Asst. Prof. HİLAL BETÜL KAYA AKKALE

Personal Information

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International Researcher IDs
ScholarID: 0cykM6gAAAAJ
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Education

Post Doctorate, Cornell University, United States Of America 2018 - 2019
Doctorate, Ege University, Turkey 2009 - 2016
Postgraduate, Ege University, Turkey 2006 - 2009
Undergraduate, Ege University, Turkey 2001 - 2006

Foreign Languages

English

Dissertations

Doctorate, Zeytin (Olea europaea)'xxde ilişki haritalaması (Association mapping) ile bazı karakterlerle ilişkili DNA markörlerinin geliştirilmesi, Ege University, 2016
Postgraduate, Domates (Lycopercicum esculentum)'xxte sarı yaprak kıvırcıklık hastalığına dayanıklı hatların DNA markörleri ile tespit edilmesi, Ege University, 2008

Academic Positions

2017 - Present
Cornell University, 2018 - 2019

Academic and Administrative Experience

Manisa Celal Bayar University, 2018 - Present

Courses

Undergraduate
Introduction to Bioengineering, Undergraduate, 2023-2024
Bioengineering Laboratory II, Undergraduate, 2023-2024

Stoichiometry, Undergraduate, 2017-2018
Social Responsibility Project, Undergraduate, 2017-2018
Process Dynamics and Control, Undergraduate, 2017-2018
BioengineeringDesign, Undergraduate, 2017-2018

Undergraduate Double Major

R Programming Language, Undergraduate Double Major, 2023-2024
Advanced Genome Editing Technologies, Undergraduate Double Major, 2022-2023

Supervised Theses

KAYA AKKALE H. B., Assessment of prime editing in grapevine protoplasts, Postgraduate, G.KOLAŞİNLİLER(Student), 2024

Articles

I. **An improved method for efficient DNA extraction from grapevine**
ÖNCÜ ÖNER T., TEMEL M., PAMAY S., ABACI A. K., KAYA AKKALE H. B.
International Journal of Life Sciences and Biotechnology, vol.6, no.1, pp.21-36, 2023 (Peer-Reviewed Journal)

II. **The use of RAPD PCR analysis in characterization of Liriomyza trifolii L congesta Agromyza apfelbecki and Chromatomyia horticola species collected from Turkey**
ÇÖL B., TONGUÇ A., ÖZGÜL O., CİVELEK H. S., KAYA AKKALE H. B.
TURKIYE ENTOMOLOJI DERGISI, vol.30, no.4, pp.243-253, 2006 (TRDizin)

Books

I. **Base Editing and Prime Editing**
KAYA AKKALE H. B.
in: A Roadmap for Plant Genome Editing,, Agnès Ricroch, Dennis Eriksson, Dragana Miladinović, Jeremy Sweet, Katrijn Van Laere, Ewa Woźniak-Gientka, Editor, Springer, pp.2, 2023

Papers Presented at Peer-Reviewed Scientific Conferences

I. **Optimizing protoplast isolation and transformation efficiency for enhanced plant genome editing in grapevine**
KAYA AKKALE H. B., Kolaşinlililer G., AKKALE C.
4th PlantEd Conference, Porto, Portugal, 18 September 2023, (Summary Text)

II. **Accelerating Plant Genome Editing By Eliminating Tissue Culture**
KAYA AKKALE H. B.
International ICONTECH SYMPOSIUM-4 on Innovative Surveys in Positive Sciences, Adana, Turkey, 18 July 2021, (Summary Text)

III. **Determination of genetic diversity in some naturally growing Lilium candidum populations in Turkey**
TOKGÖZ H. B., ÇETİN Ö., KAYA AKKALE H. B., PİRHAN A. F., YILDIRIM H., KAYA E., ALTAN F.
The 5th Symposium on EuroAsian Biodiversity (SEAB-2021), Muğla, Turkey, 1 - 03 July 2021, vol.5, pp.207, (Summary Text)

