

## Prof. SEMRA KOCABIYIK

### Personal Information

Office Phone: [+90 312 210 5174](tel:+903122105174)

Email: [biosemra@metu.edu.tr](mailto:biosemra@metu.edu.tr)

Web: <https://avesis.metu.edu.tr/biosemra>

### Education Information

Doctorate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, Turkey 1982 - 1986

Postgraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, Turkey 1980 - 1982

Undergraduate, Ankara University, Faculty Of Agriculture, Department Of Plant Protection, Turkey 1972 - 1977

### Dissertations

Doctorate, A comparative study on the resistance to aminoglycoside antibiotics among strains of Enterobacteriaceae, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 1975

### Research Areas

Natural Sciences

### Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, 1995 - Continues

Associate Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, 1989 - 1995

Assistant Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, 1988 - 1989

Lecturer PhD, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, 1987 - 1987

Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Biology, 1980 - 1986

### Academic and Administrative Experience

Seçilmiş Fakülte Yönetim Kurulu Üyesi, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2013 - 2015

Head of Department, Middle East Technical University, Graduate School of Natural and Applied Sciences, Biomedical Engineering, 2010 - 2012

Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2003 - 2006

Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 1995 - 1996

### Advising Theses

Kocabiyik S., Gürakan C., Improvement of holdase activity of a small heat shock protein from extremely acidophilic

Archaea, Postgraduate, Y.Kaçer(Student), 2019

KOCABIYIK S., Transcriptome analysis of thermoplasma volcanium GSS1 under extreme stress, Postgraduate, S.Zabcı(Student), 2015

KOCABIYIK S., Transcriptome analysis of Thermoplasma volcanium GSS11 under extreme stress, Postgraduate, S.ZABCI(Student), 2015

KOCABIYIK S., Structural modelling and functional analysis of the engineered small heat-shock protein,TPV-HSP14.3 from Thermoplasma volcanium, Postgraduate, I.SHERAJ(Student), 2014

KOCABIYIK S., Expression profiling of Thermoplasma volcanium GSS1 under stress conditions with specific emphasis on proteasome associated regulatory VAT genes, Postgraduate, T.YILMAZ(Student), 2013

KOCABIYIK S., The role of small heat shock proteins of the thermoacidophilic archaeon thermoplasma volcanium in the stress response, Postgraduate, S.Aygar(Student), 2011

KOCABIYIK S., VOLKAN M., Application of surface-enhanced raman scattering (SERS) method for genetic analyses, Doctorate, S.KARABIÇAK(Student), 2011

KOCABIYIK S., The role of small heat shock proteins of the thermoacidophilic archaeon, Thermoplasma volcanium in the stress response, Postgraduate, S.AYGAR(Student), 2011

KOCABIYIK S., Heat shock response in Thermoplasma volcanium: Cloning and differential expression of molecular chaperonin (thermosome) genes, Postgraduate, F.DOLDUR(Student), 2008

ÇALIK P., KOCABIYIK S., Recombinant therapeutic protease production by Bacillus sp., Postgraduate, N.KORKMAZ(Student), 2007

KOCABIYIK S., Determination of genes involved in the yellow rust disease of wheat, Doctorate, O.Bozkurt(Student), 2007

AKKAYA M., KOCABIYIK S., Determination of genes involved in yellow rust disease of wheat, Doctorate, O.BOZKURT(Student), 2007

AKKAYA M., KOCABIYIK S., Biochemical characterization of recombinant 20S proteasome from Thermoplasma volcanium and cloning of its regulatory subunit gene, Postgraduate, G.BAYDAR(Student), 2006

KOCABIYIK S., Cloning and expression of periplasmic (clp p-like) and membrane-bound serine protease genes of thermoplasma volcanium in escherichia coli, Postgraduate, B.Demirok(Student), 2006

KOCABIYIK S., Cloning and expression of periplasmic (CLpP-LIKE) and membrane-bound serine protease genes of thermoplasma volcanium in escherichia coli, Postgraduate, B.DEMİROK(Student), 2006

KOCABIYIK S., Expression of recombinant acid protease (thermopsin) gene from thermoplasma volcanium, Postgraduate, B.KOYUNCU(Student), 2006

KOCABIYIK S., Biochemical characterization of recombinant 20s proteasome from thermoplasma volcanium and cloning of it's regulatory subunit gene, Postgraduate, G.Baydar(Student), 2006

KOCABIYIK S., Inference of switching networks by using a piecewise linear formulation, Postgraduate, D.AKÇAY(Student), 2005

AKKAYA M., KOCABIYIK S., Cloning, expression and sequencing of citrate synthase from Thermoplasma volcanium, Postgraduate, Ç.ÇEKİÇ(Student), 2004

KOCABIYIK S., Construction of various fusion proteins of recombinant citrate synthase from thermoplasma volcanium, Postgraduate, S.ÖZDOĞAN(Student), 2004

KOCABIYIK S., Cloning of an extracellular thermostable acid protease from thermoplasma volcanium e.coli, Postgraduate, H.Özel(Student), 2003

AKKAYA M., KOCABIYIK S., Identification of the genes involved in "Phyotsiderophore" synthesis and metal ion uptake in wheat using RT-PCR, Postgraduate, Y.AKTAŞ(Student), 2003

AKKAYA M., KOCABIYIK S., Investigations of wheat genes involved in zinc efficiency mechanism using differential display technique, Postgraduate, M.TÜRKAŞ(Student), 2003

KOCABIYIK S., Purification and characterization of cytoplasmic and proteasome associated chymotrypsin-like proteases from Thermoplasma volcanium, Doctorate, İ.ÖZDEMİR(Student), 2003

AKKAYA M., KOCABIYIK S., Cloning of alpha and beta subunit genes of 20 S proteasome from thermoplasma volcanium, Postgraduate, G.SEYİT(Student), 2002

