

Assoc. Prof. Ahmet Tarık BAYKAL

Personal Information

Office Phone: [+90 216 500 4828](tel:+902165004828)

Fax Phone: [+90 216 576 3467](tel:+902165763467)

Email: ahmet.baykal@acibadem.edu.tr

Web: <https://avesis.acibadem.edu.tr/ahmet.baykal>

Address: Acibadem Mehmet Ali Aydınlar Üniversitesi Tıp Fakültesi, Tıbbi Biyokimya Anabilim Dalı İçerenköy, Kayışdağı Cd. No:32 Ataşehir – 34752, İstanbul

Education Information

Doctorate, Rutgers, The State University of New Jersey, United States Of America 2001 - 2007

Post Graduate, Istanbul Technical University, Fen-Edebiyat, Kimya, Turkey 1999 - 2001

Under Graduate, Marmara University, Ataturk Faculty Of Education, Mathematics And Science Education, Turkey 1994 - 1999

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Spectroscopic Studies and Synthetic Applications of Thiamin Diphosphate Dependent Enzymes, Rutgers, The State University of New Jersey, 2007

Post Graduate, Alfa-diazo-beta-oksoaldehit bileşiklerinin alfa, beta-enonlar ile halkalaşma reaksiyonları, Istanbul Technical University, 2001

Research Areas

Biochemistry

Academic Titles / Tasks

Associate Professor, Acibadem Mehmet Ali Aydınlar University, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, 2016 - Continues

Assistant Professor, Acibadem Mehmet Ali Aydınlar University, Tıp Fakültesi, Temel Tıp Bilimleri Bölümü, 2015 - 2016

Assistant Professor, Istanbul Medipol University, Faculty Of Medicine, Department Of Basic Medical Sciences, 2013 - 2015

Research Assistant PhD, BIOCHEMISTRY, CENTER FOR ADVANCED PROTEOMICS RESEARCH, 2006 - 2009

Research Assistant, Rutgers, The State University of New Jersey Newark Campus, GRADUATE SCHOOL, CHEMISTRY, 2003 - 2006

Lecturer, Rutgers, The State University of New Jersey Newark Campus, GRADUATE SCHOOL, CHEMISTRY, 2001 - 2003

Professional Experience

MERKEZ MÜDÜRÜ, AR-GE MERKEZİ, 2016 - Continues

UZMAN ARAŞTIRMACI, GEN MÜHENDİSLİĞİ VE BİYOTEKNOLOJİ ENSTİTÜSÜ, 2009 - 2015

Courses

Genel Biyokimya, Doctorate, 2019 - 2020

Biyokimya I, Doctorate, 2019 - 2020

Advising Theses

Baykal A. T. , Alzheimer Hastalığı'nda Periferik Mitokondriyal Disfonksiyon, Doctorate, S.Arabacı(Student), Continues

Baykal A. T. , Doğal Bileşiklerin Bilişsel Bozulmayı İyileştirici Etkisinin Alzheimer Fare Modelinde Kütle Spektrometresi Teknikleri ile Araştırılması , Doctorate, İ.Kırış(Student), Continues

Baykal A. T. , Servikal Kanserde Vücut Sıvılarından Klinik Biyobelirteçleri Belirleme ve Alternatif Kansere Tarama Yöntemlerini Araştırma, Doctorate, B.Köse(Student), Continues

Baykal A. T. , Klinik testlerde immünofiksasyon elektroforez analizine alternatif otomatize mikropipet afinite kromatografi kiti ve analiz yöntemi geliştirilmesi, Doctorate, Z.Zühal(Student), Continues

Baykal A. T. , Alzheimer Transgenik Fare Modellemesi ile Metaproteomik Yöntemler Kullanılarak Bağırsak Mikrobiyotasının Araştırılması, Post Graduate, E.Ayan(Student), Continues

Baykal A. T. , Nörodejeneratif Mekanizmaların Başlangıcının 5XFAD Transgenik Alzheimer Hastalığı Fare Modelinde Proteomik Yöntemlerle Araştırılması , Doctorate, İ.Uras(Student), Continues

Baykal A. T. , Covid-19 Tanı ve Tedavi Sürecinde Omik Yaklaşımlar, Doctorate, E.Akgün(Student), Continues

Baykal A. T. , Serteser M., RENAL ALLOGRAFT REDDİNDE YENİ POTANSİYEL ADAY BİYOBELİRTEÇLERİN ÇOKLU OMİK YAKLAŞIMLARLA TANIMLANMASI , Doctorate, İ.Yozgat(Student), Continues

Baykal A. T. , DUCHENNE MUSKULAR DISTROFİSİ (DMD), GENETİK KAS ZAYIFLIĞI HASTALIĞINDA GEN TERAPİSİ, Doctorate, S.Abanuz(Student), Continues

Baykal A. T. , Huntington Hastalığı Beyin Proteom Değişimlerinin YAC128 Transgenik Fare Modelinde MALDI-MS Görüntüleme Tekniği ile Araştırılması, Doctorate, M.Karayel(Student), Continues

Baykal A. T. , Alzheimer Hastalığına Ait Beyin Dokusundaki Protein Değişikliklerinin MALDI-MS Görüntüleme Tekniği İle Belirlenmesi, Post Graduate, E.AKGÜN(Student), 2018

Baykal A. T. , Parkinson hastalığında nöronal-lipit profili değişimi, Post Graduate, E.KADIOĞLU(Student), 2018

Baykal A. T. , Beyin ekstrasellüler matriksinin nörodejenerasyondaki rolünün alzheimer fare modelinde araştırılması, Doctorate, B.AYDOĞDU(Student), 2017

Baykal A. T. , Alzheimer hastalığında yaşa bağlı hipokampusteki protein profil değişimi ile meydana gelen farklılıklar ve ilişkili yolların transgenik 5XFAD fare modeli üzerinde incelenmesi, Post Graduate, A.SÜMEYYE(Student), 2016

