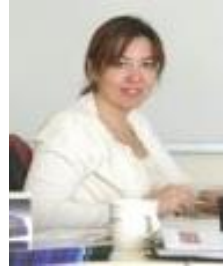
Ozlem Kutlu (Molecular Biology and Genetics of Disease)



Cenk Kig (Cell Biology, Biochemistry)



Serap Dokmeci (Medical Genetics)



Elif Damla Arisan (Molecular Cell Biology, Cancer Biology, Drug Resistance)



Koray Balcioglu (Antibody Design and Production)



Tunahan Cakir (Systems Biology)



Berrin Erdag (Antibody Design and Production)



Pinar Pir (Systems Biology, Mathematical Modeling)

#### **Bioinformatics and Computational Biology:**



Saliha Durmuş (Systems Biology, Bioinformatics Tool Design)



Burç Misirlioglu (Surface Microstructural Properties)

### Chemistry / Material Science:



Havva Funda Yagci Acar (Nano particle Design)



Meltem Sezen (Nano patterning, Biomaterials)



Nurcan Doğan (Nano particle Applications)



Feray Bakan (Drug Delivery, Nano structuring)



Gözde Ince (Polymers, Thin Films)

### Physics / Mechatronics:



Ali Kosar (Microfluidics, Heat Transfer, Cavitation)





Kursat Sendur (Nano-optics, Plasmon Resonance, Electromagnetics)



Asif Sabanovic (Robotics, Control, Micromanipulation)



Alper Kiraz (Optofluidics, Photonics, Single Molecule Microscopy)



Haluk K lah (Microelectromechanical Systems)

#### **Electrics /Electronics:**



Murat Kaya Yapici  
(Microelectromechanical Systems)



**EFSUN Researchers**



**Name : Ali      Surname : Koşar**

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

**Employment:**

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

November 2015-present- Full Professor, Mechatronics, Sabanci 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):**

2010-today: Board of Directors Member, International Cell Death Society, NY.

2016-today: Associate Editor, Applied Thermal Engineering journal

2015-today: Associate Editor, Heliyon 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):**

Sedat Simavi Foundation Award in Natural Sciences (2016).

Elginkan Foundation Technology and Science Award (2016).

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 (2015).

Award of Merit in Poster Competition in ASME (American Society of Mechanical Engineers) 2015 NEMB (NanoEngineering for Medicine and Biology) Conference.

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

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

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

**Selected 5 publications:**

1) Motezakker et al. " Surface modifications for phase change cooling applications via crenarchaeon *Sulfolobus solfataricus* P2 bio-coatings," *Nature Scientific Reports*, 7, 17891, 2017.

2) Ozbey, A. et al. " Inertial Focusing of Microparticles in Curvilinear Microchannels, " *Nature Scientific Reports*, 6, 38809, 2016.

3) Oral, O. et al. " Effect of varying magnetic fields on targeted gene delivery of nucleic acid based molecules," *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.



**Name : Alper                      Surname: Kiraz**

**Research Interests in EFSUN:**

Optofluidics for sensing applications: Fluorescence or refractive index based sensing of biological and chemical species using optofluidic resonators including liquid microdroplets and glass capillary ring resonators, Optofluidics for energy applications: Development of novel optofluidic waveguides and photoreactors for algae-based bio-fuel production and photocatalytic water splitting, Biomedical instrumentation: Development of a DLP-based confocal microscope, microscopy and spectroscopy of single fluorescent molecules.

**Employment:**

09/2016-Present, Associate Dean, College of Sciences, Koç University, Istanbul  
03/2016-Present, Professor, Department of Electrical and Electronics Engineering  
Koç University, Istanbul  
05/2014-Present, Professor, Department of Physics, Koç University, Istanbul  
08/2014-08/2015, Visiting Professor, Department of Biomedical Engineering, University of Michigan, Ann Arbor, Research group of Xudong (Sherman) Fan  
11/2009-05/2014, Associate Professor, Department of Physics, Koç University, Istanbul  
9/2004-11/2009, Assistant Professor, Department of Physics, Koç University, Istanbul  
9/2002-8/2004, Postdoctoral Researcher, Department of Chemistry, Ludwig-Maximilians Universität, Munich, Research group of Andreas Zumbusch  
9/1998-9/2002, Teaching/Research Assistant, Department of Electrical and Computer Engineering, University of California, Santa Barbara

**Education:**

2002 Ph.D., Electrical and Computer Engineering, University of California, Santa Barbara, "Nonclassical Light Emission from Single Self-Assembled InAs Quantum Dots", Ph.D. supervisor Atac Imamoglu  
2000 M.S., Electrical and Computer Engineering, University of California, Santa Barbara  
1998 B.S., Electrical and Electronics Engineering, Bilkent University, Ankara

**Honors and Services (Selected):**

Co-Chair of the COST MP1205 (Advances in Optofluidics) General Meeting and Conference, 11-13 April 2016, Istanbul  
Member of the organizing committee, Annual Turkish National Photonics Workshops, 2006-2018

**Awards (Selected):**

2016 Outstanding Faculty Award, Koç University  
2015 OSA Senior Membership  
2014 Fulbright Fellowship  
2009 Best Paper Award, "High Precision Size Tuning and Stabilization of Single Salt-Water Microdroplets on a Superhydrophobic Surface", A. Kiraz, M. Mestre, Y. Karadag, S. C. Yorulmaz, and M. Gundogan, Int. Symposium on Optomechatronic Technologies (ISOT), 21-23 Sep. 2009, Istanbul  
2009 FASED Distinguished Young Investigator Research Award  
2008 Scientific and Technological Research Council of Turkey (TÜBİTAK)

