CURRICULUM VITAE

KAAN YILANCIOĞLU

Personal Information:

- *Date of birth: Oct/27/1982, Nationality: Turkish, Army Service: Done
- *PhD, Biological Sciences and Bioengineering, Sabanci University
- *Research interests: Molecular Pharmacology, Biotechnology, Systems Biology,

Bioinformatics, Machine Learning, Molecular Biology and Genetics, Medical Biology,

Cellular Signalling, Microbiology, Biodiversity, Molecular Phylogenetics

*Personal Interests: Sailing, Scuba Diving (2*CMAS Diver), Guitars, Photography, Travel

Education & Experience:

2013-Present, Uskudar University

- * FENS, Vice Dean, 2016-Present
- * Molecular Biology and Genetics, English Program Faculty Member, 2015-Present
- * Bioengineering Program Faculty Member and Erasmus Coordinator, 2015-Present
- * Vocational School of Health Sciences, Vice President, 2014-2015
- * Audiometry Program, Director, 2013-2015
- * Biomedical Instrument Technologies Faculty Member, 2013-2014

2013-Present Co-founder of *SynVera* Medical Research and Development Company, GOSB, Technopark

2008-2014 Sabancı University, Faculty of Engineering and Natural Sciences Biological Sciences and BioengineeringDoctor of Philosophy

2006-2008 Sabancı University, Faculty of Engineering and Natural Sciences Biological Sciences and Bioengineering

Master of Science GPA 3.66/4

2002-2006 Istanbul University, Cerrahpasa Faculty of Medicine Medical Biological Sciences GPA 3.34/4

2001-2002 Istanbul University, Faculty of Engineering Chemical Engineering

2000–2001 Istanbul University, School of Foreign Languages English Preparatory Program

Other Experiences:

- 1. **2015 Harvard University**, Harvard T.H. Chan School of Public Health Laboratory of Systems Pharmacology, Summer Visiting Assist. Prof. Dr.
- 2015 Tufts University, School of Medicine
 Molecular Biology and Microbiology, Summer Visiting Assist. Prof. Dr.
- 3. **2013 University of Toronto**, Donnelly Centre for Cellular and Biomolecular Research, Molecular Genetics and Computer Science, Visiting Scientist

Research Experiences:

2003 Research Assistant

"In vivo Study of Catechine's antioxidant effects in various tissues in wistar rats (esp. kidney, liver, brain) existing Cadmium"

Supervisor: Semra Özdemir, Assist. Prof.

Department of Biophysics Istanbul University Cerrahpasa School of Medicine

2004 Research Assistant

Supervisor Isil Aksan Kurnaz (Associate Prof.)

Yeditepe University Genetics and Bioengineering Department

One of the MAPK signal transduction pathway effectors in cells is the ETS domain transcription factor Elk-1, leading to increased c-fos regulation. The interaction of Elk-1 protein with RSK2 MAPKAP kinase (another MAPK effector) has been shown. This project aimed at pinpointing the region on RSK2 that directly interacts with Elk-1. I created deletion mutants of RSK2 for mammalian expression, and conductimmunoprecipitationswith bacterially-expressed Elk-1 proteins.

2005 Research Assistant

Supervisor Prof. Pavel Hozak, PhD, DSc Department of Cell Ultrastructure and Molecular Biology,

Institute of Experimental Medicine in Prague Czech Rep.

During my internship, I worked on projects involving functional assays of nuclear proteins, especially the newly discovered nuclear myosin 1C, I have been trained in following techniques; Immunogold electron microscopy of thinsections, stereological evaluation of immunogold labellings for clustering and colocalization, confocal fluorescent multicolor imaging, Molecular Cloning and transient expression of tagged fusion proteins, cell and bacterialcultures, protein work: 1D-SDS Page and Western blotting.

2006 3 Months Assistantship in Medical Biochemistry Lab. in Cerrahpasa Faculty of Medicine

2006 6 Months Assistantship in Medical Microbiology Lab. in Cerrahpasa Faculty of Medicine

2006 3 Months Assistantship in Molecular Medicine Dept. in Istanbul Capa Faculty of Medicine

2008 Researcher (Master Thesis)

Pramanicin induces potentially apoptosis in HCT116 colon carcinoma cells: A role for MAPK family in pramanicin induced apoptosis.

