

## Prof. BERNA SARIYAR AKBULUT

### Personal Information

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### International Researcher IDs

ScholarID: u50mxflAAAAJ

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### Education Information

Postgraduate, Bogazici University, Faculty Of Engineering, Department Of Chemistry  
Engineering, Turkey 1995 - 1997

Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Chemistry  
Engineering, Turkey 1991 - 1995

### Biography

Dr. Berna Sarıyar Akbulut was born in Istanbul in 1973. After completing her undergraduate study at Boğaziçi University Chemical Engineering Department in 1995, she continued her graduate studies in the same department. She has gained her master's degree in 1997 and her PhD degree in 2003. In 2003, she pursued her post-doc study at Humboldt University in Berlin with a TUBITAK grant. In the same year, Akbulut joined the Marmara University Faculty of Engineering as an Assistant Professor and received the title of associate professor in 2011 and professor in 2016.

A large number of graduate theses have been completed under her supervision on protein engineering, metabolic engineering and understanding of antimicrobial mechanisms.

### Foreign Languages

English, C1 Advanced

German, A2 Elementary

### Dissertations

Doctorate, Experimental and theoretical studies of protein translocation by the sec pathway, Boğaziçi Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2003

Postgraduate, Cloning of thermostable glucose isomerase of thermus thermophilus in escherichia coli, Boğaziçi Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 1997

### Research Areas

Engineering and Technology

## **Academic Titles / Tasks**

Professor, Marmara University, Faculty of Engineering, Bioengineering, 2003 - Continues

## **Courses**

Biochemistry for Bioengineers I, Undergraduate, 2019 - 2020

Metabolic engineering, Doctorate, 2019 - 2020

Biochemistry for bioengineers II, Undergraduate, 2018 - 2019

Protein interactions, Postgraduate, 2018 - 2019

## **Advising Theses**

Sarıyar Akbulut B., Çoklu İlaç Dirençliliği Sağlayan Dışa Atım Pompalarının İnhibisyonları Üzerine Hesapsal Çalışma, Postgraduate, D.ŞENTÜRK(Student), 2019

Sarıyar Akbulut B., SAYAR N. A., Biotransformation studies with Curvularia lunata, Postgraduate, D.YILMAZ(Student), 2019

SARIYAR AKBULUT B., ÖZBEK SARICA P., Computational study on the inhibition multidrug resistance efflux pumps, Postgraduate, D.Şentürk(Student), 2019

SARIYAR AKBULUT B., Evaluation of thymol and carvacrol as efflux pumps inhibitors in staphylococcus aureus, Postgraduate, C.Selin(Student), 2019

Sarıyar Akbulut B., Investigation of aporphine alkaloids for their antimicrobial activities, Doctorate, F.GİZEM(Student), 2018

Sarıyar Akbulut B., Understanding alkaliphilic adaptation of Bacillus marmarensis sp. nov. using omic tools, Postgraduate, F.ECE(Student), 2017

SARIYAR AKBULUT B., Drug design against antimicrobial resistance, Postgraduate, K.BETÜL(Student), 2016

SARIYAR AKBULUT B., Bacterial uptake of antimicrobial peptides, Postgraduate, D.IRVALI(Student), 2016

Sarıyar Akbulut B., MERTOĞLU B., Transcriptional changes in Escherichia coli upon treatment with (-)-roemerine, Postgraduate, D.AYYILDIZ(Student), 2016

Sarıyar Akbulut B., Understanding the response of bacteria to plant origin antimicrobial alkaloid (-)-roemerine using biosystem engineering tools, Doctorate, N.BÜDEYRİ(Student), 2015

Sarıyar Akbulut B., Investigation of bioprocess operational parameters for phenol removal from wastewater discharges by Halomonas sp. AAD12, Postgraduate, B.AYAN(Student), 2013

Sarıyar Akbulut B., SAYAR N. A., Effect of temperature on osmolyte regulation strategy using engineering tools, Postgraduate, H.MANGAOĞLU(Student), 2013