Baykal A. T. , Yenidoğan alzheimer transgenik fare modelinde farklı beyin bölgelerinde protein profil değişimlerinin incelenmesi, Post Graduate, A.RUMEYSA(Student), 2016

Baykal A. T. , Proteomik yaklaşımlarla nörodejeneratif mekanizmaların araştırılması ve tedaviye yönelik potansiyel hedeflerin belirlenmesi, Doctorate, Ç.ACIOĞLU(Student), 2016

Baykal A. T. , Parkinson hastalığına sahip bireylerde serum kökenli olası biyomarkerların LC-MS/MS kullanılarak incelenmesi ve tanımlanması, Post Graduate, Ş.TÜRKSEVEN(Student), 2015

Baykal A. T. , Torasik aort anevrizmalı (TAA) dokuda protein ekspresyonunun incelenmesi, Doctorate, M.SERHATLI(Student), 2013

Baykal A. T. , Nörodejeneratif mekanizmaların mitokondriyal disfonksiyon hücre modellerinde proteomik yöntemlerle araştırılması, Post Graduate, B.BAYKAL(Student), 2011

Jury Memberships

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

- I. **Brain region-specific amyloid plaque-associated myelin lipid loss, APOE deposition and disruption of the myelin sheath in familial Alzheimer's disease mice**
Kaya I, Jennische E, Lange S, BAYKAL A. T. , Malmberg P, Fletcher J. S.
JOURNAL OF NEUROCHEMISTRY, 2020 (Journal Indexed in SCI)
- II. **Interaction of melatonin and Bmal1 in the regulation of PI3K/AKT pathway components and cellular survival.**
Beker M, Caglayan B, Caglayan A, Kelestemur T, Yalcin E, Caglayan A, Kilic U, Baykal A. T. , Reiter R, Kilic E.
Scientific reports, vol.9, pp.19082, 2019 (Journal Indexed in SCI)
- III. **Spatial Lipidomics Reveals Region and Long Chain Base Specific Accumulations of Monosialogangliosides in Amyloid Plaques in Familial Alzheimer's Disease Mice (5xFAD) Brain.**
Kaya I, Jennische E, Dunevall J, Lange S, Ewing A, Malmberg P, Baykal A. T. , Fletcher J.
ACS chemical neuroscience, 2019 (Journal Indexed in SCI)
- IV. **Comparison of protein expression profile of limb regeneration between neotenic and metamorphic axolotl.**
Sibai M, Altuntaş E, Süzek B, Şahin B, Parlayan C, Öztürk G, Baykal A. T. , Demircan T.
Biochemical and biophysical research communications, 2019 (Journal Indexed in SCI)
- V. **Evidence that melatonin downregulates Nedd4-1 E3 ligase and its role in cellular survival**
Yalcin E, Beker M. C. , Turkseven S, Caglayan B, Gurel B, Kilic U, Caglayan A. B. , Kalkan R, Baykal A. T. , Kelestemur T., et al.
TOXICOLOGY AND APPLIED PHARMACOLOGY, vol.379, 2019 (Journal Indexed in SCI)
- VI. **Hyperthermophilic flavin reductase from Sulfolobus solfataricus P2: Production and biochemical characterization**
Gun G, Imamoglu R, Tatli O, Yurum Y, BAYKAL A. T. , Dinler-Doganay G.
BIOTECHNOLOGY AND APPLIED BIOCHEMISTRY, 2019 (Journal Indexed in SCI)
- VII. **Molecular signatures of chronic periodontitis in gingiva: A genomic and proteomic analysis**
Guzeldemir-Akcakanat E, Alkan B, Sunnetci-Akkoyunlu D, GÜREL B, BALTA V. M. , Kan B, AKGÜN E., Yılmaz E. B. , BAYKAL A. T. , ÇİNE N., et al.
JOURNAL OF PERIODONTOLOGY, vol.90, pp.663-673, 2019 (Journal Indexed in SCI)
- VIII. **Identification of candidate biomarkers in converting and non-converting clinically isolated syndrome by proteomics analysis of cerebrospinal fluid**
Timirci-Kahraman O, Karaaslan Z, TÜZÜN E, KÜRTÜNCÜ M., BAYKAL A. T. , Gunduz T, Tuzuner M, AKGÜN E., GÜREL B., ERAKSOY M., et al.
Acta Neurologica Belgica, vol.119, pp.101-111, 2019 (Journal Indexed in SCI)
- IX. **Proteomic Analysis of Liver Preservation Solutions Prior to Liver Transplantation**
Coşkun A, Baykal A. T. , Oztug M, Kazan D, Kaya E, Emiroglu R, Yılmaz S, DüNDAR H. Z. , Akgoz M, Berber I., et al.
CURRENT PROTEOMICS, vol.16, pp.119-135, 2019 (Journal Indexed in SCI)
- X. **A Proteomic Analysis of Mitochondrial Complex III Inhibition in SH-SY5Y Human Neuroblastoma Cell Line**
Acioglu C, Tuzuner M. B. , Serhatli M, Acilan C, Sahin B, Akgun E, Adiguzel Z, Gürel B, Baykal A. T.
CURRENT PROTEOMICS, vol.16, pp.136-147, 2019 (Journal Indexed in SCI)
- XI. **Proteomics Analysis of CA1 Region of the Hippocampus in Pre-, Progression and Pathological Stages in a Mouse Model of the Alzheimer's Disease**
Gurel B, Cansev M, Koc C, Ocalan B, Cakir A, Aydin S, Kahveci N, Ulus İ. H. , Sahin B, Basar M. K. , et al.
CURRENT ALZHEIMER RESEARCH, vol.16, pp.613-621, 2019 (Journal Indexed in SCI)
- XII. **Time-of-Day Dependent Neuronal Injury After Ischemic Stroke: Implication of Circadian Clock Transcriptional Factor Bmal1 and Survival Kinase AKT**

