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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAG-4344-2019

Yoksis Researcher ID: 234853

Education Information

Doctorate, Universiteit Gent, Faculty Of Bioscience Engineering, Molecular Biotechnology, Belgium 2008 - 2014

Postgraduate, Universiteit Gent, Faculty Of Science, Molecular Biotechnology / Plant Biotechnology, Belgium 2006 - 2009

Undergraduate, Karadeniz Technical University, Fen-Edebiyat Fakültesi, Biyoloji Bölümü, Turkey 2001 - 2006

Foreign Languages

English, C1 Advanced

Dutch, A1 Beginner

Certificates, Courses and Trainings

Education Management and Planning, 2237 Araştırma Projesi Hazırlama Eğitimi, TÜBİTAK / BİDEB, 2015

Education Management and Planning, Techniques for Characterization of Carbohydrate Structure of Polysaccharides, Complex Carbohydrate Research Center (CCRC) of The University of Georgia, 2012

Dissertations

Doctorate, Cell wall engineering for better conversion of lignocellulosic biomass, Universiteit Gent, Faculty Of Bioscience Engineering, Department Of Molecular Biotechnology, 2014

Postgraduate, Functional analysis of Arabidopsis genes that are the putative orthologs of tobacco genes implicated in the activation of alkaloid biosynthesis, Universiteit Gent, Faculty Of Science, Department Of Plant System Biology, 2007

Research Areas

Mechanical Engineering, Energy, Renewable Energy Systems, Life Sciences, Biochemistry, Plant Biochemistry, Biotechnology, Plant Biotechnology, Molecular Biology and Genetics, Plant Molecular Genetics, Genetic Engineering, Genomics, Chemistry, Analytical Chemistry, Chromatographic Analysis, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Karadeniz Technical University, Of Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2023 - Continues

Assistant Professor, Karadeniz Technical University, Of Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2018 - 2023

Assistant Professor, Karadeniz Technical University, Of Teknoloji Fakültesi, Enerji Sistemleri Mühendisliği, 2015 - 2018

Advising Theses

Turumtay H., Memon A., Türkiye florasına ait *Paeonia L.* genusunun dna barkodlama sistemi ile tanılanması ve kök özütlerinin HIV-1 revers transkriptaz üzerine inhibisyonun araştırılması, Doctorate, M.VEYSİ(Student), 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Engineered reduction of S-adenosylmethionine alters lignin in sorghum**