SARIYAR AKBULUT B., Understanding the membrane penetration of antimicrobial peptides, Postgraduate, B.ALAYBEYOĞLU(Student), 2012

SARIYAR AKBULUT B., Effect of simultaneous beta-lactamase inhibitor protein expression on cellular beta-lactamase activity, Postgraduate, K.SİMAY(Student), 2012

SARIYAR AKBULUT B., Beta-lactamase ligand recognition, Postgraduate, D.MENEKŞEDAĞ(Student), 2012

Sarıyar Akbulut B., Evaluation of the antimicrobial activity of berberine, Postgraduate, K.KARAOSMANOĞLU(Student), 2012

SARIYAR AKBULUT B., Beta-lactamase binding to BLIP and BLIP based peptides, Postgraduate, A.DOĞAN(Student), 2011

Sarıyar Akbulut B., Microbial adaptation to stress conditions using an integrative modelling and experimental approach, Postgraduate, G.YILAN(Student), 2011

Sarıyar Akbulut B., Investigation of penetration of inhibitor into cells and their interactions with intracellular proteins/metabolites, Postgraduate, G.BULDUM(Student), 2011

SARIYAR AKBULUT B., TEM-1  $\beta$ -lactamase activity in the presence of BLIP in cellular environments, Postgraduate, C.CEYLAN(Student), 2010

SARIYAR AKBULUT B., Investigation of in-vivo inhibition of  $\beta$ -lactamase by  $\beta$ -lactamase inhibitor protein, Postgraduate, A.EZGİ(Student), 2010  
SARIYAR AKBULUT B., Akbulut B., Investigation of peptide inhibitor binding to  $\beta$ -Lactamamase, Postgraduate, N.BÜDEYRİ(Student), 2009  
Sariyar Akbulut B., Investigation of peptide inhibitor binding to  $\beta$ -lactamase, Postgraduate, N.BÜDEYRİ(Student), 2009

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **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)
- II. **A two-step purification platform for efficient removal of Fab-related impurities: A case study for Ranibizumab**  
Tatlı O., Öz Y., Dingiloglu B., Yalcinkaya D., Basturk E., Korkmaz M., Akbulut L., Hatipoglu D., Kirmacoglu C., Akgun B., et al.  
Heliyon, vol.9, no.11, 2023 (SCI-Expanded)
- III. **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)
- IV. **Metabolic engineering of Corynebacterium glutamicum for L-tyrosine production from glucose and xylose**  
Kurpejović E., Burgardt A., Bastem G. M., Junker N., Wendisch V. F., SARIYAR AKBULUT B.  
Journal of Biotechnology, vol.363, pp.8-16, 2023 (SCI-Expanded)
- V. **Valorization of hazelnut husk as a carbon source for L-DOPA production with Corynebacterium glutamicum**  
Pakalın B., Kurpejović E., Bastem G. M., SAYAR N. A., Wendisch V. F., Akbulut B.  
Biochemical Engineering Journal, vol.190, 2023 (SCI-Expanded)
- VI. **A review on the mechanistic details of OXA enzymes of ESKEAPE 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)
- VII. **Can DapC be the missing aminotransferease in the arogenate route of L-tyrosine biosynthesis in Corynebacterium glutamicum?**  
ALTINIŞIK KAYA F. E., Kurpejovic E., Burgardt A., Wendisch V. F., SARIYAR AKBULUT B.  
FEBS OPEN BIO, vol.12, pp.180-181, 2022 (SCI-Expanded)
- VIII. **Curcumin Displays Enhanced Solubility and Antibacterial Activities When Complexed with the Cell Penetrating Peptide pVEC**  
Koleoglu E., Acar T., DERMAN S., SARIYAR AKBULUT B.  
INTERNATIONAL JOURNAL OF PEPTIDE RESEARCH AND THERAPEUTICS, vol.28, no.4, 2022 (SCI-Expanded)
- IX. **Carvacrol Enhances the Antimicrobial Potency of Berberine in Bacillus subtilis**  
Atas B., Aksoy C. S., Avci F. G., SAYAR N. A., Ulgen K., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.  
CURRENT MICROBIOLOGY, vol.79, no.5, 2022 (SCI-Expanded)
- X. **Tyrosinase-based production of L-DOPA by Corynebacterium glutamicum**  
Kurpejovic E., Wendisch V. F., SARIYAR AKBULUT B.  
APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, vol.105, no.24, pp.9103-9111, 2021 (SCI-Expanded)
- XI. **Live Cell Imaging of Peptide Uptake Using a Microfluidic Platform**  
Yuce M., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B., Ulgen K.  
INTERNATIONAL JOURNAL OF PEPTIDE RESEARCH AND THERAPEUTICS, vol.27, pp.2003-2013, 2021 (SCI-Expanded)
- XII. **Potentiating the activity of berberine for Staphylococcus aureus in a combinatorial treatment with**