- Beker M. C. , Caglayan B., Yalcin E., Caglayan A. B. , Turkseven S., Gurel B., Kelestemur T., Sertel E., Şahin Z., Kutlu S., et al.
MOLECULAR NEUROBIOLOGY, vol.55, pp.2565-2576, 2018 (Journal Indexed in SCI)
- XIII. **Early stage alterations in CA1 extracellular region proteins indicate dysregulation of IL6 and iron homeostasis in the 5XFAD Alzheimer's disease mouse model**
Gurel B., Cansev M., Sevinc C., Kelestemur S., Ocalan B., Cakir A., Aydin S., Kahveci N., Ozansoy M., Taskapilioglu O., et al.
Journal of Alzheimer's Disease, vol.61, pp.1399-1410, 2018 (Journal Indexed in SCI)
- XIV. **In vivo evolutionary engineering for ethanol-tolerance of Saccharomyces cerevisiae haploid cells triggers diploidization**
Turanli-Yildiz B., Benbadis L., Alkim C., Sezgin T., Aksit A., Gokce A., Ozturk Y., Baykal A. T. , Çakar Z. P. , Francois J. M.
JOURNAL OF BIOSCIENCE AND BIOENGINEERING, vol.124, pp.309-318, 2017 (Journal Indexed in SCI)
- XV. **Clinical applications of MALDI imaging technologies in cancer and neurodegenerative diseases**
Ucal Y., Durer Z. A. , Atak H., Kadioglu E., Sahin B., COŞKUN A., BAYKAL A. T. , ÖZPINAR A.
BIOCHIMICA ET BIOPHYSICA ACTA-PROTEINS AND PROTEOMICS, vol.1865, pp.795-816, 2017 (Journal Indexed in SCI)
- XVI. **Proteomic profiling of HBV infected liver biopsies with different fibrotic stages**
Katrinli Ş., Ozdil K., Sahin A., Ozturk O., Kir G., Baykal A. T. , Akgun E., Sarac O. S. , Sokmen M., Doganay H. L. , et al.
PROTEOME SCIENCE, vol.15, 2017 (Journal Indexed in SCI)
- XVII. **Detailed tail proteomic analysis of axolotl (Ambystoma mexicanum) using an mRNA-seq reference database**
Demircan T., Keskin İ., Dumlu S. N. , Ayturk N., Avsaroglu M. E. , Akgun E., Öztürk G., Baykal A. T.
PROTEOMICS, vol.17, 2017 (Journal Indexed in SCI)
- XVIII. **Proteomics analysis of mitochondrial dysfunction triggered by complex specific electron transport chain inhibitors reveals common pathways involving protein misfolding in an SH-SY5Y in vitro cell model**
Sahin B., Baykal A. T.
TURKISH JOURNAL OF BIOLOGY, vol.41, pp.765-785, 2017 (Journal Indexed in SCI)
- XIX. **Tumor necrosis factor-alpha induced caspase-3 activation-related iNOS gene expression in ADP-activated platelets**
Cevik O., Adiguzel Z., Baykal A. T. , Şener A.
TURKISH JOURNAL OF BIOLOGY, vol.41, pp.31-40, 2017 (Journal Indexed in SCI)
- XX. **Proteomic Analysis of Kidney Preservation Solutions Prior to Renal Transplantation**
COŞKUN A., BAYKAL A. T. , KAZAN D., Akgoz M., Senal M. O. , Berber İ., Titz I., Bilsel G., Kilercik H., Karaosmanoglu K., et al.
PLOS ONE, vol.11, 2016 (Journal Indexed in SCI)
- XXI. **Changes in serum proteins after endotoxin administration in healthy and choline-treated calves**
Yilmaz Z., İNAN O. E. , Kocaturk M., Baykal A. T. , Hacariz O., Hatipoglu I., Tvarijonaviciute A., Cansev M., Ceron J., Ulus İ. H.
BMC VETERINARY RESEARCH, vol.12, 2016 (Journal Indexed in SCI)
- XXII. **Toll like receptor 9 antagonism modulates spinal cord neuronal function and survival: Direct versus astrocyte-mediated mechanisms**
Acioglu C., Mirabelli E., Baykal A. T. , Ni L., Ratnayake A., Heary R. F. , Elkabes S.
BRAIN BEHAVIOR AND IMMUNITY, vol.56, pp.310-324, 2016 (Journal Indexed in SCI)
- XXIII. **Proteome profiling of the compatible interaction between wheat and stripe rust**
Demirci Y. E. , Inan C., Günel A., Maytalan D., Mert Z., Baykal A. T. , Korkut S. V. , Arda N., Hasançebi S.
EUROPEAN JOURNAL OF PLANT PATHOLOGY, vol.145, pp.941-962, 2016 (Journal Indexed in SCI)
- XXIV. **Altered metabolic pathways in endometrial cells treated with mycobacterial heat shock protein HSP65 causes aberrant decidualization**
Bastu E., Gunel T., Baykal A. T. , Demiral I., Hoosini M. K. , Gumusoglu E., Akgun E., Baykal B., Eren H., Tunc T., et al.
HUMAN REPRODUCTION, vol.31, pp.279-280, 2016 (Journal Indexed in SCI)

