

## **Assoc. Prof. AHMET CAN TİMUÇİN**

### **Personal Information**

**Email:** Ahmet.Timucin@acibadem.edu.tr

**Web:** <https://avesis.acibadem.edu.tr/Ahmet.Timucin>

### **International Researcher IDs**

ScholarID: U2sH83wAAAAJ

ORCID: 0000-0002-9483-3593

Publons / Web Of Science ResearcherID: ABI-6250-2020

ScopusID: 56800816600

Yoksis Researcher ID: 263934

### **Education**

Post Doctorate, Sabanci University, Graduate School of Engineering and Natural Sciences, Biological Sciences and Bioengineering Program, Turkey 2015 - 2017

Doctorate, Sabanci University, Graduate School of Engineering and Natural Sciences, Biological Sciences and Bioengineering Program, Turkey 2008 - 2015

Postgraduate, Columbia University in the City of New York, College of Physicians and Surgeons, Institute of Human Nutrition, United States Of America 2007 - 2008

Undergraduate, Sabanci University, Faculty of Engineering and Natural Sciences, Biological Sciences and Bioengineering Program, Turkey 2003 - 2007

### **Dissertations**

Doctorate, IDENTIFICATION OF SIRT1 AS A NOVEL REGULATOR OF NFAT5 DEPENDENT ALDOSE REDUCTASE EXPRESSION UNDER OSMOTIC STRESS, Sabanci University, Graduate School of Engineering and Natural Sciences, Biological Sciences and Bioengineering Program, 2015

Postgraduate, Modulation of Cell Death by Aldose Reductase Pathway in Diabetic Hearts, Columbia University in the City of New York, College of Physicians and Surgeons, Institute of Human Nutrition, 2008

### **Research Areas**

Molecular Biochemistry, Structural Biology, Biological Modelling, Molecular Biology of Cancer, Protein Engineering

### **Academic Positions**

Associate Professor, Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Department of Molecular Biology & Genetics, 2022 - Continues

Assistant Professor, Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Department of Molecular Biology & Genetics, 2021 - 2022

## Journal articles indexed in SCI, SSCI, and AHCI

- I. **Experimental and Computational Insights into the Structural Dynamics of the Fc Fragment of IgG1 Subtype from Biosimilar VEGF-Trap**  
Destan E., Turkut E., Aldeniz A., Kang J., Tosha T., Yabashi M., Yilmaz B., Timuçin A. C., Matsuura H., Kawano Y., et al.  
SMALL STRUCTURES, pp.1-14, 2025 (SCI-Expanded)
- II. **Peptide-Based Regulation of TNF- $\alpha$ -Mediated Cytotoxicity**  
TEMUR B. Z., TİMUÇİN V. C., ATİK A. E., KOCAGÖZ Z. T., CAN Ö.  
Biomolecules, vol.15, no.4, 2025 (SCI-Expanded)
- III. **Structure based computational RNA design towards MafA transcriptional repressor implicated in multiple myeloma**  
Akdeniz G. Y., Timuçin A. C.  
JOURNAL OF MOLECULAR GRAPHICS AND MODELLING, vol.132, pp.1-17, 2024 (SCI-Expanded)
- IV. **A rare case of uncharacterized autoinflammatory disease: Patient carrying variations in NLRP3 and TNFRSF1A genes**  
Kılınç Ö. C., Gayibova K., Ozkilinc Onen M., Onat U. İ., Bülbül A., Timuçin A. C., Uğurlu S., Tahir Turanlı E.  
AMERICAN JOURNAL OF MEDICAL GENETICS, PART A, pp.1-9, 2024 (SCI-Expanded)
- V. **Var3PPred: variant prediction based on 3-D structure and sequence analyses of protein-protein interactions on autoinflammatory diseases**  
Bülbül A., TİMUÇİN E., TİMUÇİN A. C., SEZERMAN O. U., TAHİR TURANLI E.  
PeerJ, vol.12, no.5, 2024 (SCI-Expanded)
- VI. **Computational completion of the Aurora interaction region of N-Myc in the Aurora a kinase complex**  
Altiner P., Çınaroğlu S. S., Timuçin A. C., Timucin E.  
SCIENTIFIC REPORTS, vol.13, no.1, 2023 (SCI-Expanded)
- VII. **Detection of a rare variant in PSTPIP1 through three generations in a family with an initial diagnosis of FMF/MKD-overlapping phenotype**  
Özkılınç Önen M., Onat U. İ., Uğurlu S., Timuçin A. C., Öz Arslan D., Everest E., Özdoğan H., Tahir Turanlı E.  
RHEUMATOLOGY, no.9, pp.3188-3196, 2023 (SCI-Expanded)
- VIII. **Modeling and dynamical analysis of the full-length structure of factor XII with zinc.**  
Kılınç E., Can Timucin A. C., Selim Cinaroglu S., Timucin E.  
Journal of molecular modeling, vol.28, no.5, pp.129, 2022 (SCI-Expanded)
- IX. **Toward Compilation of Balanced Protein Stability Data Sets: Flattening the Delta Delta G Curve through Systematic Enrichment**  
Kebabci N., TİMUÇİN A. C., TİMUÇİN E.  
JOURNAL OF CHEMICAL INFORMATION AND MODELING, vol.62, no.5, pp.1345-1355, 2022 (SCI-Expanded)
- X. **Bridging the Bridging Imidazolate in the Bimetallic Center of the Cu/Zn SOD1 and ALS**  
TİMUÇİN A. C., Cinaroglu S. S., SEZERMAN O. U., TİMUÇİN E.  
FRONTIERS IN CHEMISTRY, vol.9, 2021 (SCI-Expanded)
- XI. **Structure based peptide design, molecular dynamics and MM-PBSA studies for targeting C terminal dimerization of NFAT5 DNA binding domain**  
Timucin A. C.  
JOURNAL OF MOLECULAR GRAPHICS & MODELLING, vol.103, 2021 (SCI-Expanded)
- XII. **The sex-dependent anti-depressant-like effects of zeatin in rat behavioral despair model as a candidate A2A receptor ligand**  
Oz P., Timucin A. C., Teomete S., Akpunar F., Tufanc C., Ogur D., Uzbay T.  
NEUROSCIENCE LETTERS, vol.734, 2020 (SCI-Expanded)
- XIII. **Immunotherapy approaches on innate immunity for SARS-Cov-2**  
Arslan B. A., Timucin A. C.  
ACTA VIROLOGICA, vol.64, no.4, pp.389-395, 2020 (SCI-Expanded)
- XIV. **Selective targeting of antiapoptotic BCL-2 proteins in cancer**  
Timucin A. C., Basaga H., Kutuk O.