Tian Y., Gao Y., Turumtay H., Turumtay E. A., Chai Y. N., Choudhary H., Park J., Wu C., De Ben C. M., Dalton J., et al.
Biotechnology for Biofuels and Bioproducts, vol.17, no.1, 2024 (SCI-Expanded)
- II. **Fine-tuning the element dose in nanoparticle synthesis is the critical factor determining nanoparticle's impact on plant growth**
Alghofaili F., Tombuloglu H., Almessiere M. A., Akhtar S., Tombuloglu G., Turumtay E. A., TURUMTAY H., Baykal A.
Plant Physiology and Biochemistry, vol.216, 2024 (SCI-Expanded)
- III. **Expression of dehydroshikimate dehydratase in poplar induces transcriptional and metabolic changes in the phenylpropanoid pathway**
Turumtay E. A., Turumtay H., Tian Y., Lin C., Chai Y. N., Louie K. B., Chen Y., Lipzen A., Harwood T., Kumar K. S., et al.
JOURNAL OF EXPERIMENTAL BOTANY, no.16, pp.4960-4977, 2024 (SCI-Expanded)
- IV. **Defined synthetic microbial communities colonize and benefit field-grown sorghum**
Fonseca-Garcia C., Pettinga D., Wilson A., Elmore J. R., McClure R., Atim J., Pedraza J., Hutmacher R., Turumtay H., Tian Y., et al.
ISME JOURNAL, vol.18, no.1, 2024 (SCI-Expanded)
- V. **Metabolite profiling of *Althaea officinalis* by HPLC-DAD-MS with in silico and in vitro analysis for therapeutic potential**
AKYÜZ TURUMTAY E., DEMİR A., Cetiz M. V., Uludag E. B., BALTAŞ N., Yaman B., Yaman M., EMİRİK M., TURUMTAY H.
Chemical Papers, vol.77, no.10, pp.6235-6253, 2023 (SCI-Expanded)
- VI. **Impact of magnetic field on the translocation of iron oxide nanoparticles (Fe₃O₄) in barley seedlings (*Hordeum vulgare L.*)**
Tombuloglu H., Ercan I., Alqahtani N., Alotaibi B., Bamhrez M., Alshumrani R., Turumtay H., ERGİN İ., Demirci T., Ozelik S., et al.
3 Biotech, vol.13, no.9, 2023 (SCI-Expanded)
- VII. **Phylogenetic analysis based on the ITS, matK and rbcL DNA barcodes and comparison of chemical contents of twelve *Paeonia* taxa in Türkiye**
Cetiz M. V., Turumtay E. A., Burnaz N. A., Özhatay F. N., Kaya E., Memon A., TURUMTAY H.
Molecular Biology Reports, vol.50, no.6, pp.5195-5208, 2023 (SCI-Expanded)
- VIII. **Whole-genome sequencing-based characteristics of *Escherichia coli* Rize-53 isolate from Turkey**
TURUMTAY H.
Advances in clinical and experimental medicine : official organ Wroclaw Medical University, vol.32, no.1, pp.91-96, 2023 (SCI-Expanded)
- IX. **Elucidation of Bioactive compounds in flower extracts of *Camellia sinensis* by HPLC-DAD-MS/MS and their inhibitory effects on replicative bacterial DNA polymerases**