Encouragement Award

2008 Associate Professorship of Physics by Higher Education Council of Turkey

2006 Turkish Science Academy-Young Investigator (TÜBA-GEBİP) Award

2003 Alexander von Humboldt Fellowship

1993 İhsan Doğramacı Foundation Award

**Selected recent 5 publications:**

- 1) Z. Rashid, I. Atay, S. Soydan, B. Yagci, A. Jonáš, E. Yilgor, A. Kiraz, and I. Yilgor, "Reversible switching of wetting properties and erasable patterning of polymer surfaces using plasma oxidation and thermal treatment", **Applied Surface Science** 441, 841-851 (2018)
- 2) Y. Ozbakir, A. Jonáš, A. Kiraz, and C. Erkey, "Total Internal Reflection-Based Optofluidic Waveguides Fabricated In Aerogels", **Journal of Sol-Gel Science and Technology** 84 (3), 522-534 (2017)
- 3) Z. Rashid, U. C. Coşkun, Y. Morova, B. Morova, A. Aşıkoğlu Bozkurt, A. Erten, A. Jonáš, S. Aktürk, and A. Kiraz, "Guiding of emulsion droplets in microfluidic chips along shallow tracks defined by laser ablation", **Microfluid. Nanofluid.** 21, 160 (2017)
- 4) M. Eryürek, Y. Karadag, M. Ghafoor, N. Bavili, K. Cicek, and A. Kiraz, "Liquid Refractometric Sensors Based on Optical Fiber Resonators", **Sensor. Actuat. A-Phys.** 265, 161-167 (2017)
- 5) A. Jonáš, Z. Pilát, S. Bernatová, T. Fořt, P. Zemánek, M. Aas, and A. Kiraz, "Thermal tuning of spectral emission from optically trapped liquid-crystal droplet resonators", **J. Opt. Soc. Am. B** 34 (9), 1855-1864 (2017)



**Name : Arzu                      Surname : Akcay**

**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:**

**YEAR: 2015- PhD of Molecular Medicine, niversity of Marmara, Institute of Health Sciences,İstanbul**

YEAR: 2012-Specialist of Forensic Medicine. Council of Frensic Medicine, İstanbul

YEAR: 2005- Medical Doctor Degree. University of İstanbul, Cerrahpasa Medical Faculty, İstanbul

**Selected 5 publications:**

- 1) Akcay A. From Macroscopic Morphology to genes: Sudden Cardiac Death. **Turkiye Klinikleri Adli Tip**, 2016
- 2) Akcay 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) Akcay Turan A et al. Sudden Death Due to Eosinophilic Endomyocardial Diseases: Three Case Report, **Am J Forensic Med Pathol**, 2008



**Name : ASİF Surname : ŠABANOVIĆ**

**Research Interests in EFSUN:** Mechatronics design, high accuracy control systems, micromanipulation

**Employment:**

2014-Present SABANCI UNIVERSITY Faculty of Engineering and Natural Science, Mechatronics Program, **Professor Emeritus**  
1999-2014 SABANCI UNIVERSITY Faculty of Engineering and Natural Science, Mechatronics Program, **Full Professor**  
1985- 2011 UNIVERSITY OF SARAJEVO, Department of Electrical Engineering (1996-2011) – adjunct professor, **Full Professor**  
2008-2009 KEIO UNIVERSITY, Faculty of Science and Technology  
**Research Fellow in GCOE Program**, on Sabbatical leave from Sabanci University  
1995-1999 ISTANBUL TECHNICAL UNIVERSITY, Electrical Engineering Department, (Part time), **Full Professor**  
1994-1995 KOCAELI UNIVERSITY, Electrical Engineering Department, (Part time), **Full Professor**  
1992-1993 YAMAGUCHI UNIVERSITY Faculty of Engineering, **Full Professor**  
1991-1992 KEIO UNIVERSITY, Faculty of Science and Technology  
**Hitachi Chair Professor**  
1987 UNIVERSITY OF TOKYO, Institute of Industrial Science  
**Research Fellow**  
1983-1985 CALIFORNIA INSTITUTE OF TECHNOLOGY –CalTech,  
Department of Electrical Engineering  
**Visiting Professor**  
1974 USSR-ACADEMY OF SCIENCE, Institute of Control Sciences  
**Visiting Researcher**

**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](http://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**" - Teknoloji Dalında, as a member of the team developing the Sabancı University Tissue Ablating BubblesSU 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, Tarik Uzunovic, Ahmet Ozcan Nergiz, Eray A. Baran, Edin Golubovic and Asif Šabanović  
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, Eray A. Baran, Edin Golubovic, Asif Sabanovic  
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, Edin Golubovic and Asif Šabanović ;  
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; Ahmet Kuzu; Seta Bogosyan; Metin Gokasan; Asif Šabanović  
*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](https://doi.org/10.1109/TII.2016.2555982)
- 5 Eşref Emre Özsoy, Edin Golubovic, Asif Šabanović , Metin Gökaşan, Seta Bogosyan:  
A Novel Current Controller Scheme for Doubly Fed Induction Generators  
**Automatika Vol56, No 2, 2015**, DOI: 10.7305/automatika.2015.07.766



**Name:** Asiye Işın

**Surname:** Doğan Ekici

**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):**

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

**Selected 5 publications:**

- 1) 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)
- 2) Ekici S, Doğan Ekici AI, Öztürk G, Benli Aksungar F, Sinanoğlu O, Turan G, Lülecı N. "Comparison of melatonin and ozone in the prevention of reperfusion injury following unilateral testicular torsion in rats". *Urology*. 80(4): 899-906 (2012)
- 3) 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
- 4) 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
- 5) Itah Z, Oral O, Perk OY, Sesen M, Demir E, Erbil S, Dogan Ekici AI, Ekici S, Kosar A, Gozuacık D. "Hydrodynamic cavitation kills prostate cells and ablates benign prostatic hyperplasia tissue" *Exp Biol Med (Maywood)* 238 (11): 1242-1250 (2013)





**Name : Berrin Surname : ERDAG**

**Research Interests in EFSUN:**

- Development of candidate recombinant peptide and antibodies for biotechnological drugs (biosimilar, original drugs)
- Antibody engineering to develop human-compatible antibody constructs
- Development of bi-functional recombinant constructs for diagnostic and therapeutic purposes. Diagnosis of DNA-based diseases by molecular biological methods.
- Production of recombinant proteins in bacterial and mammalian cells
- Identification of differences between individuals by DNA fingerprinting
- Development of recombinant antibody and peptide constructs for diagnosis and treatment with phage display technology.