MEDICINAL RESEARCH REVIEWS, vol.39, no.1, pp.146-175, 2019 (SCI-Expanded)

- XV. **Pro-apoptotic effects of lipid oxidation products: HNE at the crossroads of NF-kappa B pathway and anti-apoptotic Bcl-2**

Timucin A. C., Basaga H.

FREE RADICAL BIOLOGY AND MEDICINE, vol.111, pp.209-218, 2017 (SCI-Expanded)

- XVI. **AMP-Activated Protein Kinase Couples 3-Bromopyruvate-Induced Energy Depletion to Apoptosis via Activation of FoxO3a and Upregulation of Proapoptotic Bcl-2 Proteins**

Bodur C., Karakas B., Timucin A. C., Tezil T., Basaga H.

MOLECULAR CARCINOGENESIS, vol.55, no.11, pp.1584-1597, 2016 (SCI-Expanded)

- XVII. **SIRT6 Is a Positive Regulator of Aldose Reductase Expression in U937 and HeLa cells under Osmotic Stress: In Vitro and In Silico Insights**

Timucin A. C., Basaga H.

PLOS ONE, vol.11, no.8, 2016 (SCI-Expanded)

- XVIII. **Screening of new antileukemic agents from essential oils of algae extracts and computational modeling of their interactions with intracellular signaling nodes**

Ataseyer-Arslan B., Yilancioglu K., Kalkan Z., Timucin A. C., Gur H., Isik F. B., Deniz E., Erman B., Cetiner S.

EUROPEAN JOURNAL OF PHARMACEUTICAL SCIENCES, pp.120-131, 2016 (SCI-Expanded)

- XIX. **SIRT1 contributes to aldose reductase expression through modulating NFAT5 under osmotic stress: In vitro and in silico insights**

Timucin A. C., Bodur C., Basaga H.

CELLULAR SIGNALLING, vol.27, no.11, pp.2160-2172, 2015 (SCI-Expanded)

- XX. **ANTIBODY ARRAY-BASED IMMUNOSENSOR FOR DETECTING CARDIOVASCULAR DISEASE RISK MARKERS**

Timucin C., Gul O., Kutuk O., Basaga H.