- thymol**  
Aksoy C. S., Avci F. G., Ugurel O. M., Atas B., SAYAR N. A., Akbulut B.  
MICROBIAL PATHOGENESIS, vol.149, 2020 (SCI-Expanded)
- XIII. **Identification of novel inhibitors of the ABC transporter BmrA**  
Serçinoğlu O., Senturk D., Altiniskik K., Avci F., Frilan R., Tomašić T., Ozbek P., Orelle C., Jault J., Sariyar A.  
BIOORGANIC CHEMISTRY, vol.105, 2020 (SCI-Expanded)
- XIV. **Repurposing bioactive aporphine alkaloids as efflux pump inhibitors**  
Avci F. G., Atas B., Aksoy C. S., Kurpejovic E., Toplan G. G., GÜRER Ç., Guillerminet M., Orelle C., Jault J., Akbulut B.  
FITOTERAPIA, vol.139, 2019 (SCI-Expanded)
- XV. **Techno-economic analysis of caffeine and catechins production from black tea waste**  
SAYAR N. A., DURMAZ ŞAM S., PİNAR O., Serper D., SARIYAR AKBULUT B., KAZAN D., SAYAR A. A.  
Food And Bioproducts Processing, vol.118, pp.1-12, 2019 (SCI-Expanded)
- XVI. **A method for the quantitative determination of glycerophospholipid regioisomers by UPLC-ESI-MS/MS**  
Wozny K., Lehmann W. D., Wozny M., SARIYAR AKBULUT B., Bruegger B.  
ANALYTICAL AND BIOANALYTICAL CHEMISTRY, vol.411, no.4, pp.915-924, 2019 (SCI-Expanded)
- XVII. **What Are the Multi-Omics Mechanisms for Adaptation by Microorganisms to High Alkalinity? A Transcriptomic and Proteomic Study of a Bacillus Strain with Industrial Potential**  
ALTINIŞIK KAYA F. E., Avci F. G., SAYAR N. A., KAZAN D., SAYAR A. A., SARIYAR AKBULUT B.  
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.22, no.11, pp.717-732, 2018 (SCI-Expanded)
- XVIII. **Retro-techno-economic evaluation of acetic acid production using cotton stalk as feedstock**  
SAYAR N. A., KAZAN D., PİNAR O., SARIYAR AKBULUT B., SAYAR A. A.  
JOURNAL OF MATERIAL CYCLES AND WASTE MANAGEMENT, vol.20, no.4, pp.2077-2088, 2018 (SCI-Expanded)
- XIX. **Targeting a hidden site on class A beta-lactamases**  