**Employment:**

- Associate Professor Dr. Berrin ERDAG has been working at TÜBİTAK (scientific and technological research council of turkey) MAM (Marmara Research Center) Gene Engineering and Biotechnology Institute since 1989

**Education:**

- 1989: Biology department of Hacettepe University, Ankara
- "Recombinant Antibody Production with Phage Display Technology against Adult Human Hemoglobin" in the same discipline in.
- 1991 MSc.; Medical Biology and Genetics department of Marmara University Health Sciences Institute, İstanbul
- 1999 PhD.; Medical Biology and Genetics department of Marmara University Health Sciences Institute

**Honors and Services (Selected):**

- T.C Ministry of Health Drug and Medical Device Authority Committee Membership (2016-continuing); TÜBİTAK MRC GEİ -Member of Institute Board ( between 2008- 2013); Animal Ethics Committee Membership (2009- 2013);

**Awards (Selected):**

- TÜBİTAK MRC 2012 "Most Successful Research Team "award,
- 2006 TUBİTAK MRC Achievement Award (for "Implementation of Antianjiogenic Anticancer Applications in vitro and in vivo in Hepatocellular Carcinoma Transgenic Mice " project)
- Poster First Prize for XII. National Congress of Medical Biology and Genetics at 27-30 October 2011, Antalya (for "Diagnostic development of fluorescently-labeled recombinant antibodies by genetic fusion" project)
- 2002 Eczacıbaşı Scientific Research Support Award for "Developing recombinant antibody against Hepatitis B surface antigen with the help of phage display technology"

**Selected 5 publications:**

**Patents:**

- 1) "Recombinant antibody structures binding to and blocking the activity of vascular endothelial growth factor 2 (VEGFR-2/KDR)" (PCT/IB2010/053109, WO/2012/004631, 07/07/2010; US

registration number & Date: : 9193792 & 24/11/2015; Chinese registration number & Date:  
CN 1031190693 B Tescil tarihi: 29/06/2016

2) "Peptide constructs that bind to the vascular endothelial growth factor and block its activity"  
(TR 2007/00984 B; Tescil tarihi: 25/12/2015)

**Publications:**

- İbrahim Hatipoğlu, Bertan Koray Balcioglu, İbrahim Söğüt, Aylin Özdemir Bahadır, Kamil Serkan Uzyo1, Hülya Sivas, Berrin Erdağ, Aynur Başalp, Antibody Response to Hepatitis B Surface Antigen Displayed on Filamentous Phage MAKÜ Sag. Bil. Enst. Derg. 2017, 5(2): 124-134 ISSN: 2148-2837.
- Berrin Erdag, Koray Bertan Balcioglu, Aylin Ozdemir Bahadir, Duygu Hinc, Ozlem Ibrahimoglu, Aydin Bahar, Aynur Basalp, Fatima Yucel, (2017). Cloning of anti-HBsAg single-chain variable fragments from hybridoma cells for one-step ELISA. Biotechnology & Biotechnological Equipment. ISSN: 1310-2818 (Print) 1314-3530 (Online)DOI: 10.1080/13102818.2017.1348256.
- Bertan Koray Balcioglu, Aylin Ozdemir-Bahadir, Duygu Hinc, Candan Tamerler, Berrin Erdag, (2014). Cost Effective Filamentous Phage Based Immunization Nanoparticles Displaying a full-length hepatitis B virus surface antigen. Advances in Bioscience and Biotechnology, Volume 5, Issue 1, 46-53.
- Berrin Erdag, B. Koray Balcioglu, Aylin Ozdemir Bahadir, Muge Serhatli, Omer Kacar, Aydin Bahar, Urartu O. S. Seker, Emel Akgun, Abdulkadir Ozkan, Turker Kilic, Candan Tamerler, Kemal Baysal, 2011. Identification of novel neutralizing single-chain antibodies against vascular endothelial growth factor receptor 2. Biotechnology and applied Biochemistry 58(6), 412-422, DOI: 10.1002/bab.61.
- Erdag B., Balcioglu K.B., Kumbasar A., Celikbicak O., Zeder-Lutz G., Altschuh D., Salih B., Baysal K., 2007. Novel short peptides isolated from phage display library inhibit vascular endothelial growth factor activity. Mol Biotechnol 35(1), 51-64, DOI: 10.1385/MB:35:1:51.



**Name : Burç      Surname: Mısırlıoğlu**

**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) M. Ertas, I. B. Misirlioglu and K. Sendur, "Selective IR reflectivity in highly textured phase change VO<sub>2</sub> thin films grown via oxidation of metallic V films on substrates" accepted for publication in OSA Optical Materials Express, 2018.

2) O. Mohammadmoradi, C. Sen, G. A. Boni, L. Pintilie and I. B. Misirlioglu, "Strong composition dependence of resistive switching in Ba<sub>1-x</sub>Sr<sub>x</sub>TiO<sub>3</sub> thin films on semiconducting substrates and its thermodynamic analysis", Acta Materialia, 148, 1-13 (2018).

3) A. P. Levanyuk, S. Minyukov and I. B. Misirlioglu, "Loss of elastic stability and formation of inhomogeneous states at phase transitions in thin films on substrates", in press, Ferroelectrics, (2018).

4) I. B. Misirlioglu and S. P. Alpay, "Compositionally Graded Ferroelectric Stacks as Wide Bandgap Semiconductors: Domain Stabilities, Dielectric Properties and Origin of Low Loss", Acta Materialia 122, 266 (2017).

5) A. P. Levanyuk, I. B. Misirlioglu, "Strong influence of non-ideality of electrodes on stability of single domain state in ferroelectric-paraelectric superlattices", Journal of Applied Physics 119, 024109 (2016).



**Name : Cenk**

**Surname : Kığ**

**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: Biology, Istanbul University, Istanbul.  
2003: MSc of Molecular Biology and Genetics, Istanbul University, Istanbul.  
2008: PhD 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):**

YEAR: 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) Kığ 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) Kığ C. and Temizkan G., Nitric oxide as a signaling molecule in the fission yeast *Schizosaccharomyces pombe*, ***Protoplasma***, 2009.



