

## Assoc. Prof. ŞULE ÖNCÜL

### Personal Information

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### Education Information

Post Doctorate, Université Strasbourg I, Faculte De Pharmacie, Biophotonique At Pharmacie Lab., France 2013 - 2013

Doctorate, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Biyofizik, Turkey 2004 - 2008

Post Graduate, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Biyofizik, Turkey 2000 - 2003

Under Graduate, Yıldız Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik, Turkey 1995 - 2000

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Health&Medicine, II. Hücre Ölümü Araştırma Teknikleri Teorik Kursu, Hücre Ölümü Araştırma Derneği, 2012

Other, Basics of Bioinformatics, İstanbul Medeniyet Üniversitesi, 2012

Health&Medicine, New Technologies in Clinical Proteomics, Acıbadem Üniversitesi, 2012

Education Management and Planning, Tıp Fakültesi Eğitimci Gelişimi Temel Kursu, Acıbadem Üniversitesi, 2010

### Dissertations

Doctorate, Zara özgü katkı maddelerinin ve apoptoz sürecinin zarda oluşturduğu değişimlerin yeni geliştirilen floresan problemlerle incelenmesi, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Biyofizik, 2008

Post Graduate, Yüksek hücre dışı magnezyum ve oldukça düşük frekanslı elektromanyetik dalgaların etkisi altında K562 hücre soyunun farklılaşması, Marmara Üniversitesi, Sağlık Bilimleri Enstitüsü, Biyofizik, 2003

### Research Areas

Health Sciences, Medicine, Fundamental Medical Sciences, Biophysics, Life Sciences, Biophysics, Biological Spectroscopy, Cell Membrane and Liposomes, Structural Biophysics, Molecular Biology and Genetics, Animal Molecular Genetics, Molecular Biology of Cancer, Natural Sciences

### Academic Titles / Tasks

Assistant Professor, İstanbul Medeniyet Üniversitesi, Faculty of Medicine, Temel Tıp Bilimleri, 2018 - Continues

Assistant Professor, İstanbul Medeniyet Üniversitesi, Faculty of Medicine, Temel Bilimler, 2018 - Continues

Expert, Université Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Biyofotonik Laboratuvarı, 2011 - 2011  
Expert, Université Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Biyofotonik Laboratuvarı, 2009 - 2009  
Research Assistant, Université Louis-Pasteur: Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Fizikokimya Laboratuvarı, 2007 - 2008  
Research Assistant, Université Louis-Pasteur: Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Fizikokimya Laboratuvarı, 2006 - 2006  
Research Assistant, Université Louis-Pasteur: Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Fizikokimya Laboratuvarı, 2005 - 2005  
Research Assistant, Université Louis-Pasteur: Strasbourg I, Eczacılık Fakültesi, Farmakoloji Ve Fizikokimya Laboratuvarı, 2004 - 2004

## Professional Experience

Head of Department, İstanbul Medeniyet Üniversitesi, Faculty of Medicine, 2012 - 2015

## Advising Theses

ÖNCÜL Ş., BAKTERİ YÜZEY POTANSİYELİNDE ÇOK DÜŞÜK FREKANSLI ELEKTROMANYETİK ALANLARIN VE KATYONİK PEPTİDLERİN MEYDANA GETİRDİĞİ DEĞİŞİMLERİN MALVERN ZETASİZER VE FLORESANS SPEKTROSKOPİSİ İLE SAPTANMASI, Post Graduate, E.Münire(Student), 2013

## Jury Memberships

Post Graduate, Yüksek Lisans Tez Savunma Sınav Jürisi, Marmara Üniversitesi, January, 2013

