

Prof. PEMRA ÖZBEK SARICA

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: A-3594-2016

ScopusID: 21935134300

Yoksis Researcher ID: 37047

Education

Doctorate, Imperial College of Science, Technology and Medicine, Faculty of Engineering, Mechanical Engineering Dept., United Kingdom 2004 - 2008

Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Chemistry Engineering, Turkey 1999 - 2004

Biography

Prof. Dr. Pemra ÖZBEK SARICA was born in 1982, Istanbul. After graduating from Bogazici University, Chemical Engineering Department in 2004, she moved to United Kingdom to pursue her academic career. She completed her PhD in Mechanical Engineering in Imperial College London, 2008. She studied as a postdoc in Bogazici University, Chemical Engineering Department, Polymer Research Center (PRC) between years 2008-2011. In 2011, she started working as an Assist. Prof. in Marmara University, Bioengineering Department. Currently, she is the Principal Investigator of the Computational Biology and Bioinformatics Research Group.

Academic Positions

Associate Professor, Marmara University, Faculty of Engineering, Bioengineering, 2017 - Continues

Assistant Professor, Marmara University, Faculty of Engineering, Bioengineering, 2011 - 2017

Research Assistant, Bogazici University, Faculty Of Engineering, Department Of Chemistry Engineering, 2008 - 2011

Research Assistant, Imperial College of Science, Technology and Medicine, Mühendislik Fakültesi, Makina Mühendisliği, 2004 - 2008

Academic and Administrative Experience

Deputy Head of Department, Marmara University, Faculty of Engineering, Bioengineering, 2019 - 2022
Mevlana Exchange Program Coordinator, Marmara University, Faculty of Engineering, Bioengineering, 2013 - 2020
Erasmus Coordinator, Marmara University, Faculty of Engineering, Bioengineering, 2010 - 2020

Supervised Theses

Özbek Sarıca P., INVESTIGATION OF TYPE 4 PILI ATPASE INHIBITOR USING COMPUTATIONAL TOOLS , Postgraduate, A.Özcan(Student), 2021
Özbek Sarıca P., Development of a Web-Based Tool for Network Analysis of Protein Structure, Postgraduate, R.Murat(Student), 2019
SARIYAR AKBULUT B., ÖZBEK SARICA P., Computational study on the inhibition multidrug resistance efflux pumps, Postgraduate, D.Şentürk(Student), 2019
Özbek Sarıca P., Computational Dynamical Characterization of Human Major Histocompatibility Complex Proteins, Doctorate, O.SERÇİNOĞLU(Student), 2018
Özbek Sarıca P., Computational Investigation of Peptide Binding Affinity and Complex Stability of Major Histocompatibility Complex (MHC), Postgraduate, A.Bunsuz(Student), 2018
Özbek Sarıca P., Computational Investigation of Protein Dynamics Based on Energy Dissipation, Postgraduate, E.Naz(Student), 2017
Özbek Sarıca P., Computational Study On The Effect of pH on the Binding Behaviour of HLA-B Alleles, Postgraduate, Z.Kutlu(Student), 2015
Özbek Sarıca P., Docking Studies in HLA Molecules, Postgraduate, G.ÖZCAN(Student), 2015

Journal articles indexed in SCI, SSCI, and AHCI

- I. **Multi-approach study on diethylhexyl phthalate and monoethylhexyl phthalate binding to lysozyme: In silico, bioactivity and surface plasmon resonance analyses**
Aydoğan Ahabab M., Taştekil I., Pınar E. G., ÖZBEK SARICA P., Türkoğlu E. A.
Toxicology Letters, vol.408, pp.54-64, 2025 (SCI-Expanded)
- II. **Binding Affinity and Interaction Mechanism of Chlorhexidine with Lysozyme: Insights from Surface Plasmon Resonance, Molecular Docking, and Molecular Dynamics Simulations**
Çungur S., Taştekil I., ÖZBEK SARICA P., Türkoğlu E. A.
ChemistrySelect, vol.10, no.7, 2025 (SCI-Expanded)
- III. **Elucidation of the Binding Interaction between β -sitosterol and Lysozyme using Molecular Docking, Molecular Dynamics and Surface Plasmon Resonance Analysis**
Saygı T. K., Pınar E. G., Taştekil I., ÖZBEK SARICA P., TOPÇU G., Türkoğlu E. A.
Chemistry and Biodiversity, vol.22, no.2, 2025 (SCI-Expanded)
- IV. **Antivirulence therapy: type IV pilus as a druggable target for bacterial infections**
Basaran E., Avci F. G., Ozcan A., Kula C., Ben Ali Hassine S., Keskin O., Özbek Sarıca P., Sarıyar Akbulut B.
Medicinal Chemistry Research, vol.34, no.2, pp.285-300, 2025 (SCI-Expanded)
- V. **Surface plasmon resonance, molecular docking, and molecular dynamics simulation studies of lysozyme interaction with tannic acid**
Türkoğlu E. A., Taştekil I., ÖZBEK SARICA P.
Food Science and Nutrition, vol.12, no.10, pp.7392-7404, 2024 (SCI-Expanded)
- VI. **Lung Adenocarcinoma Systems Biomarker and Drug Candidates Identified by Machine Learning, Gene Expression Data, and Integrative Bioinformatics Pipeline**
Soyer S. M., ÖZBEK SARICA P., KASAVİ C.
OMICS A Journal of Integrative Biology, vol.28, no.8, pp.408-420, 2024 (SCI-Expanded)
- VII. **Polymorphism in F pocket affects peptide selection and stability of type 1 diabetes-associated HLA-B39 allotypes.**

