

## Assoc. Prof. Hilal AY

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAR-4296-2020

ScopusID: 51763210000

Yoksis Researcher ID: 103585

### Education Information

Doctorate, Ondokuz Mayıs University, Institute Of Science, Turkey 2011 - 2016

Postgraduate, Selcuk University, Institute Of Science, Turkey 2005 - 2008

Undergraduate, Selcuk University, Ahmet Keleşoğlu Faculty Of Education, Turkey 2000 - 2005

### Foreign Languages

English, C1 Advanced

### Certificates, Courses and Trainings

Science and Technology Policy, 6. Ulusal Antarktika Bilim Seferi, TÜBİTAK, 2022

Vocational Course, II. Teorik ve Uygulamalı Kromatografi Eğitim Kursu, Bolu Abant İzzet Baysal Üniversitesi, 2019

Vocational Course, Temel ve İleri Hücre Kültürü, İstanbul Üniversitesi, 2019

Other, 2nd International UNIDOKAP Black Sea Symposium on Biodiversity, Ondokuz Mayıs Üniversitesi, 2018

Vocational Training, Özel Çevrelerin Mikrobiyolojisi Yeni Biyoaktif Maddelerin Keşfi, Karadeniz Teknik Üniversitesi, 2018

Entrepreneurship, Bütüncül Bir Yaklaşımla Girişimcilik Eğitimi, Ondokuz Mayıs Üniversitesi, 2017

R&D Management, Turkey in Horizon 2020 Project, TÜBİTAK, 2017

Other, Chemotaxonomic characterization of actinomycetes isolated from crater lakes, Newcastle University, 2016

Other, How to Publish a Scientific Journal Article, Springer, 2014

R&D Management, Biyolojik Bilimlerde Araştırma Projesi Hazırlama Eğitimi, Karadeniz Teknik Üniversitesi, 2013

Occupational Health and Safety, İş Sağlığı ve Güvenliği Eğitimi, Ondokuz Mayıs Üniversitesi, 2012

### Dissertations

Doctorate, Isolation and polyphasic taxonomy of actinomycetes from coastal sediment and soil samples of different crater lakes, Ondokuz Mayıs University, Institute Of Science, 2016

Postgraduate, A taxonomic revision of the genus Hippomarathrum link in Turkey, Selcuk University, Institute Of Science, 2008

## Research Areas

Bioinformatics, Biotechnology, Microbiology, Molecular Biology and Genetics

## Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Molecular Biology And Genetics, 2023 - Continues

Assistant Professor, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Department Of Molecular Biology And Genetics, 2017 - 2023

Research Assistant, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Department Of Biology, 2011 - 2017

Research Assistant, Agri Ibrahim Cecen University, Faculty Of Arts And Sciences, Department Of Biology, 2010 - 2011

## Academic and Administrative Experience

Deputy Head of Department, Ondokuz Mayıs University, 2018 - 2020

Head of Department, Ondokuz Mayıs University, 2017 - 2018

## Courses

Microbiology, Undergraduate, 2023 - 2024

Bioinformatic Analysis, Doctorate, 2023 - 2024

General Biology I, Undergraduate, 2023 - 2024

Graduation Thesis, Undergraduate, 2023 - 2024

## Advising Theses

Ay H., Antarktika Horseshoe adası'ndan izole edilen yeni aktinobakteri türlerinin tüm genom analizine dayalı polifazik karakterizasyonu ve biyoteknolojik potansiyellerinin araştırılması, Postgraduate, S.MELİSA(Student), 2023

Ay H., Antarktika Horseshoe adası'nın mikrobiyal biyoçeşitliliğinin metagenomik analizi, Postgraduate, M.ERCAN(Student), 2023

Ay H., Transcriptomic analysis of Klebsiella pneumoniae exposed to biologically synthesized silver nanoparticles, Postgraduate, W.KHALAF(Student), 2023

Ay H., Micromonospora craterilacus NA12 ve streptomyces SP. MK37H suşlarından birlikte kültürleme yoluyla desferrioksamin biyosentezinin optimizasyonu, Postgraduate, M.KAYA(Student), 2023

