

Asst. Prof. Işıl TULUM

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAK-2354-2021

ScopusID: 55608982400

Yoksis Researcher ID: 368038

Education Information

Post Doctorate, Osaka City University, Faculty of Science, Department of Biology, Japan 2014 - 2014

Doctorate, Osaka City University, Faculty of Science, Department of Biology, Japan 2011 - 2014

Doctorate, Koc University, Institute Of Science, Department Of Computational Engineering (Interdisciplinary), Turkey 2010 - 2011

Postgraduate, Istanbul University, Institute of Graduate Studies In Sciences, Fen Fakültesi Bölümü, Turkey 2008 - 2010

Postgraduate, Istanbul University, Institute of Graduate Studies In Sciences, Eğitim Fakültesi Bölümü, Turkey 2006 - 2008

Undergraduate, Marmara University, Faculty Of Arts And Sciences, Biology, Turkey 2002 - 2006

Foreign Languages

Japanese, C1 Advanced

German, A2 Elementary

English, C1 Advanced

Research Areas

Bioinformatics, Biotechnology, Microbiology, Molecular Biology and Genetics

Academic Titles / Tasks

Assistant Professor, Istanbul University, Faculty of Science, Department of Biology, 2022 - Continues

Assistant Professor, Tokyo University, Faculty of Science, Department of Applied Chemistry, 2018 - 2019

Assistant Professor, Osaka City University, Faculty of Science, Department of Biology, 2014 - 2018

Research Assistant, Osaka City University, Faculty of Science, Department of Biology, 2011 - 2014

Published journal articles indexed by SCI, SSCI, and AHCI

1. Comparative analysis of the complete chloroplast genome of endemic *Colchicum baytopiorum* CD. BRICKELL

Morgil Gerçek H., Unlu O., Boztaş K., Tulum I., Öz G.

BRAZILIAN JOURNAL OF BOTANY, vol.47, no.3, pp.637-647, 2024 (SCI-Expanded)

- II. **Molecular Detection and Characterization of '*Candidatus* *Phytoplasma mali*' Associated With Phyllody on *Narcissus tazetta* in Türkiye**
BOZTAŞ K., Derecik K., Caglayan K., TULUM I.
JOURNAL OF CROP HEALTH, 2024 (SCI-Expanded)
- III. **Expression analyses of soluble starch synthase and starch branching enzyme isoforms in stem and leaf tissues under different photoperiods in lentil (*Lens culinaris* Medik.)**
Gerçek Y. C., Boztaş K., Aydın C., Morgil H., Baris I., Öz G., Tulum I.
Biologia, vol.77, no.2, pp.593-607, 2022 (SCI-Expanded)
- IV. **Identification and sequence analyses of the gliding machinery proteins from *Mycoplasma mobile***
Tulum I., Kimura K., Miyata M.
SCIENTIFIC REPORTS, vol.10, no.1, 2020 (SCI-Expanded)
- V. **Tree of motility – A proposed history of motility systems in the tree of life**
Miyata M., Robinson R. C., Uyeda T. Q. P., Fukumori Y., Fukushima S., Haruta S., Homma M., Inaba K., Ito M., Kaito C., et al.
Genes to Cells, vol.25, no.1, pp.6-21, 2020 (SCI-Expanded)
- VI. **Peptidoglycan layer and disruption processes in *Bacillus subtilis* cells visualized using quick-freeze, deep-etch electron microscopy**
Tulum I., Tahara Y. O., Miyata M.
MICROSCOPY, vol.68, no.6, pp.441-449, 2019 (SCI-Expanded)
- VII. **Detailed Analyses of Stall Force Generation in *Mycoplasma mobile* Gliding**
Mizutani M., Tulum I., Kinoshita Y., Nishizaka T., Miyata M.
BIOPHYSICAL JOURNAL, vol.114, no.6, pp.1411-1419, 2018 (SCI-Expanded)
- VIII. **Transformation of crustacean pathogenic bacterium *Spiroplasma eriocheiris* and expression of yellow fluorescent protein**
Terahara N., Tulum I., Miyata M.
BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol.487, no.3, pp.488-493, 2017 (SCI-Expanded)
- IX. **Structural Study of MPN387, an Essential Protein for Gliding Motility of a Human-Pathogenic Bacterium, *Mycoplasma pneumoniae***
Kawakita Y., Kinoshita M., Furukawa Y., Tulum I., Tahara Y. O., Katayama E., Namba K., Miyata M.
JOURNAL OF BACTERIOLOGY, vol.198, no.17, pp.2352-2359, 2016 (SCI-Expanded)
- X. **Localization of P42 and F-1-ATPase alpha-Subunit Homolog of the Gliding Machinery in *Mycoplasma mobile* Revealed by Newly Developed Gene Manipulation and Fluorescent Protein Tagging**
Tulum I., Yabe M., Uenoyama A., Miyata M.
JOURNAL OF BACTERIOLOGY, vol.196, no.10, pp.1815-1824, 2014 (SCI-Expanded)
- XI. **Transcriptional regulation of the ADP-glucose pyrophosphorylase isoforms in the leaf and the stem under long and short photoperiod in lentil**
Seferoglu A. B., Baris I., Morgil H., Tulum I., Ozdas S., Cevahir G., Kavakli I. H.
Plant Science, vol.205-206, pp.29-37, 2013 (SCI-Expanded)