KOCABIYIK S., Isolation of monobromoacetate and dichloroacetate degrading bacteria from polluten seawater and analysis of haloacid de halogenaze geofypes by using polymerase choun reaction (PCR), Postgraduate, B.FIRAT(Student), 2000

KOCABIYIK S., Engineering of citrate synthase from thermoplasma acidophilum to investigate the molecular mechanisms of thermostability, Doctorate, İ.ERDURAN(Student), 2000

KOCABIYIK S., Engineering of citrate synthase from Thermoplasma acidophilum to investigate the molecular mechanisms of Thermostability, Doctorate, İ.Erduran(Student), 2000

KOCABIYIK S., Isolation of monobromoacetate and dichloroacetate degrading bacteria from polluted seawater and analysis of haloacid dehalogenase genotypes by using polymerase chain reaction (PCR), Postgraduate, B.Firat(Student), 2000

KOCABIYIK S., Protease activities of thermophilic microorganisms isolated from hot springs in Turkey: detection of alkaline serine protease gene sequences by polymerase chain reaction(PCR), Postgraduate, B.Erdem(Student), 1999

KOCABIYIK S., Protease activities of thermophilic microorganisms isolated from hot springs in Turkey: Detection of alkaline serine protease gene sequences by polmerase chain reaction (PCR), Postgraduate, B.ERDEM(Student), 1999

Kocabiyik S., Arınç E., Field Evaluation of Cytochrome P450C1A1 mRNA Levels as a Monitor for Pollution, Postgraduate, E.Su(Student), 1998

KOCABIYIK S., AKKAYA M., Cloning and sequencing of a PCR amplicon of a novel dehalogenase gene from pseudomonas Sp.Strain SEC896, Postgraduate, G.Mehmet(Student), 1997

KOCABIYIK S., Clouing and sequencing of a PCR amplican of a novel dehalogeuse gene from pseudomonas sp strain SEC 896, Postgraduate, G.MEHMET(Student), 1997

KOCABIYIK S., Detection of monochloroacetate degrading genotypes of pseudomonas SP.Using PCR/DNA probe assays, Postgraduate, E.CABA(Student), 1996

KOCABIYIK S., The Effects of cysteine 43 mutation on catalytic properties and thermostability of thermoplasma acidophilum citrate synthase, Postgraduate, İ.ERDURAN(Student), 1996

KOCABIYIK S., Cloning and expression of a haloacid dehalogenase gene from pseudomanas sp. strain ISS in E. coli, Postgraduate, B.ASLAN(Student), 1995

KOCABIYIK S., Dedection of aminoglycoside 3'-phosphotransferases by using Dna and antibodd probes, Postgraduate, A.KOÇER(Student), 1995

KOCABIYIK S., Cloning and expression of a haloacid dehalogenase gene from pseudomanas SP. strain 19S in e coli, Postgraduate, B.Aslan(Student), 1995

KOCABIYIK S., Detection of aminoglycoside 3'- phosphotransferases by using DNA and antibody probes, Postgraduate, A.Sağiroğlu(Student), 1995

KOCABIYIK S., Molecular analysis of a unique type of S(alfa)-thalassemia, Doctorate, G.BALTA(Student), 1994

KOCABIYIK S., Molecular analysis of a unique type of thalassemia, Doctorate, G.Balta(Student), 1994

KOCABIYIK S., Pseudomonas aeruginosa ses-938-1 elastase : Isolation microbiological and biochemical characterizations, Postgraduate, M.ERGİN(Student), 1994

KOCABIYIK S., Pseudomonas aeruginosa ses-938-1 elastase: isolation microbiological and biochemical characterizations, Postgraduate, M.Ezgi(Student), 1994

## **Jury Memberships**

Associate Professor Exam, Associate Professor Exam, Middle East Technical University, March, 2020

Associate Professor Exam, Associate Professor Exam, Middle East Technical University, March, 2020

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

- I. **Effect of N-terminal extension of small heat shock protein, Tpv HSP 14.3 on its molecular chaperone activity**  
Zabci S., Kocabiyik S.  
NEW BIOTECHNOLOGY, vol.33, 2016 (Journal Indexed in SCI)
- II. **Alpha crystallin domain mutations increase holdase capacity of the archeal small heat shock protein, Tpv HSP 14.3**