JOURNAL OF IMMUNOASSAY & IMMUNOCHEMISTRY, vol.33, no.3, pp.275-290, 2012 (SCI-Expanded)

- XXI. **Identification of biomarkers for the antiangiogenic and antitumour activity of the superoxide dismutase 1 (SOD1) inhibitor tetrathiomolybdate (ATN-224)**

Donate F., Juarez J. C., Burnett M. E., Manuia M. M., Guan X., Shaw D. E., Smith E. L. P., Timucin C., Braunstein M. J., Batuman O. A., et al.

BRITISH JOURNAL OF CANCER, vol.98, no.4, pp.776-783, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Experimental and Computational Insights into the Structural Dynamics of the Fc Fragment of IgG1 Subtype from Biosimilar VEGF-Trap**

Destan E., Turkut E., Aldeniz A., Kang J., Tosha T., Yabashi M., Yilmaz ., Timuçin A. C., Matsuura H., Kawano Y., et al. BIORXIV, no.-, pp.1-28, 2024 (Non Peer-Reviewed Journal)

- II. **Selective cytotoxicity of chemical composition of Spirulina platensis extract in endometrial cells: In vitro and in silico approach**

Atasever Arslan B., Yilancioglu K., Timuçin A. C., Kalkan Z., Kuşoğlu Gültekin S., Çetiner S.

KSU TARIM VE DOGA DERGISI-KSU JOURNAL OF AGRICULTURE AND NATURE, vol.0, 2022 (Peer-Reviewed Journal)

- III. **Towards Compilation of Balanced Protein Stability Datasets: Flattening the  $\Delta\Delta G$  Curve through Systematic Under-sampling**

Timuçin A. C., Timuçin E.

BIORXIV, vol.0, pp.1-31, 2021 (Non Peer-Reviewed Journal)

- IV. **Molecular Dynamics and MM-PBSA Studies for Deciphering Molecular Interactions of Valproic Acid with CYP2C9 Mutants F114L and I207T**

Timuçin A. C.

Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.25, pp.64-73, 2021 (Peer-Reviewed Journal)

- V. **Conserved Amino Acids in HCoV-HKU1 and SARS-Cov2 at RNA-dependent RNA Polymerase (RdRp) Motifs**  
Timuçin A. C.  
Anatolian Journal of Biology , vol.2, pp.17-24, 2021 (Peer-Reviewed Journal)
- VI. **Computational Modeling of Trans-Zeatin as a Novel Target of Adenosine A2A Receptor: Insights into Molecular Interactions**  
Timuçin A. C.  
The Journal of Neurobehavioral Sciences, vol.7, pp.118-129, 2020 (Peer-Reviewed Journal)

## Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Novel Approaches in Rational Peptide Design for Recognition of FABP3 and Myoglobin in Cardiac Biosensors**  
Karadeniz K. B., Şentürk B., Timuçin A. C., Kocagöz Z. T., Camadan E., Can Ö.  
ODTU MEMS Center 3rd BioMEMS and Microfluidic Technologies Workshop, Ankara, Turkey, 10 - 11 June 2024, (Unpublished)
- II. **A rare case of uncharacterised autoinflammatory disease: patient carrying variations in NLRP3 and TNFRSF1A genes**  
Kılınç Ö. C., Gayibova K., Durucan İ., Özkılınç Önen M., Onat U. İ., Bülbül A., Timuçin A. C., Uğurlu S., Tahir Turanlı E.  
European Congress of Rheumatology, Vienna, Austria, 12 - 15 June 2024, (Unpublished)
- III. **Classification of Variants in Systemic Autoinflammatory Diseases using 3D Structures and Protein-protein Interactions**  
Bülbül A., Timuçin E., Timuçin A. C., Sezerman O. U., Tahir Turanlı E.  
American Society of Human Genetics Annual Meeting , Washington, United States Of America, 1 - 05 November 2023, pp.516, (Summary Text)
- IV. **Genetic and Functional Activity Analyses of ADA2 in Patients with Deficiency of Adenosine Deaminase 2**  
Everest E., Ozkilinc Onen M., Demirci T., Timuçin A. C., Sahin S., Kasapcopur O., Tahir Turanlı E.  
American Society of Human Genetics Annual Meeting, Washington, United States Of America, 1 - 05 November 2023, pp.258, (Summary Text)
- V. **Computational Design of RNA Based Modulators Targeting Maf-A protein for Multiple Myolema**  
Yıldırım Akdeniz G., Başağa S. H., Timuçin A. C.  
Intelligent Systems for Molecular Biology/European Conference on Computational Biology 2023, Lyon, France, 23 - 27 July 2023, (Unpublished)
- VI. **Structure based peptide design, molecular dynamics and MM-PBSA studies for targeting transcription factors**  
Timuçin A. C.  
10.Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, İstanbul, Turkey, 17 - 19 December 2021, (Unpublished)
- VII. **Computational design of a peptide targeting homodimerization of BACH2 BTB domain using molecular dynamics and MM-PBSA studies**  
Timuçin A. C.  
4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Ankara, Turkey, 24 - 26 November 2021, pp.1-2, (Summary Text)
- VIII. **Molecular dynamics and MM-PBSA based relative binding free energy prediction studies for identification of novel amino acids and nucleic acids governing the interaction between transcription factor NFAT5 and its target consensus DNA sequence**  
Timuçin A. C.  
10th International Molecular Biology and Biotechnology Congress, İstanbul, Turkey, 4 - 08 October 2021, pp.1, (Summary Text)
- IX. **Early biomarkers for the anti-angiogenic and anti-thmor activity of the superoxide dismutase 1**