Avci F. G., ALTINIŞIK KAYA F. E., Karacan I., Karagoz D. S., Ersahin S., Eren A., SAYAR N. A., Ulu D. V., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.  
JOURNAL OF MOLECULAR GRAPHICS & MODELLING, vol.84, pp.125-133, 2018 (SCI-Expanded)
- XX. **Membrane Active Peptides and Their Biophysical Characterization**  
Avci F. G., SARIYAR AKBULUT B., ÖZKIRIMLI ÖLMEZ E.  
BIOMOLECULES, vol.8, no.3, 2018 (SCI-Expanded)
- XXI. **pVEC hydrophobic N-terminus is critical for antibacterial activity**  
ALAYBEYOĞLU B., SARIYAR AKBULUT B., ÖZKIRIMLI ÖLMEZ E.  
Journal Of Peptide Science, vol.24, pp.3083, 2018 (SCI-Expanded)
- XXII. **An OMIC approach to elaborate the antibacterial mechanisms of different alkaloids**  
Avci F. G., SAYAR N. A., Akbulut B.  
PHYTOCHEMISTRY, vol.149, pp.123-131, 2018 (SCI-Expanded)
- XXIII. **Transcriptomic analysis displays the effect of (-)-roemerine on the motility and nutrient uptake in Escherichia coli**  
Ayyildiz D., ARĞA K. Y., Avci F. G., ALTINIŞIK KAYA F. E., Gurer C., Toplan G. G., KAZAN D., Wozny K., Bruegger B., MERTOĞLU B., et al.  
CURRENT GENETICS, vol.63, no.4, pp.709-722, 2017 (SCI-Expanded)
- XXIV. **Response of Escherichia coli to Prolonged Berberine Exposure**  
Gokgoz N. B., Avci F. G., Yonetek K. K., Alaybeyoglu B., ÖZKIRIMLI ÖLMEZ E., SAYAR N. A., KAZAN D., SARIYAR AKBULUT B.  
MICROBIAL DRUG RESISTANCE, vol.23, no.5, pp.531-544, 2017 (SCI-Expanded)
- XXV. **The effect of a beta-lactamase inhibitor peptide on bacterial membrane structure and integrity: a comparative study**  
Alaybeyoglu B., ULUOCAK B. B., SARIYAR AKBULUT B., ÖZKIRIMLI ÖLMEZ E.  
JOURNAL OF PEPTIDE SCIENCE, vol.23, no.5, pp.374-383, 2017 (SCI-Expanded)
- XXVI. **An evolutionarily conserved allosteric site modulates beta-lactamase activity**  
Avci F. G., ALTINIŞIK KAYA F. E., Vardar Ulu D., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.