- Kocabiyik S., Zabci S.  
NEW BIOTECHNOLOGY, vol.33, 2016 (Journal Indexed in SCI)
- III. **Preparation of silica coated cobalt ferrite magnetic nanoparticles for the purification of histidine-tagged proteins**  
Aygur G., Kaya M., Özkan N., Kocabiyik S., Volkan M.  
JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS, vol.87, pp.64-71, 2015 (Journal Indexed in SCI)
- IV. **Gene expression profiling of *Thermoplasma volcanium* under extreme stress conditions**  
Zabci S., Kocabiyik S.  
NEW BIOTECHNOLOGY, vol.31, 2014 (Journal Indexed in SCI)
- V. **Effects of K87 mutations in the alpha-crystallin domain of Tpv sHSP 14.3 on oligomerization and in vitro chaperone activity**  
Kocabiyik S., Sharej I.  
NEW BIOTECHNOLOGY, vol.31, 2014 (Journal Indexed in SCI)
- VI. **Improvement of protein stability and enzyme recovery under stress conditions by using a small HSP (tpv-HSP 14.3) from *Thermoplasma volcanium***  
Kocabiyik S., Aygar S.  
PROCESS BIOCHEMISTRY, vol.47, pp.1676-1683, 2012 (Journal Indexed in SCI)
- VII. **Molecular cloning and co-expression of *Thermoplasma volcanium* proteasome subunit genes**  
Kocabiyik S., Ozdemir I., Zwickl P., Ozdogan S.  
PROTEIN EXPRESSION AND PURIFICATION, vol.73, pp.223-230, 2010 (Journal Indexed in SCI)
- VIII. **Essential Structural and Functional Features of Small Heat Shock Proteins in Molecular Chaperoning Process**  
Kocabiyik S.  
PROTEIN AND PEPTIDE LETTERS, vol.16, pp.613-622, 2009 (Journal Indexed in SCI)
- IX. **An extracellular - Pepstatin insensitive acid protease produced by *Thermoplasma volcanium***  
Kocabiyik S., Ozel H.  
BIORESOURTE TECHNOLOGY, vol.98, pp.112-117, 2007 (Journal Indexed in SCI)
- X. **Purification and characterization of an intracellular chymotrypsin-like serine protease from *Thermoplasma volcanium***  
Kocabiyik S., Ozdemir I.  
BIOSCIENCE BIOTECHNOLOGY AND BIOCHEMISTRY, vol.70, pp.126-134, 2006 (Journal Indexed in SCI)
- XI. **Intracellular alkaline proteases produced by thermoacidophiles: detection of protease heterogeneity by gelatin zymography and polymerase chain reaction (PCR)**  
Kocabiyik S., Erdem B.  
BIORESOURTE TECHNOLOGY, vol.84, pp.29-33, 2002 (Journal Indexed in SCI)
- XII. **Induced CYP1A mRNA, protein and catalytic activity in the liver of feral fish, leaping mullet, *Liza saliens***  
Arinc E., Kocabiyik S., Su E.  
COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY C-TOXICOLOGY & PHARMACOLOGY, vol.128, no.2, pp.281-290, 2001 (Journal Indexed in SCI)
- XIII. **The effect of valine substitution for glycine in the dimer interface of citrate synthase from *Thermoplasma acidophilum* on stability and activity**  
Kocabiyik S., Erduran I.  
BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol.275, pp.460-465, 2000 (Journal Indexed in SCI)
- XIV. **Amino acid substitutions in the subunit interface enhancing thermostability of *Thermoplasma acidophilum* citrate synthase**  
Erduran I., Kocabiyik S.  
BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol.249, pp.566-571, 1998 (Journal Indexed in SCI)
- XV. **The effect of hydrophobic interactions in the dimer interface of *Thermoplasma acidophilum* citrate**

**synthase on thermostability.**

Erduran I, Kocabiyik S.

JOURNAL OF PROTEIN CHEMISTRY, vol.17, pp.531-532, 1998 (Journal Indexed in SCI)

- XVI. **Prevalence of monochloroacetate degrading genotypes among soil isolates of Pseudomonas sp.**  
Kocabiyik S, Caba E.  
BIODEGRADATION, vol.8, pp.371-377, 1997 (Journal Indexed in SCI)
- XVII. **The effect of cysteine-43 mutation on thermostability and kinetic properties of citrate synthase from Thermoplasma acidophilum**  
Kocabiyik S, Erduran I, Russel R., Danson M., Hough D.  
BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol.224, no.1, pp.224-228, 1996 (Journal Indexed in SCI)
- XVIII. **ANALYSIS OF PLASMIDS MEDIATING ANT (2'') AND AAC(3)-II BASED GENTAMICIN RESISTANCE IN CLINICAL ISOLATES OF ENTEROBACTERIACEAE**  
KOCABIYIK S., ALAEDDINOGLU N.  
ZENTRALBLATT FUR BAKTERIOLOGIE-INTERNATIONAL JOURNAL OF MEDICAL MICROBIOLOGY VIROLOGY PARASITOLOGY AND INFECTIOUS DISEASES, vol.271, no.2, pp.214-221, 1989 (Journal Indexed in SCI)
- XIX. **A THERMO-STABLE DEHALOGENASE IN THE EXTRACTS FROM PSEUDOMONAS SP (STRAIN-19S)**  
Kocabiyik S, Turkoglu S.  
BIOTECHNOLOGY LETTERS, vol.11, pp.397-400, 1989 (Journal Indexed in SCI)

## Articles Published in Other Journals

- I. **Biomonitoring of toxic carcinogenic llutants by molecular and biochemical responses of fish cytochrome P4501A1 CYP1A1 along the Izmir Bay on the Mediterranean Sea**  
KOCABIYIK S.  
Rapp. Comn. Int. Mer. Médit, vol.36, pp.179-180, 2001 (Refereed Journals of Other Institutions)
- II. **Effects of Metals on Elastase from Pseudomonas aeruginosa SES-938-1**  
Kocabiyik S., Türkoğlu S., Ergin E.  
Biological Trace Element Research, vol.50, no.1, pp.25-31, 1995 (Refereed Journals of Other Institutions)
- III. **Cloning and Expression of a Haloacid Dehalogenase form Pseudomonas sp. Strain 19S,**  
Kocabiyik S, Aslan B., Muller R.  
Biodegradation, vol.6, no.3, pp.217-222, 1995 (Refereed Journals of Other Institutions)
- IV. **A Modified Method for RNA Isolation from Bacteria by Guanidinium Thiocyanate - Cesium Chloride Centrifugation,"**  
Kocabiyik S.  
BioTechniques, vol.18, no.4, pp.570-572, 1995 (Refereed Journals of Other Institutions)
- V. **Amino Acid Substitutions within the Analogous Nucleotide Binding Loop (P-Loop) of Aminoglycoside 3' -Phosphotransferase-II**  
Kocabiyik S., Perlin M.  
International Journal of Biochemistry, vol.26, no.1, pp.61-66, 1994 (Refereed Journals of Other Institutions)
- VI. **Site - Specific Mutations of Conserved C - Terminal Residues in Aminoglycoside 3'-Phosphotransferase II [APH(3')-II]: Phenotypic and Structural Analysis of the Mutant Enzymes**  
Kocabiyik S., Perlin M.  
Biochem. Biophys. Res. Commun, vol.185, no.3, pp.925-931, 1992 (Refereed Journals of Other Institutions)
- VII. **Evaluation of Plasmid DNA and Protein Profiles as Epidemiological Tools in Pseudomonas aeruginosa**  
Kocabiyik S, Adwan K, Alaeddinoğlu G.  
Chemotherapy Int. J. Experiment. Clin. Chemother , vol.5, no.1, pp.37-40, 1992 (Refereed Journals of Other Institutions)
- VIII. **Altered Substrate Specificities by Substitutions at Tyr 218 in Bacterial Aminoglycoside 3'-**

## **Phosphotransferase – II**

Kocabiyik S., Perlin M.