**Name : Devrim Surname : Gozuacik**

**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, Sabanci University, Istanbul.

2006: Assistant Professor and Research Team Leader, Sabanci University, Istanbul.

2001: Postdoctoral Researcher, Weizmann Institute of Science, Rehovot.

**Education:**

2001: PhD 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.



**Name** : ELIF DAMLA

**Surname** : ARISAN

**Research Interests in EFSUN:** Molecular Cell Biology, Cell signalling cascades

**Employment:**

2006-today: Academician, Istanbul Kultur University, Istanbul

2017-today: Founder, DAPGENOMICS, Istanbul

2001-2006: Academician, Istanbul Haliç University, Istanbul

1999-200: Academician, Istanbul University, Istanbul

**Education:**

2009: **Biological Sciences and Bioengineering PhD, Sabancı University, Istanbul**

2017: Cancer Biology and Therapeutics, Sabancı University, Istanbul

2003: Medical Biology and Genetics MSc, Marmara University, Istanbul

**Awards (Selected):**

2017, 2016, 2015 : Istanbul Kultur University

2017: TUBITAK H2020 award

2014: Promising cancer researcher, MOKAD

**Selected 5 publications:**

- 1) Gurkan AC, Arisan ED, Yerlikaya PO, Ilhan H, Unsal NP. Inhibition of autophagy enhances DENSp<sup>m</sup>-induced apoptosis in human colon cancer cells in a p53 independent manner. **Cell Oncol (Dordr)**. 2018 Feb 28. doi: 10.1007/s13402-017-0369-x. [Epub ahead of print]
- 2) Obakan-Yerlikaya P, Arisan ED, Coker-Gurkan A, et al. Calreticulin is a fine tuning molecule in epibrassinolide-induced apoptosis through activating endoplasmic reticulum stress in colon cancer cells. **Molecular Carcinogenesis**. 2017 Jan 23. doi: 10.1002/mc.22616.
- 3) Berrak B, Arisan ED, Obakan-Yerlikaya P, Coker-Gürkan A, Palavan-Unsal N. "mTOR is a fine tuning molecule in CDK inhibitors-induced distinct cell death mechanisms via PI3K/AKT/mTOR signaling axis in prostate cancer cells". **Apoptosis**. DOI: 10.1007/s10495-016-1275-9, 2016.
- 4) Obakan P, Barrero C, Coker-Gurkan A, Arisan ED, Merali S, Palavan-Unsal N. "SILAC-based mass spectrometry analysis reveals that epibrassinolide induces apoptosis via activating endoplasmic reticulum stress in prostate cancer cells" **PLOS One**, 10(9):e0135788. doi: 10.1371/journal.pone.0135788., 2015
- 5) Coskun D, Obakan P, Arisan ED, Çoker-Gürkan A, Palavan-Ünsal N "Epibrassinolide alters PI3K/MAPK signaling axis via activating Foxo3a- induced mitochondria-mediated apoptosis in colon cancer cells" **Experimental Cell Research**, DOI:10.1016/j.yexcr.2015.08.015, 2015



**Name : Feray Surname : Bakan**

**Research Interests in EFSUN:** Drug delivery systems, artificial bone composites, nanostructuring for cell adhesion optimization, adhesion behavior of functional surfaces

**Employment:**

**2016-present:** Assistant Professor-Researcher, SU, İstanbul.

**2011-2016:** Post-doctoral reseacher, SUNUM, İstanbul.

**2002-2001:** Research assistant, Atatürk University, Erzurum.

**Education:**

**2011:** PhD, Chemical Engineering, Atatürk University, Erzurum.

**2004:** MSc, Chemical Engineering, Atatürk University, Erzurum.

**2002:** BSc, Chemical Engineering, Atatürk University, Erzurum

**Honors and Services (Selected):**

**2014:** Turkish Society for Electron Microscopy, Electron Microscopy Congress: Scientific Board Member

**2015:** Turkish Delegate in the Management Committee of COST CM1301 Action –CELINA

**2014:** Career Development Grant by TUBITAK 3501 Programme

**Awards (Selected):**

**2017:** Short Term Scientific Mission Grant awarded by COST CM 1301 Action, Holon Institute of Technology, Israel.

**Selected 5 publications:**

- 1) **Bakan, F.;** Gene Delivery by Hydroxyapatite and Calcium Phosphate Nanoparticles: A Review of Novel and Recent Applications (Full Chapter), Hydroxyapatite-Advances in Composite Nanomaterials, Biomedical Applications and Its Technological Facets, InTech; Book: Edited by **Jagannathan Thirumalai;** ISBN 978-953-51-5731-1, 2017.
- 2) **Bakan, F.,** Sezen, M., Gecgin, M., Goncu, Y., Ay, N.; "Structural and Chemical Analysis of Hydroxyapatite (HA)-Boron Nitride (BN) Nanocomposites Sintered under Different Atmospheric Conditions", 2017, Microscopy & Microanalysis, 23, 5, 891-899.
- 3) **Bakan, F.,** Kara, G., Cokol Cakmak, M., Cokol, M., Denkbaz, E.B.; Synthesis and characterization of amino acid-functionalized calcium phosphate nanoparticles for siRNA delivery, Colloids and Surfaces B: Biointerfaces, 1,158,175-181,2017.
- 4) Sezen, M.; **Bakan, F.;** Development of Functional Surfaces on High Density Polyethylene (HDPE) via Gas Assisted Etching (GAE) using Focused Ion Beams; Microscopy and Microanalysis, 2015, 21(6), 1379-1386.
- 5) Goncu, Y., Gecgin, M., **Bakan, F.,** Ay, N.; Electrophoretic deposition of hydroxyapatite-hexagonal boron nitride composite coatings on Ti substrate; Materials Science and Engineering C, 79, 343-353, 2017.