- JOURNAL OF ENZYME INHIBITION AND MEDICINAL CHEMISTRY, vol.31, pp.33-40, 2016 (SCI-Expanded)
- XXVII. Insights into membrane translocation of the cell-penetrating peptide pVEC from molecular dynamics calculations  
Alaybeyoglu B., SARIYAR AKBULUT B., ÖZKIRIMLI ÖLMEZ E.  
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, vol.34, no.11, pp.2387-2398, 2016 (SCI-Expanded)
- XXVIII. Proteomics Evidence for the Activity of the Putative Antibacterial Plant Alkaloid (-)-Roemerine: Mainstreaming Omics-Guided Drug Discovery  
Gokgoz N. B., SARIYAR AKBULUT B.  
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.19, no.8, pp.478-489, 2015 (SCI-Expanded)
- XXIX. A novel chimeric peptide with antimicrobial activity  
Alaybeyoglu B., SARIYAR AKBULUT B., ÖZKIRIMLI ÖLMEZ E.  
JOURNAL OF PEPTIDE SCIENCE, vol.21, no.4, pp.294-301, 2015 (SCI-Expanded)
- XXX. Investigation of the in vivo interaction between beta-lactamase and its inhibitor protein  
Budeyri Gokgoz N., Yalaz S., Avci N. G., BULDUM G., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.  
TURKISH JOURNAL OF BIOLOGY, vol.39, no.3, pp.485-492, 2015 (SCI-Expanded)
- XXXI. The importance of a conserved residue of the H10 helix in beta-lactamase  
Avci F. G., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.  
NEW BIOTECHNOLOGY, vol.31, 2014 (SCI-Expanded)
- XXXII. Assessment of Berberine as a Multi-target Antimicrobial: A Multi-omics Study for Drug Discovery and Repositioning  
Karaosmanoglu K., SAYAR N. A., KURNAZ I., SARIYAR AKBULUT B.  
OMICS-A JOURNAL OF INTEGRATIVE BIOLOGY, vol.18, no.1, pp.42-53, 2014 (SCI-Expanded)
- XXXIII. Production of industrial enzymes for feed industry  
Sogut M. S., Ozturk N. C., Ozturk H. U., Pinar O., Ipek F. M., Cayir E., Gokce A., Karasu D., Ozturk D. C., Ozturk Y., et al.  
NEW BIOTECHNOLOGY, vol.29, 2012 (SCI-Expanded)
- XXXIV. Purification and characterization of a thermo and acid-stable endo-1,3-1,4-beta-glucanase from *Bacillus amyliquefaciens* YMNg47  
DUMAN Y., KORKMAZ GÜVENMEZ H., ARIKAN B., DİNÇER S., Denizci A. A., SARIYAR AKBULUT B., KAZAN D., Erarslan A.  
NEW BIOTECHNOLOGY, vol.29, 2012 (SCI-Expanded)
- XXXV. Adaptive changes in the lipid distribution of a moderately halophilic microorganism under salt stress  
Ozturk H. U., Ozturk N. C., Poli A., Nicolaus B., Ayan B., Denizci A. A., Utkan G., SARIYAR AKBULUT B., KAZAN D.  
NEW BIOTECHNOLOGY, vol.29, 2012 (SCI-Expanded)
- XXXVI. Osmoadaptation of a moderately halophilic microorganisms under cold stress  
Ayan B., SARIYAR AKBULUT B., Poli A., Ozturk U., Ozturk N. C., Denizci A. A., Utkan G., KAZAN D.  
NEW BIOTECHNOLOGY, vol.29, 2012 (SCI-Expanded)
- XXXVII. Interplay of adaptive capabilities of *Halomonas* sp AAD12 under salt stress  
Ceylan S., Yilan G., Sariyar Akbulut B., Poli A., Kazan D.  
JOURNAL OF BIOSCIENCE AND BIOENGINEERING, vol.114, pp.45-52, 2012 (SCI-Expanded)
- XXXVIII. Thermostable alpha-amylase from moderately halophilic *Halomonas* sp AAD21  
Uzyol K. S., SARIYAR AKBULUT B., Denizci A. A., KAZAN D.  
TURKISH JOURNAL OF BIOLOGY, vol.36, no.3, pp.327-338, 2012 (SCI-Expanded)
- XXXIX. Proteomic insight into phenolic adaptation of a moderately halophilic *Halomonas* sp strain AAD12  
Ceylan S., SARIYAR AKBULUT B., Denizci A. A., Kazan D.  
CANADIAN JOURNAL OF MICROBIOLOGY, vol.57, no.4, pp.295-302, 2011 (SCI-Expanded)
- XL. Proteomic response of *Escherichia coli* to the alkaloid extract of *Papaver polychaetum*  
Ozbalcı C., Ünsal C., KAZAN D., SARIYAR AKBULUT B.  
ANNALS OF MICROBIOLOGY, vol.60, no.4, pp.709-717, 2010 (SCI-Expanded)
- XLI. Cellular distribution of activity for three enzymes with maltose binding protein as fusion partner and the structural implications