FEMS Microbiol. Lett, vol.93, pp.199-202, 1992 (Refereed Journals of Other Institutions)

### **IX. ,” Structure - Function Analyses for Aminoglycoside 3'-Phosphotransferase-II [APH(3')-II]**

Kocabiyik S., Mullis C., Breeding C., Perlin M.

SAAS Bulletin: Biochem. Biotech, vol.5, pp.158-163, 1992 (Refereed Journals of Other Institutions)

### **X. Aminoglycoside Resistance Profiles of the Gentamicin Resistant Enterobacteriaceae and Pseudomonas Strains**

Kocabiyik S., Akalın E., Alaeddinoğlu G.

Int. J. Experiment. Clin. Chemother, vol.2, no.2, pp.118-124, 1989 (Refereed Journals of Other Institutions)

### **XI. Plasmid Profiles of Gentamicin Resistant Gram Negative Bacilli**

KOCABIYIK S.

HACETTEPE MEDICAL JOURNAL, vol.22, no.2, pp.79-86, 1989 (Refereed Journals of Other Institutions)

### **XII. Biodegradation of Halogenated Hydrocarbons**

KOCABIYIK S.

JOURNAL OF KÜKEM, vol.12, no.1, pp.15-28, 1989 (Other Refereed National Journals)

### **XIII. Resistance to Aminoglycoside Antibiotics**

KOCABIYIK S.

JOURNAL OF ANKEM, vol.2, no.3, pp.203-206, 1988 (Other Refereed National Journals)

### **XIV. Determination of Aminoglycoside Modification Enzymes by MIC Ratio Method and its Comparison with Radioactive Assay**

KOCABIYIK S.

Hacettepe Medical Journal, vol.21, no.3, pp.145-156, 1988 (Refereed Journals of Other Institutions)

### **XV. Epidemiological and Practical Aspects of Enzyme Mediated Aminoglycoside Resistance**

KOCABIYIK S.

Hacettepe Medical Journal, vol.20, no.0, pp.185-189, 1987 (Refereed Journals of Other Institutions)

## **Books & Book Chapters**

### **I. Moleküler Genetik Teknikleri**

KOCABIYIK S.

in: Moleküler Hücre Biyolojisi, Hikmet Geçkil, Murat Özmen, Özfer Yeşilada, Editor, Palme yayıncılık, pp.177-198, 2013

## **Refereed Congress / Symposium Publications in Proceedings**

### **I. Gene expression analysis of thermoacidophilic archaeon Thermoplasma volcanium GSS1 under mild- and severe-pH stress conditions**

KOCABIYIK S., ZABCI S., YILMAZ T.

BioMicroWorld2017 VII International Conference on Environmental, Industrial and Applied Microbiology, Madrid, Spain, 18 - 20 October 2017

### **II. Temperature dependent variations in oligomer status of an archaeal small heat shock protein, Tpv HSP14.3**

RAFIQ A., ZABCI S., KAÇER Y., KOCABIYIK S.

BioMicroWorld2017 VII International conference on Environmental Industrial and Applied Microbiology, 18 - 20 October 2017

### **III. Yüzeyde Güçlendirilmiş Raman Saçılması (YGRS) Metodu ile Proteazom DNA'sının Tanınması**

UZUN C., KARABIÇAK S., KOCABIYIK S., VOLKAN M.