Amarajeewa A. W. P., Özcan A., Mukhtiar A., Ren X., Wang Q., Ozbek P., Garstka M. A., Serçinoğlu O.
European journal of immunology, vol.54, no.6, 2024 (SCI-Expanded)

- VIII. **Attenuation of Type IV pili activity by natural products**
Yalkut K., Ben Ali Hassine S., Basaran E., KULA C., Ozcan A., Avci F. G., Keskin O., SARIYAR AKBULUT B., ÖZBEK SARICA P.
Journal of Biomolecular Structure and Dynamics, 2024 (SCI-Expanded)
- IX. **Piperidine-based natural products targeting Type IV pili antivirulence: A computational approach**
Ozcan A., Keskin O., Sariyar Akbulut B., Özbek Sarica P.
JOURNAL OF MOLECULAR GRAPHICS & MODELLING, vol.119, 2023 (SCI-Expanded)
- X. **A review on the mechanistic details of OXA enzymes of ESKAPE pathogens**
Avci F. G., Tastekil I., Jaisi A., ÖZBEK SARICA P., SARIYAR AKBULUT B.
PATHOGENS AND GLOBAL HEALTH, vol.117, no.3, pp.219-234, 2023 (SCI-Expanded)
- XI. **Epistatic effects between amino acid insertions and substitutions mediate toxin-resistance of vertebrate Na⁺, K⁺-ATPases**
Mohammadi S., Özdemir H. I., Özbek Sarica P., Sumbul F., Stiller J., Deng Y., Crawford A. J., Rowland H. M., Storz J. F., Andolfatto P., et al.
MOLECULAR BIOLOGY AND EVOLUTION, vol.1, no.1, pp.100-102, 2022 (SCI-Expanded)
- XII. **How Epstein-Barr virus envelope glycoprotein gp350 tricks the CR2? A molecular dynamics study**
Bingöl E. N., Taştekil I., Yay C., Keskin N., ÖZBEK SARICA P.
Journal of Molecular Graphics and Modelling, vol.114, 2022 (SCI-Expanded)
- XIII. **Assessment of 13 in silico pathogenicity methods on cancer-related variants**
Yazar M., ÖZBEK SARICA P.
Computers in Biology and Medicine, vol.145, 2022 (SCI-Expanded)
- XIV. **Exploring the recognition differences of peptides in TCR-pMHC complex**
Bingol E. N., Özbek Sarica P.
BIOPHYSICAL JOURNAL, vol.121, no.3, 2022 (SCI-Expanded)
- XV. **Hydration modulates oxygen channel residues for oxygenation of cysteine dioxygenase: Perspectives from molecular dynamics simulations**
Tariq M., Özbek Sarica P., Moin S. T.
JOURNAL OF MOLECULAR GRAPHICS & MODELLING, vol.110, 2022 (SCI-Expanded)
- XVI. **Systems biomarkers for papillary thyroid cancer prognosis and treatment through multi-omics networks**
Gulfidan G., Soylu M., Demirel D., Erdonmez H. B. C., Beklen H., ÖZBEK SARICA P., ARÇA K. Y., TURANLI B.
ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, vol.715, 2022 (SCI-Expanded)
- XVII. **Unraveling the Allosteric Communication Mechanisms in T-Cell Receptor-Peptide-Loaded Major Histocompatibility Complex Dynamics Using Molecular Dynamics Simulations: An Approach Based on Dynamic Cross Correlation Maps and Residue Interaction Energy Calculations**
Bingol E. N., Serçinoğlu O., Özbek Sarica P.
JOURNAL OF CHEMICAL INFORMATION AND MODELING, vol.61, no.5, pp.2444-2453, 2021 (SCI-Expanded)
- XVIII. **In Silico Tools and Approaches for the Prediction of Functional and Structural Effects of Single-Nucleotide Polymorphisms on Proteins: An Expert Review**
Yazar M., ÖZBEK SARICA P.
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.25, pp.23-37, 2021 (SCI-Expanded)
- XIX. **Identification of novel inhibitors of the ABC transporter BmrA**
Serçinoğlu O., Senturk D., Altinisik K., Avci F., Frlan R., Tomašič T., Ozbek P., Orelle C., Jault J., Sariyar A.
BIOORGANIC CHEMISTRY, vol.105, 2020 (SCI-Expanded)
- XX. **Revisiting allostery in CREB-binding protein (CBP) using residue-based interaction energy**
Yazar M., Ozbek P.
JOURNAL OF COMPUTER-AIDED MOLECULAR DESIGN, vol.34, no.9, pp.965-974, 2020 (SCI-Expanded)
- XXI. **New Machine Learning Applications to Accelerate Personalized Medicine in Breast Cancer: Rise of the Support Vector Machines**