IV. **Safran ve Yakın Akraba Türlerinin İpbs retrotranspozon DNA markörleri ile Moleküler Karakterizasyonu**
Gedik A., KAYA AKKALE H. B., CÖMERTPAY G., ŞIK L., EROL O., TANYOLAÇ M. B., ÖZKAN H.
11. TARLA BİTKİLERİ KONGRESİ, Çanakkale, Turkey, 07 September 2015, (Summary Text)

V. **Safranda SSR DNA Markörlerinin Geliştirilmesi**
Gedik A., KAYA AKKALE H. B., ŞIK L., EROL O., TANYOLAÇ M. B., ÖZKAN H.
11. TARLA BİTKİLERİ KONGRESİ, Çanakkale, Turkey, 07 September 2015, (Summary Text)

VI. **Chloroplast Genome Sequencing of 7 Crocus Species through Illumina Platform from Total DNA**
KAYA AKKALE H. B., EROL O., ŞIK L., Gedik A., ÖZKAN H., TANYOLAÇ M. B.
Plant & Animal Genomes XXII Conference, San Diego, United States Of America, 11 January 2014, (Summary Text)

VII. **Identification QTLs Controlling Genes to Se Uptake in Lentil**
Sever T., ATEŞ D., Aldemir Bayar S., YAĞMUR B., KAYA AKKALE H. B., YILMAZ TEMEL H., KAHRİMAN A., ÖZKAN H., TANYOLAÇ M. B.
Plant & Animal Genomes XXII, San Diego, United States Of America, 11 January 2014, (Summary Text)

VIII. **Identification of QTLs Controlling Genes to Mn and Zn Uptake in Lentil Seed**
ATEŞ D., Sever T., Aldemir Bayar S., YAĞMUR B., KAYA AKKALE H. B., YILMAZ TEMEL H., KAHRİMAN A., ÖZKAN H., TANYOLAÇ M. B.
Plant & Animal Genomes XXII Conference, San Diego, United States Of America, 11 January 2014, (Summary Text)

IX. **QTL Mapping of Genes Controlling to Fe Uptake in Lentil Seed (Lens culinaris L.) Using Recombinant Inbred Lines**
Aldemir Bayar S., Sever T., ATEŞ D., YAĞMUR B., KAYA AKKALE H. B., YILMAZ TEMEL H., KAHRİMAN A., ÖZKAN H., TANYOLAÇ M. B.
Plant & Animal Genomes XXII Conference, San Diego, United States Of America, 11 - 15 January 2014, (Summary Text)

X. **Genetic Diversity and Variation Among Olive Genotypes Revealed By AFLP, SSR And SNP Markers**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Şahin M., Arsel H., Sefer F., Sefer F., Arsel H., Özışık S., et al.
Plant & Animal Genomes XXI Conference, United States Of America, 14 January 2013, (Summary Text)

XI. **Association mapping of important agronomical traits in olive tree with AFLP, SSR and SNP markers**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Sefer F., Arsel H., Özışık S., TANYOLAÇ M. B.
Plant & Animal Genomes XXI Conference, United States Of America, 14 January 2013, (Summary Text)

XII. **SNP Discovery in Olive Tree Using Illumina Transcriptome Sequencing**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Sefer F., Arsel H., Özışık S., TANYOLAÇ M. B.
Plant & Animal Genomes XXI Conference, United States Of America, 14 January 2013, (Summary Text)

XIII. **Determination of Genetic Diversity of Turkish Olive Cultivars by RAPD and AFLP Markers**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Sefer F., Arsel H., Özışık S., TANYOLAÇ M. B.
OLIVEBIOTECH 2011, Greece, 31 October 2011, (Full Text)

XIV. **Türk Zeytin Çeşitlerinde Genetik Çeşitliliğin AFLP ve SSR DNA Markörleri ile Saptanması**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Sefer F., Arsel H., Özışık S., TANYOLAÇ M. B.
Akhisar Ulusal Zeytin Kongresi, United States Of America, 22 February 2011, (Full Text)

XV. **Analysis of Genetic Diversity in Echinochloa spp. Using AFLP Markers,**
KAYA AKKALE H. B., Demirci M., Demirci M., TANYOLAÇ M. B.
The 5th International Congress for Bioengineering, Turkey, 16 June 2010, (Summary Text)

