

Assoc. Prof. MEHMET AYDIN AKBUDAK

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: B-9064-2016

ScopusID: 8856341800

Yoksis Researcher ID: 46012

Education Information

Post Doctorate, Institute Of Molecular Genetics Of The Cas, Prague, Transgenic Models Of Diseases, Czech Republic 2013 - 2014

Post Doctorate, University of Arkansas at Fayetteville, Bitki Ve Cevre Bilimleri, Bitki Biyoteknolojisi, United States Of America 2010 - 2012

Doctorate, University of Arkansas at Fayetteville, Hücre Ve Moleküler Biyoloji , Bitki Biyoteknolojisi, United States Of America 2006 - 2010

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Applications of site-specific recombination systems in transgene expression and marker gene removal, University of Arkansas at Fayetteville, Graduate School, Cell And Molecular Biology, 2010

Research Areas

Life Sciences, Biotechnology, Plant Biotechnology, Molecular Biology and Genetics, Plant Molecular Genetics, Genetic Engineering, Natural Sciences

Academic Titles / Tasks

Associate Professor, Akdeniz University, Faculty of Agriculture, Department of Agricultural Biotechnology, 2019 - Continues

Assistant Professor, Akdeniz University, Faculty of Agriculture, Department of Agricultural Biotechnology, 2015 - 2019

Assistant Professor, Necmettin Erbakan University, Faculty Of Science, Moleküler Biyoloji Ve Genetik, 2012 - 2015

Research Assistant PhD, University of Arkansas at Fayetteville, Dale Bumpers College Of Agriculture, Crop, Soil And Environmental Sciences, 2010 - 2012

Courses

Yeni Nesil Genom Düzenleme Teknikleri ve Bitki Islahında Kullanımı, Doctorate, 2021 - 2022

Recombinant DNA Technologies, Undergraduate, 2020 - 2021

Introduction to Bioinformatics, Undergraduate, 2021 - 2022

Advanced Plant Biotechnology, Doctorate, 2020 - 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Genome-wide exploration and analysis of plant stress-responsive CAMTA transcription factor genes in *Brachypodium distachyon* and their expression patterns under environmental challenges**
AKBUDAK M. A., ÇETİN D., Filiz E., Srivastava V.
South African Journal of Botany, vol.166, pp.208-217, 2024 (SCI-Expanded)
- II. **Genome-Wide Identification, Characterization and Expression Profiling of Potato (*Solanum tuberosum*) Frataxin (FH) Gene**
Kurt F., Filiz E., Yildiz K., AKBUDAK M. A.
Genes, vol.14, no.2, 2023 (SCI-Expanded)
- III. **Mitochondrial iron transporter (MIT) gene in potato (*Solanum tuberosum*): comparative bioinformatics, physiological and expression analyses in response to drought and salinity**
Kurt F., Kurt B., Filiz E., Yildiz K., AKBUDAK M. A.
BioMetals, vol.35, no.5, pp.875-887, 2022 (SCI-Expanded)
- IV. **Genes involved in mRNA surveillance are induced in *Brachypodium distachyon* under cadmium toxicity**
AKSOY E., Uncu A. T., Filiz E., ORMAN Ş., ÇETİN D., AKBUDAK M. A.
MOLECULAR BIOLOGY REPORTS, vol.49, no.6, pp.5303-5313, 2022 (SCI-Expanded)
- V. **Genome-wide identification and characterization of high-affinity nitrate transporter 2 (NRT2) gene family in tomato (*Solanum lycopersicum*) and their transcriptional responses to drought and salinity stresses**
AKBUDAK M. A., Filiz E., ÇETİN D.
Journal of Plant Physiology, vol.272, 2022 (SCI-Expanded)
- VI. **Genome-wide investigation of proline transporter (ProT) gene family in tomato: Bioinformatics and expression analyses in response to drought stress**
AKBUDAK M. A., FİLİZ E.
PLANT PHYSIOLOGY AND BIOCHEMISTRY, vol.157, pp.13-22, 2020 (SCI-Expanded)
- VII. **Pathogenesis related protein-1 (PR-1) genes in tomato (*Solanum lycopersicum* L.): Bioinformatics analyses and expression profiles in response to drought stress**
AKBUDAK M. A., YİLDİZ S., Filiz E.
GENOMICS, vol.112, no.6, pp.4089-4099, 2020 (SCI-Expanded)
- VIII. **Novel TALEN-generated mCitrine-FANCD2 fusion reporter mouse model for in vivo research of DNA damage response**
Sabol M., Akbudak M. A., Fricova D., Beck I., Sedlacek R.
DNA REPAIR, vol.94, 2020 (SCI-Expanded)
- IX. **Ammonium transporter 1 (AMT1) gene family in tomato (*Solanum lycopersicum* L.): Bioinformatics, physiological and expression analyses under drought and salt stresses**
Filiz E., AKBUDAK M. A.
GENOMICS, vol.112, no.5, pp.3773-3782, 2020 (SCI-Expanded)
- X. **Investigation of PIC1 (permease in chloroplasts 1) gene's role in iron homeostasis: bioinformatics**