Articles Published in Other Journals

- I. **Overview of the bacterial/archaeal supermolecular assembly session at the 21st IUPAB and the 62nd Biophysics Society of Japan joint congress**
Nakane D., TULUM I.
BIOPHYSICAL REVIEWS, 2024 (ESCI)
- II. **In situ Detection and Investigation of The Ultrastructural Modifications of *Phytoplasma* Infection on Daffodil (*Narcissus tazetta*) Using a Combined Microscopy Approaches**
Derecik K., Boztaş K., Ulusoy M., Çağlayan K., Tulum I.

Books & Book Chapters

I. Phytoplasma resistance

TULUM I, ÇAĞLAYAN K.

in: Phytoplasma Diseases in Asian Countries: Characterization, Epidemiology, and Management, A.K. Tiwari, Kenro Oshima, Amit Yadav, Seyyed Esmailzadeh-Hosseini, Yupa Hanboonsong, Suman Lakhanpaul, Editor, Elsevier, Amsterdam, pp.210-223, 2023

II. Single Nucleotide Polymorphisms (SNPs) in Plant Genetics and Breeding

TULUM I, MORGİL H., GERÇEK Y. C.

in: The Recent Topics in Genetic Polymorphisms., Çalışkan Mahmut, Cevahir Gül, Erol Osman, Editor, IntechOpen, pp.53-65, 2020

Refereed Congress / Symposium Publications in Proceedings

I. Visualization of Phytoplasma Infection in Plant Tissues

Boztaş K., Kocabağ H. D., Derecik K., Gazel M., Çağlayan K., Tulum I.

24th Biennial Congress of the International Organization for Mycoplasmatology (IOM), Osaka, Japan, 16 - 20 July 2023, no.15, pp.98-99

II. Molecular detection of 'Candidatus Phytoplasma mali' associated with virescence in Narcissus tazetta in Turkey.

Boztaş K., Kocabağ H. D., Derecik K., Gazel M., Sipahioğlu H. M., Çağlayan K., Tulum I.

5th Meeting of the International Phytoplasmatologist Working Group, Masqat, Oman, 21 - 25 May 2023, vol.13, pp.113-114

III. Molecular detection of phytoplasma associated disease in Türkiye.

Ünlü Y. S., Boztaş K., Tulum I.

2nd International Molecular Plant Protection Congress- IMPPC2023, Bursa, Turkey, 15 - 18 May 2023, pp.105-106

IV. Spreading status of 'Candidatus Phytoplasma' in tomato and grapevine plants in Western Marmara region of Turkey

Ünlü Y. S., Boztaş K., Öz G., Tulum I.

5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2022), Ankara, Turkey, 23 - 25 November 2022, no.1165, pp.65

Supported Projects

TULUM I, Project Supported by Higher Education Institutions, Patojen özellik taşıyan Mollicutelerin karakterizasyonu kapsamında Araştırma Laboratuvarı Altyapısı Sürekliliği Desteği, 2024 - Continues

TULUM I, MÜLAYİM B., Project Supported by Higher Education Institutions, Fitoplazmaların Belirlenmesi için Yeni Nesil Dizileme (YND) Protokollerinin Karşılaştırılması, 2021 - Continues

TULUM I, DERECİK K., TULUM I., Project Supported by Higher Education Institutions, Moleküler Hastalık Kontrolü için Fitoplazma Etektör Proteinlerinin Belirlenmesi, 2020 - Continues