- Turumtay H., Tombuloğlu H., Er H., Sandallı C., Akyüz Turumtay E.
INDUSTRIAL CROPS AND PRODUCTS, vol.188, pp.115528-115538, 2022 (SCI-Expanded)
- X. **Characteristics in the whole-genome sequence of *Klebsiella pneumoniae* ST147 from Turkey.**
Turumtay H., Allam M., Sandallı A., Turumtay E. A., Genç H., Sandallı C.
Acta microbiologica et immunologica Hungarica, vol.69, pp.144-149, 2022 (SCI-Expanded)
- XI. **M-MLV REVERSE TRANSCRIPTASE WAS STRONGLY INHIBITED BY ESSENTIAL OIL EXTRACT OF *PAEONIA DAURICA* SUBSP. *MACROPHYLLA***
Demirt A., TURUMTAY H., Sandallı A., BAYKAL H., Atamovs V., Sandallı C., Turumtay E. A.
FRESENIUS ENVIRONMENTAL BULLETIN, vol.30, no.6, pp.5616-5624, 2021 (SCI-Expanded)
- XII. **Çay budama atık biyokütlesinin linyit kömür ile karıştırılarak beraber yanma potansiyelinin araştırılması**
TURUMTAY H.
Artvin Çoruh Üniversitesi Orman Fakültesi Dergisi, vol.21, no.2, pp.1-8, 2020 (SCI-Expanded)
- XIII. **Iron oxide nanoparticles translocate in pumpkin and alter the phloem sap metabolites related to oil metabolism**
Tombuloglu H., Anil I., Akhtar S., Turumtay H., Sabit H., Slimani Y., Almessiere M., Baykal A.
SCIENTIA HORTICULTURAE, vol.265, 2020 (SCI-Expanded)
- XIV. **PIRIN2 suppresses S-type lignin accumulation in a noncell-autonomous manner in *Arabidopsis* xylem elements.**
Zhang B., Sztojka B., Escamez S., Vanholme R., Hedenström M., Wang Y., Turumtay H., Gorzsás A., Boerjan W., Tuominen H.
The New phytologist, vol.225, pp.1923-1935, 2020 (SCI-Expanded)
- XV. **Paeoniflorigenone purified from *Paeonia daurica* roots potently inhibits viral and bacterial DNA polymerases: investigation by experimental validation and docking simulation**
DEMİR A., TURUMTAY H., Emirik M., Sandallı C., KANBOLAT Ş., ÖZGEN U., Turumtay E. A.
MEDICINAL CHEMISTRY RESEARCH, vol.28, no.12, pp.2232-2245, 2019 (SCI-Expanded)
- XVI. **beta-lactamase genes in carbapenem resistance *Acinetobacter baumannii* isolates from a Turkish university hospital**
Coskun U. S. S., Caliskan E., CICEK A. C., TURUMTAY H., Sandallı C.
JOURNAL OF INFECTION IN DEVELOPING COUNTRIES, vol.13, no.1, pp.50-55, 2019 (SCI-Expanded)
- XVII. **Phytochemical Profiling and Evaluation of the Hepatoprotective Effect of *Cuscuta Campestris* by High-Performance Liquid Chromatography with Diode Array Detection**
KILIÇKAYA SELVİ E., TURUMTAY H., DEMİR A., AKYÜZ TURUMTAY E.
ANALYTICAL LETTERS, vol.51, no.10, pp.1464-1478, 2018 (SCI-Expanded)
- XVIII. **Gram (-) microorganisms DNA polymerase inhibition, antibacterial and chemical properties of fruit and leaf extracts of *Sorbus acuparia* and *Sorbus caucasica* var. *yaltirikii***
TURUMTAY H., MIDILLI A., TURUMTAY E. A., DEMİR A., SELVİ E. K., BUDAK E. E., Er H., KOCAIMAMOĞLU F., BAYKAL H., BELDÜZ A. O., et al.
BIOMEDICAL CHROMATOGRAPHY, vol.31, no.6, 2017 (SCI-Expanded)
- XIX. **Three seasonal comprehensive evaluation process of *Digitalis trojana* Ivan's phenolics**
TURUMTAY H., Turumtay E. A., Selvi E. K., ŞAHİN H., Sandallı C., Yazici Z. A.
INDUSTRIAL CROPS AND PRODUCTS, vol.94, pp.160-166, 2016 (SCI-Expanded)
- XX. **Anthocyanins profiling of *Thymus praecox* opiz subsp *caucasicus* var. *caucasicus***
AKYÜZ TURUMTAY E., TURUMTAY H., DEMİR A., KILIÇKAYA SELVİ E., Yazici E., Sandallı C., YAZICI Z. A.
INDUSTRIAL CROPS AND PRODUCTS, vol.77, pp.748-753, 2015 (SCI-Expanded)
- XXI. **Cell Wall Engineering by Heterologous Expression of Cell Wall-Degrading Enzymes for Better Conversion of Lignocellulosic Biomass into Biofuels**
Turumtay H.
BIOENERGY RESEARCH, vol.8, no.4, pp.1574-1588, 2015 (SCI-Expanded)
- XXII. **The Phenolic Composition and Antioxidant Activity of Tea with different Parts of *Sideritis* condensate at Different Steeping Conditions**