and expression analyses in tomato and sorghum

Filiz E., Aydin Akbudak M. A.

BIOMETALS, vol.33, no.1, pp.29-44, 2020 (SCI-Expanded)

- XI. **Whirly (Why) transcription factors in tomato (*Solanum lycopersicum* L.): genome-wide identification and transcriptional profiling under drought and salt stresses**
AKBUDAK M. A., Filiz E.
MOLECULAR BIOLOGY REPORTS, vol.46, no.4, pp.4139-4150, 2019 (SCI-Expanded)
- XII. **Genome-wide analyses of ATP sulfurylase (ATPS) genes in higher plants and expression profiles in sorghum (*Sorghum bicolor*) under cadmium and salinity stresses**
AKBUDAK M. A., Filiz E.
GENOMICS, vol.111, no.4, pp.579-589, 2019 (SCI-Expanded)
- XIII. **Aromatic amino acids biosynthesis genes identification and expression analysis under salt and drought stresses in *Solanum lycopersicum* L.**
Filiz E., ÇETİN D., AKBUDAK M. A.
SCIENTIA HORTICULTURAE, vol.250, pp.127-137, 2019 (SCI-Expanded)
- XIV. **Identification of O-acetylserine(thiol)lyase (OASTL) genes in sorghum (*Sorghum bicolor*) and gene expression analysis under cadmium stress**
AKBUDAK M. A., Filiz E., UYLAŞ S.
MOLECULAR BIOLOGY REPORTS, vol.46, no.1, pp.343-354, 2019 (SCI-Expanded)
- XV. **Estimation of Nuclear DNA Content and Determination of Relationship Between Altitude and Genome Size of USDA Turkish Oat (*Avena* spp.) Collection**
AKBUDAK M. A., Sakiroglu M., Tuna M.
GESUNDE PFLANZEN, vol.70, no.4, pp.171-178, 2018 (SCI-Expanded)
- XVI. **Genome-Wide Identification and Expression Profiling of Ascorbate Peroxidase (APX) and Glutathione Peroxidase (GPX) Genes Under Drought Stress in Sorghum (*Sorghum bicolor* L.)**
AKBUDAK M. A., Filiz E., Vatansever R., KONTBAY K.
JOURNAL OF PLANT GROWTH REGULATION, vol.37, no.3, pp.925-936, 2018 (SCI-Expanded)
- XVII. **DREB2 (dehydration-responsive element-binding protein 2) type transcription factor in sorghum (*Sorghum bicolor*): genome-wide identification, characterization and expression profiles under cadmium and salt stresses**
AKBUDAK M. A., Filiz E., KONTBAY K.
3 BIOTECH, vol.8, no.10, 2018 (SCI-Expanded)
- XVIII. **Genome-wide identification and cadmium induced expression profiling of sulfate transporter (SULTR) genes in sorghum (*Sorghum bicolor* L.)**
AKBUDAK M. A., Filiz E., KONTBAY K.
BIOMETALS, vol.31, no.1, pp.91-105, 2018 (SCI-Expanded)
- XIX. **EVALUATING GENOTYPIC VARIATIONS AMONG DROUGHT-INDUCED SORGHUM CULTIVARS FOR ASCORBATE PEROXIDASES (APXS)**
AKBUDAK M. A.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.27, no.12, pp.8560-8567, 2018 (SCI-Expanded)
- XX. **Effect of gene order in DNA constructs on gene expression upon integration into plant genome**
Akbudk M. A., Srivastava V.
3 BIOTECH, vol.7, 2017 (SCI-Expanded)
- XXI. **Down-regulation of hydroxycinnamoyl CoA: shikimate hydroxycinnamoyl transferase, cinnamoyl CoA reductase, and cinnamyl alcohol dehydrogenase leads to lignin reduction in rice (*Oryza sativa* L. ssp *japonica* cv. Nipponbare)**
Ponniiah S. K., Shang Z., Akbudak M. A., Srivastava V., Manoharan M.
PLANT BIOTECHNOLOGY REPORTS, vol.11, no.1, pp.17-27, 2017 (SCI-Expanded)
- XXII. **Strong activity of FLPe recombinase in rice plants does not correlate with the transmission of the recombined locus to the progeny**
Nguyen L. D., Underwood J. L., Nandy S., Akbudak M. A., Srivastava V.