- XXV. **Platelets Proteomic Profiles of Acute Ischemic Stroke Patients**
Cevik O., Baykal A. T. , Şener A.
PLOS ONE, vol.11, 2016 (Journal Indexed in SCI)
- XXVI. **Evaluation of Serum and Ascitic Fluid Proteomes in Dogs with Dilated Cardiomyopathy**
Kocaturk M., Baykal A. T. , Turkseven S., Acioglu C., Agudelo C. F. , Yilmaz Z.
KAFKAS UNIVERSITESI VETERINER FAKULTESI DERGISI, vol.22, pp.273-279, 2016 (Journal Indexed in SCI)
- XXVII. **Master redox regulator Trx1 upregulates SMYD1 & modulates lysine methylation**
Liu T., Wu C., Jain M. R. , Nagarajan N., Yan L., Dai H., Cui C., Baykal A. T. , Pan S., Ago T., et al.
BIOCHIMICA ET BIOPHYSICA ACTA-PROTEINS AND PROTEOMICS, vol.1854, pp.1816-1822, 2015 (Journal Indexed in SCI)
- XXVIII. **Linking a compound-heterozygous Parkin mutant (Q311R and A371T) to Parkinson's disease by using proteomic and molecular approaches**
Ozgul S., KASAP M., AKPINAR G., KANLI A., Guzel N., Karaosmanoglu K., Baykal A. T. , Iseri P.
NEUROCHEMISTRY INTERNATIONAL, pp.1-13, 2015 (Journal Indexed in SCI)
- XXIX. **A proteomic analysis of p53-independent induction of apoptosis by bortezomib in 4T1 breast cancer cell line**
Yerlikaya A., Okur E., Baykal A. T. , Acilan C., Boyaci I., Ulukaya E.
JOURNAL OF PROTEOMICS, vol.113, pp.315-325, 2015 (Journal Indexed in SCI)
- XXX. **Hepatitis B virus e antigen (HBeAg) may have a negative effect on dendritic cell generation**
Hatipoglu I., Ercan D., Acilan C., Basalp A., Durali D., Baykal A. T.
IMMUNOBIOLOGY, vol.219, pp.944-949, 2014 (Journal Indexed in SCI)
- XXXI. **Evaluation of apoptotic molecular pathways for smooth muscle cells isolated from thoracic aortic aneurysms in response to oxidized sterols**
Adiguzel Z., Arda N., Kacar O., Serhatli M., Tas S. G. , Baykal A. T. , Baysal K., Acilan C.
MOLECULAR BIOLOGY REPORTS, vol.41, pp.7875-7884, 2014 (Journal Indexed in SCI)
- XXXII. **Biochemical and Proteomic Analysis of a Potential Anticancer Agent: Palladium(II) Saccharinate Complex of Terpyridine Acting through Double Strand Break Formation**
Adiguzel Z., Baykal A. T. , Kacar O., Yilmaz V. T. , Ulukaya E., Acilan C.
JOURNAL OF PROTEOME RESEARCH, vol.13, pp.5240-5249, 2014 (Journal Indexed in SCI)
- XXXIII. **Proteomic Study of the Microdissected Aortic Media in Human Thoracic Aortic Aneurysms**
Serhatli M., Baysal K., Acilan C., Tuncer E., Bekpinar S., Baykal A. T.
JOURNAL OF PROTEOME RESEARCH, vol.13, pp.5071-5080, 2014 (Journal Indexed in SCI)
- XXXIV. **Identification of ApoA1, HPX and POTEE genes by omic analysis in breast cancer**
ÇİNE N., Baykal A. T. , Sunnetci D., Canturk Z., Serhatli M., SAVLI H.
ONCOLOGY REPORTS, vol.32, pp.1078-1086, 2014 (Journal Indexed in SCI)
- XXXV. **Generating a detailed protein profile of Fasciola hepatica during the chronic stage of infection in cattle**
Hacariz O., Baykal A. T. , Akgun M., Kavak P., Sagioglu M. S. , Sayers G. P.
PROTEOMICS, vol.14, pp.1519-1530, 2014 (Journal Indexed in SCI)
- XXXVI. **mTor Is a Signaling Hub in Cell Survival: A Mass-Spectrometry-Based Proteomics Investigation**
Tang Z., Baykal A. T. , Gao H., Quezada H. C. , Zhang H., Bereczki E., Serhatli M., Baykal B., Acioglu C., Wang S., et al.
JOURNAL OF PROTEOME RESEARCH, vol.13, pp.2433-2444, 2014 (Journal Indexed in SCI)
- XXXVII. **Evaluation of the molecular mechanisms of a palladium(II) saccharinate complex with terpyridine as an anticancer agent**
Kacar O., Adiguzel Z., Yilmaz V. T. , Cetin Y., Cevatemre B., Arda N., Baykal A. T. , Ulukaya E., Acilan C.
ANTI-CANCER DRUGS, vol.25, pp.17-29, 2014 (Journal Indexed in SCI)
- XXXVIII. **A preliminary proteomic evaluation of smooth muscle cells in thoracic aortic aneurysms**
Ayhan C. A. , Baykal B., Serhatli M., Kacar O., Adiguzel Z., Tas S., Baysal K., Baykal A. T.
TURKISH JOURNAL OF BIOLOGY, vol.38, pp.238-252, 2014 (Journal Indexed in SCI)
- XXXIX. **A novel method to differentiate bovine and porcine gelatins in food products: NanoUPLC-ESI-Q-TOF-MSE based data independent acquisition technique to detect marker peptides in gelatin**