TULUM I, ÜNLÜ Y. S., TULUM I., Project Supported by Higher Education Institutions, Fitoplazmaların Kantitatif Tespiti için Droplet Dijital PZR (ddPZR) Tekniğinin Geliştirilmesi, 2020 - Continues

Tulum I, TUBITAK Project, Turunçgillerden, Otsu Konukçu Bitkilerden Ve Vektör Böceklerden İzole Edilen Spiroplasma Citri İzolatlarının Kıyaslamalı Tüm Genom Analizleri, 2024 - 2026

Erol O., Çiftçi A., Tulum I., Şık L., Tuna M., BOZTAŞ K., TUBITAK Project, A Comprehensive Study on the Systematics and Rhizosphere Biome of Crocus chrysanthus Herb. complex, 2023 - 2026

Tulum I., TUBITAK Project, Moleküler Hastalık Kontrolü İçin Fitoplazma Efektör Proteinlerinin Belirlenmesi, 2024 - 2024
Tulum I., TUBITAK Project, Fitoplazmaların Kantitatif Tespiti İçin Droplet Dijital Pzr (Ddpzr) Tekniğinin Geliştirilmesi, 2024 - 2024
TULUM I., BOZTAŞ K., Project Supported by Higher Education Institutions, Floresan ve Elektron Mikroskop Görüntüleme Teknikleri ile Narcissus tazetta Bitkisinde Fitoplazma Enfeksiyon Mekanizmasının Belirlenmesi, 2019 - 2024
Tulum I., Öz G., Morgil Gerçek H., TUBITAK Project, DEVELOPMENT OF GENOME-BASED STRATEGİES FOR DETECTION, IDENTİFICATION AND CONTROLLİNG PLANT PATHOGENİC PHYTOPLASMAS, 2019 - 2023
Tulum I., Project Supported by Public Organizations in Other Countries, Grants-in-Aid for Scientific Research (KAKENHI)- Japan Society for Promotion of Science (JSPS)- JAPANProje no: 17H01544Proje adı: Three types of motility mechanisms in pathogenic bacteria, class Mollicutes, 2017 - 2020
Tulum I., Project Supported by Public Organizations in Other Countries, Japan Science and Technology Agency (JST)- Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT)Artificial Cell Reactor Technology for an Enriched and Secure Society and New Bioengineering, 2018 - 2019
Tulum I., Industrial Organizations of Other Countries Supported Project, Kurabo Industries Co. Ltd. Institute of Technology Business Development Group- Osaka/JAPAN Proje adı: Science-Industry Collaborative Research Projects Program- Observation of bacterial cells on the surface of black silicon as antibacterial material, 2017 - 2018
Tulum I., Project Supported by Public Organizations in Other Countries, Grants-in-Aid for Scientific Research (KAKENHI)- Japan Society for Promotion of Science (JSPS)- JAPANProje no: 50209912/ Area 3407, 2012 - 2018

Memberships / Tasks in Scientific Organizations

The Biophysical Society of Japan, Member, 2011 - Continues, Japan
Japanese Society for Bacteriology, Member, 2011 - Continues, Japan
The International Organization for Mycoplasmaology (IOM), Member, 2011 - Continues, United States Of America
Japanese Society for Mycoplasmaology, Member, 2011 - Continues, Japan

Metrics

Publication: 19
Citation (WoS): 152
Citation (Scopus): 185
H-Index (WoS): 8
H-Index (Scopus): 8

Scholarships

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) PhD Scholarship, Official Institutions of Foreign Countries, 2011 - 2014

Awards

Tulum I., Best paper award "Peptidoglycan layer and disruption processes in Bacillus subtilis cells visualized using quick-freeze, deep-etch electron microscopy", Japanese Society Of Microscopy, June 2021
Tulum I., Cover Page and Editor's choice "Peptidoglycan layer and disruption processes in Bacillus subtilis cells visualized using quick-freeze, deep-etch electron microscopy", Japanese Society Of Microscopy, January 2020
Tulum I., Encouragement Award for Female Researchers - Okamura Award, Osaka City University, October 2017
Tulum I., Best presentation award "Subcellular localization of internal structure of gliding machinery in Mycoplasma mobile" , Japanese Society For Mycoplasmaology, May 2017