**Name :** Gözde **Surname :** Ince

**Research Interests in EFSUN:** Vapor phase synthesis of functional and conductive polymers, ultra thin films, nanoparticles for controlled drug delivery, biosensors

**Employment:**

2016 - today: Assoc. Prof., Sabancı University, Istanbul, Turkey  
2010 - 2016 : Assistant Prof., Sabancı University, Istanbul, Turkey  
2008 - 2010 : Post-doc, MIT, Cambridge, USA.

**Education:**

2008: PhD in Mechanical Engineering, Boston University, Boston, USA  
2001: Physics, Boğaziçi University, Istanbul, Turkey

**Awards (Selected):**

2014: Bilim Akademisi – Young Scientist Award (BAGEP)  
2012: TÜBA-The Young Scientists Award (GEBİP)  
2012: L'Oréal Turkey Young Women Scientist Fellowship

**Selected 5 publications:**

1. A. Tufani, G. Ozaydin Ince, (2017) "Smart membranes with pH-responsive control of macromolecule permeability", Journal of Membrane Science 537, 255-262.
2. F. Balkan, E. Armagan, G. Ozaydin Ince, (2017) "Synthesis of coaxial nanotubes of polyaniline and poly(hydroxyethyl methacrylate) by oxidative/initiated chemical vapor deposition", Beilstein J. Nanotechnology 8, 872-882.
3. E. Armagan, G. Ozaydin Ince, (2015) "Coaxial nanotubes of stimuli responsive polymers with tunable release kinetics", Soft Matter, 11, 8069-8075 (2015).
4. E. Armagan, P. Qureshi, G. Ozaydin Ince, "Functional Nanotubes for Triggered Release of Molecules", Nanoscience and Nanotechnology Letters 7, 79-83 (2015).
5. R. Demiryurek, M. Kassim Ali, G. Ozaydin Ince, "A facile method for fabrication of responsive micropatterned surfaces", Smart Mater. Struct. 23, 095020 (2014).





**Name : Havva Funda      Surname: Yağcı 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: PhD, Polymer Science and Engineering, USM, Mississippi.

1995: MS, Chemistry, Boğaziçi University, İstanbul

1993: BS, Chemistry, Boğaziçi University, İstanbul

**Honors and Services (Selected):**

**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.



**Name : Hikmet                      Surname : Akkiz**

**Research Interests in EFSUN:**

Hepatocellular carcinoma, colorectal cancer

**Employment:**

Professor of Gastroenterology

Chief, Division of Gastroenterology and Hepatology, Çukurova University, Medical Faculty, Adana

**Education:**

1978, medical doctor degree, Çukurova University, Medical Faculty

1990, Associated Professor

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

1995, Inserm Institute, HCV genotype

**Awards (Selected):**

22 scientific awards in the field of Hepatology and Gastroenterology, in Turkey

1 International award on HCC research from Essen University,

**Selected 5 publications:**

- 1) Akkiz et al, " Inflammatory markers C-reactive protein and PLR in relation to HCC characteristics" Journal of Translational Science, 2018.
- 2) Akkiz et al. " Macroscopic portal vein thrombosis in HCC patients" Canadian Journal of Gastroenterology and Hepatology 2018.
- 3) Akkiz et. " Characteristics of Hepatocellular Carcinoma Aggressiveness Factors in Turkish Patients" Oncology 2017.
- 4) Akkiz et al. " C-reactive protein and hepatocellular carcinoma: its relationships to tumor factors" Clinical Practice 2018.
- 5) Akkiz et al. "Relationship between functional polymorphism in the Aurora A gene and susceptibility of hepatocellular carcinoma". J Viral Hepatitis 2009.



**Name : Huveyda      Surname : Basaga**

**Research Interests in EFSUN:** Molecular marker discovery.

**Employment:**

Professor and Research Team Leader, Sabanci University, Istanbul.

**Education:**

Ph.D. Brunel, University of West London, ENGLAND  
B.Sc. A.I.T.I.A. School of Pharmacy, Ankara, TURKEY,

**Awards (Selected):**

2000: Turkish Society of Education, Education award,

**Selected 5 publications:**

- 1) Ahmet Can Timucin & Huveyda Basaga; Pro-Apoptotic Effects of Lipid Oxidation Products: HNE at the crossroads of NF- $\kappa$ B Pathway and Anti-Apoptotic Bcl-2. *Free Radical Biology and Medicine*. (2016).
- 2) Ahmet Can Timucin & Huveyda Basaga; SIRT6 Is a Positive Regulator of Aldose Reductase Expression in U937 and HeLa cells under Osmotic Stress: In Vitro and In Silico Insights. *Plos One*. 2016.
- 3) Moldovan & Irinel-Adriana Badea & Emilia Elena Iorgulescu & Tuğçe Ayça Tekiner & Huveyda Basaga; Voltammetric determination of polyphenolic content as rosmarinic acid equivalent in tea samples using pencil graphite electrodes. *J Food Sci Technol*. Online Pub (2016).
- 4) Beyza Vurusanera, Gabriella Leonarduzzi, Paola Gambab, Giuseppe Polib\*, Huveyda Basagaa,\*; Oxysterols and mechanisms of survival signaling. *Molecular Aspects of Medicine* 49 (2016) 8–22.
- 5) Beyza Vurusaner, PaolaGamba, SimonaGargiulo, GabriellaTesta, Erica Staurengghi, Gabriella Leonarduzzi, GiuseppePoli, Huveyda Basaga; Nrf2 antioxidant defense is involved in survival signaling elicited by 27 hydroxycholesterol in human promonocytic cells. *Free Radical Biology and Medicine* 91(2016)93–104.



**Name : Koray Surname : Balcioglu**

**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: PhD of Molecular Biology-Genetics and Biotechnology, Istanbul Technical University, Istanbul.

2003: Msc 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) 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.



**Name : Kubilay**

**Surname : 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 : PhD 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



**Name: Kürşat Surname: Şendür**

**Research Interests in EFSUN:** Nano-optical systems and transducers, interaction of photons with nanostructures, surface plasmon polaritons, surface plasmon resonances, magnetoresistive sensors.

