

# Prof. Mustafa GÜZEL

## Personal Information

**Email:** mguzel@medipol.edu.tr

**Web:** <https://avesis.medipol.edu.tr/mguzel>

## International Researcher IDs

ORCID: 0000-0002-1423-0435

ScopusID: 6603918651

Yoksis Researcher ID: 154086

## Education Information

Doctorate, Clemson University, Fen Ve Mühendislik Fakültesi-Medisinal Kimya Ad, United States Of America 1997 - 2001

Postgraduate, Clemson University, Fen Ve Mühendislik Fakültesi- Organik Kimya Ad, United States Of America 1994 - 1996

Undergraduate, Hacettepe University, Fen Fakültesi, Kimya Bölümü, Turkey 1982 - 1987

## Dissertations

Doctorate, Asymmetric Catalytic Synthesis Using Arene Chromium Carbonyls, Clemson University, Fen Ve Mühendislik Fakültesi-Medisinal Kimya Ad, 2001

Postgraduate, New enantioselective Lewis acid catalysts, Clemson University, Fen Ve Mühendislik Fakültesi- Organik Kimya Ad, 1996

## Research Areas

Health Sciences, Pharmacology and Therapeutics, Life Sciences, Molecular Biology and Genetics, Cytogenetic, Chemistry, Natural Sciences

## Academic and Administrative Experience

Istanbul Medipol University, 2014 - Continues

## Courses

FARMAKLOJİ, Undergraduate, 2019 - 2020

GENEL KİMYA, Undergraduate, 2014 - 2015

KLİNİK ARAŞTIRMALAR, Undergraduate, 2014 - 2015

GENETİK VE BİYOTEKNOLOJİ, Doctorate, 2014 - 2015

MESLEKİ BECERİ VE BİLİMSEL ARAŞTIRMA PROJELERİ I, Undergraduate, 2014 - 2015

MESLEKİ İNGİLİZCE I ve II, Undergraduate, 2014 - 2015

ORGANİK KİMYA, Undergraduate, 2014 - 2015

BİTİRME PROJESİ, Undergraduate, 2014 - 2015

ORGANİK/MEDİSİNAL KİMYA, Undergraduate, 2014 - 2015

BİTİRME PROJESİ UYGULAMA, Undergraduate, 2014 - 2015

## Advising Theses

Özge Ş., Mustafa G., Hiperinsülinemi etkisiyle posttranslasyonel modifikasyona uğrayan enzimlerin dinamiğinin incelenmesi ve inhibitör moleküllerin araştırılarak in vitro ortamda test edilmesi, Doctorate, H. PEKEL (Student), 2022

Mustafa G., Investigation of anticancer activities of potentially active small molecule drug candidate molecules, Postgraduate, E. AYDIN (Student), 2022

Mustafa G., Effect of trastuzumab and lonidamine-loaded lipid nanoparticles on her2+ breast cancer, Postgraduate, F. ÖZLEM (Student), 2021

Mustafa G., Esra Ç., Özgün metil jasmonat mimetiklerinin hücre canlılığı üzerine etkinliklerinin insan akciğer ve yumurtalık kanser hatlarında incelenmesi, Postgraduate, B. EMİNE (Student), 2021

Mustafa G., Ghrelin o-açıl transferaz inhibisyonunun obezite üzerine etkisinin araştırılması, Postgraduate, Ş. BETÜL (Student), 2019

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

- I. **Effect of Trastuzumab and Lonidamine-Loaded Lipid Nanoparticles (LNP) on HER2+ Breast Cancer**  
Ozlem Zurnaci F., Ozdatli Kurtulus S., ŞENGEL TÜRK C. T., HASÇIÇEK C., GÜZEL M.  
ChemistrySelect, vol.9, no.22, 2024 (SCI-Expanded)
- II. **TW68, cryptochromes stabilizer, regulates fasting blood glucose levels in diabetic ob/ob and high fat-diet-induced obese mice**  
Surme S., Ergun C., Gul S., Akyel Y. K., Gul Z. M., Ozcan O., Ipek Ö., Akarlar B. A., Ozlu N., Taşkın A. C., et al.  
Biochemical Pharmacology, vol.218, 2023 (SCI-Expanded)
- III. **Synthesis of Novel Hybrid Lonidamine-Coumarin Derivatives and Their Anticancer Activities**  
Ipek Ö., Sucu B. O., Gül Ş., Yolaçan Ç., Güzel M.  
Journal of Molecular Structure, vol.1281, 2023 (SCI-Expanded)
- IV. **Determination of antioxidant, anticancer, antidiabetic and antimicrobial activities of Turkish red pine (<i>Pinus brutia</i> Ten.) bark ultrasound-assisted extract as a functional food additive**  
Erol K., Kutlu G., Tornuk F., Guzel M., Donmez I.  
ACTA ALIMENTARIA, vol.52, no.1, pp.102-112, 2023 (SCI-Expanded)
- V. **An economical and practical procedure of favipiravir synthesis for the treatment of Covid-19**  
Karatas H., Hanashalshahaby E. H. A., Catal U., Butun Y. E., Kurt E., Gursel S., Kaya A., GÜZEL M.  
Chemical Papers, vol.77, no.3, pp.1695-1702, 2023 (SCI-Expanded)
- VI. **Discovery of a small molecule that selectively destabilizes Cryptochrome 1 and enhances life span in p53 knockout mice**  
Gul S., Akyel Y. K., Gul Z. M., Isin S., Ozcan O., Korkmaz T., Selvi S., Danis I., Ipek Ö., Aygenli F., et al.  
Nature Communications, vol.13, no.1, 2022 (SCI-Expanded)
- VII. **Cytotoxic Activity and Docking Studies of 2-arenoxybenzaldehyde N-acyl Hydrazone and 1,3,4-Oxadiazole Derivatives against Various Cancer Cell Lines**  
Aydın E., Şentürk A. M., BAŞPINAR KÜÇÜK H., GÜZEL M.  
Molecules, vol.27, no.21, 2022 (SCI-Expanded)
- VIII. **Mechanistic insight into impact of phosphorylation on the enzymatic steps of farnesyltransferase**  
PEKEL H., GÜZEL M., ŞENSOY Ö.  
Protein Science, vol.31, no.10, 2022 (SCI-Expanded)
- IX. **Lamotrigine derivatives-synthesis, anti-cancer, and anti-MDR-bacterial activities**  
Khan M. K., Siddiqui H., Sharif R., GÜZEL M., Wahab A., Yousuf S., Choudhary M. I.