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

- **Effect of extremely low frequency electromagnetic fields on bacterial membrane**  
ÖNCÜL Ş., Cuce E. M. , Aksu B., Garip A. I.  
INTERNATIONAL JOURNAL OF RADIATION BIOLOGY, vol.92, pp.42-49, 2016 (Journal Indexed in SCI)
- **Blue fluorogenic probes for cell plasma membranes fill the gap in multicolour imaging**  
KREDER R., Oncul S., KUCHERAK O. A. , PYRSHEV K. A. , REAL E., Mely Y., KLYMCHENKO A. S.  
RSC ADVANCES, vol.5, pp.22899-22905, 2015 (Journal Indexed in SCI)
- **Fluorinated counterion-enhanced emission of rhodamine aggregates: ultrabright nanoparticles for bioimaging and light-harvesting**  
SHULOV I., Oncul S., REISCH A., Arntz Y., COLLOT M., Mely Y., KLYMCHENKO A. S.  
NANOSCALE, vol.7, pp.18198-18210, 2015 (Journal Indexed in SCI)
- **Collective fluorescence switching of counterion-assembled dyes in polymer nanoparticles**  
REISCH A., Didier P., RICHERT L., Oncul S., Arntz Y., Mely Y., KLYMCHENKO A. S.  
NATURE COMMUNICATIONS, vol.5, 2014 (Journal Indexed in SCI)
- **Lactose-ornithine bolaamphiphiles for efficient gene delivery in vitro**  
Jain N., Goldschmidt V., Oncul S., Arntz Y., Duportail G., Mely Y., Klymchenko A. S.  
INTERNATIONAL JOURNAL OF PHARMACEUTICS, vol.423, pp.392-400, 2012 (Journal Indexed in SCI)
- **Characterization of the lipid and protein organization in HBsAg viral particles by steady-state and time-resolved fluorescence spectroscopy**  
Greiner V. J. , Egele C., Oncul S., Ronzon F., Manin C., Klymchenko A., Mely Y.  
BIOCHIMIE, vol.92, pp.994-1002, 2010 (Journal Indexed in SCI)
- **Liquid ordered phase in cell membranes evidenced by a hydration-sensitive probe: Effects of**

### **cholesterol depletion and apoptosis**

Oncul S., Klymchenko A. S., Kucherak O. A., Demchenko A. P., Martin S., Döntenwill M., Arntz Y., Didier P., Duportail G., Mely Y.

BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES, vol.1798, pp.1436-1443, 2010 (Journal Indexed in SCI)

#### **Switchable Nile Red-Based Probe for Cholesterol and Lipid Order at the Outer Leaflet of Biomembranes**

Kucherak O. A., Oncul S., Darwich Z., Yushchenko D. A., Arntz Y., Didier P., Mely Y., Klymchenko A. S.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.132, pp.4907-4916, 2010 (Journal Indexed in SCI)

#### **Differentiation of K562 Cells Under ELF-EMF Applied at Different Time Courses**

Ayşe I., Zafer A., Sule O., Isil I., Kalkan T.

ELECTROMAGNETIC BIOLOGY AND MEDICINE, vol.29, pp.122-130, 2010 (Journal Indexed in SCI)

#### **Visualization of lipid domains in giant unilamellar vesicles using an environment-sensitive membrane probe based on 3-hydroxyflavone**

Klymchenko A. S., Oncul S., Didier P., Schaub E., Bagatolli L., Duportail G., Mely Y.

BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES, vol.1788, pp.495-499, 2009 (Journal Indexed in SCI)

#### **Dynamic quenching as a simple test for the mechanism of excited-state reaction**

Tomin V. I., Oncul S., Smolarczyk G., Demchenko A. P.

CHEMICAL PHYSICS, vol.342, pp.126-134, 2007 (Journal Indexed in SCI)

#### **New 3-hydroxyflavone derivatives for probing hydrophobic sites in microheterogeneous systems**

Öztürk T., KLYMCHENKO A. S., Capan A., Oncul S., Cikrikci S., Taskiran Ş., Tasan B., KAYNAK F. B., ÖZBEY S., DEMCHENKO A. P.

TETRAHEDRON, vol.63, pp.10290-10299, 2007 (Journal Indexed in SCI)

#### **Fluorescence sensing of intermolecular interactions and development of direct molecular biosensors**

Altschuh D., Oncul S., Demchenko A. P.

JOURNAL OF MOLECULAR RECOGNITION, vol.19, pp.459-477, 2006 (Journal Indexed in SCI)

#### **The effects of thermal quenching on the excited-state intramolecular proton transfer reaction in 3-hydroxyflavones**

Oncul S., Demchenko A. P.

SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.65, pp.179-183, 2006 (Journal Indexed in SCI)

#### **A triterpene oleanolic acid conjugate with 3-hydroxyflavone derivative as a new membrane probe with two-color ratiometric response**

Türkmen Z., Klymchenko A., Oncul S., Duportail G., Topçu G., Demchenko A.

JOURNAL OF BIOCHEMICAL AND BIOPHYSICAL METHODS, vol.64, pp.1-18, 2005 (Journal Indexed in SCI)

### **Articles Published in Other Journals**

#### **Social isolation and predator scent tests alter brain BDNF levels differentially according to gender, in rats and effects of fluoxetine**

Aykac A., ÖNCÜL Ş., Onur R.