Ay H., Antimicrobial activity and characterization of silver nanoparticles synthesized by endophytic actinobacterium Micromonospora sp. CPM1, Postgraduate, M.FOUAD(Student), 2022

Ay H., Antimicrobial, antioxidant, and cytotoxic activity of chrysin-conjugated goldnanoparticles as drug delivery system, Postgraduate, A.JASIM(Student), 2022

Ay H., Actinobacteria-mediated synthesis of titanium oxide nanoparticles and their potential application as nanopesticide, Postgraduate, M.ALI(Student), 2022

Ay H., Bioactivity characteristics of silver nanoparticles synthesized by Streptomyces sp. BSP1, Postgraduate, H.MABROUK(Student), 2022

Ay H., Removal of lead and cadmium by iron nanoparticles synthesized by actinobacteria, Postgraduate, A.SALEH(Student), 2022

Ay H., Isolation and bioactivity profiling of actinobacteria from environmental samples, Postgraduate, H.ATEŞ(Student), 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Comprehensive genome analysis of five novel flavobacteria: *Flavobacterium piscisymbiosum* sp. nov., *Flavobacterium pisciphilum* sp. nov., *Flavobacterium flavipigmentatum* sp. nov., *Flavobacterium lipolyticum* sp. nov. and *Flavobacterium cupriresistens* sp. nov.**  
SATICIOĞLU İ. B., AY H., ALTUN S., Ajmi N., Gunduz E. S., Gocmen H., DUMAN M.  
Systematic and Applied Microbiology, vol.47, no.4, 2024 (SCI-Expanded)
- II. ***Flavobacterium acetivorans* sp. nov. and *Flavobacterium galactosidilyticum* sp. nov., psychrotolerant flavobacteria isolated from cultivated fish**  
SATICIOĞLU İ. B., AY H., ALTUN S., Ajmi N., Gunduz E. S., Gocmen H., DUMAN M.  
International Journal of Systematic and Evolutionary Microbiology, vol.74, no.5, 2024 (SCI-Expanded)
- III. **Phenotypic and molecular differentiation of *Lactococcus garvieae* and *Lactococcus petauri* isolated from trout**  
SATICIOĞLU İ. B., Onuk E. E., AY H., Ajmi N., Demirbaş E., ALTUN S.  
Aquaculture, vol.577, 2023 (SCI-Expanded)
- IV. **Genome-based classification of *Streptomyces anatolicus* sp. nov., an actinobacterium with antimicrobial and cytotoxic activities, and reclassification of *Streptomyces nashvillensis* as a later heterotypic synonym of *Streptomyces tanashiensis***  
Ates H., Saygın H., CORA M., KILIÇ A. O., AY H.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.116, no.10, pp.1073-1090, 2023 (SCI-Expanded)
- V. **Description of a Novel Fish Pathogen, *Plesiomonas shigelloides* subsp. *oncorhynchi*, Isolated from Rainbow Trout (*Oncorhynchus mykiss*): First Genome Analysis and Comparative Genomics**  
DUMAN M., García Valdés E., Ay H., ALTUN S., SATICIOĞLU İ. B.  
Fishes, vol.8, no.4, 2023 (SCI-Expanded)
- VI. **Genomic insight into *Myroides oncorhynchi* sp. nov., a new member of the *Myroides* genus, isolated from the internal organ of rainbow trout (*Oncorhynchus mykiss*)**  
SATICIOĞLU İ. B., Ay H., ALTUN S., KARAKAYA E., Gunduz E. S., Aydogdu D., Yarim D., Erkek N., DUMAN M.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.116, no.3, pp.291-302, 2023 (SCI-Expanded)
- VII. **Genomic insight into *Chryseobacterium turcicum* sp. nov. and *Chryseobacterium muglaense* sp. nov. isolated from farmed rainbow trout in Turkey**  
SATICIOĞLU İ. B., Ay H., ALTUN S., DUMAN M.  
Systematic and Applied Microbiology, vol.46, no.1, 2023 (SCI-Expanded)
- VIII. **Antimicrobial, antibiofilm, and anticancer potential of silver nanoparticles synthesized using pigment-producing *Micromonospora* sp. SH121**  
Mazmanlı B., Könen Adıgüzel S., Sadak Y. S., Yetkin D., Ay H., Adıgüzel A. O.  
Preparative Biochemistry and Biotechnology, vol.53, no.5, pp.475-487, 2023 (SCI-Expanded)
- IX. **Description of the two novel species of the genus *Helicobacter*: *Helicobacter anatolicus* sp. nov., and *Helicobacter kayseriensis* sp. nov., isolated from feces of urban wild birds**  
AYDIN F., SATICIOĞLU İ. B., Ay H., Kayman T., KARAKAYA E., ABAY S.  
Systematic and Applied Microbiology, vol.45, no.4, 2022 (SCI-Expanded)
- X. ***Shewanella oncorhynchi* sp. nov., a novel member of the genus *Shewanella*, isolated from Rainbow Trout (*Oncorhynchus mykiss*)**  
ALTUN S., DUMAN M., Ay H., SATICIOĞLU İ. B.  
International Journal of Systematic and Evolutionary Microbiology, vol.72, no.7, 2022 (SCI-Expanded)
- XI. **Preliminary trials of the gold nanoparticles conjugated chrysin: An assessment of anti-oxidant, anti-microbial, and in vitro cytotoxic activities of a nanoformulated flavonoid**  
Jasim A. J., Sulaiman G. M., AY H., Mohammed S. A. A., Mohammed H. A., Jabir M. S., Khan R. A.  
Nanotechnology Reviews, vol.11, no.1, pp.2726-2741, 2022 (SCI-Expanded)
- XII. **Comprehensive genome analysis of a novel actinobacterium with high potential for biotechnological**