- PLANT BIOTECHNOLOGY REPORTS, vol.8, no.6, pp.455-462, 2014 (SCI-Expanded)
- XXIII. **Suppression of Arabidopsis genes by terminator-less transgene constructs**
Akbulak M. A., Nicholson S. J., Srivastava V.
PLANT BIOTECHNOLOGY REPORTS, vol.7, no.4, pp.415-424, 2013 (SCI-Expanded)
- XXIV. **Improved FLP Recombinase, FLPe, Efficiently Removes Marker Gene from Transgene Locus Developed by Cre-lox Mediated Site-Specific Gene Integration in Rice**
AKBUDAK M. A., Srivastava V.
MOLECULAR BIOTECHNOLOGY, vol.49, no.1, pp.82-89, 2011 (SCI-Expanded)
- XXV. **Dosage-Dependent Gene Expression from Direct Repeat Locus in Rice Developed by Site-Specific Gene Integration**
Akbulak M. A., More A. B., Nandy S., Srivastava V.
MOLECULAR BIOTECHNOLOGY, vol.45, no.1, pp.15-23, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Yeast Functional Screen to Determine cDNAs of European Alkali Grass (*Puccinellia distans*) Conferring Selenium (Se) Toxicity**
Budak K., Akbulak M. A.
Journal of Agricultural Sciences, vol.6, no.4, pp.698-707, 2022 (Peer-Reviewed Journal)
- II. **Antiproliferative Effect of *Epilobium parviflorum* Extracts on Colorectal Cancer Cell Line HT-29**
AKBUDAK M. A., SUT T., ERUYGUR N., AKINCI E.
Romanian Biotechnological Letters, 2021 (Peer-Reviewed Journal)
- III. **Sodyum azid (NaN_3) ile muamele edilen arpa mutantlarının genetik çeşitliliğinin ISSR markörler ile belirlenmesi**
GÜNGÖR H., AKBUDAK M. A., FILİZ E., YÜCE İ., DUMLUPINAR Z.
Derim, vol.37, no.1, pp.27-32, 2020 (Peer-Reviewed Journal)
- IV. **Expression patterns of ROS responsive genes on boron-stressed canola (*Brassica napus* ssp. *oleifera* L.) following selenium treatment**
ÖZEN M. O., KAYA S., UYLAŞ S., Durmus C., ARI E., AKBUDAK M. A.
Mediterranean Agricultural Sciences, vol.32, no.1, pp.35-41, 2019 (Peer-Reviewed Journal)
- V. **Sorgum (*Sorghum bicolor* L.)' da Sülfat Taşıyıcı (SULTR) Genlerin Kuraklık Stresi Altında İfadelerinin Belirlenmesi**
AKBUDAK M. A.
Mediterranean Agricultural Sciences, vol.31, no.1, 2018 (Peer-Reviewed Journal)
- VI. **Farklı türlere ait yulaf aksesyonlarının genom büyüklüklerinin belirlenmesi ve ploidi seviyelerinin tespiti**
AKBUDAK M. A., PAKSOY A., TUNA M.
Mediterranean Agricultural Sciences, vol.31, pp.49-54, 2018 (Peer-Reviewed Journal)
- VII. **Yeni Nesil Genom Düzenleme Teknikleri: ZFN, TALEN, CRISPR'lar ve Bitkilerde Kullanımı**
AKBUDAK M. A., KONTBAY K.
Tarla Bitkileri Merkez Araştırma Enstitüsü Dergisi, vol.26, no.1, pp.111-126, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **EXPRESSION PROFILES OF TOMATO NITRATE TRANSPORTER 2 (NRT2) GENES UNDER ABIOTIC STRESS CONDITIONS**
Cetin D., Filiz E., Akbulak M. A.
- III. **INTERNATIONAL CONFERENCE ON GLOBAL PRACTISE OF MULTIDISCIPLINARY SCIENTIFIC STUDIES**, Girne, Cyprus (Kktc), 15 - 17 November 2022, pp.71