- Ozer M. E., Sarica P., ARÇA K. Y.
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.24, no.5, pp.241-246, 2020 (SCI-Expanded)
- XXII. **Sequence-structure-function relationships in class I MHC: A local frustration perspective**
Serçinoğlu O., Ozbek P.
PLOS ONE, vol.15, no.5, 2020 (SCI-Expanded)
- XXIII. **Computational investigation of peptide binding stabilities of HLA-B*27 and HLA-B*44 alleles**
Bunsuz A., SERÇİNOĞLU O., Ozbek P.
Computational Biology and Chemistry, vol.84, 2020 (SCI-Expanded)
- XXIV. **Next-Generation Sequencing Identifies BRCA1 and/or BRCA2 Mutations in Women at High Hereditary Risk for Breast Cancer with Shorter Telomere Length**
Peker E., Yenmiş G., Bingöl E., Yüksel Ş., Tokat F., Özbek P., Güllü A., Yakıcıer C., Akkiprik M.
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.24, no.1, pp.5-15, 2020 (SCI-Expanded)
- XXV. **ProSNEx: a web-based application for exploration and analysis of protein structures using network formalism**
Aydıncal R. M., Serçinoğlu O., Özbek Sarica P.
Nucleic Acids Research, vol.1, no.1, 2019 (SCI-Expanded)
- XXVI. **How Do Mutations and Allosteric Inhibitors Modulate Caspase-7 Activity? A Molecular Dynamics Study**
Bingol E. N., Serçinoğlu O., Özbek Sarica P.
Journal Of Biomolecular Structure & Dynamics, vol.37, no.13, pp.3456-3466, 2019 (SCI-Expanded)
- XXVII. **gRINN: a tool for calculation of residue interaction energies and protein energy network analysis of molecular dynamics simulations**
Sercinoglu O., Özbek Sarica P.
NUCLEIC ACIDS RESEARCH, vol.46, 2018 (SCI-Expanded)
- XXVIII. **Computational characterization of residue couplings and micropolymorphism-induced changes in the dynamics of two differentially disease-associated human MHC class-I alleles**
Sercinoglu O., Özbek Sarica P.
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, vol.36, pp.724-740, 2018 (SCI-Expanded)
- XXIX. **A computational docking study on the pH dependence of peptide binding to HLA-B27 sub-types differentially associated with ankylosing spondylitis**
Sercinoglu O., Ozcan G., Kabas Z. K., ÖZBEK SARICA P.
JOURNAL OF COMPUTER-AIDED MOLECULAR DESIGN, vol.30, no.7, pp.569-581, 2016 (SCI-Expanded)
- XXX. **Dynamic characterization of HLA-B*44 Alleles: A comparative molecular dynamics simulation study**
ÖZBEK SARICA P.
COMPUTATIONAL BIOLOGY AND CHEMISTRY, vol.62, pp.12-16, 2016 (SCI-Expanded)
- XXXI. **DynaFace: Discrimination between Obligatory and Non-obligatory Protein-Protein Interactions Based on the Complex's Dynamics**
Soner S., ÖZBEK SARICA P., Garzon J. I., Ben-Tal N., HALİLOĞLU T.
PLOS COMPUTATIONAL BIOLOGY, vol.11, no.10, 2015 (SCI-Expanded)
- XXXII. **Hot Spots in a Network of Functional Sites**
ÖZBEK SARICA P., Soner S., HALİLOĞLU T.
PLOS ONE, vol.8, no.9, 2013 (SCI-Expanded)
- XXXIII. **Community wide assessment of protein interface modeling suggests improvements to design methodology**
Sarel J F., Timothy A W., Strauch E., Corn J. E., Qin S., Zhou H., Mitchell J. C., Omar NA D., Mayuko T., Genki T., et al.
Journal Of Molecular Biology, vol.414, pp.289-302, 2011 (SCI-Expanded)
- XXXIV. **DNABINDPROT fluctuation based predictor of DNA binding residues within a network of interacting residues**
Özbek Sarica P., Soner S., Erman B., Haliloglu T.
Nucleic Acids Research, vol.38, pp.417-423, 2010 (SCI-Expanded)
- XXXV. **Fracture mechanics analysis of arc shaped specimens for pipe grade polymers**

ÖZBEK SARICA P., Argyrakis C., Leever P.
Polymer Testing, vol.28, pp.357-361, 2009 (SCI-Expanded)