**applications, *Nonomuraea aridisoli* sp. nov., isolated from desert soil**

Saygin H., Ay H., Guven K., ÇETİN D., Sahin N.

Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.114, no.12, pp.1963-1975, 2021 (SCI-Expanded)

- XIII. **Saccharopolyspora karakumensis** sp. nov., **Saccharopolyspora elongata** sp. nov., **Saccharopolyspora aridisoli** sp. nov., **Saccharopolyspora terrae** sp. nov. and their biotechnological potential revealed by genome analysis  
Saygin H., Ay H., Guven K., Inan-Bektas K., ÇETİN D., Sahin N.  
Systematic and Applied Microbiology, vol.44, no.6, 2021 (SCI-Expanded)
- XIV. **Cloning, expression, biochemical characterization, and molecular docking studies of a novel glucose tolerant  $\beta$ -glucosidase from *Saccharomonospora* sp. NB11**  
Saleh Zada N., BELDÜZ A. O., GÜLER H. İ., Khan A., Sahinkaya M., Kaçiran A., Ay H., Badshah M., Shah A. A., Khan S.  
Enzyme and Microbial Technology, vol.148, 2021 (SCI-Expanded)
- XV. **Flavobacterium bernardetii** sp. nov., a possible emerging pathogen of farmed rainbow trout (*Oncorhynchus mykiss*) in cold water  
SATICIOĞLU İ. B., Ay H., ALTUN S., Sahin N., DUMAN M.  
Aquaculture, vol.540, 2021 (SCI-Expanded)
- XVI. **Flavobacterium turcicum** sp. nov. and **Flavobacterium kayseriense** sp. nov. isolated from farmed rainbow trout in Turkey  
SATICIOĞLU İ. B., Ay H., ALTUN S., DUMAN M., Sahin N.  
Systematic and Applied Microbiology, vol.44, no.2, 2021 (SCI-Expanded)
- XVII. **Genomic insight into a novel actinobacterium, *Actinomadura rubrisoli* sp. nov., reveals high potential for bioactive metabolites**  
Ay H.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.114, no.2, pp.195-208, 2021 (SCI-Expanded)
- XVIII. **Flavobacterium muglaense** sp. Nov. isolated from internal organs of apparently healthy rainbow trout  
DUMAN M., Ay H., ALTUN S., Sahin N., SATICIOĞLU İ. B.  
International Journal of Systematic and Evolutionary Microbiology, vol.71, no.7, 2021 (SCI-Expanded)
- XIX. ***Nonomuraea terrae* sp. nov., isolated from arid soil**  
Ay H.  
Archives of Microbiology, vol.202, no.8, pp.2197-2205, 2020 (SCI-Expanded)
- XX. ***Shimazuella alba* sp. nov. isolated from desert soil and emended description of the genus *Shimazuella* Park et al. 2007**  
Saygin H., Ay H., Sahin N.  
Archives of Microbiology, vol.202, no.7, pp.1831-1838, 2020 (SCI-Expanded)
- XXI. **Genome-based classification of *Micromonospora craterilacus* sp. nov., a novel actinobacterium isolated from Nemrut Lake**  
Ay H., Nouioui I., Klenk H., ÇETİN D., Igual J. M., Sahin N., Isik K.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.113, no.6, pp.791-801, 2020 (SCI-Expanded)
- XXII. **Polyphasic classification of nonomuraea strains isolated from the karakum desert and description of *nonomuraea deserti* sp. Nov., *Nonomuraea diastatica* sp. nov., *nonomuraea longispora* sp. nov. and *nonomuraea mesophila* sp. nov**  
Saygin H., Nouioui I., Ay H., Guven K., ÇETİN D., Klenk H., Goodfellow M., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.1, pp.636-647, 2020 (SCI-Expanded)
- XXIII. ***Bacillus pasinlerensis* sp. Nov., a thermophilic bacterium isolated from a hot spring in Turkey**  
BALTAÇI M. Ö., Ay H., AKBULUT S., Adiguzel G., ALBAYRAK Ş., ÖMEROĞLU M. A., ÖZKAN H., TAŞKIN M., ADIGÜZEL A.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.6, pp.3865-3871, 2020 (SCI-Expanded)