- Yılmaz M. T. , Kesmen Z., Baykal B., Sağdıç O., Kulen O., Kacar O., Yetim H., Baykal A. T.
FOOD CHEMISTRY, vol.141, pp.2450-2458, 2013 (Journal Indexed in SCI)
- XL. **The apoptotic actions of platelets in acute ischemic stroke**
Cevik O., Adiguzel Z., Baykal A. T. , Somay G., ŞENER A.
MOLECULAR BIOLOGY REPORTS, vol.40, pp.6721-6727, 2013 (Journal Indexed in SCI)
- XLII. **Identification of differentially expressed proteins in atherosclerotic aorta and effect of vitamin E**
Kaga E., Karademir B., Baykal A. T. , Ozer N. K.
JOURNAL OF PROTEOMICS, vol.92, pp.260-273, 2013 (Journal Indexed in SCI)
- XLIII. **Proteomic evidence for the plasticity of cultured vascular smooth muscle cells**
Baykal A. T. , Baykal B., Serhatli M., Adiguzel Z., Tuncer M. A. , Kacar O., Baysal K., Acilan Ayhan C.
TURKISH JOURNAL OF BIOLOGY, vol.37, pp.414-425, 2013 (Journal Indexed in SCI)
- XLIV. **Proteomic analysis of early responsive resistance proteins of wheat (*Triticum aestivum*) to yellow rust (*Puccinia striiformis* f. sp. *tritici*) using ProteomeLab PF2D**
Maytalman D., Mert Z., Baykal A. T. , Inan C., Günel A., Hasançebi S.
PLANT OMICS, vol.6, pp.24-35, 2013 (Journal Indexed in SCI)
- XLV. **The comparative proteomics analysis by lc-ms/ms of thoracic aortic aneurysms (taa) tissue**
Serhatli M., Kacar O., Tuncer A., Baysal K., Bekpinar S., Baykal A. T.
NEW BIOTECHNOLOGY, vol.29, 2012 (Journal Indexed in SCI)
- XLVI. **Proteomic investigation of compatible interaction between wheat and yellow rust**
Demirci Y. E. , Inan C., Mert Z., Maytalman D., Baykal A. T. , Gunel A., Korkut S. V. , Hasancebi S.
NEW BIOTECHNOLOGY, vol.29, 2012 (Journal Indexed in SCI)
- XLVII. **Proteomic investigation of compatible interaction between wheat and yellow rust**
Demirci Y. E. , Inan C., Mert Z., Maytalman D., Baykal A. T. , Gunel A., Korkut S. V. , Hasancebi S.
NEW BIOTECHNOLOGY, vol.29, 2012 (Journal Indexed in SCI)
- XLVIII. **A Proteomic Approach To Investigate the Distribution and Abundance of Surface and Internal Fasciola hepatica Proteins during the Chronic Stage of Natural Liver Fluke Infection in Cattle**
Hacariz O., Sayers G., Baykal A. T.
JOURNAL OF PROTEOME RESEARCH, vol.11, pp.3592-3604, 2012 (Journal Indexed in SCI)
- XLIX. **Thioredoxin 1-Mediated Post-Translational Modifications: Reduction, Transnitrosylation, Denitrosylation, and Related Proteomics Methodologies**
Wu C., Parrott A. M. , Fu C., Liu T., Marino S. M. , Gladyshev V. N. , Jain M. R. , Baykal A. T. , Li Q., Oka S., et al.
ANTIOXIDANTS & REDOX SIGNALING, vol.15, pp.2565-2604, 2011 (Journal Indexed in SCI)
- L. **Redox Regulatory Mechanism of Transnitrosylation by Thioredoxin**
Wu C., Liu T., Chen W., Oka S., Fu C., Jain M. R. , Parrott A. M. , Baykal A. T. , Sadoshima J., Li H.
MOLECULAR & CELLULAR PROTEOMICS, vol.9, pp.2262-2275, 2010 (Journal Indexed in SCI)
- LI. **Proton Bridging in the Interactions of Thrombin with Small Inhibitors**
Kovach I. M. , Kelley P., Eddy C., Jordan F., Baykal A. T.
BIOCHEMISTRY, vol.48, pp.7296-7304, 2009 (Journal Indexed in SCI)
- LII. **Snapshot of a Reaction Intermediate: Analysis of Benzoylformate Decarboxylase in Complex with a Benzoylphosphonate Inhibitor**
Brandt G. S. , Kneen M. M. , Chakraborty S., Baykal A. T. , Nemeria N., Yep A., Ruby D. I. , Petsko G. A. , Kenyon G. L. , McLeish M. J. , et al.
BIOCHEMISTRY, vol.48, pp.3247-3257, 2009 (Journal Indexed in SCI)
- LIII. **Aberrant regulation of choline metabolism by mitochondrial electron transport system inhibition in neuroblastoma cells**
Baykal A. T. , Jain M. R. , Li H.
METABOLOMICS, vol.4, pp.347-356, 2008 (Journal Indexed in SCI)
- LIV. **The 1',4'-iminopyrimidine tautomer of thiamin diphosphate is poised for catalysis in asymmetric active centers on enzymes**
Nemeria N., Chakraborty S., Baykal A. T. , Korotchkina L. G. , Patel M. S. , Jordan F.
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol.104, pp.78-

82, 2007 (Journal Indexed in SCI)