Supervisor Prof. Dr. Huveyda Basağa, Department of Biological Sciences and Bioengineering Sabanci University Istanbul/Turkey

2009 Researcher

Induction of Endoplasmic Reticulum (ER) Stress by Pramanicin, Potential Role of CHOP and XBP-1, Crosstalk between MAPK and ER StressSignaling Pathways. Supervisor Prof. Dr. Huveyda Basağa, Department of Biological Sciences and Bioengineering Sabanci University Istanbul/Turkey

2010-2011 Researcher

Genetic Characterization and Biodiversity of Historical Grape Varieties in Anatolia and Genetic Relationships with Selected Anatolian Grape Cultivars Obtained from

Different Regions. Applications of DNA Fingerprinting Methods, SSR-PCR and AFLP Supervisor Prof. Dr. Selim Cetiner, Department of Biological Sciences and Bioengineering Sabanci University Istanbul/Turkey

2010-2011 Researcher

Analysis of Growth and Lipid Accumulation of Green Alga *Scenedesmus obliquus* Cultivated with Different Nitrogen Sources Using Gravimetric and Fluorometric Methods.

Supervisor Prof. Dr. Selim Cetiner, Department of Biological Sciences and Bioengineering Sabanci University Istanbul/Turkey

2013-Summer Visiting Scientist, Canada, Toronto University
Drug Interactions, Prediction of Synergistic Drug Combinations, Effects of
Hydrophobicity and Molecular Weight on Drug Synergy in Model Yeast
Donnelly Centre for Cellular & Biomolecular Research, University of Toronto,
Toronto/Canada

2008-2014 PhD Thesis

Genetic, physiological and biotechnological assessment of microorganisms for renewable and sustainable energy resource production

Supervisor Prof. Dr. Selim Cetiner, Department of Biological Sciences and Bioengineering Sabanci University Istanbul/Turkey

Graduation Projects and Undergraduate Projects Supervisions:

2010-11 Graduation Project Supervisor (ENS492)

Isolation and Culturing of Microalgae from Different Regions of Turkey, Biotin Effects on Growth and Lipid Accumulation of Green Alga *Chlamydomonas reinhardtii*

2010-11 Freshman Project (Proj102)

Collecting, Isolation and Culturing Green Algae for Biodiesel Production

2010-11 Freshman Project (Proj102)

Wine Making Techniques

2010-11 Freshman Project (Proj102)

Surveying Public Perception on Genetically Modified Organisms

2011-12

TUBITAK Project for High school Students; Supervisor

Determination of Optimum Conditions for *Tetraselmis Chuii* for Biofuel Production

Purpose and The Factors for Increasing It's Lipid Content (3th in Ranking)

2011-2012/2012-2013/2013-2014

Prep. Course for Science Of Nature (PreNS Coordinator), 10-18 September 2012 Physics and Biology Experiments for freshmen, Invited Talks (Nanomedicine, Evolution, Microalgae and Biodiesel)

2012-13

TUBITAK Project for High school Students; Supervisor

Comparison of Efficiency of Different Algae Species Cultivated in Wastewater for Potential Removal of Phosphorus and Nitrate and Further Production of Organic Fertilizer (1stin Ranking in Mediterranean Region, MEF EDUCATIONAL INSTITUTIONS 22nd INTERNATIONAL RESEARCH PROJECTS CONTEST 1st in Ranking in Turkey)

2012-2013 Graduation Project; Supervisor (ENS492)

Development of Algal Strains for Biodiesel Production Using Directed Evolution Techniques.