- XXXVI. **Uniaxial tensile properties underlying plane stress rapid fracture resistance in polyethylene**
ÖZBEK SARICA P., Leever P.
Polymer Engineering And Science, vol.48, pp.1855-1861, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Differential Interactome Based Drug Repositioning Unraveled Abacavir, Exemestane, Nortriptyline Hydrochloride, and Tolcapone as Potential Therapeutics for Colorectal Cancers**
beklen h., arslan s., Gulfidan G., Turanlı B., ÖZBEK SARICA P., Karademir Yılmaz B., ARĞA K. Y.
Frontiers in Bioinformatics, vol.1, 2021 (Peer-Reviewed Journal)
- II. **HLA Moleküllerinde Peptit Ligandlarının Kompleks Stabilitesine Olan Etkisinin Araştırılması**
Bunsuz A., Serçinoğlu O., Özbek Sarıca P.
International journal of advances in engineering and pure sciences (Online), vol.30, 2018 (Peer-Reviewed Journal)
- III. **Dynamic Characterization of HLA Molecules by GNM**
SERÇİNOĞLU O., ÖZBEK SARICA P.
Dokuz Eylül Üniversitesi Mühendislik Fakültesi Fen ve Mühendislik Dergisi, vol.20, no.59, pp.376-399, 2018 (Peer-Reviewed Journal)
- IV. **Protein dynamics**
ÖZBEK SARICA P., Haliloglu T.
Sigma Mühendislik ve Fen Bilimleri Dergisi, vol.27, pp.161-170, 2009 (Peer-Reviewed Journal)
- V. **Plane stress rapid fracture resistance of pipe grade PE Estimation from tensile drawing data**
ÖZBEK SARICA P., Leever P. S.
ANTEC Conference Proceedings, vol.5, pp.2880-2884, 2007 (Peer-Reviewed Journal)

Books

- I. **MOLEKÜLER DİNAMİK (MD) SİMÜLASYONLARI**
Bingol E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
in: PROTEİN: YAPISI, MÜHENDİSLİĞİ, ETKİLEŞİMLERİ, DİNAMİĞİ VE İLAÇ TASARIMINDAKİ YERİ, Saliha Ece Acuner, Editor, Ankara Nobel Tıp Kitabevleri, İstanbul, pp.237-255, 2021
- II. **In Silico Databases and Tools for Drug Repurposing**
Serçinoğlu O., Özbek Sarıca P.
in: In Silico Drug Design, Kunal Roy, Editor, Elsevier Science, Oxford/Amsterdam , London, pp.703-743, 2019

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **Implications of Machine Learning Approaches in Cancer for Biomarker Discovery: Oversampling and Feature Selection**
Soyer S. M., Özbek Sarıca P., Kasavi C.
5th International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2024), Ankara, Turkey, 26 - 28 June 2024, (Summary Text)
- II. **A drug repurposing study on the inhibition of type IV pili**
Özcan A., Ben Ali Hassine S., KULA C., AVCI F. G., ÖZBEK SARICA P., SARIYAR AKBULUT B.
47th FEBS Congress, Tours, France, 08 July 2023, (Summary Text)
- III. **Screening of FDA-Approved Natural Drugs as Anti-Virulence Agents Against Pseudomonas aeruginosa and Neisseria meningitidis**

Özcan Yöner A., KULA C., AVCI F. G., KESKİN ÖZKAYA Z. Ö., ÖZBEK SARICA P., SARIYAR AKBULUT B.
FEMS Conference on Microbiology, Belgrade, Serbia, 30 June 2022, (Summary Text)