- XXIV. **Genome-based classification of calidifontibacillus erzurumensis gen. Nov., sp. nov., isolated from a hot spring in turkey, with reclassification of bacillus azotoformans as calidifontibacillus azotoformans comb. nov. and bacillus oryzae as calidifontibacillus oryzae comb. nov.**  
ADIGÜZEL A., Ay H., BALTACI M. Ö., AKBULUT S., ALBAYRAK Ş., ÖMEROĞLU M. A.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.12, pp.6418-6427, 2020 (SCI-Expanded)
- XXV. **Micromonospora deserti sp. nov., isolated from the karakum desert**  
Saygin H., Ay H., Guven K., ÇETİN D., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.1, pp.282-291, 2020 (SCI-Expanded)
- XXVI. **Streptomyces cahitamycinicus sp. nov., isolated from desert soil and reclassification of Streptomyces galilaeus as a later heterotypic synonym of Streptomyces bobili**  
Saygin H., Ay H., Guven K., ÇETİN D., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.4, pp.2750-2759, 2020 (SCI-Expanded)
- XXVII. **Phylogenomic revision of the family streptosporangiaceae, reclassification of desertactinospora gelatinilytica as spongiactinospora gelatinilytica comb. Nov. and a taxonomic home for the genus sinosporangium in the family streptosporangiaceae**  
Ay H., Saygin H., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.4, pp.2569-2579, 2020 (SCI-Expanded)
- XXVIII. **Genome-based classification of three novel actinobacteria from the karakum desert: Jiangella asiatica sp. nov., jiangella aurantiaca sp. nov. and jiangella ureilytica sp. nov**  
Saygin H., Ay H., Guven K., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.70, no.3, pp.1993-2002, 2020 (SCI-Expanded)
- XXIX. **Jiangella anatolica sp. nov. isolated from coastal lake soil**  
Ay H., Nouioui I., Carro L., Klenk H., ÇETİN D., Igual J. M., Sahin N., Isik K.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.112, no.6, pp.887-895, 2019 (SCI-Expanded)
- XXX. **Desertiactinospora gelatinilytica gen. nov., sp. nov., a new member of the family Streptosporangiaceae isolated from the Karakum Desert**  
Saygin H., Ay H., Guven K., ÇETİN D., Sahin N.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.112, no.3, pp.409-423, 2019 (SCI-Expanded)
- XXXI. **Kribbella turkmenica sp. Nov., isolated from the karakum desert**  
Saygin H., Ay H., Guven K., Sahin N.  
International Journal of Systematic and Evolutionary Microbiology, vol.69, no.8, pp.2533-2540, 2019 (SCI-Expanded)
- XXXII. **Nonomuraea insulae sp. nov., isolated from forest soil**  
Saricaoglu S., Nouioui I., Ay H., Saygin H., Bektas K. I., Guven K., ÇETİN D., Klenk H., Isik K., Sahin N.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.111, no.11, pp.2051-2059, 2018 (SCI-Expanded)
- XXXIII. **Genotoxic, cytotoxic, antimicrobial and antioxidant properties of gold nanoparticles synthesized by Nocardia sp. GTS18 using response surface methodology**  
Könen-Adigüzel S., Adigüzel A. O., Ay H., Alpdoğan S., Şahin N., CaputCu A., Ergene R. S., Metin Gübür H., TunCer M.  
Materials Research Express, vol.5, no.11, 2018 (SCI-Expanded)
- XXXIV. **Amycolatopsis cappadoca sp. nov., isolated from soil**  
Işık K., Gençbay T., Topkara A. R., Sarıcaoğlu S., Saygın H., Ay H., ÇETİN D., Güven K., Şahin N.  
Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.111, no.7, pp.1175-1182, 2018 (SCI-Expanded)
- XXXV. **Streptomyces sediminis sp. nov. isolated from crater lake sediment**