Attendance of Conferences, Symposiums and Workshops:

- 1. Nutrition in Health and Illness Symposium, Istanbul University, Cerrahpasa School of Medicine, 2004
- 2. International Electron Microscopy Congress, TUBITAK, Gebze, 2005
- 3. Gene Therapy Symposium, Yeditepe University Istanbul, 2007

4. The Agricultural Biotechnology and Biosafety Symposium, Sabanci University, TURKEY, 2010 24th September

Contibuted as a member of committee head table

- 5. The Bioinformatics Roadshow Sabanci, TURKEY, 2011
- 6. ZEISS on Your Campus Workshop Series, Workshop on Confocal Microscopy using the LSM 710, Sabancı University SUNUM November, 20th 2012
- 7. Systems Biology of Complex Traits, Sabanci University, 2013
- 8. International Symposium on Advances in Predictive & Personalized Medicine, 2-3 April 2015.
- 9. Modelling Mixtures of Bioactive Compounds Collaboration Meeting at University of Cambridge, England, May 2015.

Courses:

Use of Experimental Animals in Medicine at Cerrahpasa School of Medicine, October 2006, ISTANBUL/TURKEY

Biosafety Training Course 13-15 August, 2013, University of Toronto, CANADA

Use of Experimental Animals at Uskudar University, Biostatistics Instructor, 22 June - 03 July 2015, ISTANBUL/TURKEY

Technical Experiences:

Tissue/Cell Culture Techniques; Mammalian, Plant Tissue/Cell Culture Techniques, Yeast, Bacteria and Algae Cell Culturing Techniques.

Molecular Phylogenetics and Biodiversity; Simple Sequence Repeat (SSR), Random Amplified Polymorphic DNAs (RAPD), Amplified Fragment Lenght Polymorphism (AFLP) Techniques. Ribotyping Techniques using 16S-18S rRNA ITS Genomic Sequence Analyses and Genomic Restriction Site Analysis. Statistics; R, Matlab, Phylip, MVSP, FigTree,

Winboot Softwares for Unweighted Pair Group Method with Arithmetic Mean (UPMGA), Bootstraping, Principal Component Analysis (PCA).

Algal Biotechnology; Lipid Content Analysis; Gravimetric, Fluorometric and Flow-Cytometric Analyses (Nile-Red Staining), Protein, B-Carotene, Chlorophyll Content Analyses. Biomass and Lipid Productivity Analyses. Fluorometric Cell Survival and Oxidative Stress Assays. Bioremediation; ICP-MS-OES, GC-MS

In Vivo Techniques; Care, Experimentation, Injection, Taking Blood and Dissection of Experimental Animals (Rat, Mice, Rabbit and Guinea Pig)

Molecular Biology Techniques; Transformation, Transfection, DNA, Plasmid and Gel Purification and Isolation, Gene Cloning, Mutational Studies (Site-Directed, Deletional Mutagenesis), PCR and Gel Techniques, 1D-SDS Page and Western blotting, Real-Time Quantitavive PCR, Semi Quantitative PCR.

Imaging; Immunogold Electronmicroscopy of Thin Sections, Stereological Evaluation of Immunogold Labellings for Clustering and Colocalization, Confocal-Fluorescent Multicolor Imaging.

Research and Publications:

- Rediscovery of Historical *Vitis vinifera* Varieties from the South Anatolia Region by
 Using Amplified Fragment Length Polymorphism and Simple Sequence Repeat DNA
 Fingerprinting Methods, GENOME, 2013, Published
 Kaan Yilancioglu, Selim Cetiner
- Oxidative stress is a mediator for increased lipid accumulation in a newly isolated Dunaliella salina strain, PLoS ONE, 2014, Published
 Kaan Yilancioglu, Murat Cokol, Inanc Pastirmaci, Batu Erman, Selim Cetiner
- 3. Target-independent prediction of drug synergies using only drug lipophilicity, Journal of Chemical Information and Modeling, 2014, Published
 Kaan Yilancioglu, Cem Meydan, Zohar B. Weinstein, Melike Cokol, Azat Akhmetov, IvanIossifov, Hilal Kazan, Frederick P. Roth, Murat Cokol

 Systematic identification and analysis of suppressive drug interactions, Chemistry & Biology, 2014, Published

Murat Cokol, Zohar B. Weinstein, **Kaan Yilancioglu**, Murat Tasan, Siyang Li, Dilay Cansever, Allison Doak, Beste Mutlu, , Raul Rodriguez-Esteban, Murodzhon Akhmedov, Aysegul Guvenek, Guri Giaever, Ivan Iossifov, Brian Shoichet, Corey Nislow, Frederick P. Roth