Journal of Molecular Structure, vol.1264, 2022 (SCI-Expanded)

- X. **An efficient approach to access 2,5-disubstituted 1,3,4-oxadiazoles by oxidation of 2-arenoxybenzaldehyde N-acyl hydrazones with molecular iodine**  
BAŞPINAR KÜÇÜK H., Alhonaish A., YILDIZ T., GÜZEL M.  
ChemistrySelect, vol.7, no.26, 2022 (SCI-Expanded)
- XI. **Design and synthesis of novel caffeic acid phenethyl ester (CAPE) derivatives and their biological activity studies in glioblastoma multiforme (GBM) cancer cell lines**  
SUCU B. O., Koc E. B., Savlug Ipek Ö., Mirat A., Almas F., Guzel M. A., Doğan B., Uludag D., KARAKAŞ N., Durdagi S., et al.  
Journal of Molecular Graphics and Modelling, vol.113, 2022 (SCI-Expanded)
- XII. **Potential of Novel Methyl Jasmonate Analogs as Anticancer Agents to Metabolically Target HK-2 Activity in Glioblastoma Cells**  
Uludağ D., Bay S., SUCU B. O., Şavluğ İpek Ö., Mohr T., GÜZEL M., KARAKAŞ N.  
Frontiers in Pharmacology, vol.13, 2022 (SCI-Expanded)
- XIII. **Instant determination of the artemisinin from various Artemisia annua L. extracts by LC-ESI-MS/MS and their in-silico modelling and in vitro antiviral activity studies against SARS-CoV-2**  
DOĞAN K. M., EROL E., Didem Orhan M., Degirmenci Z., Kan T., Gungor A., Yasa B., Avsar T., Cetin Y., Durdagi S., et al.  
Phytochemical Analysis, vol.33, no.2, pp.303-319, 2022 (SCI-Expanded)
- XIV. **Novel  $\beta$ -hydroxy ketones: Synthesis, spectroscopic characterization, molecular docking, and anticancer activity studies**  
BAŞPINAR KÜÇÜK H., Kanturk G., YERLİKAYA Ş., YILDIZ T., Senturk A. M., GÜZEL M.  
Journal of Molecular Structure, vol.1250, 2022 (SCI-Expanded)
- XV. **The neutralization effect of montelukast on SARS-CoV-2 is shown by multiscale in silico simulations and combined in vitro studies**  
Durdagi S., Avsar T., Orhan M. D., Serhatli M., Balcioglu B. K., Ozturk H. U., Kayabolen A., Cetin Y., Aydinlik S., Bagci-Onder T., et al.  
Molecular Therapy, vol.30, no.2, pp.963-974, 2022 (SCI-Expanded)
- XVI. **Welcome message**  
YİĞİTBAŞI T., GÜZEL M.  
Turkish Journal of Biochemistry, vol.46, no.S1, pp.4, 2021 (SCI-Expanded)
- XVII. **Design and synthesis of novel cylopentapyrazoles bearing 1,2,3-thiadiazole moiety as potent antifungal agents**  
Giray B., KARADAĞ A. E., İpek Ö., PEKEL H., GÜZEL M., BAŞPINAR KÜÇÜK H.  
Bioorganic Chemistry, vol.95, 2020 (SCI-Expanded)
- XVIII. **Novel synthetic approaches for bisnaphthalimidopropyl (BNIP) derivatives as potential anti-parasitic agents for the treatment of leishmaniasis**  
Keskin E., Ucisik M. H., SUCU B. O., GÜZEL M.  
Molecules, vol.24, no.24, 2019 (SCI-Expanded)
- XIX. **Primary tumor-induced immunity eradicates disseminated tumor cells in syngeneic mouse model**  
Piranlioglu R., Lee E., Ouzounova M., Bollag R. J., Vinyard A. H., Arbab A. S., Marasco D., GÜZEL M., Cowell J. K., Thangaraju M., et al.  
Nature Communications, vol.10, no.1, 2019 (SCI-Expanded)
- XX. **Synthesis of novel methyl jasmonate derivatives and evaluation of their biological activity in various cancer cell lines**  
SUCU B. O., Ipek Ö., Kurtulus S. O., Yazici B. E., KARAKAŞ N., GÜZEL M.  
Bioorganic Chemistry, vol.91, 2019 (SCI-Expanded)
- XXI. **The pleiotropic effects of TNF $\alpha$  in breast cancer subtypes is regulated by TNFAIP3/A20**  
Lee E., Ouzounova M., Piranlioglu R., Ma M. T., GÜZEL M., Marasco D., Chadli A., Gestwicki J. E., Cowell J. K., Wicha M. S., et al.  
Oncogene, vol.38, no.4, pp.469-482, 2019 (SCI-Expanded)
- XXII. **Synthesis of substituted pyridines from 1,2-nucleophilic addition products of functionalized N-acyl-**