### **(SOD1) inhibitor tetrathiomolybdate**

Braunstein M. J., Smith E., Timucin C., Donate F., Juarez J. C., Burnett M., Manuia M., Shaw D. E., Mazar A. P., Batuman O.

49th Annual Meeting of the American-Society-of-Hematology, Georgia, United States Of America, 8 - 11 December 2007, vol.110, (Summary Text)

#### **X. Differential effects of Hsp70 inhibition within the tumor and microenvironment in multiple myeloma.**

Braunstein M. J., Liu N., Klueppelberg U., Scott C., Behrman S., Tamucin C., Walter P., Wipf P., Brodsky J., Batuman O.

48th Annual Meeting of the American-Society-of-Hematology, Florida, United States Of America, 9 - 12 December 2006, vol.108, (Summary Text)

## **Funded Projects**

Timuçin A. C., İsci Ü., Dumoulin F., Timuçin E., TÜBİTAK International Bilateral Joint Cooperation Program Project, Phthalozymes: new artificial metalloenzymes for concomitant photocatalytic hydrogen production and CO2 reduction, 2024 - 2027

Tahir Turanlı E., Onat U. İ., Timuçin A. C., TUBITAK Project, Investigation of functional roles of LAMA5 gene variants identified in a cohort of Turkish multiple sclerosis families on the disease pathophysiology, 2023 - 2026

Timuçin A. C., Gürol İ., Can Ö., Kocagöz Z. T., TUBITAK Project, Detection and monitorization of cardiovascular disease parameter through MEMS structured sensor systems (KARMEMS) , 2022 - 2026

Timuçin A. C., Külâh H., Gürol İ., Can Ö., Kocagöz Z. T., TUBITAK Project, MAESTRO - Micro Medical Technologies Platform, 2022 - 2026

Timuçin A. C., Cuadrado A., TÜBİTAK - AB COST Project, Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases (BenBedPhar), 2021 - 2025

Timuçin A. C., Timuçin E., Başağa S. H., TÜBİTAK - AB COST Project, Rational design of peptides targeting BTB domain homodimerization of BACH2, a nuclear suppressor NRF2 transcription factor: Complementary in silico and in vitro approaches, 2022 - 2024

Timuçin A. C., Timuçin E., Belkaya S., TUBITAK Project, Peptide-based Inhibitor Discovery Targeting the Human IL18:IL18R $\alpha$  Complex, 2022 - 2024

Timuçin A. C., Timuçin E., TUBITAK Project, SEMI-RATIONAL PEPTIDE DESIGN TARGETING AURORA A/N-MYC COMPLEX AND EXPERIMENTAL VALIDATIONS , 2021 - 2023

Timuçin A. C., TUBITAK Project, In silico development of peptide-based inhibitor candidate molecules targeting NFAT5 dimerization domain , 2019 - 2020

Timuçin A. C., Sözer B., TUBITAK Project, In silico peptide design and molecular analyses for inhibiting dimerization of K-RAS, 2019 - 2020

Timuçin A. C., Başağa S. H., TUBITAK Project, RESEARCH AND DEVELOPMENT OF NANOPARTICLE AND PHOTODYNAMIC THERAPY BASED ADVANCED THERANOSTIC APPLICATIONS FOR CANCER , 2016 - 2019

Timuçin A. C., Başağa S. H., TÜBİTAK International Multi-Cooperation Project, Advanced theranostic approach in cancer combining photodynamic therapy and nanoparticles, 2016 - 2019

Timuçin A. C., Project Supported by Higher Education Institutions, Sabancı University Individual Research Fund, 2017 - 2017

## **Metrics**

Publication: 37

Citation (WoS): 210

Citation (Scopus): 255

H-Index (WoS): 7

H-Index (Scopus): 7