A learning Leverage: Peer Instruction, Procedia - Social and Behavioral Sciences,
 2014, Published

Huriye Arikan, Kaan Yilancioglu, Selda Sonusen

- 6. Systems Biology & Computational Neuroscience, The Journal of Neurobehavioral Sciences, 2014, Published
 Kaan Yılancıoğlu
- 7. Cytotoxic effect of extract from Dunaliella salina against SH-SY5Y neuroblastoma cells, General Physiology and Biophysics, 2015, Published
 Belkis Atasever-Arslan, Kaan Yılancıoglu, Maide Gokce Bekaroglu, Selim Cetiner
- 8. Antileukemic Drug Potentials of Essential Oils of Algea Extracts
 Belkis Atasever Arslan, Kaan Yilancioglu, Zeynep Kalkan, Vildan Enisoglu Atalay,
 Hazal Gur, Fatma Busra Isik, Emre Deniz, Batu Erman, Selim Cetiner, ACTA
 PHYSIOLOGICA, 2015, Published
- Biogas production using various carbohydrates in microbial electrolysis cells,
 Biotechnology Letters, 2015 In Progress
 Catal T., Yilancioglu K.
- 10. Heavy Metal Bioadsorbtion and Oxidative Stress Induced Alteration of Lipid Accumulation in Microalgae, 2015, In Progress
 Kaan Yilancioglu, Zuleyha Ozlem Kocabas Ataklı, Yuda Yurum, Selim Cetiner

11. Nitrogen source, an important determinant of fatty acid accumulation and profile in *Scenedesmus obliquus*, 2015, Accepted

Kaan Yilancioglu, Selim Cetiner

12. Screening of New Antileukemic Agents from Essential Oils of Algae Extracts and Computational Modelling of Their Interactions with Intracellular Signalling Nodes, European Jornal of Pharmaceutical Sciences, 2015, Published Belkis Atasever-Arslan, Kaan Yilancioglu, Zeynep Kalkan, Ahmet Can Timucin, Hazal Gür, Fatma Busra Isik, Emre Deniz, Batu Erman & Selim Cetiner

Conreference and Symposium Publications:

 Congress of Medical Biological Sciences and 4. Students Symposium of Biomedical Sciences, 4-5 of January 2005, Cerrahpasa School of Medicine, Istanbul/Turkey

"RNA interference as a gene silencer"

Kaan Yilancioglu

2. EMBO (The European Molecular Biology Organization) Young Scientists Forum Bogazici University 2008

"Apoptosis induced by Pramanicin and its analogs in (HCT116) colon cancer cells; the role of mitochondria and endoplasmic reticulum"

Gizem Karsli^a, *Kaan Yilancioglu*^a, Paul Harrison^b, Ozgur Kutuk^c, Huveyda Basaga^a a Biological Sciences and Bioengineering Program, Sabancı University, 34956 Orhanlı-Tuzla, İstanbul, Turkey.

b Department of Chemistry, McMaster University, Hamilton, ON, L8S 4M1, Canada. c Medical Oncology- Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA 02115, USA.

3. The 20th International Biology Congress, Pamukkale University, TURKEY, 2010

"The Effects of Genotype on Plant Regeneration on the Same Medium After Transformation"

Dilek Tekdal, Tolga Izgu, Kaan Yılancıoglu, Nurten Ukelgi, Yesim Yalcin-Mendi.

4. First International Congress of the Molecular Biology Association of Turkey on 23-24 Nov 2012

"Revealing Historical Vitis vinifera Varieties from South Anatolia Region by Using Combination of AFLP and SSR-PCR DNA Fingerprinting Methods"

Kaan Yilancioglu, Inanc Pastirmaci, Begum Baysan, Selim Cetiner

5. First International Congress of the Molecular Biology Association of Turkey on 23-24 Nov 2012

"Molecular Identification of Newly Isolated Dunaliella species and Application of Flow-cytometric and Epifluorescent Lipid Content Analyses Under Different Cultivations Conditions"