**Employment:**

**2017-Pres:** Sabanci University, Istanbul, Turkey, Professor, Faculty of Engineering and Natural Sciences.

**2011-2017:** Sabanci University, Istanbul, Turkey, Associate Professor, Faculty of Engineering and Natural Sciences.

**2007-2011:** Sabanci University, Istanbul, Turkey, Assistant Professor, Faculty of Engineering and Natural Sciences.

**2005-2007:** Advanced Micro Sensors, Boston, Massachusetts, USA, Design Engineer, Research and Development Group.

**2002-2005:** Seagate Technology Research Center, Pittsburgh, Pennsylvania, USA, Postdoctoral Researcher, Optical Storage Group.

**Education:**

**Ph.D.,** Electrical and Computer Engineering, August, 2001, **The Ohio State University**, Ohio, USA

**M.S.,** Electrical and Electronics Engineering, July, 1997, **Bilkent University**, Ankara, Turkey

**B.S.,** Electrical and Electronics Engineering, July, 1995, **Middle East Technical University**, Turkey

**Awards (Selected):**

1. (2014) Recipient of the second place award with his patent at the Yıldız Patents Competition held by Yıldız Technical University.
2. (2014) Recipient of the Journal of Quantitative Spectroscopy and Radiative Transfer's most valued reviewer award.
3. (2011) Recipient of the İTÜ FABED Foundation Eser Tümen Outstanding Young Scientist Award.
4. (2010) Recipient of the ODTÜ Parlar Foundation Research Incentive Award.
5. (2009) Recipient of the highly regarded Turkish Academy of Sciences (TÜBA) Outstanding Young Scientist (GEBIP) Award.
6. (2007) Recipient of the European Union FP7 International Reintegration Grant.
7. (2002-2005) Six time recipient of the Technological Achievement Award at Seagate Technology, given for technical contributions.
8. (1999-2002) Two time recipient of the outstanding technical report awards, ElectroScience Laboratory, the Ohio State University.

**Selected 5 publications:**

1. M. Ertas Uslu, I. B. Misirlioglu, and K. Sendur, "Selective IR response of highly textured phase change VO<sub>2</sub> nanostructures obtained via oxidation of electron beam deposited metallic V films," Opt. Mater. Express 8, 2035-2049 (2018)
2. E. Rahimi and K. Sendur, "Thermally controlled femtosecond pulse shaping using metasurface based optical filters", Nanophotonics 7(3): 659–668 (2018).
3. E. Rahimi and K. Sendur, "Chimera states in plasmonic nanoresonators", Photonics Research, Vol. 6, 427-433 (2018).
4. E. Ogut, C. Yanik, I. I. Kaya, C. Ow-Yang, and K. Sendur, "Focusing short-wavelength surface plasmons by a plasmonic mirror", Optics Letters, Vol.43, 2208-2211 (2018).
5. M. A. Kecebas, M. P. Menguc, A. Kosar, and K. Sendur "Passive radiative cooling design with broadband optical thin-film filters", Journal of Quantitative Spectroscopy & Radiative Transfer, Vol.198, 179-186 (2017).



**Name : Meltem                      Surname : Sezen**

**Research Interests in EFSUN:**

Surface modification by electron/ion beams nanostructuring, Functionalization of biomaterials' surfaces, Focused Ion Beam based nanomachining, direct lithography and micro-prototyping

**Employment:**

**2011-Today:** Researcher, Sabancı University Nanotechnology Research and Application Center (SUNUM), Istanbul, Turkey

**2009-2011:** Postdoctoral Fellow, Graz Center for Electron Microscopy, Graz, Austria

**2005-2009:** PhD Project Researcher, Institute for Electron Microscopy, TU Graz, Austria

**2002-2005:** Research Assistant, Gebze University of Technology, Gebze, Kocaeli

**Education:**

2009: PhD, Physics Engineering, TU Graz, Austria

2005: MSc, Materials Science and Engineering, Gebze University of Technology, Turkey

2000: BSc, Metallurgical and Materials Engineering, Istanbul Technical University, Turkey

**Honors and Services (Selected):**

**2014:** Turkish Society for Electron Microscopy, Electron Microscopy Congress: Scientific Board Member

**2014:** Turkish Delegate in the Management Committee of COST CM1301 Action –CELINA

**2012:** Turkish Delegate in the Management Committee of COST MP1103 Action -Nanostructured materials for solid-state hydrogen storage

**2012:** Career Development Grant by TUBITAK 3501 Programme

**Awards (Selected):**

**2013:** Short Term Scientific Mission Grant awarded by COST MP1103 Action, Technion, Israel

**Selected 5 publications:**

1. Sezen, M.; Focused Ion Beams (FIB): Novel Methodologies and Recent Applications for Multidisciplinary Sciences" (Full Chapter); Modern Electron Microscopy, InTech; Book: Edited by **Miloš Janeček**; ISBN 978-953-51-4599-8, 2016
2. Bakan, F., Sezen, M., Gecgin, M., Goncu, Y., Ay, N.; "Structural and Chemical Analysis of Hydroxyapatite (HA)-Boron Nitride (BN) Nanocomposites Sintered under Different Atmospheric Conditions", 2017, Microscopy & Microanalysis, 23, 5, 891-899
3. Sezen, M.; Sadighikia, S.; 3D Electron Microscopy Investigations of Human Dentin at the Micro/Nano-Scale using Focused Ion Beams based Nanostructuring; *RSC Advances*, 2015, 5, 7196 – 7199
4. Sezen, M.; Bakan, F.; Development of Functional Surfaces on High Density Polyethylene (HDPE) via Gas Assisted Etching (GAE) using Focused Ion Beams; *Microscopy and Microanalysis*, 2015, 21(6), 1379-1386
5. Sezen, M.; Plank, H.; Fisslthaler, E.; Chernev, B.; Zankel, A.; Tchernychova, E.; Blümel, A.; List, E.J.W.; Grogger, W.; Poelt, P.; An investigation on focused electron / ion beam induced degradation mechanisms of conjugated polymers, *Physical Chemistry Chemical Physics*, 2011, 13, 20235-20240



**Name : Murat Kaya Surname: Yapıcı**

**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, Sabanci 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: PhD, 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):**

- TPC Member – IEEE Int. Conf. on Electronics, Circuits, and Systems, 2013.
- TPC Member – IEEE Int. Conf. on Design & Technology of Integrated Systems, 2013-2018.
- Session Chair – IEEE Int. Conf. on Wearable and Implantable Body Sensor Networks, 2018.
- Session Chair – IEEE Int. Conf. on Design & Technology of Integrated Systems (DTIS), 2013.
- Keynote Presentation – 19<sup>th</sup> Int. Conf. on Thermal, Mechanical Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE), 2018.
- Reviewer: Sensors and Actuators A. Physical, IEEE Sensors, Sensors Review, IEEE Transactions on VLSI Systems, MDPI-Sensors, Micromachines, Materials, Scientific Reports.