- II. **Bioinformatics and Expression Analyses of ATP Sulfurylase (ATPS) Gene in Sorghum (Sorghum bicolor) Under Cadmium And Salinity Stresses**
FILIZ E., AKBUDAK M. A.
INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES, 26 - 27 April 2018
- III. **The Comparative Analyses of Tryptophan Synthase (TS) Genes in Tomato (Solanum lycopersicum): Bioinformatics Approaches**
FILIZ E., AKBUDAK M. A.
INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES, 26 - 27 April 2018
- IV. **Biyoyakıt Üretimi İçin Terminatörsüz Vektörler Kullanılarak Çeltik Saplarında Lignin Miktarının Düşürülmesi**
AKBUDAK M. A., KONTBAY K.
19. Ulusal Biyoteknoloji Kongresi, Turkey, 1 - 03 December 2017
- V. **Reduction of Lignin Content in Rice Straw for Biofuel Production**
PONNIAH S. K., ZENHUA S., AKBUDAK M. A., Srivastava V., MUTHUSAMY M.
Eurobiotech, 11 - 14 September 2017
- VI. **Evaluation of FLP Recombinase FLPwt and its variants FLPe and FLPo to obtain stable marker free transgenic rice**
AKBUDAK M. A., NGUYEN L., VIBHA S.
Green Biotechnology, 21 - 23 September 2015
- VII. **Suppression of Arabidopsis Genes by Terminator-less Transgene Constructs**
AKBUDAK M. A., Nicholson S., Srivastava V.
Long Regulatory RNAs Conference, Pultusk, Poland, 13 - 18 October 2014

Supported Projects

Akbudak M. A., TUBITAK Project, TUBITAK Proje No: 221Z179, 2022 - 2023
Akbudak M. A., TUBITAK Project, TUBITAK Proje No: 215Z086, 2016 - 2021
Akbudak M. A., TUBITAK Project, TUBITAK 3501, 2015 - 2021

Activities in Scientific Journals

Mediterranean Agricultural Sciences (Akdeniz Üniversitesi Ziraat Fakültesi Dergisi), Scientific Committee Membership, 2018 - Continues
Turkish Journal Of Biology, Scientific Committee Membership, 2012 - 2015