- Ay H., Nouioui I., del Carmen Montero-Calasanz M., Klenk H., Isik K., ÇETİN D., Şahin N.  
 Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.111, no.4, pp.493-500, 2018 (SCI-Expanded)
- XXXVI. **Actinomadura alkaliterrae sp. nov., isolated from an alkaline soil**  
 Ay H., Nouioui I., del Carmen Montero-Calasanz M., Carro L., Klenk H., Goodfellow M., Igual J. M., ÇETİN D., Şahin N., Işık K.  
 Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, vol.110, no.6, pp.787-794, 2017 (SCI-Expanded)
- XXXVII. **Determination of genotoxic effects of boron and zinc on Zea mays using protein and random amplification of polymorphic DNA analyses**  
 Erturk F. A., Nardemir G., Hilal A., ARSLAN YÜKSEL E., AĞAR G.  
 Toxicology and Industrial Health, vol.31, no.11, pp.1015-1023, 2015 (SCI-Expanded)
- XXXVIII. **Molecular determination of genotoxic effects of cobalt and nickel on maize (Zea mays L.) by RAPD and protein analyses**  
 Erturk F. A., Ay H., Nardemir G., AĞAR G.  
 Toxicology and Industrial Health, vol.29, no.7, pp.662-671, 2013 (SCI-Expanded)
- XXXIX. **Karyological studies of clinopodium l. (sect. pseudomelissa) and micromeria benth. s. str. (lamiaceae) from Turkey**  
 Martin E., Cetin O., Dirmenci T., Ay H.  
 Caryologia, vol.64, no.4, pp.398-404, 2011 (SCI-Expanded)
- XL. **Bilacunaria aksekiensis (Apiaceae), a new species from South Anatolia, Turkey**  
 Duran A., Doğan B., Ay H.  
 Annales Botanici Fennici, vol.48, no.4, pp.361-367, 2011 (SCI-Expanded)
- XLI. **Bilacunaria anatolica sp. nov. (Apiaceae) from southwest Anatolia, Turkey**  
 Duran A., Öztürk M., Ay H.  
 Nordic Journal of Botany, vol.29, no.6, pp.652-659, 2011 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Bioactivity Features of Novel Actinobacteria Isolated from Lichen and Orchid Plant**  
 ATEŞ H., AY H.  
 Adıyaman Üniversitesi Fen Bilimleri Dergisi, vol.13, pp.43-58, 2023 (Scopus)
- II. **Use of Silver Nanoparticles Loaded Locust Bean Gum Coatings to Extend the Shelf-Life of Fruits**  
 Akyüz G., Kaymazlar E., Ay H., Andaç M., Andaç Ö.  
 Biointerface Research in Applied Chemistry, vol.13, no.3, 2023 (Scopus)
- III. **Green synthesis of silver nanoparticles using common poppy ( Papaver rhoeas L.) and evaluation of their potential antibacterial activity „Zelena“ sinteza nanočestica srebra uporabom maka turčinaka (Papaver rhoeas L.) i procjena njihovog potencijalnog antibakterijskog učinka**  
 Dikbas C., Yavuz O., Ay H., Andac M.  
 Veterinarska Stanica, vol.54, no.1, 2023 (Scopus)
- IV. **Phylogeny of Plant Growth-Promoting Actinobacteria Isolated from Legume Nodules in Turkey**  
 AY H.  
 ERCİŞ (VAN) İLÇESİ İÇME SULARININ SU KALİTESİ ÖZELLİKLERİ, vol.30, no.3, pp.611-619, 2020 (Scopus)
- V. **Phylogeny of plant growth-promoting actinobacteria isolated from legume nodules in turkey Türkiye’de baklagil nodüllerinden izole edilen bitki gelişimini destekleyici aktinobakterilerin filogenisi**  
 Hilal A.  
 Yuzuncu Yil University Journal of Agricultural Sciences, vol.30, no.3, pp.611-619, 2020 (Scopus)
- VI. **New chromosome numbers in thegenus Marrubium Horehound from Turkey**  
 MARTİN E., ÇETİN Ö., AKGÜL G., AY H.