**Awards (Selected):**

- Finalist, Best Student Paper, IEEE Nano'07, Hong Kong
- Transducers 2007 Student Travel Award, Transducer Research Foundation, San Diego.
- International Education Study Grant, Texas A&M University, 2007.
- Friends of EE Graduate scholarship, Department of Electrical Engineering, TAMU, 2004.
- TEES Research Assistantship, 2005-2009.
- Fellow of the Undergraduate Research Awards Program (REU), 2003-2004.
- Who's Who in America 2010, 64th Edition (pub. 2009).

**Selected 5 publications:**

- 1) Yapıcı et al. Intelligent Medical Garments with Graphene-Functionalized Smart-Cloth ECG Sensors, 2017, *Sensors*.
- 2) Yapıcı 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) Yapıcı et al. A novel micromachining technique for the batch fabrication of scanning probe arrays with precisely defined tip contact areas, 2008, *J. Micromechanics Microengineering*
- 5) Yapıcı et al. Development and experimental characterization of micromachined electromagnetic probes for biological manipulation and stimulation applications, 2008, *Sensors and Actuators A*.





**Name : Nurcan                      Surname: Doğan**

**Research Interests in EFSUN:** Medical application of (magnetic) nanoparticles, development new medical imaging methods,

**Employment:**

2016-today: Assoc. Prof., Gebze Technical University, Kocaeli, TURKIYE

2013-2016: Dr. Asist., Gebze Technical University, Kocaeli, TURKIYE

2012-2013: Postdoc., University of California Berkeley, Berkeley,-CA, USA

**Education:**

2011: Physics, Gebze Technical University, Kocaeli, TURKIYE

2010: Macromolecular Chemistry, RWTH Aachen-GERMANY

**Awards (Selected):**

1. 2016, Support for Biomedical Partnering event , Enterprise European Network, INGILTERE.
2. 2013, Postdoc Bursary, TÜBİTAK, University of California, Berkeley, CA-USA .
3. 2013, Conference Attendance support, niversity of California, Berkeley, CA-USA.
4. 2010, PhD research bursary, Erasmus, RWTH-Aachen, GERMANY
5. 2008, EUROMAR-2008 Conference support, NATO-ARW, France, St.Petersburg, RUSSIA.

**Selected 5 publications:**

- 1) ARDA Lütfi, DOĞAN Nurcan, BOYRAZ Cihat, Effects of Annealing Temperature on Microstructure and Magnetic Properties of  $\text{Ni}_{0.05}\text{Zn}_{0.95}\text{Fe}_2\text{O}_4$  Nanoparticles, **Journal of Superconductivity and Novel Magnetism**, 2018.
- 2) DOĞAN Nurcan, BİNGÖLBALI Ayhan, Arda Lütfi, AKCAN Doğan , Synthesis, Structure, and Magnetic Properties of  $\text{Ni}_{1-x}\text{Zn}_x\text{Fe}_2\text{O}_4$  Nanoparticles, **Journal of Superconductivity and Novel Magnetism**, 2017.
- 3) HEIBA Zein K, MOHAMED Mohamed Bakr, ARDA Lütfi, DOĞAN Nurcan, Cation Distribution correlated with magnetic properties of nano crystalline gadolinium substituted nickel ferrite, **Journal of Magnetism and Magnetic Materials**, 2015.
- 4)HOCAOĞLU Ibrahim, ASIK Didar, ULUSOY Gulen, GRANDFILS Christian, OJEAJİMENEZ Isaac, ROSSI Francois, KIRAZ Alper, DOĞAN Nurcan,YAGCI Acar Havva, Cyto hemocompatible magnetic hybrid nanoparticles  $\text{Ag}_2\text{S}$   $\text{Fe}_3\text{O}_4$  with luminescence in the near infrared region as promisingtheranostic materials, **Colloids and Surfaces B: Biointerfaces**, 2015.
- 5) DOĞAN Nurcan, BİNGÖLBALI Ayhan, Arda Lütfi, Preparation structure and magnetic characterization of Ni doped  $\text{ZnO}$  nano particles, **Journal of Magnetism and Magnetic Materials**, 2015.



**Name : Ozlem Surname : 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, Sabanci University, Nanotechnology Research and Application Center  
2012- 2015: Postdoctoral Fellow, Sabanci University, Nanotechnology Research and Application Center  
2009-2012: Postdoctoral Fellow, Sabanci University, Molecular Biology, Genetics and Bioengineering Program, Istanbul, TURKEY  
2008-2009: Project Advisor, Sabanci 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–PhD Kumamoto University / Department of Material and Life Science/ Molecular Biology and Genetics, JAPAN  
2005–MSc Kumamoto University / Department of Systems in Natural Environment/ Molecular Reproductive Biology, JAPAN  
2002–BSc 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 Sabanci University, Nanotechnology Research and Application Center and Sabanci University Faculty of Engineering and Natural Science, Postdoctoral Research Fellow  
2009-2011: Received National Government Scientific and Technological Research Council (TUBITAK) Post-doctoral Fellow

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



**Name : Pinar Surname: Pir**

**Research Interests in EFSUN:**

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

**Employment:**

October 2015 – present: Gebze Technical University, Department of Bioengineering , Assistant Professor.

October 2012 – October 2015: Babraham Institute, Signalling ISP: Le Novère Group, Senior Research Associate.