29. Ulusal Kimya Kongresi, Turkey, 10 - 14 September 2017

- IV. **Alpha crystallin domain mutations increase holdase capacity of the archeal small heat shock protein, Tpv HSP 14.3**  
KOCABIYIK S.  
17th European Biotechnology Congress, Krakow, Poland, 3 - 06 July 2016, vol.33
- V. **Gene expression profile of Thermoplasma volcanium GSS1 under mild and severe oxidative stress**  
Zabci S., ÇELEBİ M. N., KOCABIYIK S.  
40th Congress of the Federation-of-European-Biochemical-Societies (FEBS) - The Biochemical Basis of Life, Berlin, Germany, 4 - 09 July 2015, vol.282, pp.75
- VI. **Importance of salt bridges in the dimer interface of Tpv sHSP14.3 for oligomere assembly and chaperone function**  
KOCABIYIK S., Sheraj I., Zabci S., ÇELEBİ M. N.  
40th Congress of the Federation-of-European-Biochemical-Societies (FEBS) - The Biochemical Basis of Life, Berlin, Germany, 4 - 09 July 2015, vol.282, pp.332
- VII. **Gene expression profiling of Thermoplasma volcanium under extreme stress conditions**  
KOCABIYIK S.  
European Biotechnology Congress, Edinburgh, Saint Helena, 22 - 26 June 2014
- VIII. **Heat-induced structural dynamics of a thermoacidophilic small heat-shock protein sHSP14.3; functional implications**  
KOCABIYIK S., Sheraj I.  
38th Congress of the Federation-of-European-Biochemical-Societies (FEBS), Saint Peter, Guernsey And Alderney, 6 - 11 July 2013, vol.280, pp.139
- IX. **Altered gene expression patterns of Thermoplasma volcanium 20S proteasome-VAT complex proteins in stress response**  
Yilmaz T., Kacar S., KOCABIYIK S.  
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.499-500
- X. **Determination of proteasome activity using surface enhanced raman scattering (SERS) spectroscopy**  
VOLKAN M., KOCABIYIK S., Akpınar Y., UZUN C. N.  
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.351
- XI. **Application of SERS nanotag labeled probes for DNA studies**  
UZUN C. N., KOCABIYIK S., VOLKAN M.  
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.350-351
- XII. **Genome-wide transcriptional response of the thermoacidophilic archaeon, Thermoplasma volcanium to environmental stress**  
KOCABIYIK S., Yilmaz T.  
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.501
- XIII. **Stress induced changes in the oligomeric assembly and expression of a small heat shock protein from thermoacidophilic archaeon Thermoplasma volcanium**  
KOCABIYIK S.  
4th Congress of European Microbiologists, FEMS 2011, Cenevre, Switzerland, 1 - 04 June 2011, pp.249
- XIV. **Improving Protein Stability And Enzyme Recovery Under Stress Conditions By Use Of Recombinant Molecular Chaperones**  
KOCABIYIK S., Aygar S., Koyuncu B.  
14th International Biotechnology Symposium and Exhibition (IBS-2008), Rimini, Italy, 14 - 18 September 2010, vol.150
- XV. **Cloning and Expression of Hsp20 Related Small Heat Shock Proteins of Thermoplasma volcanium**  
KOCABIYIK S.  
of 32rd FEBS Congress Molecular Machines, Vienna, Austria, 7 - 12 July 2007, pp.195
- XVI. **Differential expression of archaeal Hsp60 and CDC48 homologue VAT genes in heat shock**  
KOCABIYIK S., Doldur F., Demirok B.  
32nd Congress of the Federation-of-European-Biochemical-Societies (FEBS), Vienna, Austria, 7 - 12 July 2007, vol.274, pp.196

- XVII. **Differential expression of archaeal Hsp60 and CDC48 homologue VAT genes in heat-shock**  
Doldur F., KOCABIYIK S., Demirok B.  
32nd Congress of the Federation-of-European-Biochemical-Societies (FEBS), Vienna, Austria, 7 - 12 July 2007, vol.274, pp.195
- XVIII. **Cloning and expression of Hsp20 related small heat shock proteins of Thermoplasma**  
Koyuncu B., KOCABIYIK S.  
32nd Congress of the Federation-of-European-Biochemical-Societies (FEBS), Vienna, Austria, 7 - 12 July 2007, vol.274, pp.195
- XIX. **Purification and characterization of archaeal 6xHis tagged recombinant proteases**  
Koyuncu B., Demirok B., Kocabiyik S.  
31st Congress of the Federation-of-European-Biochemical-Societies (FEBS), İstanbul, Turkey, 24 - 29 June 2006, vol.273, pp.361
- XX. **Biochemical characterization of Thermoplasma volcanium recombinant 20S proteasome and its regulatory subunit**  
Baydar G., Kocabiyik S.  
IUBMB 50th Anniversary Symposium, Budapest, Hungary, 2 - 07 July 2005, vol.272, pp.179
- XXI. **Cloning and expression of a pepstatin insensitive acid protease from Thermoplasma volcanium in E-coli**  
Koyuncu B., Ozel H., Kocabiyik S.  
30th Congress of the Federation-of-European-Biochemical-Societies (FEBS)/9th IUBMB Conference, Budapest, Hungary, 2 - 07 July 2005, vol.272, pp.156
- XXII. **Citrate synthases from organisms with diverse optimum growth temperatures**  
KOCABIYIK S., ÇEKİÇ Ç.  
BAGECO 8, Lyon, France, 26 - 29 June 2005, pp.16
- XXIII. **Energy dependent proteases in heat shock response of thermoacidophilic archaeon Thermoplasma volcanium**  
KOCABIYIK S.  
BAGECO 8, Lyon, France, 26 - 29 June 2005, pp.86
- XXIV. **Programmed proteolytic machineries of Thermoplasma volcanium**  
KOCABIYIK S.  
20th IUBMB International Congress of Biochemistry and Molecular Biology and 11th FAOBMB Congress, Kyoto, Japan, 18 - 23 June 2006, pp.94
- XXV. **Cloning and expression of a pepstatin insensitive acid protease from T volcanium in E coli**  
KOCABIYIK S.  
30th FEBS Congress and 9th IUBMB Conference, The protein world Budapest, Budapest, Hungary, 2 - 07 June 2005, pp.156
- XXVI. **Cloning of Citrate Synthase Gene from Thermoplasma volcanium**  
KOCABIYIK S., ÇEKİÇ Ç.  
28th Meeting of the Federation of European Biochemical Societies, İstanbul, Turkey, 20 - 25 October 2002, pp.114
- XXVII. **Cloning of Two Subunit Genes of Thermoplasma volcanium**  
KOCABIYIK S.  
28th Meeting of the Federation of European Biochemical Societies, İstanbul, Turkey, 20 - 25 October 2002, pp.114
- XXVIII. **Effects of Polyols on Thermal Stability of Citrate Synthase from Thermoplasma acidophilum**  
KOCABIYIK S.  
28th Meeting of the Federation of European Biochemical Societies, İstanbul, Turkey, 20 - 25 October 2002, vol.269, pp.113
- XXIX. **A Thermophilic Extracellular Acid Protease from Thermoplasma volcanium**  
KOCABIYIK S.  
28th Meeting of the Federation of European Biochemical Societies, İstanbul, Turkey, 20 - 25 October 2002, vol.269, pp.113
- XXX. **Purification and Characterization of a Thermostable Serine protease from Thermoplasma volcanium**