## Books & Book Chapters

- I. **Kocuria**  
Şahin N., Ay H., Saygın H.  
in: Bergey's Manual of Systematics of Archaea and Bacteria (BMSAB), Professor William B. Whitman, Editor, Wiley-VCH Verlag Berlin GmbH , Georgia, pp.1-42, 2021
- II. **KARŞILAŞTIRMALI GENOM ANALİZLERİ**  
AY H.  
in: UYGULAMALI BİYOİNFORMATİK, TUNCER MÜNİR, AY HİLAL, Editor, PALME YAYINEVİ, pp.124-140, 2019
- III. **GENOMLARIN İŞLEVSEL ANALİZİ**  
KILIÇ A. O., AY H.  
in: UYGULAMALI BİYOİNFORMATİK, TUNCER MÜNİR, AY HİLAL, Editor, PALME YAYINEVİ, pp.92-122, 2019

## Refereed Congress / Symposium Publications in Proceedings

- I. **Antarktika Horseshoe Adası'ndan İzole Edilen Amycolatopsis sp. H20-H5'in Biyoteknolojik Potansiyelinin Genomik Analizi**  
ŞAHİN S. M., AY H., SATICIOĞLU İ. B., DUMAN M.  
8. Uluslararası Ankara Bilimsel Araştırmalar Kongresi, Ankara, Turkey, 9 - 11 June 2023
- II. **Genomic Analysis of Microbacterium sp. H37-C3 Synthesizing Silver Nanoparticles**  
Alharoun O., AY H.  
5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2022), Ankara, Turkey, 23 November 2022
- III. **A Novel Actinobacterium, Arthrobacter sp. H14-L1, Synthesizing Silver Nanoparticles**  
Maftool W., AY H.  
5th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2022), Ankara, Turkey, 23 - 25 November 2022
- IV. **HORSESHOE ADASI'NIN (ANTARKTİKA) AKTİNOBAKTERİ BİYOÇEŞİTLİLİĞİNİN METAGENOMİK ANALİZİ**  
GÜRSOY M. E., DUMAN M., SATICIOĞLU İ. B., AY H.  
6. Ulusal Kutup Bilimleri Çalıştayı, Trabzon, Turkey, 30 November - 01 December 2022
- V. **Antarktika Horseshoe Adası'ndan İzole Edilen Massilia antarctica H27-R4'ün Biyoteknolojik Potansiyelinin Genomik Analizi**  
ŞAHİN S. M., AY H., SATICIOĞLU İ. B., DUMAN M.  
6. Ulusal Kutup Bilimleri Çalıştayı, Trabzon, Turkey, 30 November - 01 December 2022
- VI. **ANTARKTİKA HORSESHOE ADASI AKTİNOBAKTERİLERİNİN GENOMİK ANALİZİ: BİYOTEKNOLOJİ İÇİN YENİ TÜRLER**  
AY H., SATICIOĞLU İ. B., DUMAN M., ŞAHİN S. M.  
6. Ulusal Kutup Bilimleri Çalıştayı, Trabzon, Turkey, 30 November - 01 December 2022
- VII. **Genome Analysis of a Silver Nanoparticle-Producing Actinobacterium, Micromonospora sp. CPM1**  
Khalil M. F. M., AY H.  
III. INTERNATIONAL SCIENCE AND INNOVATION CONGRESS (INSI 2022), Turkey, 09 June 2022
- VIII. **Genomic Insight Into Streptomyces sp. BSP1, a Novel Actinobacterium Synthesizing Silver Nanoparticles**  