- Utkur O. F., SARIYAR AKBULUT B., Hortacsu A.  
TURKISH JOURNAL OF CHEMISTRY, vol.34, no.1, pp.1-13, 2010 (SCI-Expanded)
- XLII. Dynamic Analysis of Beta-lactamase Ligand Recognition**  
Kanlikilicer P., Budeyri N., SARIYAR AKBULUT B., Hortacsu A., ÖZKIRIMLI ÖLMEZ E.  
BIOPHYSICAL JOURNAL, vol.96, no.3, 2009 (SCI-Expanded)
- XLIII. Discriminant Function Analysis Based on Principal ComponentsforRapid Discrimination of Metabolic Capabilities of New Isolates**  
SARIYAR AKBULUT B.  
Chem. Biochem. Eng. Q., vol.24, pp.119-127, 2009 (SCI-Expanded)
- XLIV. Rapid differentiation of new isolates with MALDI TOF mass spectrometry via discriminant function analysis based on principal components**  
SARIYAR AKBULUT B.  
Korean J. Chem. Eng., vol.26, pp.1645-1651, 2009 (SCI-Expanded)
- XLV. Preliminary phenotypic characterization of newly isolated halophilic microorganisms by footprinting: a rapid metabolome analysis**  
Sariyar-Akbulut B., Salman-Dilgimen A., Ceylan S., Perk S., Denizci A. A., Kazan D.  
ARCHIVES OF MICROBIOLOGY, vol.189, no.1, pp.19-26, 2008 (SCI-Expanded)
- XLVI. Monte Carlo sampling and principal component analysis of flux distributions yield topological and modular information on metabolic networks**  
Sariyar B., Perk S., Akman U., Hortacsu A.  
JOURNAL OF THEORETICAL BIOLOGY, vol.242, no.2, pp.389-400, 2006 (SCI-Expanded)
- XLVII. Metabolic flux analysis of recombinant protein overproduction in Escherichia coli**  
Özkan P., SARIYAR AKBULUT B., Ütkür Ö., AKMAN Ş. U., Hortacsu A.  
Biochemical Engineering Journal, vol.22, pp.167-195, 2005 (SCI-Expanded)
- XLVIII. Expression and translocation of glucose isomerase as a fusion protein in E coli**  
SARIYAR AKBULUT B., Özkan P., Kirdar B., Hortacsu A.  
Enzyme And Microbial Technology, vol.35, pp.105-112, 2004 (SCI-Expanded)
- XLIX. Mathematical modelling of Sec pathway mechanism in Escherichia coli a case study for periplasmic translocation of maltose binding protein glucose isomerase fusion protein**  
SARIYAR AKBULUT B., Hortaçsu A.  
Chemical Engineering Science, vol.59, pp.1027-1038, 2004 (SCI-Expanded)
- L. Metabolic Engineering through Cofactor Manipulation and Its Effects on Metabolic Flux Redistribution in Escherichia coli**  
Ka Y. S., George N B., Susana J B., Ravi V V., YeaTyng Y., Horton E., Fred B R., SARIYAR AKBULUT B., Kimathi B.  
Metabolic Engineering, vol.4, pp.182-192, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Curvularia lunata: A fungus for possible berberine transformation**  
Yilmaz D., AVCI F. G., SARIYAR AKBULUT B.  
International Journal of Secondary Metabolite, vol.9, no.1, pp.66-73, 2022 (Scopus)
- II. **Moderately Halophilic Bacterium Halomonas. sp. AAD12: A promising candidate as a Hydroxyectoine Producer**  
Öztürk H. Ü., Sariyar Akbulut B., Ayan B., Poli A., Denizci A. A., Utakan G., Nicolaus B., Kazan D.  
J Microb Biochem Technol, vol.7, pp.262-268, 2015 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Antibacterial and antifungal activities of isoquinoline alkaloids of the Papaveraceae and**