MARMARA PHARMACEUTICAL JOURNAL, vol.22, pp.190-198, 2018 (Journal Indexed in ESCI)

### **Books & Book Chapters**

#### **Introduction to Fluorescence Probing of Biological Membranes**

Demchenko A., Duportail G., ÖNCÜL Ş., Klymchenko A., Mely Y.

in: Methods in Membrane Lipids, Dylan M. Owen, Editor, Springer New York, New York, pp.19-43, 2015

## Refereed Congress / Symposium Publications in Proceedings

- **Effect of 4- Aminopyridine on Paclitaxel Activity on MDA- MB 435 Breast cancer cell line**  
Cüce E., ÖNCÜL Ş., İnhan Garip A.  
International Congress on Biological and Medical Sciences 2018 Life Science and Medicine, Niğde, Turkey, 31 October 2018, pp.100
- **Electromagnetic Fields Cause Changes in Electrical Properties of Bacterial Membrane**  
Cüce E., ÖNCÜL Ş., Aksu B., İnhan Garip A.  
7th International Workshop on Biological Effects of Electromagnetic Fields, Malta, 01 October 2012
- **Hücre Farklılaşması ve Otofaji Sırasında Hücre Zarında Meydana Gelen Değişiklikler**  
Öz Arslan D., ÖNCÜL Ş., Kan B.  
24. Ulusal Biyofizik Kongresi, İstanbul, Turkey, 01 September 2012, vol.1, pp.75
- **Aşırı Düşük Frekanslı Manyetik Alanın S. Aureus ve E. Coli Bakterilerinin Hücre Zarında Meydana Getirdiği Değişimlerin Saptanması**  
Cüce E., ÖNCÜL Ş., Aksu B., Garip G. A.  
24. Ulusal Biyofizik Kongresi, İstanbul, Turkey, 01 September 2012, vol.1, pp.29
- **Katyonik peptit etkisi ile oluşan yüzey potansiyel değişiminin floresan spektroskopisi ile saptanması.**  
Polat S., Cüce E., ÖNCÜL Ş., Garip A., Aksu B.  
23. Ulusal Biyofizik Kongresi, Edirne, Turkey, 01 September 2011, pp.33
- **S.Aureus kökenliğinde çok düşük frekanslı elektromanyetik alan altında yüzey potansiyel, değişiminin floresan spektroskopisi ile saptanması.**  
Cüce E., Polat S., Aksu B., Özbaş Turan S., Garip A., ÖNCÜL Ş.  
23. Ulusal Biyofizik Kongresi, Edirne, Turkey, 01 September 2011, pp.31
- **Lipid and protein organization of Hepatitis B antigen characterized by fluorescence spectroscopy.**  
Greiner V., Egele C., ÖNCÜL Ş., Ronzon F., Manin C., Klymchenko A., Mely Y.  
12th Conference on Methods and Applications of Fluorescence: Spectroscopy, Imaging and Probes, France, 01 September 2011
- **Fluorescent probes for monitoring lipid order selectively at one bilayer leaflet.**  
Klymchenko A., Kucherak O., Darwich Z., ÖNCÜL Ş., Arntz Y., Didier P., Duportail G., Mely Y.  
12th Conference on Methods and Applications of Fluorescence: Spectroscopy, Imaging and Probes, France, 01 September 2011
- **Determination of the changes which occur in the membrane due to different inducers by new developed fluorescent probes**  
ÖNCÜL Ş., Kan B., Klymchenko A.  
Gap'ta 2. Uluslararası Biyofizik Kongresi, Turkey, 01 October 2009, pp.83
- **Hydrophobic 3-Hydroxyflavone Derivatives as Biomembrane Probes. Journal of fluorescence Volume 15, Number 2, 203.**  
ÖNCÜL Ş., Baysal K., Klymchenko A., Mely Y., Duportail G., Demchenko A.  
9th Conference on Methods and Applications of Fluorescence: Spectroscopy, Imaging and Probes, Portugal, 01 September 2005, vol.15, no.2, pp.203
- **Development of Derivatives of 3-HF as New Ratiometric Membrane Probes.**  
ÖNCÜL Ş., Demchenko A.  
17th National Biophysics Congress, İzmir, Turkey, 01 September 2005, pp.55
- **Fluorescent color-changing dyes as reporters in sensing technologies. Nanotechnology in BioDiagnostic and Analytics'' (NBDA) , European Nanotechnology Gateway**  
Demchenko A., Klymchenko A., ÖNCÜL Ş., Yushchenko D., Topçu G., Öztürk T., Mely Y.  
Conference, Nanoforum.org, France, 01 June 2005
- **Phospholipid Bilayers as the sensors with fluorescence response. .**  
ÖNCÜL Ş., Demchenko A.  
International Workshop on « Bioengineering ; Problems and Perspectives, Turkey, 01 October 2004, vol.1
- **2-Aryl-3-Hydroxyquinolones – A New Class of the Dyes with Dual Fluorescence.**

Yushchenko D., Pivovarenko V., ÖNCÜL Ş., Demchenko A.