Zahran H., AY H.  
III. INTERNATIONAL SCIENCE AND INNOVATION CONGRESS (INSI 2022), Turkey, 09 June 2022
- IX. **HORSESHOE ADASI'NDAN BİYOAKTİF METABOLİT ÜRETİCİSİ YENİ AKTİNOBAKTERİLERİN KEŞFİ**

AY H., SATICIOĞLU İ. B., DUMAN M.

5. Ulusal Kutup Bilimleri Çalıştayı, Kocaeli, Turkey, 30 November - 01 December 2021

- X. **Green synthesis of iron nanoparticles using actinobacteria and their catalytic application in dye removal**  
Mohammed A. S., AKBAL F., AY H.  
4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Ankara, Turkey, 24 November 2021, pp.848-855
- XI. **Actinobacteria-mediated synthesis of titanium dioxide nanoparticles and their potential as pesticides**  
Al Yousif M. A. H., AY H.  
4th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2021), Ankara, Turkey, 24 November 2021, pp.822-829
- XII. **Green synthesis of silver nanoparticles using common poppy (*Papaver rhoeas*) and evaluation of their potential antibacterial activity**  
DİKBAŞ Ç., YAVUZ O., AY H., ANDAÇ M.  
EDUVET International Veterinary Sciences Congress, Turkey, 25 June 2021, pp.80-81
- XIII. **Preparation and Characterization of Colloid Silver Nanoparticles and Their Antimicrobial Activity**  
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- XIV. **In Silico Biosynthetic Gene Cluster Analysis of a Novel Actinobacterium *Nonomuraea* sp. CH32**  
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- XVII. **Genome Mining of *Actinomadura* sp. H3C3, a Novel Actinobacterium Isolated from Arid Soil**  
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SARICAOĞLU S., AY H., AHMET RIDVAN T., TALHA G., ÖZDEMİR KOÇAK F., IŞIK K.  
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3rd International Molecular Biology and Biotechnology Congress, 2 - 06 June 2014

## Supported Projects

AY H., BOZKURT K., EREN T., Project Supported by Higher Education Institutions, Antarktika Horseshoe Adasından İzole Edilen Yeni Aktinobakteri Türlerinin Plastik Degradasyon Kapasitelerinin Araştırılması, 2023 - Continues

Ay H., TÜBİTAK - AB COST Project, Enhancing knowledge of BIOMolecular solutions for the well-being of European AQUAculture sector (BIOAQUA), 2023 - 2027

Ay H., Ergün S., Taşkurt Hekim G. N., Güneş S., TUBİTAK Project, Investigation of cytotoxicity potential of *Crossiella* sp. SN42 on prostate cancer cell line, 2024 - 2024