**Fumariaceae families and their implications in structure–activity relationships**

AVCI F. G., ATAŞ B., GÜLSOY TOPLAN G., GURER Ç., SARIYAR AKBULUT B.

in: Studies in Natural Products Chemistry, Atta-ur-Rahman, Editor, Elsevier, pp.87-118, 2021

**II. Antibiyotik Üretimi**

Avcı F. G., Sayar N. A., Sariyar Akbulut B.

in: Fermente Ürünler Teknolojisi ve Mikrobiyolojisi, Erkmen, Osman; Erten, Hüseyin, Sağlam, Hidayet, Editor, Nobel Akademik Yayıncılık, Ankara, pp.721-738, 2020

**III. Protein İzolasyonu ve Analizi**

Sariyar Akbulut B., Kazan D.

in: Moleküller Uroloji, Türkeliü L.N., Özer, AÇ, Narter, F, Editor, Pelin Offset, Ankara, pp.583-597, 2012

**IV. Protein-Peptide Interactions Revolutionize Drug Development**

Sariyar Akbulut B., Özkırımlı Ölmez E.

in: Binding Protein, Ktob Abdelmohsen, Editor, InTech, Rijeka, pp.49-72, 2012

**Refereed Congress / Symposium Publications in Proceedings**

**I. New inhibitors of the BmrA pump identified through virtual screening**

Sentürk D., SERÇİNOĞLU O., ALTINIŞIK KAYA F. E., Frilan 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

**II. Understanding the metabolic reprogramming behind alkaliphilic adaptation in *Bacillus marmarensis* through a multi-omics data integration strategy**

Altınışık F. E., Arga K. Y., Kazan D., Sariyar Akbulut B.

44th FEBS Congress: From molecules to living systems, Krakow, Poland, 6 - 11 July 2019

**III. 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

**IV. 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

**V. MOTILITY STUDIES BY USING MICROFLUIDIC TECHNOLOGY**

YÜCE M., ÜLGEN Ş. K., ÖZKIRIMLI ÖLMEZ E., SARIYAR AKBULUT B.

5TH BAU DRUG DESIGN CONGRESS, İstanbul, Turkey, 19 - 21 October 2017

**VI. Biotransformation of Different Molecules by Curvularia lunata**

YILMAZ D., SAYAR A. A., SARIYAR AKBULUT B.

BioMicroWorld 2017 : VII International Conference on Environmental, Industrial and Applied Microbiology,

Madrid, Spain, 18 - 20 October 2017, vol.1, pp.1

**VII. Evaluation of active natural products as bacterial efflux pump inhibitors**

SARIYAR AKBULUT B., ATAŞ B., AKSOY S., AVCI F. G., SAYAR A. A.

EpiChemBio (CM1406) and MuTaLig COST (CA15135) actions joint meeting, Porto, Portugal, 22 - 24 September 2017

**VIII. Optimisation of extracellular lipase production by *Cryptococcus diffluens* D44.**

KOCA A., DURMAZ ŞAM S., SARIYAR AKBULUT B.

7th Congress of European Microbiologists (FEMS 2017), Valensiya, Spain, 9 - 13 July 2017

**IX. Optimisation of Extracellular Lipase Production by *Cryptococcus diffluens* D44**

KOCA A., Durmaz Sam S., SARIYAR AKBULUT B.

FEMS Kongresi, 9 - 13 July 2017

**X. Adaptation of *B. marmarensis* Sp Nov To Extreme Alkaline Conditions**

Altinisik F. E., KAZAN D., SARIYAR AKBULUT B.

- 7th Congress of European Microbiologists (FEMS), 9 - 13 July 2017
- XI. **Roemerine: A New Multidrug Resistance Pump Inhibitor?**  
AVCI F. G., Guillerminet M., Orelle C., Jault J., SARIYAR AKBULUT B.  
FEMS Kongresi, Valencia, Spain, 9 - 13 July 2017
- XII. **Antimicrobial activity of an inhibitor peptide and its effects on bacterial membrane structure and integrity**  
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- XIX. **Investigation of the proteome profile of alkaliphilic *B. marmarensis* sp nov under different pH conditions**  
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- XXXI. Proteomics in industrial biotechnology  
Ceylan S., Ozbalci C., SARIYAR AKBULUT B., KAZAN D.  
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- XXXII. Analysis of the Osmolyte Strategy of the Moderately Halophilic *Halomonas* sp AAD12  
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- XXXIII. Understanding of Microbial Adaptation to High Salt Concentrations  
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- XXXIV. DYNAMIC ANALYSIS OF beta LACTAMASE LIGAND INTERACTION  
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## Supported Projects