kara m., SAHIN H., TURUMTAY H., Dinç s., Gümüşçü a.

JOURNAL OF FOOD AND NUTRITION RESEARCH, no.2, pp.258-262, 2014 (SCI-Expanded)

XXIII. Accumulation of N-Acetylglucosamine Oligomers in the Plant Cell Wall Affects Plant Architecture in a Dose-Dependent and Conditional Manner

VANHOLME B., VANHOLME R., Turumtay H., GOEMINNE G., CESARINO I., GOUBET F., MORREEL K., RENCORET J., Bulone V., Hooijmaijers C., et al.

PLANT PHYSIOLOGY, vol.165, no.1, pp.290-308, 2014 (SCI-Expanded)

XXIV. Correlation between phenolic compounds and antioxidant activity of Anzer tea (*Thymus praecox* Opiz subsp. *caucasicus* var. *caucasicus*)

TURUMTAY E. A., ISLAMOGLU F., CAVUS D., SAHIN H., Turumtay H., VANHOLME B.

INDUSTRIAL CROPS AND PRODUCTS, vol.52, pp.687-694, 2014 (SCI-Expanded)

Articles Published in Other Journals

I. Impact of sonication time in nanoparticle synthesis on the nutrition and growth of wheat (*Triticum aestivum* L.) plant

Tombuloglu G., Slimani Y., Tombuloglu H., Alsaed M., Turumtay E. A., Sozeri H., Akhtar S., Almessiere M. A., TURUMTAY H., Baykal A.

Plant Nano Biology, vol.8, 2024 (ESCI)

Books & Book Chapters

I. Metabolomics

TURUMTAY H., SANDALLI C., AKYÜZ TURUMTAY E.

in: Plant Omics Trends and Applications, Hakeem K.R., Tombuloglu H., and Tombuloglu G., Editor, Springer, Munich, pp.300-320, 2016

II. FENİLPROPANOİDLER ÇOK SAYIDA BİTKİ SEKONDER METABOLİTLERİNİ VE HÜCRE ÇEPERİ BİLEŞENLERİNİ KAPSAR

TURUMTAY H.

in: BİTKİ BİYOKİMYASI, PROF. FAİK AHMET AYAZ, PROF. ATALAY SÖKMEN, Editor, Nobel Akademik Yayıncılık Eğitim Danışmanlık, Ankara, pp.431-449, 2015

Refereed Congress / Symposium Publications in Proceedings

I. Investigation of the inhibition effect of compounds isolated from *P. daurica* root in viral MMLV-RT and bacterial DNA polymerases (PolC and DnaE)

DEMİR A., TURUMTAY H., SANDALLI C., KANBOLAT Ş., ÖZGEN U., AKYÜZ TURUMTAY E.

2nd international congress of analytical and bioanalytical congress, Antalya, Turkey, 11 March 2020

II. Heterologous expression of Thermophilic xylanase deacetylase in *Arabidopsis thaliana*

TURUMTAY H.

International Green Biotechnology Congress, İstanbul, Turkey, 11 - 13 September 2017, pp.35

III. CHARACTERIZATION OF PHENOLIC COMPOUNDS AND THEIR INHIBITORY EFFECT OF ROSA CANINA ON BACTERIAL DNA POLYMERASES

TURUMTAY H., TURUMTAY E. A., Demir A., Budak E. E., Sandallı C.

I. Uluslararası Tıbbi ve Aromatik Bitkiler Kongresi, Konya, Turkey, 9 - 12 May 2017, pp.1184

IV. CHROMATOGRAPHIC AND SPECTROSCOPIC DETERMINATION OF PHENOLIC ACID AND FLAVONOID CONTENTS WITH RADICAL SCAVENGING ACTIVITY OF CUSCUTA CAMPESTRIS

Akyuz Turumtay E., Kılıçkaya Selvi E., TURUMTAY H., Demir A.