- KOCABIYIK S.  
27th Meeting of the Federation of European Biochemical Societies, Lisbon, Portugal, 30 June - 05 July 2001, pp.193
- XXXI. **20S Proteasome Complex from *Thermoplasma volcanium***  
KOCABIYIK S.  
27th Meeting of the Federation of European Biochemical Societies, Lisbon, Portugal, 30 June - 05 July 2001, pp.199
- XXXII. **Differential Amplification of 16S rDNA Sequences of Archaea and bacteria from Solfataric Hot Springs in Turkey**  
KOCABIYIK S.  
18th International Union of Biochemistry and Molecular Biology (IUBMB) Congress, Birmingham, United Kingdom, 16 - 20 July 2000, pp.550
- XXXIII. **The effects of external factors on the Activities of Mutant *Thermoplasma Citrate Synthases***  
KOCABIYIK S.  
18th International Union of Biochemistry and Molecular Biology (IUBMB) Congress, Birmingham, United Kingdom, 16 - 20 July 2000, pp.1077
- XXXIV. **Effects of Glycine Substitutions in Subunit Interface Helices on Stability of *Thermoplasma acidophilum Citrate Synthase***  
KOCABIYIK S.  
26th Meeting of the Federation of European Biochemical Societies, Nice, France, 19 - 24 June 1999, vol.81, pp.355
- XXXV. **Induced CYPmRNA protein and catalytic activity in the liver microsomes of *Lisa saliens***  
KOCABIYIK S.  
26th Meeting of the Federation of European Biochemical Societies, Nice, France, 19 - 24 June 1999, vol.81, pp.117
- XXXVI. **Thermostable Protease Activities of Thermoacidophilic Bacteria and Archaea Isolated from Natural Solfataric Hot Springs in Turkey**  
KOCABIYIK S.  
26th Meeting of the Federation of European Biochemical Societies, Nice, France, 19 - 24 June 1999, vol.81, pp.355
- XXXVII. **Engineering of Citrate Synthase from *Thermoplasma acidophilum* by Site Specific Mutagenesis to Investigate the Mechanisms of Thermostability**  
KOCABIYIK S.  
18th International Congress of Genetics, Beijing, China, 10 - 15 August 1998, pp.32
- XXXVIII. **Analysis of Genomic Organizations of Dehalogenase Genes in *Pseudomonas* sp Isolates Using gene Probe PCR Assays**  
KOCABIYIK S.  
25 th Silver Jubilee FEBS Meeting, Copenhagen, Denmark, 5 - 10 July 1998, pp.124
- XXXIX. **Amino Acid Substitutions in the Subunit Interface Enhancing Thermostability of *Thermoplasma acidophilum Citrate Synthase***  
KOCABIYIK S.  
25th Silver Jubilee FEBS Meeting, Copenhagen, Denmark, 5 - 10 July 1998, pp.124
- XL. **The Effect of Hydrophobic Interactions in the Subunit Interphase of *Thermoplasma acidophilum Citrate Synthase* on Thermostability**  
KOCABIYIK S.  
8th European Congress on Biotechnology, Budapest, Hungary, 17 - 21 August 1997, pp.1417
- XLI. **The Effect of Cysteine 43 Mutation on Catalytic Properties and Thermostability of *Thermoplasma acidophilum Citrate Synthase***  
KOCABIYIK S.  
24th Meeting of the Federation of European Biochemical Societies, Barcelona, Spain, 7 - 12 July 1996, pp.24-25
- XLII. **Detaction of Hydrocarbon Degrading Genotypes of *Pseudomonas* sp by using PCR DNA Probe Assays**  
KOCABIYIK S.  
24th Meeting of the Federation of European Biochemical Societies (FEBS), Barcelona, Spain, 7 - 12 July 1996, vol.42, pp.3
- XLIII. **Prevalence of Haloalkanoic Acid Dehalogenase Genotypes in Bacteria from Different Environments**  
KOCABIYIK S.

NATO-ASI on ' Genome Structure and Function, Elba Island, Italy, 13 - 15 June 1996

- XLIV. **Detection of Aminoglycoside 3 Phosphotransferases by Using DNA and Antibody Probes**  
KOCABIYIK S.  
." 23rd Meeting of the Federation of European Biochemical Societies (FEBS), Basel, Switzerland, 13 - 18 August 1995, pp.136
- XLV. **Engineering of Citrate Synthase from Thermoplasma acidophilum by Site Directed Mutagenesis**  
KOCABIYIK S.  
23rd Meeting of the Federation of European Biochemical Societies (FEBS), Basel, Switzerland, 13 - 18 August 1995, pp.295
- XLVI. **Pseudomonas aeruginosa SES 938 I Elastase Some Properties as a Metalloneutral Proteinase**  
KOCABIYIK S., TÜRKOĞLU E. S.  
IUMS Congress' 94: 7th International Congress of Bacteriology and Applied Microbiology Division, Prague, Czech Republic, 3 - 08 July 1994, pp.528
- XLVII. **Cloning and Expression of a Haloacid Dehalogenase Gene from Pseudomonas sp Strain 19S**  
KOCABIYIK S.  
IUMS Congresses' 94: 7th International Congress of Bacteriology and Applied Microbiology Division, Prague, 3 - 08 July 1994, pp.209
- XLVIII. **The Role of Arginine 211 in ATP Binding of Aminoglycoside 3 Phosphotransferase II**  
KOCABIYIK S., TÜRKOĞLU E. S.  
22nd FEBS Meeting, Stockholm, Sweden, 4 - 09 July 1993, vol.13
- XLIX. **Isolation and Characterization of Elastase from Bacteria and Human Leukocyte**  
KOCABIYIK S., TÜRKOĞLU E. S.  
22nd FEBS Meeting, Stockholm, Sweden, 4 - 09 July 1993, vol.13, pp.246
- L. **Site Specific Mutations in the Analogous Nucleotide Binding Loop P Loop Motif of Aminoglycoside 3 Phosphotransferase II APH 3 II**  
KOCABIYIK S.  
Cold Spring Harbor Laboratory Meeting on Molecular Genetics of Bacteria and Phages., New York, United States Of America, 18 - 23 August 1992
- LI. **Site Specific Mutations of Highly Conserved Residues in APH 3 II Phenotypic and Structural Analysis of Mutant Enzymes**  
KOCABIYIK S.  
92nd General Meeting of the American Society for Microbiology, New Orleans, United States Of America, 26 - 30 May 1992
- LII. **Structure Function Analysis for Aminoglycoside 3 Phosphotransferase II APH 3 II**  
KOCABIYIK S.  
89th Annual Meeting of Southern Association of Agricultural Scientists, Biochemistry Division, Lexington, United States Of America, 1 - 05 February 1992
- LIII. **Kinetic Studies of Mutant Aminoglycoside 3 Phosphotransferase II APH 3 II Enzymes**  
KOCABIYIK S.  
31st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Chicago, United States Of America, 29 September - 02 October 1991, pp.1361
- LIV. **Structure Activity Relationships for Aminoglycoside 3 Phosphotransferase II Role of Tyrosine Residue 218 in Substrate Specificity**  
KOCABIYIK S.  
91st General Meeting of the American Society for Microbiology, Dallas, United States Of America, 5 - 09 May 1991, pp.95
- LV. **Plasmid Mediated Dehalogenation of Halogenated Hydrocarbons by a Thermostable dehalogenase from a Pseudomonas sp**  
KOCABIYIK S.  
Summer School on Molecular Biology, " Global Regulation of Gene Expression in Microorganisms, Spetsai, Greece, 2 - 15 September 1990