Scientific Refereeing

ROMANIAN BIOTECHNOLOGICAL LETTERS, SCI Journal, October 2021
TUBITAK Project, 1002 - Quick Support Program, Akdeniz University, Turkey, October 2021
Project Supported by Higher Education Institutions, BAP Research Project, Akdeniz University, Turkey, October 2021
3 BIOTECH, SCI Journal, September 2021
The Romanian Biotechnological Letters, SCI Journal, August 2021
July 2021
May 2021
Project Supported by Higher Education Institutions, May 2021
TUBITAK Project, May 2021
International Journal of Life Sciences and Biotechnology, Other Indexed Journal, April 2021
Turkish Journal of Botany, SCI Journal, April 2021

Turkish Journal of Agriculture and Forestry, SCI Journal, March 2021
TUBITAK Project, March 2021
Plant Cell Reports, SCI Journal, February 2021
International Journal of Genomics, SCI Journal, February 2021
Molecular Biotechnology, SCI Journal, February 2021
Project Supported by Higher Education Institutions, February 2021
International Journal of Genomics, SCI Journal, January 2021
Potato Research, SCI Journal, January 2021
BMC Genomics, SCI Journal, December 2020
December 2020
Natural Product Research , SCI Journal, November 2020
November 2020
Biotech Studies, Other Indexed Journal, October 2020
Biologia Futura, SCI Journal, October 2020
TUBITAK Project, October 2020
TUBITAK Project, September 2020
Conservation Physiology, SCI Journal, August 2020
Gene Reports, SCI Journal, August 2020
3 Biotech, SCI Journal, July 2020
TUBITAK Project, July 2020
Turkish Journal of Botany, SCI Journal, May 2020
Preparative Biochemistry & Biotechnology, SCI Journal, March 2020
Turkish Journal of Botany, SCI Journal, March 2020
Turkish Journal of Botany, SCI Journal, March 2020
Journal of the Science of Food and Agriculture, SCI Journal, February 2020
TUBITAK Project, February 2020
Plant Genetic Resources, SCI Journal, January 2020
3 Biotech, SCI Journal, December 2019
Scientia Horticulturae, SCI Journal, October 2019
Functional & Integrative Genomics, SCI Journal, August 2019
Scientific Reports, SCI Journal, July 2019
Scientia Horticulturae, SCI Journal, March 2019
Turkish Journal of Botany, SCI Journal, January 2019

Metrics

Publication: 40
Citation (WoS): 221
Citation (Scopus): 319
H-Index (WoS): 10
H-Index (Scopus): 11

Congress and Symposium Activities

4th iPLANTA Conference, Attendee, Athens, Greece, 2020
3. Uluslararası Mardin Artuklu Bilimsel Araştırmalar Kongresi, Attendee, Mardin, Turkey, 2020

Scholarships

Arařtırma Bursu, Official Institutions of Foreign Countries, 2013 - Continues

Üçüncülık Ödülü, Plant Biotechnology Post-Doc Competition, Official Institutions of Foreign Countries, 2012 - Continues

Birincilik Ödülü, Plant Biotechnology Post-Doc Competition, Official Institutions of Foreign Countries, 2011 - Continues

Student Fellowship, Official Institutions of Foreign Countries, 2010 - Continues

Ph.D. Research Poster Presentation Competition, Official Institutions of Foreign Countries, 2009 - Continues

Faculty/Student Exchange Program Grant Award, Official Institutions of Foreign Countries, 2008 - Continues

Spooner Scholar Award, Official Institutions of Foreign Countries, 2008 - Continues

Doktora Bursu, Other International Organizations, 2006 - Continues

Travel and Participation Award, Other International Organizations, 2006 - Continues

Travel and Participation Award, Other International Organizations, 2002 - Continues