1. Uluslararası Tıbbi ve Aromatik Bitkiler Kongresi, Konya, Turkey, 9 May - 12 June 2017, pp.1182
- V. **Chromatographic Determination of Phenolic Compounds of *Camellia sinensis* Flowers Exhibited Strong Inhibition Effect on the two Replicative DNA Polymerases**
Kılıçkaya Selvi E., Er H., Akyuz Turumtay E., TURUMTAY H.
3. Uluslararası İlaç ve Eczacılık Kongresi, İstanbul, Turkey, 26 - 29 April 2017, pp.294
- VI. **Chromatographic and Spectroscopic Determination of Phenolic Compounds of *Pyhtolacca americana* L.} fruits**
Kılıçkaya Selvi E., Kalkan Ü., Akyuz Turumtay E., TURUMTAY H.
3. Uluslararası İlaç ve Eczacılık Kongresi, İstanbul, Turkey, 26 - 29 April 2017, pp.297
- VII. **Kızılağaç (*Alnus orientalis*)'ın Biyoyakıt Olarak Kullanılabilirliğinin Araştırılması ve Kalite Özelliklerinin Belirlenmesi ?**
TURUMTAY H., TURNA İ., Mortimer J.
2. Ulusal Biyoyakıtlar Sempozyumu, Samsun, Turkey, 27 - 30 September 2016, pp.258
- VIII. **High-throughput screening of inhibitory effect of medicinal plants on bacterial DNA polymerases**
Sandalı C., TURUMTAY E. A., TURUMTAY H.
European Biotechnology Conference, Latvia, 5 - 07 May 2016, vol.231
- IX. ***Serratia marcescens*'e ait Kitinaz-A enzimini kodlayan genin *Arabidopsis*'te ifade edilmesi**
TURUMTAY H., Sandalı C., NALÇACIOĞLU R., Akyuz Turumtay E., DEMİRBAĞ Z.
4. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, Konya, Turkey, 18 - 21 July 2016, pp.99-100
- X. **Screening of Natural Compounds as a potential source to prepare anti-viral herbal composition targeting viral reverse transcriptase**
Sandalı C., Ardiç G., Akyuz Turumtay E., TURUMTAY H.
26th ECCMID, Amsterdam, Netherlands, 9 - 12 April 2016, pp.199
- XI. **Leaf extract of *Diospyrus kaki* May Inhibit the Growth of Gram and Gram Microorganisms by Blocking Their DNA Polymerases**
SANDALLI C., AKYÜZ TURUMTAY E., MİDİLLİ A., BUDAK E., BELDÜZ A. O., ER H., TURUMTAY H., BAYKAL H.
The 7th Eurasia Congress of Infectious Diseases, Tiflis, Georgia, 30 September - 03 October 2015, pp.122
- XII. **Leaf Extract of *Diospyrus kaki* may inhibit the growth of GRAM and Gram microorganisms by blocking their DNA polymerases**
SANDALLI C., AKYÜZ TURUMTAY E., Ahmet M., Emine Esra B., Beldüz A. O., Er H., TURUMTAY H.
The 7th Eurasia congress of infectious diseases, Tiflis, Georgia, 30 September - 03 October 2015
- XIII. **Lignoselülozik Biyokütlenin Daha İyi Verimde Biyoyakıt Dönüştürülmesi İçin Hücre Çeperi Mühendisliği Uygulamaları**
TURUMTAY H.
1. Ulusal Bitki Fizyoloji Sempozyumu, Erzurum, Turkey, 1 - 04 September 2015, pp.106
- XIV. **Lignoselülozik biyokütlenin daha iyi verimde Biyoyakıt dönüştürülmesi için Hücre çeperi mühendisliği uygulamaları**
TURUMTAY H.
I. ULUSAL BİTKİ FİZYOLOJİSİ SEMPOZYUMU, Erzurum, Turkey, 1 - 04 September 2015
- XV. **4 Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi**
TURUMTAY H.
4.Ulusal Moleküler Biyoloji ve Biyoteknoloji, Afyon, Turkey, 21 - 24 August 2015
- XVI. **Bitkilerde hücre çeperi mühendisliği yöntemiyle hücre duvarlarının yeniden dizayn edilmesi: pektin modifikasyonu**
TURUMTAY H.
Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongre, Afyon, Turkey, 21 - 24 August 2015, pp.23
- XVII. **Modifying the plant cell wall to improve the conversion of cell wall polysaccharides**
TURUMTAY H., Van De Wouwer D., GHEYSEN G., Boerjan W., VANHOLME B.
9th International Conference on Renewable Resources & Biorefineries, Antwerpen, Belgium, 5 - 07 June 2013, pp.233
- XVIII. **Expression of xylanase in lignin mutants**

Harholt J., TURUMTAY H., Lebris P., Lapierre C., Jouanin L., Sibout R., Ulvskov P., Jorgensen B., VANHOLME B., Boerjan W.