April 2012 – September 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

September 2007 – March 2011: University of Cambridge, Cambridge Systems Biology Center: SG Oliver Group, Research Associate,

January 2006 – August 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: PhD, Boğaziçi University, Department of Chemical Engineering

1998 – 2001: MSc, Boğaziçi University, Department of Chemical Engineering

1993 – 1998: Bsc, Boğaziçi University, Department of Chemical Engineering

1990 – 1993: İstanbul Atatürk High School of Science

**Honors and Services (Selected):**

2006: PhD Thesis Award (Institute for Graduate Studies in Science and Engineering - Boğaziçi University)

1993: 4th rank among 1.2 million attendants in Central Entrance Test for Universities (ÖSS Sayısal)

1990: 97th rank among 60 thousand attendants in Central Entrance Test for Highschools of Science

**Selected 5 publications:**

1) Malek, M., Kielkowska, A., Chessa, T., Anderson, K.E., Barneda, D., Pir, P., Nakanishi, H., Eguchi, S., Koizumi, A., Sasaki, J. and Juvin, V., Kiselev, V.Y., Niewczas, I, Gray, A., Valayer, A., Spensberger, D., Imbert, M., Felisbino, S., Habuchi, T., Beinke, S., Cosulich, S., Le Novère, L., Sasaki, T., Clark, J., Hawkins, P.T., Stephens, L.R., 2017. "PTEN Regulates PI (3, 4) P 2 Signaling Downstream of Class I PI3K", *Molecular Cell*, 19 Oct. 2017

2) Müllereder 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

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) Dobson, P., K. Smallbone, K., D. Jameson, E. Simenodis, K. Lanthaler, P. Pir, C. Lu, N. Swainston, W.B. Dunn, P. Fisher, D. Hull, M. Brown, O. Oshota, N. Stanford, D.B. Kell, R. King, S.G. Oliver, R. Stevens, P. Mendes, 2010, "Further developments towards a genome-scale metabolic model of yeast", *BMC Systems Biology*, 4, 1, 145-150

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



**Name: Saliha    Surname: 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 Inc., Kocaeli.

**2004 - 2013:** Research/Teaching Assistant, Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Education:**

**2013:** PhD., 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:** BSc., 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 PhD 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.



**Name : Serap Surname : Dökmeci**

**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: PhD of Medical Biology, Hacettepe Faculty of Medicine, Ankara.

1984: MSc of Medical Biology, Hacettepe Faculty of Medicine, Ankara.

1980: BSc 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, Gençpınar 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) Yuce, 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., Gençpınar, P., Makay, B., Yüzbaşıoğlu, A., Arslan, N. , Dökmeci, 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) Arian-Ayyildiz, Z., Yüce, 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.



**Name : Sinan Surname : 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.



**Name** : Tunahan      **Surname** : Çakır

**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:** Bioinformatics Head, 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:** PhD., Biosystems Engineering Research Lab., Department of Chemical Engineering, Boğaziçi University, İstanbul.

**2004/2005:** Visiting PhD Student, Center for Microbial Biotechnology, University of Denmark, Lyngby

**2001:** BSc., Department of Chemical Engineering, Boğaziçi University, İstanbul.

**Honors and Services (Selected):**

**2015-today:** Advisory Board Member, **Molecular Omics** Journal.

**Awards (Selected):**

**2017:** METU Prof. M. Parlar Foundation Research Incentive Award

**2015:** Turkish Academy of Sciences (**TÜBA**) Outstanding Young Scientist Award

**2007:** Boğaziçi University, Best PhD 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.





**Name : Tunç Surname : Laçın**

**Research Interests in EFSUN:**

Early diagnosis tests for lung cancer, myasthenia gravis, thymic diseases, electrochemical and electrophysiological signaling, imaging techniques of tissues, human – machine integration in surgery, 3D navigational bronchoscopy

**Employment:**

**2013 – today: Associate 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: PhD of Biochemistry, Faculty of Pharmacology, Marmara University, Istanbul

1999-2006 Thoracic Surgery, Marmara University, Istanbul

1998: MD degree, Cerrahpaşa Medical Faculty, English Division, Istanbul University

**Honors and Services (Selected):**

April 2018 : Katip Celebi Newton Fund : Integrated sensing platform for early characterization of pleural effusion (Turkish PI)

September 2017: Co-founder of ELAA Technology at Istanbul Technopark

September 2017: TUBITAK 1512 project: Volumetric 3D Navigation System

2015-today: European Association of Cardiothoracic Surgery, Thoracic Domain Member

2005: ECFMG certificate, USA

**Awards (Selected):**

February 2018: Best pitching Award at Royal Academy of Engineering

2011 European Society of Thoracic Surgery, Dutch Travel Award

**Selected 5 publications:**

1) Yuksel M, **Lacin T**, Ermerak NO, Sirzai EY, Sayan B. Minimally Invasive Repair of Pectus Carinatum. *Ann Thorac Surg*. 2018.

2) 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.

3) Alpay L, et al. Is Video-Assisted Thoracoscopic Surgery Adequate in Treatment of Pulmonary Hydatidosis? **The Annals of Thoracic Surgery**, 2015.

4) 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.

5) Lacin T, Swanson S. Current costs of video-assisted thoracic surgery (VATS) lobectomy. **J Thorac Dis**, 2013



## EVENTS

- The 'Functional Surfaces and Interfaces Workshop' of EFSUN was held at Sabanci University SUNUM building (25.11.2017)
- EFSUN team had a Brain Storming Event (17.02.2018)
- General Meeting and Iftar Dinner (17.5.2018)
- End of Year Workshop and Poster Competition will take place in November 2018



## **Job Openings**

- EFSUN invites applications for Ph.D. students, post-doctoral positions and technical staff.
- Candidates having experience on biology of diseases, microfluidics/nanofluidics, material fundamentals, surface and interface interactions, energy harvesting 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 Ali Kosar (kosara@sabanciuniv.edu)

Professor Burc Misirlioglu, (burc@sabanciuniv.edu)

Professor Devrim Gozuacik (dgozuacik@sabanciuniv.edu)