Kaan Yilancioglu, Inanc Pastirmaci, Begum Baysan, Selim Cetiner

6. 9th International Conference on Toxic Cyanobacteria, 11-16 August, 2013, South Africa

"Determination of Genetic Diversity of Microcystis Strains Isolated from Kucukcekmece Lagoon using AFLP DNA Fingerprinting Analysis"

Latife Koker, *Kaan Yılancıoglu*, Reyhan Akcaalan, Selim Çetiner, Meric Albay

7. XXIII International Symposium on Bioelectrochemistry and Bioenergetics, 2015 "Evaluation of Anode Biofilms of Microbial Electrolysis Cells Producing Hydrogen" Tunc Catal, Kaan Yılancıoğlu

8. 2nd International Conference on Computational and Experimental Science and Engineering (Iccesen-2015), 14-19 October 2015, Antalya-Turkey

"Estimation of Nuclear Resonance Fluorescence (NRF) Excitations Photopeaks and Energy Levels in 63-1874 keV Energy Range by Using Artificial Neural Networks (ANN)"

Hüseyin Ozan Tekin, Kaan Yılancıoğlu, Umit Kara, İskender Akkurt

9. 2nd International Conference on Computational and Experimental Science and Engineering (Iccesen-2015), 14-19 October 2015, Antalya-Turkey

"Nitrogen source, an important determinant of fatty acid accumulation and profile in Scenedesmus obliquus"

Kaan Yılancıoğlu, Hüseyin Ozan Tekin

10. 2nd International Conference on Computational and Experimental Science and Engineering (Iccesen-2015), 14-19 October 2015, Antalya-Turkey

"Estimation of Energy Spectrum from Co-60 and Cs-137 by using Artificial Neural Networks (ANN)"

Hüseyin Ozan Tekin, Kaan Yılancıoğlu, İskender Akkurt

11. Munich Neurophysiology Conference Annual Joint Meeting of ECNS / ISNIP / ISBET September 9-13 2015, Munich-Germany

"Comparison of neurofeedback with medical methods for the treatment of children and adolescents with attention deficit and hyperactivity disorder"

H. Unubol, H. Colgecen, K. Yilancioglu

12. Munich Neurophysiology Conference Annual Joint Meeting of ECNS / ISNIP / ISBET September 9-13 2015, Munich-Germany

"Multilayer perceptron neural network approach for classification of schizophrenic and normal subjects using gene expression omnibus dataset"

K. Yilancioglu, G. Arasil, E. Kaplan, S. Gultekin

13. 1st PHARMACOGENOMICS İSTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Cyp2c9 *1/*1 is the dominating genotype in patients with major depression"

14. 1st PHARMACOGENOMICS İSTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Classification of schizophrenia patients by using multilayer perceptron neural network: a data minining approach" **Oral Presentation** – *Kaan Yılancıoğlu*

15. 1st PHARMACOGENOMICS ISTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Determination of cyp2c19 genotype in patients under depression treatment"

16. 1st PHARMACOGENOMICS ISTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Distribution of SLC6a4 l/s polymorphism in patients with depression, and impact of the alleles on optimal dosage for treatment"

17. 1st PHARMACOGENOMICS İSTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Cyp2d6 genetic profile of patients under major depression treatment in a neuropysciatry hospital in istanbul"

18. 1st PHARMACOGENOMICS İSTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Pharmacogenetics in psychiatry, from bedside to bench; how, when and what to apply"

19. 1st PHARMACOGENOMICS ISTANBUL SUMMIT, Increasing the Safety and Effectiveness of Personalized Therapy for Metabolic Disorders November 27-28 2015, Istanbul-Turkey

"Cyp1a2 genotype may interfere in patients with drug medication"

20. 4th International Congress of the Molecular Biology Association of Turkey, November 27-29 2015, Ankara-Turkey

"Cytotoxic Effect and Intracellular Signal Pathway of Momordica Charantia Extracts on SH-SY5Y Human Neuroblastoma Cells"

Other Publications:

- "Antibiyotik Direncine Yeni Çözüm", 2015, http://www.habercaddesi.com/haber/9714-direncli-turler-cogunlukta.html
- "Antibiyotik Direncine Karşı Katran Araştırması", 2015
 http://www.hurriyet.com.tr/antibiyotik-direncine-karsi-katran-arastirmasi-40027664

Teaching Experiences:

- *Biochemistry 101 and Biochemistry 102 (2006-2008, TA)
- * Biochemistry 101 and Biochemistry 102 Laboratory (2006-2008, TA)
- *Plant Tissue Culture Techniques (2009, TA)
- *Science and Nature 102 (Chemistry and Biology 2010-2012, TA)
- *Agricultural Biotechnology (2012, TA)

General Microbiology (Instructor, 2013)

Introduction to Biomedical Instrumentation (Instructor, 2013)

Physiology (Instructor, 2014)

Food Microbiology (Instructor, 2014)

Medical Microbiology (Instructor, 2014)

Medical Biology and Genetics (Instructor, 2014)

*Biochemistry I (Instructor, 2014)

Sterilization Instruments (Instructor, 2014)

- *Biochemistry II (Instructor, 2015)
- *Plant Genetics and Biotechnology (Instructor, 2015)
- *Immunology (Instructor, 2016)

Physical Chemistry (Instructor, 2016)

Pathology (Instructor, 2016)

*Biosensors (Instructor, 2016)

First Aid (Instructor, 2016)

*Given in English

Project Experience:

- Chlorophyceae, Cyanophyceae, Prymnesiophyceae, Eustigmatophyceae ve Bacillariophyceae Ailesine Ait Mikroalglerin Antilösemik İlaç Potansiyellerinin Moleküler ve Mekanistik Temellerinin Araştırılması. TUBITAK Proje No: SBAG-113S251
- 2. Özgün Protein Mikroçip Tasarımı: Moleküler Tanı Amaçlı Biyoteknoloji Uygulaması. **TUBITAK 1001 Proje No: 104S380**

Awards:

Sabanci University M. Sc. Tuition Waiver (2006-2008)

Sabanci University Doctorate Full Scholarship (2008-2012)

TUBITAK-ULAKBIM Yurt Dışı Bilimsel Yayınları Teşvik Ödülü (2013)

Other Work Experiences:

- 1. Medical translation (Eng-Tur), CSA Global Publishing, 2005
- 2.MEDLINE Emergency Call Center, 2006-2007
- 3. High School Biology and ChemistryPrivate Lessons

Social Organizations:

Istanbul Selamicesme Alumni LEO Club Membership , Sabanci University Alumni Society, Medical Biologist Society, Molecular Biology and Genetics Society

Skills:

Computer skills:

Hardware, Office programs, HTML, Bioinformatics; Protein, nucleic acid or composite Databases; RasMol,Chime,Biology WorkBench (SDSC), Medical Databases (PUBMED), R, MATLAB, OriginPro, Sigmaplot, SPSS.

Language skills:

English, Excellent, fluent

Examination Skills;

LES

OSYM - 2006(62.8)

UDS (Universiteler Arası Kurul Yabancı Dil Sınavı) / Language Proficiency Exam

Medical Sciences-2011(95/100)

Tıpta Uzmanlık Sınavı / Medical Residency Exam

OSYM - 2009(61,3)

TOEFL (Test Of English as a Foreign Language)

CBT/TOEFL -*2006*(223)

References:

Prof. Dr. Melek Ozturk ozturkmel@superonline.com

Department of Medical Biology Istanbul University Cerrahpasa School of Medicine Istanbul

Prof. Dr. Selim Cetiner cetiner@sabanciuniv.edu

Department of Biological Sciences and Bioengineering Faculty of Engineering and Natural Sciences Sabancı University, Istanbul

Prof. Dr. Pavel Hozak hozak@biomed.cas.cz

Department of Cell Ultrastucture and Molecular Biology, Institute of Experimental Medicine ,Academy of the Science of Czech Republic, Prague

Prof. Dr. Frederick "Fritz" Roth fritz.roth@utoronto.ca

Donnelly Centre for Cellular & Biomolecular Research, University of Toronto, Canada, Toronto

Web Info: Researchgate, Linkedin, Google Scholar