Ay H., Project Supported by Higher Education Institutions, Transcriptomic analysis of *Klebsiella pneumoniae* exposed to biologically synthesized silver nanoparticles , 2022 - 2023

Ay H., Saticioğlu İ. B., Duman M., TUBİTAK Project, Horseshoe Adası Çevresel Örneklerinden Yeni Aktinobakteri Türlerinin Keşfi, Tüm Genom Analizine Dayalı Polifazik Karakterizasyonu ve Akuakültürde Probiyotik Olarak Kullanım Potansiyellerinin Araştırılması, 2021 - 2023

Saticioğlu İ. B., Karakaya E., Koca F. D., Aydın F., Ay H., Duman M., Abay S., TUBİTAK Project, Marmara Denizindeki Müsilajın Mikrobiyal Biyoçeşitlilik, Halk Sağlığı ve Su Hayvanları Sağlığı Üzerine Etkilerinin Araştırılması, 2021 - 2023

Ay H., Arslan Ş., Demirtaş İ., İnan C., Saygın H., Şahin N., TUBİTAK Project, Yeni Aktinobakteri Türlerinin Biyoteknolojik İlaç Öncülü Olabilecek Antimikrobiyal, Antioksidan, Sitotoksik ve Nöroprotektif Moleküller İçin Biyoaktivite ve Genom Temelli Araştırılması, 2020 - 2023

Ay H., Şahin N., Maraklı S., Saygın H., Kızılkaya R., TAGEM Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü Projesi, 2018 - 2023

Ay H., Project Supported by Higher Education Institutions, Antimicrobial Activity and Characterization of Silver Nanoparticles Synthesized by Endophytic Actinobacterium *Micromonospora* sp. CPM1, 2021 - 2022

Ay H., Project Supported by Higher Education Institutions, 2021 - 2022

Ay H., Project Supported by Higher Education Institutions, 2021 - 2022

Ay H., Project Supported by Higher Education Institutions, Aktinobakteriler Tarafından Sentezlenen Demir Nanopartikülleri Kullanarak Kurşun ve Kadmiyumun Uzaklaştırılması, 2020 - 2022

Ay H., Project Supported by Higher Education Institutions, Titanyum Oksit Nanopartiküllerinin Aktinobakteriler Aracılığıyla Sentezi ve Nanopestisit Olarak Potansiyel Kullanımı, 2020 - 2022

Saticioğlu İ. B., Altun S., Ay H., Duman M., Project Supported by Higher Education Institutions, Gökkuşluğu Alabalığı İşletmelerindeki Hastalık Vakalarından İzole Edilen Akvatik Bakteri İzolatlarının Polifazik Yaklaşım ile Tanımlanması ve Antimikrobiyal Virülens Genlerinin Genom Düzeyinde Belirlenmesi, 2021 - 2021

Adıgüzel A., Ay H., Baltacı M. Ö., Project Supported by Higher Education Institutions, Yeni Termofilik *Bacillus* Türlerinin Polifazik Karakterizasyonu, 2019 - 2020

Ay H., Şahin N., Project Supported by Higher Education Institutions, Moleküler Biyoloji ve Genetik Bölümü Öğrenci Laboratuvarının Yenilenmesi, 2017 - 2018

## Activities in Scientific Journals

INTERNATIONAL JOURNAL OF SYSTEMATIC AND EVOLUTIONARY MICROBIOLOGY, Committee Member, 2023 - Continues

FRONTIERS IN MICROBIOLOGY, Committee Member, 2022 - Continues

## **Memberships / Tasks in Scientific Organizations**

Member, 2022 - Continues, Turkey

## **Tasks In Event Organizations**

Ay H., The 2nd International UNIDOKAP Black Sea Symposium on BIODIVERSITY, Scientific Congress, Samsun, Turkey, Kasım 2018

## **Scholarships**

2214-A International Research Fellowship Programme for PhD Students, TUBITAK, 2016 - 2016

2211 - PhD Scholarship Program, TUBITAK, 2011 - 2015

2210 - MSc Scholarship Program, TUBITAK, 2006 - 2008