XVI. **Genome Mapping, Identification QTLs and Next Generation Sequencing in Plants**
TANYOLAÇ M. B., KAYA AKKALE H. B., YILMAZ TEMEL H., ALTAN F., Sarıkaya D., Uzan İ., Sarıkaya D., Uzan İ., NEMLİ S.
The 5th International Congress for Bioengineering, Turkey, 16 June 2010, (Summary Text)

XVII. **Genetic Relationships Among Spirulina Strains Based on AFLP Markers**
KAYA AKKALE H. B., Torzillo G., Conk Dalay M., TANYOLAÇ M. B.
The 5th International Congress for Bioengineering, Turkey, 16 June 2010, (Summary Text)

XVIII. **Genetic Diversity In Turkish Olive Genbank Resource Revealed By RAPD, SSR And AFLP Markers**
KAYA AKKALE H. B., Cetin O., Sozer Kaya H., Şahin M., Sefer F., Arsel H., Özışık S., TANYOLAÇ M. B.
Plant & Animal Genomes XVIII Conference, United States Of America, 09 January 2010, (Summary Text)

Funded Projects

KAYA AKKALE H. B., Bogdanove A., Other International Funding Programs, Reduced susceptibility to powdery mildew by precision gene editing, 2024 - 2025
USLU M. E., DENİZ CAN İ., TAŞDEMİR Ş., ÖNCÜ ÖNER T., EROĞLU E., POLATOĞLU İ., KAYA AKKALE H. B., Project Supported by Higher Education Institutions, BAP Other, Vıı. Ulusal Biyomühendislik Kongresi "Biyomühendislik Uygulamaları" (Bec2024), 2024 - 2024
KAYA AKKALE H. B., Bogdanove A., Asmada Küllemeye Dayanıklı Çeşitlerin Geliştirilmesinde Yenilikçi "Prime Düzenleme" Tekniğinin Uygulanması, 2022 - 2024
İnam A., Güler İplikçi H., Öncü Öner T., Polatoğlu İ., Uslu M. E., Eroğlu E., Kaya Akkale H. B., Deniz Can İ., Project Supported by Higher Education Institutions, BAP Research Project, Sürdürülebilir ve Yaşanabilir Bir Dünya İçin Biyoekonomi Çalıştayı, 2021 - 2022
KAYA AKKALE H. B., Project Supported by Higher Education Institutions, CRISPR-Cas9 aracılı genom düzenleme amacı ile meristem transformasyonunun optimizasyonu, 2021 - 2023
KAYA AKKALE H. B., USLU M. E., ÖNCÜ ÖNER T., Project Supported by Other Official Institutions, Ege Bölgesi Asma Çeşitlerinde Değerli Metabolit İçeriği ile İlişkili Markörlerin Yeni Nesil Sekanslama Teknolojileri Kullanılarak Belirlenmesi., 2017 - 2020
ÖNCÜ ÖNER T., USLU M. E., KAYA AKKALE H. B., Project Supported by Higher Education Institutions, Ege Bölgesi Asma Çeşitlerinde Değerli Metabolit İçeriği İle İlişkili Markörlerin Yeni Nesil Sekanslama Teknolojileri Kullanılarak Belirlenmesi, 2017 - 2020
USLU M. E., ÖNCÜ ÖNER T., KAYA AKKALE H. B., Project Supported by Higher Education Institutions, Ege Bölgesi Asma Çeşitlerinde Değerli Metobolit İçeriği İle İlişkili Markörlerin Yeni Nesil Sekanlama Teknolojileri Kullanılarak Belirlenmesi, 2017 - 2020
KAYA AKKALE H. B., YAĞMUR B., SEVER T., ALSALAH A., ALDEMİR S., ATEŞ D., KAHRİMAN A., ÖZKAN H., YILMAZ TEMEL H., TANYOLAÇ M. B., TUBITAK Project, QTL mapping of genes controlling someseed nutrients uptake in Lentil (Lensculinaris medic L.) using RecombinantInbred lines., 2011 - 2014

Peer Reviews in Scientific Publications

Other Journals, January 2017

Metrics

Publication: 21

Non Academic Experience

Cornell University, Visiting Assistant Professor