- IV. **Differential Interactome Based Drug Repositioning Unraveled Potential Therapeutics for Colorectal Cancers**
BEKLEN H., Arslan S., GULFİDAN G., TURANLI B., ÖZBEK SARICA P., YILMAZ B., ARĞA K. Y.
3rd EURASIA BIOCHEMICAL APPROACHES & TECHNOLOGIES (EBAT) CONGRESS, Antalya, Turkey, 4 - 07 November 2021, (Summary Text)
- V. **New inhibitors of the BmrA pump identified through virtual screening**
Senturk D., SERÇİNOĞLU O., ALTINIŞIK KAYA F. E., Frlan R., Tomasic T., AVCI F. G., ÖZBEK SARICA P., Orelle C., Jault J. M., SARIYAR AKBULUT B.
MuTaLig COST ACTION CA15135 4th WG meeting, 05 March 2020, (Summary Text)
- VI. **Exploring dynamics of pMHC using accelerated molecular dynamics**
Bingol E. N., ÖZBEK SARICA P.
7th International Bahçeşehir University (BAU) Drug Design Congress, 19 - 21 December 2019, (Summary Text)
- VII. **A Tool for Investigating Protein Signaling Network by Perturbation of External Energy Dissipation**
özer m. e., özdemir h. i., SERÇİNOĞLU O., Bingol E. N., ÖZBEK SARICA P.
7th International Bahçeşehir University (BAU) Drug Design Congress, 19 - 21 December 2019, (Summary Text)
- VIII. **Identification of allostery in CREB-Binding Protein via using pairwise residue interaction energy method**
YAZAR M., ÖZBEK SARICA P.
7th International Bahçeşehir University (BAU) Drug Design Congress, 19 - 21 December 2019, (Summary Text)
- IX. **Ailesel Meme Kanseri Hastalarında BRCA1 ve BRCA2 Genlerinin Yeni Nesil Dizileme Yöntemi ile Dizilenmesi ve Telomer Uzunluğuyla İlişkisi**
PEKER EYÜBOĞLU İ., YENMİŞ G., BİNGÖL E. N., YÜKSEL KILIÇTURGAY Ş., TOKAT F., ÖZBEK SARICA P., GÜLLÜ AMURAN G., YAKICIER M. C., AKKİPRİK M.
Tıbbi Biyoloji ve Genetik kongresi, Turkey, 27 - 30 October 2019, (Summary Text)
- X. **Determination Of Candidate Biomarkers Through Differential Interactome in Colorectal Adenocarcinoma**
BEKLEN H., GULFİDAN G., TURANLI B., ÖZBEK SARICA P., YILMAZ B., ARĞA K. Y.
The 12th International Symposium on Health Informatics and Bioinformatics (HIBIT 2019), İzmir, Turkey, 17 - 19 October 2019, (Summary Text)
- XI. **Comparative dynamical characterization of TCR and MHC molecules upon binding via molecular dynamics simulations**
Bingol E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
ECOMB, 19 - 21 September 2019, (Summary Text)
- XII. **Biophysical Links Between Polymorphism, Stability and Peptide-Binding in the Major Histocompatibility Complex**
SERÇİNOĞLU O., ÖZBEK SARICA P.
6th International BAU-Drug Design Congress, 13 - 15 December 2018, (Summary Text)
- XIII. **Comparative Analysis of Two Binding Sites on The BmrA Efflux Pump**
şentürk karagöz d., SERÇİNOĞLU O., ÖZBEK SARICA P., orelle c., Jault J., SARIYAR AKBULUT B.
6th International BAU-Drug Design Congress, Turkey, 13 - 15 December 2018, (Summary Text)
- XIV. **Protein Networks: Development of a web tool to analyze protein structural topology**
aydıncal r. m., SERÇİNOĞLU O., ÖZBEK SARICA P.
6th International BAU-Drug Design Congress, 13 - 15 December 2018, (Summary Text)
- XV. **Dynamical characterization of TCRpMHC complex: A comparative molecular dynamics study**
Bingol E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
6th International BAU-Drug Design Congress, 13 - 15 December 2018, (Summary Text)
- XVI. **Comparison of allosteric pathway identification of CREB-binding protein using computational methods**
YAZAR M., ÖZBEK SARICA P.

6th International BAU-Drug Design Congress, 13 - 15 December 2018, (Summary Text)

- XVII. VIRTUAL SCREENING FOR INHIBITORS OF THE BmrA PUMP**
Şentürk Karagöz D., SERÇİNOĞLU O., SARIYAR AKBULUT B., ÖZBEK SARICA P., ORELLE C., JAULT J. M.
HIBIT 2018 11TH INTERNATIONAL SYMPOSIUM ON HEALTH INFORMATICS AND BIOINFORMATICS, 25 - 27
October 2018, (Summary Text)
- XVIII. Biophysical basis of MHC Class I polymorphism**
SERÇİNOĞLU O., ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XIX. Development of a web-based tool for network analysis of protein structures**
AYDINKAL R. M., SERÇİNOĞLU O., ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XX. Computational Approaches to the Investigation of Peptide-MHC Complex Stability**
BUNSUZ A., SERÇİNOĞLU O., ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XXI. Comparison of computational allosteric pathway identification methods**
YAZAR M., SERÇİNOĞLU O., ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XXII. Investigation of catalytic loop motions and global dynamics of caspase-7 structures**
BİNGÖL E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XXIII. Understanding the dynamic nature of proteins using molecular dynamics (MD) simulations**
ÖZBEK SARICA P.
International conference on applied mathematics, modeling and Life Sciences, 3 - 05 October 2018, (Summary
Text)
- XXIV. Quantifying Peptide Binding Affinities from Non-equilibrium Work**
SERCİNOĞLU O., ÖZBEK SARICA P.
62nd Annual Meeting of the Biophysical Society, San-Francisco, Costa Rica, 17 - 21 February 2018, vol.114,
(Summary Text)
- XXV. Effect of temperature on the molecular dynamics simulations of HLA-A 02 alleles,**
BUNSUZ A., SERÇİNOĞLU O., ÖZBEK SARICA P.
International Symposium on Chemistry via Computation Applications on Molecular Nanoscience, 30 October 2017,
(Summary Text)
- XXVI. Construction of allosteric residue networks in caspase-7 using energy perturbation responses**
BİNGÖL E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
International Symposium on Chemistry via Computation Applications on Molecular Nanoscience, 30 October 2017,
(Summary Text)
- XXVII. A Software Tool for Parallel Computation and Characterization of Residue Interaction Energies from
Molecular Dynamics Simulations**
SERÇİNOĞLU O., ÖZBEK SARICA P.
International Symposium on Chemistry via Computation Applications on Molecular Nanoscience, 30 October 2017,
(Summary Text)
- XXVIII. Immunogenic Peptide - HLA-A 02:01 Complexes Studied by Comparative Molecular Dynamics
Simulation**
BUNSUZ A., SERÇİNOĞLU O., ÖZBEK SARICA P.
5th International BAU-Drug Design Congress, 19 - 21 October 2017, (Summary Text)
- XXIX. Steered Molecular Dynamics Simulation for Efficient Ranking of Peptide - MHC Class I Binding**

Affinities_

SERÇİNOĞLU O., ÖZBEK SARICA P.