- LIV. **Synthesis with good enantiomeric excess of both enantiomers of alpha-ketols and acetolactates by two thiamin diphosphate-dependent decarboxylases**
Baykal A. T. , Chakraborty S., Dodoo A., Jordan F.
BIOORGANIC CHEMISTRY, vol.34, pp.380-393, 2006 (Journal Indexed in SCI)
- LV. **Electronic and nuclear magnetic resonance spectroscopic features of the 1',4'-iminopyrimidine tautomeric form of thiamin diphosphate, a novel intermediate on enzymes requiring this coenzyme**
Baykal A. T. , Kakalis L., Jordan F.
BIOCHEMISTRY, vol.45, pp.7522-7528, 2006 (Journal Indexed in SCI)
- LVI. **Tetrahedral intermediates in thiamin diphosphate-dependent decarboxylations exist as a 1',4'-imino tautomeric form of the coenzyme, unlike the Michaelis complex or the free coenzyme**
Nemeria N., Baykal A. T. , Joseph E., Zhang S., Yan Y., Furey W., Jordan F.
BIOCHEMISTRY, vol.43, pp.6565-6575, 2004 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Neonatal Neurodegeneration in Alzheimer's Disease Transgenic Mouse Model.**
Mazi A., Arzuman A., Gurel B., Sahin B., Tuzuner M., Ozansoy M., Baykal A. T.
Journal of Alzheimer's disease reports, vol.2, pp.79-91, 2018 (Refereed Journals of Other Institutions)
- II. **[Investigation of the abundance of proteins secreted by Fasciola hepatica, which is exposed to environmental change in experimental studies, with an advanced proteomic approach]. Deneysel Çalışmalarda Çevresel Değişikliğe Maruz Kalan Fasciola hepatica'nin Salgiladığı Protein Miktarlarının Bir İleri Proteomik Yaklaşımla İncelenmesi.**
Haçarız O., Baykal A. T.
Türkiye parazitolojii dergisi / Türkiye Parazitoloji Derneği = Acta parasitologica Turcica / Turkish Society for Parasitology, vol.38, pp.106-110, 2014 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Alzheimer, Parkinson Ve Huntington Transgenik Fare Modellerinde Nörodejenerasyon Gelişiminde Ortak Ve Özgün Protein Yolaklarının Maldı Görüntüleme İle Belirlenmesi**
Akgün E., Karayel Başar M., Arabacı S., Kırış İ., Gürel B., Ozansoy M., Keskin İ., Hanoğlu L., Baykal A. T.
24. Ulusal Biyoloji Kongresi, Manisa, Turkey, 10 - 14 September 2018, pp.91
- II. **YAC128 Transgenik Fare Modelinin Beyin Dokusundaki Protein Değişikliklerinin MALDI-MS Görüntüleme Tekniği ile Belirlenmesi**
Karayel Başar M., Akgün E., Arabacı S., Gürel B., Ozansoy M., Keskin İ., Ersoy Tunalı N., Hanoğlu L., Baykal A. T.
24. Ulusal Biyoloji Kongresi, Manisa, Turkey, 10 - 14 September 2018, pp.86
- III. **Endometrial proteomic signature in recurrent implantation failure**
Dogan M., Demiral I., Akgun E., Ulgen E., Gurel B., Sahin B., Aytan A. N. , Ozgor B. Y. , Baykal A. T. , Sezerman U., et al.
34th Annual Meeting of the European-Society-of-Human-Reproduction-and-Embryology (ESHRE), Barcelona, Spain, 1 - 04 June 2018, vol.33, pp.116-117
- IV. **From a screening test to blood-based biomarkers: a research protocol for the diagnosis of dementia and detection of risk factors in Turkey**
AYHAN Y., KARADAĞ ÇAMAN Ö., KARAHAN S., BAYKAL A. T. , KARAHAN S., KIRAN S., SAKA TOPÇUOĞLU E., BARIŞKIN E., BİLİR N.
XXIII World Congress of Neurology, 16 - 21 September 2017, pp.317-318
- V. **Multipl Skleroz Gelişiminde Aday Biyomarkerların Proteomiks Analiz Yöntemi ile Belirlenmesi**
TİMİRCİ KAHRAMAN Ö., KÜÇÜKALİ C. İ. , KARAASLAN Z., TÜZÜN E., BAYKAL A. T. , KÜRTÜNCÜ M., GÜNDÜZ T., ERAKSOY M.

53. Ulusal Nöroloji Kongresi, Antalya, Turkey, 24 - 30 November 2017

- VI. **From a screening test to blood-based biomarkers: A research protocol for the diagnosis of dementia and detection of risk factors in Turkey**
Ayhan Y., Caman O. K., Karahan S., Baykal T., Karahan S., Kiran S., Saka E., Bariskin E., Bilir N.
23rd World Congress of Neurology (WCN), Kyoto, Japan, 16 - 21 September 2017, vol.381, pp.317-318
- VII. **INVESTIGATING NEUROLOGICAL DISEASE MECHANISMS VIA PROTEOMICS ANALYSIS**
Gürel B., Mazi A. R., Arzuman A. S., Sevinç C., KELEŞTEMUR S., ÖCALAN B., ÇAKIR A., Aydın S., KAHVECİ N., OZANSOY M., et al.
6th International Congress of Molecular Medicine, İstanbul, Turkey, 22 - 25 May 2017, pp.36
- VIII. **PROTEOMICS ANALYSIS OF HIPPOCAMPAL EXTRACELLULAR MATRIX DURING EARLY, PROGRESSION AND LATE STAGE OF ALZHEIMER'S DISEASE**
Gürel B., CANSEV M., Sevinç C., Aydın S., ÖCALAN B., ÇAKIR A., KAHVECİ N., OZANSOY M., TAŞKAPILIOĞLU Ö., ULUS İ. H., et al.
6th International Congress of Molecular Medicine, İstanbul, Turkey, 22 - 25 May 2017, pp.120
- IX. **Investigating Neurological Disease Mechanisms via Proteomics Analysis**
OZANSOY M., BAYKAL A. T.
6. International Congress of Molecular Medicine, 22 - 25 May 2017
- X. **Alterations in Glycolysis, Ethanol and Lipid Metabolism Pathways Yields to Oxidative Stress Response in HBV Infected Human Liver with a Fibrosis Stage Specific Manner**
DOĞANAY L., KATRİNLİ Ş., ÖZDİL K., ŞAHİN A., ÖZTÜRK O., KIR G., BAYKAL A. T., DİNLER DOĞANAY G.
Viral Hepatitis, 3 - 04 March 2017
- XI. **DETERMINATION OF STAGE SPECIFIC MARKERS FOR LIVER FIBROSIS IN HEPATITIS B: A COMPARATIVE TISSUE PROTEOMIC STUDY**
Katrinli Ş., Ozdil K., Sahin A., Ozturk O., Kir G., Baykal A. T., Sarac O. S., Sokmen M., Doganay G. D., Doganay H. L.
EASL International Liver Congress, Barcelona, Spain, 13 - 17 April 2016, vol.64
- XII. **Opposing effects of a toll-like receptor 9 antagonist on spinal cord neuronal viability through direct versus astrocyte-mediated actions**
Acioglu C., Baykal A. T., Heary R. F., Elkabes S.
12th European Meeting on Glial Cell Function in Health and Disease, Bilbao, Spain, 15 - 18 July 2015, vol.63
- XIII. **The comparative proteomics analysis by LC-MS/MS of thoracic aortic aneurysms (taa) tissue**
Baykal A. T.
Proteomic Evaluation of Thoracic Aortic Aneurysm, İstanbul, Turkey, 7 - 09 December 2010, pp.158
- XIV. **Proteomic evaluation of preservation solutions prior to kidney transplantation**
Coskun A., Kazan D., Akgöz M., Baykal A. T., Berber İ., Bilsel G., Senal M. O., Karaosmanoglu K., Aksoy I., Yazici C.
22nd IUBMB Congress/37th FEBS Congress, Sevilla, Spain, 4 - 09 September 2012, vol.279, pp.235
- XV. **Use of thiamin diphosphate-dependent decarboxylases in chiral synthesis of carboligase products**
Baykal A. T., Chakraborty S., Nemeria N., Jordan F.
Experimental Biology 2006 Meeting, San-Francisco, Costa Rica, 1 - 05 April 2006, vol.20
- XVI. **Mechanism based inhibition of benzoylformate decarboxylase by methyl benzoylphosphonate**
Chakraborty S., Baykal A. T., Nemeria N., Zhou L., Kneen M., Kenyon G., McLeish M., Jordan F.
230th National Meeting of the American-Chemical-Society, Washington, Kiribati, 28 August - 01 September 2005, vol.230
- XVII. **Circular dichroism signatures for the amino and imino tautomers of thiamin diphosphate on enzymes.**
Baykal A. T., Joseph E., Nemeria N., Jordan F.
226th National Meeting of the American-Chemical-Society, New-York, United States Of America, 7 - 11 September 2003, vol.226
- XVIII. **Circular dichroism signatures for the amino and imino tautomers of thiamin diphosphate on enzymes.**
Baykal A. T., Joseph E., Nemeria N., Jordan F.
226th National Meeting of the American-Chemical-Society, New-York, United States Of America, 7 - 11 September