- Sariyar Akbulut B., Sayar N. A., Özbek Sarica 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
- Sariyar Akbulut B., Sayar N. A., Özbek Sarica P., TÜBİTAK International Multi-Cooperation Project, Replacing food-competing feedstocks with Methanol, CO<sub>2</sub> and Methylamine for a Sustainable Bioeconomy, 2021 - 2024
- Sariyar Akbulut B., Özbek Sarica P., Avci F. G., Keskin Özkaia Z. Ö., TUBITAK Project, Inhibition and characterization of the inhibition dynamics of the type 4 pili protein complex, 2020 - 2023
- Özbek Sarica P., Sariyar Akbulut B., Project Supported by Other Official Institutions, Peptidlerle ilişkili bağışıklık sistemi proteinlerinin çalışma mekanizmalarının aydınlatılması, 2020 - 2022
- Sariyar Akbulut B., TUBITAK Project, Determination of the hidden pockets in beta-lactamase for allosteric regulation using correlated amino acids , 2019 - 2020
- Sariyar Akbulut B., Project Supported by Higher Education Institutions, Evaluation of thymol and carvacrol as efflux pumps inhibitors for *Staphylococcus aureus*, 2018 - 2020
- Kazan D., Sariyar Akbulut B., Pinar O., TUBITAK Project, Biosimilars Ranibizumab: Its domestic development and production, 2016 - 2020
- Sariyar Akbulut B., Özbek Sarica P., Avci 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
- Sariyar Akbulut B., Sayar N. A., TUBITAK Project, L-DOPA production in *Corynebacterium glutamicum* using a metabolic engineering approach, 2017 - 2018

Sarıyar Akbulut B., Özkırımlı Ölmez E., TUBITAK Project, Biophysical characterization of the intracellular localization and cellular transport of inhibitor/antimicrobial peptides, 2014 - 2017

Sarıyar Akbulut B., Sayar N. A., Project Supported by Higher Education Institutions, Determination of intracellular targets of different alkaloids with antimicrobial properties by real-time polymerase chain reaction and microarray technologies , 2014 - 2017

Sarıyar Akbulut B., Kazan D., Sayar N. A., TÜBİTAK International Bilateral Joint Cooperation Program Project, Systems Biology Approach for Integrative OMICs Data Analysis to Investigate the Action of Antimicrobial Agents, 2014 - 2017

Sarıyar Akbulut B., TUBITAK Project, Investigation of the effect of the allosteric site of  $\beta$ -lactamase for ligand recognition and binding, 2013 - 2014

Sarıyar Akbulut B., Kazan D., TUBITAK Project, Extremophiles as a source of natural products for biotechnological applications: Investigation of their osmoregulation strategies using Engineering Principles, 2010 - 2012

Sarıyar Akbulut B., Özkırımlı Ölmez E., TUBITAK Project, Investigation of the cell-uptake and in-vivo inhibition potential of inhibitory peptides using computational and experimental methods, 2009 - 2012

Sarıyar Akbulut B., Mandacı S., Pınar O., Kazan D., TUBITAK Project, Production of Industrial Enzymes For Feed Industry, 2008 - 2012

Sarıyar Akbulut B., TUBITAK Project, The analysis of metabolic capabilities under stress conditions using biosystems engineering principles, 2009 - 2011

Sarıyar Akbulut B., Özkırımlı Ölmez E., TUBITAK Project, Peptide based inhibitor design against beta-lactamase, 2009 - 2010

Sarıyar Akbulut B., Project Supported by Higher Education Institutions, Investigation of thermostable glucose isomerase export from the the cells using the bacterial Sec and Tat mechanisms, 2005 - 2007

Sarıyar Akbulut B., Kazan D., TUBITAK Project, Investigation of halophilic and extremely halophilic archaea isolated from salty environments and the investigation of their extremozymes with a focus on their proteases, 2003 - 2006

## Tasks In Event Organizations

Sarıyar Akbulut B., FROM NETWORKS TO TARGETS Workshop on OMIC technologies and their applications, Workshop Organization, Turkey, Haziran 2017

## Metrics

Publication: 92

Citation (WoS): 544

Citation (Scopus): 564

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H-Index (Scopus): 12