- LVI. **Isolation of Plasmids in Pseudomonas Strains Degrading Chlorinated Hydrocarbons**  
KOCABIYIK S.  
16th International Congress of Genetics, 20 - 27 August 1988
- LVII. **Aminoglycoside Resistance Profiles of Gentamicin Resistant Strains of Enterobacteriaceae and Pseudomonas**  
KOCABIYIK S.  
15th International Congress of Chemotherapy, İstanbul, Turkey, 20 - 27 July 1987, pp.224
- LVIII. **Plasmid Mediated Enzymatic Detoxification of Aminoglycoside Antibiotics in Clinical Isolates of Gram Negative Bacilli**  
KOCABIYIK S.  
15th International Congress of Chemotherapy, İstanbul, Turkey, 20 - 27 July 1987, pp.148

## Supported Projects

- KOCABIYIK S., ZABCI S., Project Supported by Higher Education Institutions, Bir arkeal küçük ısı şoku proteinin Tpv sHSP143 yapısal modifikasyonu ve özgün küçük şaperon tasarlanması, 2020 - 2021
- KOCABIYIK S., ZABCI S., Project Supported by Higher Education Institutions, Termoasidofilik Arkeabakteride pH Stres Tepkisi ve pH homeostazının Transkripsiyon Düzeyinde İncelenmesi, 2019 - 2021
- KOCABIYIK S., RAFIQ A., Project Supported by Higher Education Institutions, ARKEA KÖKENLİ BİR KÜÇÜK ISI ŞOKU PROTEİNİNDE SUBSTRAT TANINMASI VE BAĞLANMASININ MOLEKÜLER TEMELİNİ BELİRLEMEK AMAÇLI YAPISAL MODİFİKASYONLAR, 2018 - 2019
- KOCABIYIK S., ZABCI S., Project Supported by Higher Education Institutions, ARKEA KÖKENLİ BİR KÜÇÜK ISI ŞOKU PROTEİNİNİN YAPISAL DİNAMİK ANALİZİ, 2018 - 2019
- KOCABIYIK S., KAÇER Y., Project Supported by Higher Education Institutions, AŞIRI DERECEDE ASİDOPHİLİK BİR ARKEA KÖKENLİ KÜÇÜK ISI ŞOKU PROTEİNİN HOLDAZ AKTİVİTESİNİN İYİLEŞTİRİLMESİ, 2018 - 2019
- SON Ç. D. , ZABCI S., İZGÜ K. F. , ATAY Ö., DOĞAN M., YANIK T., KOCABIYIK S., ÖNDE S., Project Supported by Higher Education Institutions, G-alpha (i) proteinlerinin homodimerizasyonunun canlı hücrelerde tespiti, 2018 - 2019
- KOCABIYIK S., Project Supported by Higher Education Institutions, ARKEA KÖKENLİ BİR KÜÇÜK ISI ŞOKU PROTEİNİNİN YAPISAL DİNAMİK ANALİZİ, 2017 - 2017
- KOCABIYIK S., Project Supported by Higher Education Institutions, AŞIRI DERECEDE ASİDOPHİLİK BİR ARKEA KÖKENLİ KÜÇÜK ISI ŞOKU PROTEİNİN HOLDAZ AKTİVİTESİNİN İYİLEŞTİRİLMESİ, 2017 - 2017
- Kocabiyyik S., TUBITAK Project, Küçük Isı Şoku Proteinini Tpv HSP14.3'ün Alfa Kristalin Motifine İlişkin Yapı-Fonksiyon Analizi, 2015 - 2017
- KOCABIYIK S., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
- KOCABIYIK S., SON Ç. D. , YANIK T., ZABCI S., Project Supported by Higher Education Institutions, Isı şoku altında termofilik arkea'da (model: Thermoplasma volcanium) global gen anlatımındaki farklılaşmanın mikrodizin tekniği ile analizi, 2015 - 2015
- KOCABIYIK S., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2015
- KOCABIYIK S., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- KOCABIYIK S., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- YANIK T., SON Ç. D. , KOCABIYIK S., Project Supported by Higher Education Institutions, Kokain ve Amfetamin ile Regüle Edilen Transkript (CART)'le Etkileşim ERK fosforilasyonunu tetikleyen belirlenmiş on GPCR geninin qRT-PCR ile doğrulanması, 2014 - 2014
- KOCABIYIK S., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- Kocabiyyik S., TUBITAK Project, Archeaon Thermoplasma volcanium under stress conditionsUBITAK, 2013 - 2014