5th International BAU-Drug Design Congress, 19 - 21 October 2017, (Summary Text)

- XXX. **Detection of the allosteric residue network in effector caspase molecules by energy dissipation model**
Bingol E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
5th International BAU-Drug Design Congress, 19 - 21 October 2017, (Summary Text)
- XXXI. **Investigation of Peptide Binding Affinity and Thermal Stability of Human Leukocyte Antigens (HLAs)**
Bunsuz A., SERÇİNOĞLU O., ÖZBEK SARICA P.
19th UIPAB congress and 11th EBSA congress, 16 - 20 July 2017, (Summary Text)
- XXXII. **Allelic dependence of MHC I stability on peptide termini contacts in MD simulations**
SERÇİNOĞLU O., ÖZBEK SARICA P.
19th UIPAB congress and 11th EBSA congress, 16 - 20 July 2017, (Summary Text)
- XXXIII. **Searching a communication pathway between allosteric site and binding region in effector caspase molecules**
Bingöl E. N., SERÇİNOĞLU O., ÖZBEK SARICA P.
BAU Drug Design, 13 - 15 October 2016, (Summary Text)
- XXXIV. **Investigation of Peptide Binding Affinity and Complex Stability of Human Leukocyte Antigens HLAs**
bunsuz a., SERÇİNOĞLU O., ÖZBEK SARICA P.
BAU Drug Design, 12 - 15 October 2016, (Summary Text)
- XXXV. **Exploration of allosteric paths in caspase molecules using energy dissipation**
Bingol E. N., Sercinoglu O., Sarica P.
41st FEBS Congress on Molecular and Systems Biology for a Better Life, Kusadasi, Turkey, 3 - 08 September 2016, vol.283, pp.235, (Summary Text)
- XXXVI. **Allelic modulation of global dynamics of HLA B 27 05 and HLA B 27 09 molecules**
SERÇİNOĞLU O., ÖZBEK SARICA P.
13th Greta Pifat Mrzljak International School of Biophysics, 1 - 10 September 2016, (Summary Text)
- XXXVII. **HLA B 44 Allelerinin Peptid Bağlanma Davranış Mekanizmalarının Hesaplamalı Olarak Araştırılması**
Bunsuz A., SERÇİNOĞLU O., ÖZBEK SARICA P.
Biruni Üniversitesi Bilgisayar Destekli İlaç Tasarımı, Turkey, 16 - 17 May 2016, (Summary Text)
- XXXVIII. **Investigating Dynamics of HLA Molecules by Energy Dissipation**
Bingol E. N., Sercinoglu O., ÖZBEK SARICA P.
60th Annual Meeting of the Biophysical-Society, Los-Angeles, Chile, 27 February - 02 March 2016, vol.110, (Summary Text)
- XXXIX. **Investigation of the binding behaviour of HLA B27 alleles at varying pH Conditions using computational methods**
Sercinoglu O., ÖZBEK SARICA P.
3rd International BAU-Drug Design Congress, Istanbul, 1 - 03 October 2015, (Summary Text)
- XL. **Computational study on the binding behaviour of HLA B44 alleles**
Sercinoglu O., ÖZBEK SARICA P.
3rd International BAU-Drug Design Congress, Istanbul, 1 - 03 October 2015, (Summary Text)
- XLI. **Computational investigation of protein dynamics based on energy dissipation**
Sercinoglu O., ÖZBEK SARICA P.
3rd International BAU-Drug Design Congress, Istanbul, 1 - 03 October 2015, (Summary Text)
- XLII. **Structural characterization of peptide binding to class I MHC proteins using protein energy networks from molecular dynamics simulations**
Sercinoglu O., ÖZBEK SARICA P.
3rd International BAU-Drug Design Congress, Istanbul, 1 - 03 October 2015, (Summary Text)
- XLIII. **Computational study on the binding behaviour of HLA B27 alleles at varying pH conditions**
Ozcan G., Kutlu Kabas Z., Sercinoglu O., ÖZBEK SARICA P.
10th European Biophysics Congress, Dresden, 17 - 22 July 2015, (Summary Text)