Expert Reports

I. Doktora İntihal Deęerlendirme Raporu

Baykal A. T.

Ege Üniversitesi, pp.4, İzmir, 2015

Supported Projects

Baykal A. T. , Güngör M., Takmaz Ö., Serdar M. A. , TUBITAK Project, Servikal Kanserde Erken Tanı Kiti Gelistirmek İçin Biyobelirteç Belirleme, 2020 - 2021

Baykal A. T. , TUBITAK Project, Mekanizmaların Başlangıcının 5xfad Transgenik Alzheimer Hastalığı Fare Modelinde Proteomik Yöntemlerle Araştırılması, 2018 - 2021

Baykal A. T. , TUBITAK Project, EMBRİYO TRANSFERİNDE, ENDOMETRİYUM TARAFINDAN KABUL EDİLİP-EDİLMEYECEĞİNİN ANLAŞILMASINI SAĞLAYACAK GENETİK VE METOBOLİK BİYOBELİRTEÇLERİN TANIMLANMASI VE KİTLEŞTİRİLMESİ, 2018 - 2021

Baykal A. T. , Tüzüner M. B. , TUBITAK Project, Meme Kanseri ve Kansere Çevresi Dokularında Steroidogenez Yolağı Metabolik Akış Profillerinin Belirlenmesi ve Klinikopatolojik Bulgularla Karşılaştırılması, 2018 - 2020

Baykal A. T. , Tüzün E., TUBITAK Project, Otoimmün Demiyelinizan Hastalıkların Tanı ve Tedavisinde Antikor ve B Lenfosit Temelli Yöntemlerin Araştırılması, 2018 - 2020

Baykal A. T. , TÜBİTAK - AB COST Project, Alzheimer Hastalığı'nda Periferik Mitokondriyal Disfonksiyon, 2018 - 2020

Baykal A. T. , Özdemir Y., TUBITAK Project, Multiple Skleroz hastalığında perisitlerin rolünün araştırılması ve klinik alt tiplerin belirlenmesine yönelik tarama sistemi geliştirilmesi, 2017 - 2020

Baykal A. T. , Karadağ A., TUBITAK Project, Biyobelirteç Temelli Akciğer Kanseri Erken Tanı Ve Tarama Sistemi Geliştirilmesi, 2015 - 2020

Baykal A. T. , TÜBİTAK International Bilateral Joint Cooperation Program Project, Alzheimer Hastalığı Tedavisine Yönelik Yeni Doğal Bileşiklerin Tanımlanması ve Nörodejenerasyon Üzerindeki Etkilerinin Belirlenmesi, 2016 - 2019

Baykal A. T. , TUBITAK Project, Demans İçin Yaygın Kullanılabilecek Bir Tarama Testinin Standardizasyonu, Bazı Çevresel Risk Etmenlerinin Tespiti Ve Biyolojik Belirteçlerin Araştırılması, 2015 - 2018

Baykal A. T. , Development Agency, Yeni Nesil Kütle Spektrometresi Görüntüleme Teknolojisi ile Klinik Tarama ve Tanı Metotlarının Gelistirilmesi, 2016 - 2017

Baykal A. T. , TÜBİTAK International Bilateral Joint Cooperation Program Project, Beyin ekstraselüler matrisinin nörodejenerasyondaki rolünün Alzheimer'xxda araştırılması, 2013 - 2017

Baykal A. T. , TÜBİTAK - AB COST Project, Nörodejeneratif Beyin Dokusundaki Protein Değişikliklerin MALDI MS Görüntüleme Tekniğı ile Belirlenmesi, 2013 - 2016

Activities in Scientific Journals

Turkish journal of molecular biol and biotech., Committee Member, 2018 - Continues

Journal Of Alzheimers Disease, Assistant Editor, 2018 - 2019

European Journal of Chemistry, Technical Redactor, 2010 - 2012

Scientific Refereeing

ICGEB Supported Project, Koc University, Turkey, June 2020

TUBITAK Project, 1002 - Quick Support Program, Kocaeli University, Turkey, January 2020

Project Supported by Other Official Institutions, TÜSEB, Turkey, January 2020

Project Supported by Higher Education Institutions, BAP Research Project, İstanbul University-Cerrahpaşa, Turkey, May 2019

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Bogazici University, Turkey, February 2019

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Inonu University, Turkey, December 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Pamukkale University, Turkey, December 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Akdeniz University, Turkey, December 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Bogazici University, Turkey, December 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ataturk University, Turkey, November 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Marmara University, Turkey, November 2018

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Ataturk University, Turkey, November 2018

TUBITAK Project, 3001 - Initial R&D Projects Support Program, Mersin University, Turkey, September 2018

TUBITAK Project, 1002 - Quick Support Program, Kocaeli University, Turkey, June 2018