15th National Chemistry Congress, Kars, Turkey, 01 July 2004, pp.984

● **Synthesis of 3- hydroxyflavone derivatives and investigation their behaviors as fluorescent probe.**

Türkmen Z., Klymchenko A., ÖNCÜL Ş., Topçu G., Demchenko A., Öztürk T.

15th National Chemistry Congress, Kars, Turkey, 01 July 2004, vol.1, pp.1045

● **Differentiation of K562 cell line under the effect of high extracellular magnesium and extremely low electromagnetic fields.**

Garip A., ÖNCÜL Ş., Kalkan T.

13th Balkan Biochemical and Biophysical Days and Meeting on Metabolic Disorders, Turkey, 01 October 2003, vol.28, no.3, pp.163

## Other Publications

● **G.I.T. Laboratory Europe "Fluorescent Color-changing Dyes Light-up the Sensor" Response.**

ÖNCÜL Ş., Demchenko A.

Technical Report, pp.42-43, 2005

## Supported Projects

USLU S., MARAL I., ÖNCÜL Ş., SAMASTI M., SARÇIN M., KORUK S., KANBAY A., ARTIŞ A. S. , Açıksarı K., Project Supported by Higher Education Institutions, İstanbul Medeniyet Üniversitesi Tıp Fakültesi 1 Tıp Öğrenci Kongresi, 2016 - 2016

ÖNCÜL Ş., AYKAÇ A., Project Supported by Higher Education Institutions, Kronik anti-depresan tedavinin, farklı beyin bölgelerinde BDNF (Brain-derived neurotrophic factor) ekspresyon seviyelerine etkisinin cinsiyet farkına göre farklı rat stres modellerinde kıyaslanması., 2013 - 2016

AKALIN İ., IRAZ M., KANTER M., KOZAN R., ARTIŞ A. S. , DEMİRCAN B., ÖNCÜL Ş., ALKOÇ O. A. , YILMAZ S. N. , ÇETİNKAYA Z., et al., Project Supported by Higher Education Institutions, İstanbul Medeniyet Üniversitesi Deney Hayvanları ve Deneysel Araştırmalar Merkezi Alt Yapı Projesi, 2013 - 2016

## Activities in Scientific Journals

Medical Science and Discovery, Publication Committee Member, 2014 - 2016

Acıbadem Sağlık Dergisi, Advisory Committee Member, 2010 - 2016

Acıbadem Sağlık Dergisi, Publication Committee Member, 2010 - 2012

## Memberships / Tasks in Scientific Organizations

Member, 2009 - Continues

## Scientific Refereeing

Sensors and Actuators B: Chemical, SCI Journal, November 2015

## Invited Congress and Symposium Activities

International Congress on Biological and Medical Sciences 2018 Life Science and Medicine, Attendee, Niğde, Turkey, 2018

41st FEBS Congress on Molecular and Systems Biology for a Better Life, Attendee, Aydın, Turkey, 2016  
2. Hücre Ölümü Araştırma Teknikleri Teorik Kursu, Attendee, Eskişehir, Turkey, 2012  
7th International Workshop on Biological Effects of Electromagnetic Fields, Attendee, Malta, 2012  
24. Ulusal Biyofizik Kongresi, Attendee, İstanbul, Turkey, 2012  
Membran Yapısı ve Etkileşimleri Sempozyumu, Attendee, İstanbul, Turkey, 2012  
Membran Yapısı ve Etkileşimleri, Invited Speaker, İstanbul, Turkey, 2012  
23. Ulusal Biyofizik Kongresi, Attendee, Edirne, Turkey, 2011  
12th Conference on Methods and Applications of Fluorescence: Spectroscopy, Imaging and Probes, Attendee, Strasbourg, France, 2011  
1. Tıp Eğitim Günleri, Attendee, İstanbul, Turkey, 2011  
Gap'ta 2. Uluslararası Biyofizik Kongresi, Attendee, Diyarbakır, Turkey, 2009  
7th EBSA Congress, Attendee, Genoa, Italy, 2009  
9th Conference on Methods and Applications of Fluorescence: Spectroscopy, Imaging and Probes, Attendee, Lizbon, Portugal, 2005  
International Workshop on « Bioengineering ; Problems and Perspectives, Attendee, İstanbul, Turkey, 2004  
15th National Chemistry Congress, Attendee, Kars, Turkey, 2004

## Citations

Total Citations (WOS):640

h-index (WOS):13