KOCABIYIK S., TUBITAK Project, Termoasidofilik Arkeon Thermoplasma Volcanium Un Ekspresyon Mikrodizinleri Kullanılarak Stres Koşullarında Transkriptom Analizi, 2013 - 2014

KOCABIYIK S., YILMAZ T., Project Supported by Higher Education Institutions, THERMOPLASMA VOLCANIUM'UN 20S PROTEOZOM DÜZENLEYİCİ PROTEİN GENLERİNİN STRES KOŞULLARINDA ANLATIM PROFİLLERİNDEKİ DEĞİŞİM, 2013 - 2013

KOCABIYIK S., BRAHUSHA A., Project Supported by Higher Education Institutions, TERMOFİLİK ARKEA PİCROPHILUS SP. DE MOLEKÜLER ŞAPERON SİSTEMLERİ, 2013 - 2013

KOCABIYIK S., SHERAJ I., Project Supported by Higher Education Institutions, THERMOPLASMA VOLCANIUM'UN Hps20 BENZERİ BİR KÜÇÜK ISI ŞOKU PROTEİNİNE İLİŞKİN YAPISAL ANALİZLER, 2013 - 2013

YANIK T., KASAP M., SON Ç. D., KOCABIYIK S., Project Supported by Higher Education Institutions, Kokain Ve Amfetamin İle Regüle Edilen Transkript(cart) İle Etkileşim Erk Fosforilasyonunu Tetikleyen G-Proteine Kenetli Reseptörün Tespiti, 2012 - 2013

Kocabiyik S., Volkan M., TUBITAK Project, Yüzeyde Güçlendirilmiş Raman Etiketli Olarak Boya Hapsedilmiş Çekirdek-Kabuk Nanoparçacıklarının Hazırlanması, Karakterize Edilmesi ve 20S ile 26S Proteasomlarının Tayininde Kullanılması, 2011 - 2013

Kocabiyik S., TUBITAK Project, Overexpression and characterization of an archaee originated small heat shock protein in E. coliA, 2010 - 2012

KOCABIYIK S., TUBITAK Project, Arkeabakteri Kökenli Rekombinant Küçük Isı Şoku Proteinlerinin E. coli'de Yüksek Düzeyde Ekspresyonu ve Karakterizasyonu; Çeşitli Stres Koşullarında Küçük Isı Şoku Protein Genlerinin Anlatım Farklılaşmasının Analizi, 2010 - 2012

Kocabiyik S., TUBITAK Project, Arkea Kökenli 20S Proteazom Alt Birim Genlerinin Farklı Stres Koşullarında Gen Anlatım Profillerindeki Değişimin mRNA ve Protein Düzeylerinde Nitel Olarak Analizi, 2010 - 2011

Kocabiyik S., TUBITAK Project, Rekombinant Arkeal Şaperonin (termozom) ve Ko-şaperonin (prefoldin) Gen Anlatımlarının, İşlevsel Etkileşimlerinin, ve Şaperon aktivitelerinin Araştırılması . TÜBİTAK Projesi, 2008 - 2009

KOCABIYIK S., TUBITAK Project, Thermoplasma Volcanium'da 20S Proteasomun Regülasyonu ve Isı Şoku Tepkisi İle İlişkisinin Araştırılması, 2005 - 2008

Kocabiyik S., TUBITAK Project, Regulation of Thermoplasma volcanium 20S Proteasome and its role in Heat-Shock Response. , 2005 - 2007

Kocabiyik S., Project Supported by Other Official Institutions, Development of Biotechnological Process for Production of a Recombinant Acid Protease, 2002 - 2004

Kocabiyik S., TUBITAK Project, Expression of Cloned  $\alpha$ - and  $\beta$ - Subunit Genes of 20S Proteasome from Thermoplasma volcanium in E.coli, 2002 - 2004

Kocabiyik S., TUBITAK Project, Isolation, and Biochemical and Genetic Analysis of 20S Proteasome Complex from Thermoplasma volcanium, 2001 - 2002

Kocabiyik S., TUBITAK Project, Isolation of Thermophilic Archaea/Bacteria from Hot Springs in Turkey and Cloning of a Thermophilic Serine Protease Gene from Archaea in E.coli. , 1998 - 2000

Kocabiyik S., TUBITAK Project, Determination of the Mechanisms Responsible for the Thermostability of Thermoplasma acidophilum Citrate Synthase by Using Genetic Engineering Techniques, 1996 - 1998

Kocabiyik S., TUBITAK Project, Cloning of a Haloacid Dehalogenase Gene from Pseudomonas sp. (19 S). TÜBİTAK Projesi, 1993 - 1995

Kocabiyik S., TUBITAK Project, Isolation and Characterization of Elastase from Pseudomonas aeruginosa. TÜBİTAK Projesi, 1992 - 1994

## Citations

Total Citations (WOS):124

h-index (WOS):7

## **Scholarships**

The Third World Academy of Sciences(TWAS) Research, TUBITAK, 1996 - 1996

British Council Research, British Council, 1995 - 1995

British Council Reseach, British Council, 1994 - 1994

The Third World Academy of Sciences (TWAS), TUBITAK, 1994 - 1994

DAAD Research, Other International Organizations, 1993 - 1993

NIH Post Doktora, Other International Organizations, 1990 - 1992

British Council and Royal Society Arařtırma Bursu, British Council, 1987 - 1987