- XLIV. **Peptide dependent binding stabilization effect of 2 microglobulin on HLA B27 alleles**
Sercinoglu O., ÖZBEK SARICA P.
10th European Biophysics Congress, Dresden, 17 - 22 July 2015, (Summary Text)
- XLV. **Peptide-dependent binding-stabilization effect of beta 2m on HLA B27 alleles: A computational study**
Sercinoglu O., Ozbek P.
10th European-Biophysical-Societies-Association (EBSA) European Biophysics Congress, Dresden, Germany, 18 - 22 July 2015, vol.44, (Summary Text)
- XLVI. **Computational study on the binding behaviour of HLA-B27 alleles at varying pH conditions**
Ozcan G., Kabas Z. K., Sercinoglu O., Ozbek P.
10th European-Biophysical-Societies-Association (EBSA) European Biophysics Congress, Dresden, Germany, 18 - 22 July 2015, vol.44, (Summary Text)
- XLVII. **Comparative study of functional dynamics in mutant von hippel lindau tumor suppressor protein structures**
Güçlü T. F., ÖZBEK SARICA P., Ozer A. N.
Modeling of Biomolecular Systems Interactions, Dynamics, and Allosteric Bridging Experiments and Computations, Istanbul, Turkey, September 10-14, 2014, 10 - 14 September 2014, pp.92, (Summary Text)
- XLVIII. **Computational investigation of the energy exchange pathways in peptide loaded major histocompatibility complex proteins**
Sercinoglu O., Ozcan G., ÖZBEK SARICA P.
Modeling of Biomolecular Systems Interactions, Dynamics, and Allosteric Bridging Experiments and Computations, 10 - 14 September 2014, (Summary Text)
- XLIX. **An investigation of the effects of model simplification and water box shell size on the molecular dynamics simulations of peptide loaded major histocompatibility complex proteins**
Sercinoglu O., ÖZBEK SARICA P.
Modeling of Biomolecular Systems Interactions, Dynamics, and Allosteric Bridging Experiments and Computations, 10 - 14 September 2014, (Summary Text)
- L. **Comparison of the binding behavior of HLA B alleles related to ankylosing spondylitis disease by computational methods**
Kutlu Kabas Z., Ozcan G., Sercinoglu O., ÖZBEK SARICA P.
Modeling of Biomolecular Systems Interactions, Dynamics, and Allosteric Bridging Experiments and Computations, 10 - 14 September 2014, (Summary Text)
- L.I. **Binding behavior of HLA B alleles related to ankylosing spondylitis AS disease A comparative study by computational methods**
Ozcan G., Kutlu Kabas Z., Sercinoglu O., ÖZBEK SARICA P.
ECCB'xx14, the 13th European Conference on Computational Biology, Strasbourg, 7 - 10 September 2014, (Summary Text)
- L.II. **Computational study on the effect of pH on the binding behaviour of HLA B alleles**
Kutlu Kabas Z., Ozcan G., Sercinoglu O., ÖZBEK SARICA P.
ECCB'xx14, the 13th European Conference on Computational Biology, 7 - 10 September 2014, (Summary Text)
- L.III. **Dynamic Analysis of Mutant von Hippel Lindau Tumor Suppressor Protein structures**
Güçlü T. F., ÖZBEK SARICA P., Ozer A. N.
2nd International BAU-Drug Design Congress, Istanbul, 17 - 19 April 2014, (Summary Text)
- L.IV. **Collective Dynamics provides a measure for biological association**
Soner S., Ovalı Ş. K., ÖZBEK SARICA P., BenTal N., Haliloglu T.
CAPRI 2013 Combine and Conquer Meeting, 17 - 19 April 2013, (Summary Text)
- L.V. **The intrinsic dynamics of partner chains aid in the detection of native complexes amongst docking decoys**
Kaya C., Soner S., ÖZBEK SARICA P., Haliloglu T.
CAPRI 2013 Combine and Conquer Meeting, 17 - 19 April 2013, (Summary Text)
- L.VI. **Dynamics predefine protein binding**
Soner S., ÖZBEK SARICA P., Haliloglu T.

Chemical Physics Congress-IX Izmir, İzmir, Turkey, 14 - 16 October 2010, (Summary Text)

LVII. Dynamics and evolutionary conservation of inter protein interfaces aid in the detection of native complexes amongst docking decoys

ÖZBEK SARICA P., Soner S., Chen N., Kalman M., Erman B., Bental N., Haliloglu T.

CAPRI 4th Evaluation Meeting, 9 - 11 December 2009, (Summary Text)

LVIII. The origins of polyethylenes resistance to rapid plane stress rupture

ÖZBEK SARICA P., Leever P.

5th ESIS TC4 Conference on Fracture of Polymers, Composites and Adhesives, 7 - 11 September 2008, (Summary Text)

LIX. Plane stress rapid fracture resistance of pipe grade PE Estimation from tensile drawing data

ÖZBEK SARICA P., Leever P.