TÜBİTAK - AB COST Project, Akdeniz University, Turkey, May 2018

JOURNAL OF CHROMATOGRAPHY B, SCI Journal, April 2018

FOOD CHEMISTRY, SCI Journal, March 2018

ACS CHEMICAL NEUROSCIENCE, SCI Journal, February 2018

TUBITAK Project, 3001 - Initial R&D Projects Support Program, Manisa Celal Bayar University, Turkey, January 2018

FOOD CHEMISTRY, SCI Journal, November 2017

TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Uskudar University, Turkey, November 2017

METABOLOMICS, SCI Journal, July 2017

TUBITAK Project, 3001 - Initial R&D Projects Support Program, Tokat Gaziosmanpaşa University, Turkey, May 2017

NEUROCHEMISTRY INTERNATIONAL, SCI Journal, February 2017

JOURNAL OF PROTEOME RESEARCH, SCI Journal, November 2016

Universities of Other Countries Supported Project, university of sharjah, United Arab Emirates, September 2016

PHYTOMEDICINE, SCI Journal, June 2016

TUBITAK Project, 3001 - Initial R&D Projects Support Program, Koc University, Turkey, May 2016

TÜBİTAK International Bilateral Joint Cooperation Program Project, Japan Society for the Promotion of Science, JSPS Bilateral Cooperation Program, Koc University, Turkey, December 2015

Tasks In Event Organizations

Uçal Y., Özpınar A., Baykal A. T. , 3. Ulusal Proteomik Kongresi, Scientific Congress, İstanbul, Turkey, Şubat 2020

Baykal A. T. , 6. İlaç Kimyası Kongresi, Scientific Congress, Antalya, Turkey, Mart 2018

Baykal A. T. , Uçal Y. , 2. Uluslararası Proteomik Kongresi-TuPA , Scientific Congress, İstanbul, Turkey, Kasım 2017

Uçal Y., Baykal A. T. , Özpınar A., Coskun A., Serdar M. A. , Serteser M., Aksungar F., X Annual Congress of the European Proteomics Association, Scientific Congress, İstanbul, Turkey, Haziran 2016

Baykal A. T. , Biyobenzer İlaç Analizi Bilgi Günü, Scientific Congress, İstanbul, Turkey, Haziran 2016

Uçal Y., Serteser M., Özpınar A., Baykal A. T. , Coskun A., 1. Ulusal Proteomik Kongresi, Scientific Congress, Antalya, Turkey, Kasım 2014

Uçal Y., Özpınar A., Baykal A. T. , Coskun A., OurCON II, Scientific Congress, Antalya, Turkey, Kasım 2014

Scientific Research / Working Group Memberships

Covid-19 Mass Spectrometry Coalition, British Mass Spectrometry Society, England, <https://covid19-msc.org/>, 2020 - Continues

Avrupa Birliđi Cost Aksiyonu (Bilimsel Ve Teknik İşbirliđi Alanında Avrupa İşbirliđi) Yönetim Kurulu , Acibadem Mehmet Ali Aydınlar University, Turkey, <https://www.cost.eu/actions/CA15203/#tabs|Name:management-committee>, 2018 - Continues

Bm1114: Avrupa Birliđi Cost Aksiyonu (Bilimsel Ve Teknik İşbirliđi Alanında Avrupa İşbirliđi) Yönetim Kurulu, Acibadem Mehmet Ali Aydınlar University, Turkey, <https://www.cost.eu/actions/BM1104/#tabs|Name:management-committee>, 2014 - 2015

Invited Congress and Symposium Activities

3. Ulusal Proteomik Kongresi , Invited Speaker, İstanbul, Turkey, 2020

Selçuk Üniversitesi Düşünsel Elementler Sempozyumu, Invited Speaker, Konya, Turkey, 2019

th EFLM-UEMS European Joint Congress in Laboratory Medicine, Invited Speaker, Antalya, Turkey, 2018

VI. International Congress of Molecular Medicine, Invited Speaker, İstanbul, Turkey, 2017

Farmasötik Bilimler Ankara Derneđi (FABAD) Konferans Serisi, Invited Speaker, Ankara, Turkey, 2017

X Annual Congress of The European Proteomics Association, Invited Speaker, İstanbul, Turkey, 2016

4. İlaç Kimyası: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu Kongresi, Invited Speaker, Aydın, Turkey, 2016

1. Ulusal Proteomik Kongresi, Invited Speaker, Antalya, Turkey, 2014

Citations

Total Citations (WOS):824

h-index (WOS):17

Invited Talks

Temel Klinik Proteomik Uygulamaları Kursu III, Seminar, Kocaeli Üniversitesi, Turkey, May 2014

Temel Klinik Proteomik Uygulamaları Kursu II, Seminar, Kocaeli Üniversitesi, Turkey, June 2012

Temel Klinik Proteomik Uygulamaları Kursu I, Seminar, Kocaeli Üniversitesi, Turkey, June 2011

Awards

Baykal A. T. , TÜBİTAK Polonya İkili İşbirliđi Programı kapsamında en iyi ikili işbirliđi proje ödülü, Polonya Ulusal Araştırma Ve Geliştirme Merkezi (Ncbr), October 2019

Özpınar A., Serteser M., Coşkun A., Serdar M. A. , Aksungar F., Baykal A. T. , Kilercik M., Uçal Y., Öğretim Üyesi Başına Düşen ve Q1 Kategorisindeki Dergilerde Yapılan Yayınlar, Acibadem Mehmet Ali Aydınlar Üniversitesi, May 2019

Baykal A. T. , Kırış İ., Karayel Başar M., Gürel B., Mroczek T., Skalicka-Woznia K., Poster ikincilik ödülü, 24. Ulusal Biyoloji Kongresi, September 2018

Baykal A. T. , Kırış İ., Karayel Başar M., Gürel B., Mroczek T., Skalicka-Wozniak K., Poster birincilik ödülü, 24. Ulusal Biyoloji Kongresi, September 2018