XIII Cell Wall Meeting, Nantes, France, 7 - 12 July 2012, pp.55

XIX. Modifying plant cell walls by expression of cell wall degrading enzymes

TURUMTAY H., Van De Wouwer D., GHEYSEN G., Boerjan W., VANHOLME B.

XIII Cell Wall Meeting, Nantes, France, 7 - 12 July 2012, pp.255

XX. Characterization and Identification of the new genes involved in lignin biosynthesis

TURUMTAY H., Zhang B., VANHOLME R., GOEMINNE G., Tuominen H., BOERJAN W.

SYMBIOSE 2011, Basel, Switzerland, 27 July - 06 August 2011, pp.51-56

XXI. Biyo-Enerji çalışmalarında lignin biyosentezi

TURUMTAY H., VANHOLME R., BOERJAN W.

1. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi, Antalya, Turkey, 26 - 29 October 2010, pp.142

XXII. Bitki Hücre çeperi oluşumundaki yeni genlerin keşfedilmesi ve bu genleri modifiye ederek daha iyi verimde biyo-yakıt elde edilmesi

Turumtay H.

20. Ulusal Biyoloji Kongresi, Denizli, Turkey, 21 - 25 June 2010, pp.423

Other Publications

I. GENETICALLY MODIFIED PLANTS HAVING ALTERED LIGNIN CONTENT

Boerjan W., VANHOLME R., TURUMTAY H., TUOMINEN H., ESCAMEZ S., Zhang B.

Other, pp.53, 2016

Supported Projects

Çolak N., Ayaz F. A., Turumtay H., TUBITAK Project, Investigation of the Effect of Pre-Strigolactone (GR24) Application on Remodeling and Hormonal Interaction of Leaf and Root Membrane Lipids of Corn Plant under Phosphate Stress, 2024 - 2026

Akyüz Turumtay E., Özgen U., Çopur Çiçek A., Turumtay H., Demir A., TUBITAK Project, Purification of Monoterpene Compounds from Turkey Peonies (7 Compounds), Investigation of Inhibition Effects on SARS-Cov-2 Spike-1 Rbd and Ace-2 Interaction and β -Lactam Resistant Bacteria, 2023 - 2026

Turumtay H., Özhatay F. N., Kaya E., Akyüz Turumtay E., TUBITAK Project, Türkiye'deki Paeonia Türlerinin Barkod Dizilerinin (ITS-rDNA, matK ve rbcL) Belirlenmesi, Kök Özütlerinde HIV-1 ve M-MLV Revers Transkriptaz (RT) İnhibitörlerinin Araştırılması ve Saflaştırılması, 2021 - 2024

TURUMTAY H., MORTIMER J., TURNA İ., Project Supported by Higher Education Institutions, Kızılağaç (*Alnus glutinosa* sub. *barbata*)'ın Biyoyakıt Olarak Kullanılabilirliğinin Araştırılması ve Kalite Özelliklerinin Belirlenmesi', 2016 - 2018

TURUMTAY H., Project Supported by Higher Education Institutions, Hücre çeperini modifiye eden enzimleri sentezleyen transgenik *Arabidopsis thaliana* kütüphanesinin oluşturulması, 2016 - 2017

Metrics

Publication: 51

Citation (WoS): 256

Citation (Scopus): 256

H-Index (WoS): 9

H-Index (Scopus): 9

Scholarships

Visiting Scientist Scholarship, Official Institutions of Foreign Countries, 2022 - 2024

Yurt dıřı doktora bursu, TUBITAK, 2008 - 2014

Non Academic Experience

Lawrence National Berkeley Laboratory