ANTEC Conference Proceedings, 6 - 10 May 2007, (Full Text)

Funded Projects

Özbek Sarıca P., Aksu M. B., Keskin Özkaya Z. Ö., Avcı F. G., Sarıyar Akbulut B., TÜBİTAK Project, Eskape Patojenlerinde Yaygın Bulunan D-Sınıfı Beta-Laktamazlara Karşı Ortak İnhibitörlerin Belirlenmesi, 2023 - 2026

Sarıyar Akbulut B., Sayar N. A., Özbek Sarıca P., TÜBİTAK International Multi-Cooperation Project, Replacing food-competing feedstocks with Methanol, CO₂ and Methylamine for a Sustainable Bioeconomy, 2021 - 2024

Sarıyar Akbulut B., Sayar N. A., Özbek Sarıca P., Kazan D., TÜBİTAK International Bilateral Joint Cooperation Program Project, Rational design of *Corynebacterium glutamicum* for a microbial cell factory to synthesize L-DOPA and bioprocess development for L-DOPA production, 2021 - 2024

Sarıyar Akbulut B., Özbek Sarıca P., Avcı F. G., Keskin Özkaya Z. Ö., TÜBİTAK Project, Inhibition and characterization of the inhibition dynamics of the type 4 pili protein complex, 2020 - 2023

Özbek Sarıca P., Sarıyar Akbulut B., Project Supported by Other Official Institutions, Peptidlerle ilişkili bağışıklık sistemi proteinlerinin çalışma mekanizmalarının aydınlatılması, 2020 - 2022

Arğa K. Y., ÖZBEK SARICA P., TÜBİTAK Project, Kolorektal kanserinde farklılaşan protein-protein etkileşimleri üzerinden ilaç repozisyonu, 2019 - 2020

Özbek Sarıca P., TÜBİTAK Project, Development of a web based tool for protein network investigation, 2019 - 2020

Özbek Sarıca P., Project Supported by Higher Education Institutions, Computational Investigation of Peptide Binding Affinity and Complex Stability of Major Histocompatibility Complex (MHC), 2018 - 2020

Sarıyar Akbulut B., Özbek Sarıca P., Avcı F. G., Project Supported by Higher Education Institutions, Evaluation of the alkaloids of the aporphine family as inhibitors of different efflux pumps using in vitro and in silico methods, 2017 - 2019

Özbek Sarıca P., Project Supported by Higher Education Institutions, Moleküler Dinamik Simülasyon Bazlı Sarsım Yöntemi ile Protein İçi Sinyal İletim Mekanizmasının Karakterizasyonu, 2016 - 2018

Özbek Sarıca P., Project Supported by Higher Education Institutions, Computational Dynamical Characterization of Human Major Histocompatibility Complex Proteins, 2015 - 2018

Özbek Sarıca P., Project Supported by Higher Education Institutions, Dynamic Characterization of Protein-protein Interfaces using Gaussian Network Model, Marmara University Research Fund Project, 2014 - 2015

Özbek Sarıca P., TÜBİTAK Project, Dynamic Characterization of HLA Molecules, 2013 - 2015

Özbek Sarıca P., Project Supported by Higher Education Institutions, Dynamic Characterization of Protein Binding Mechanism, 2012 - 2013

Özbek Sarıca P., Haliloğlu T., TÜBİTAK Project, Proteinlerde Bağlanma Mekanizmasında Yapısal Dinamik, 2009 - 2010

Memberships and Roles in Scientific Organizations

Biophysical Society, Member, 2016 - Continues

Peer Reviews in Scientific Publications

COMPUTATIONAL BIOLOGY AND CHEMISTRY, SCI Journal, November 2019

Metrics

Publication: 105

Citation (WoS): 326

Citation (Scopus): 357

H-Index (WoS): 8

H-Index (Scopus): 9

Congress and Symposium Activities

International conference on applied mathematics, modeling and Life Sciences, Working Group, İstanbul, Turkey, 2018

Biophysical Society 62th Annual Meeting, Working Group, California, United States Of America, 2018

5th International BAU Drug Design Congress, Working Group, İstanbul, Turkey, 2017

International Symposium on Chemistry via Computation Applications on Molecular Nanoscience, Working Group, İstanbul, Turkey, 2017

Biophysical Society 60th Annual Meeting, Working Group, California, United States Of America, 2016

3rd International BAU Drug Design Congress, Working Group, İstanbul, Turkey, 2015

10th European Biophysics Congress, Working Group, Dresden, Germany, 2015

Biophysical Society Thematic Meeting: Modeling of Biomolecular Systems Interactions, Dynamics, and Allostery: Bridging Experiments and Computations, Working Group, İstanbul, Turkey, 2014

Joint TCBG/MMBioS Hands-on Workshop on Computational Biophysics, Working Group, Pennsylvania, United States Of America, 2013

Schrodinger Workshop, "Computational Drug Discovery", Working Group, İstanbul, Turkey, 2012

Three-days HADDOCK workshop, Working Group, İstanbul, Turkey, 2011

Scholarships

TUBITAK-BİDEB 2218 (Turkish National Science and Technology Foundation), TUBITAK, 2009 - 2011

Chevron Phillips Chemical Company, Other International Organizations, 2004 - 2008

Overseas Research Student Awards Scheme (ORSAS), Other International Organizations, 2004 - 2008