### **2,3-dihydropyridones**

GÜZEL M., Watts J., Mcgilvary M., Wright M., Kiren S.

Tetrahedron Letters, vol.56, no.38, pp.5275-5277, 2015 (SCI-Expanded)

### **XXIII. Stereoselective route to mitosanes via tricarbonyl eta(6) arene chromium complexes**

GÜZEL M.

TETRAHEDRON LETTERS, vol.41, no.8, pp.0-1126, 2000 (SCI-Expanded)

## **Articles Published in Other Journals**

- I. **Antileishmanial Activity of BNIPDaoct- and BNIPDanon-loaded Emulsomes on Leishmania infantum Parasites**  
Islek Z., Ucisik M. H., Keskin E., SUCU B. O., Gomes-Alves A. G., Tomás A. M., GÜZEL M., Sahin F.  
Frontiers in Nanotechnology, vol.3, 2022 (Scopus)
- II. **Essential parameters and risk factors of the patients for diabetes care and treatment**  
Bener A., Keskin F. E., KURTULUŞ E. M., GÜZEL M., Çekirdekçi E. I., KADIOĞLU P., KONUKOĞLU D., Öztürk M.  
Diabetes and Metabolic Syndrome: Clinical Research and Reviews, vol.11, 2017 (Scopus)
- III. **Gender Satisfaction among Type 2 Diabetes Patients: A Comparison between Intensive Diets, Lifestyle Intervention with Medication Controlled Management**  
BENER A., Al HAMAQ A. O., ÇATAN F., RAJPUT K. U., GÜZEL M.  
British Journal of Medicine Medical Research, vol.18, no.7, pp.1-13, 2016 (Peer-Reviewed Journal)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **SYNTHESIS OF NEW DUAL DRUG CANDIDATES THAT MAY HAVE THERAPEUTIC EFFECT AND DETERMINATION OF THEIR BIOLOGICAL ACTIVITIES**  
Şavluğ İpek Ö., SUCU B. O., GÜZEL M., YOLAÇAN Ç.  
10th International Drug Chemistry Congress, Antalya, Turkey, 10 - 12 March 2022
- II. **Tripalmitin-based Emulsome Formulations for Sustained Delivery of Antileishmanial Compounds to Infected Macrophages**  
İŞLEK Z., SUCU B. O., KESKİN E., GÜZEL M., ŞAHİN F., ÜÇİŞİK M. H.  
7th International BAU Drug Design Congress, İstanbul, Turkey, 19 - 21 December 2019, pp.75
- III. **Glioblastoma Multiform Hücre Hatlarında Özgün Kafeik Asit Fenetil Ester Analoglarının Anti-Kanser Etkisinin Araştırılması**  
SUCU B. O., Koç E. B., KARAKAŞ N., GÜZEL M.  
7.International Drug Chemistry Conference, Antalya, Turkey, 14 March 2019
- IV. **Therapeutic Effects of Novel Methyl Jasmonate Derivatives on Brain Cancer Cell Lines**  
Uludağ D., SUCU B. O., Şavluğ Ö., Yazıcı E., GÜZEL M., KARAKAŞ N.  
3rd Annual Meeting MuTaLig COST Action, Malta, Italy, 18 October 2018
- V. **Targeting different types of cancers by Novel Methyl Jasmonate Derivatives**  
YAZICI E., SUCU B. O., Şavluğ Ö., Uludağ D., KARAKAŞ N., GÜZEL M.  
3rd Annual Meeting MuTaLig COST Action, Malta, Italy, 18 October 2018
- VI. **Anti-cancer Effects of Novel Caffeic Acid Phenthy Ester (CAPE) Analogues on Glioblastome Multiforme Cell Lines**  
Tosyalı İ. S., Öztür İ., Koç E. B., Güzel M. A., SUCU B. O., Şavluğ Ö., GÜZEL M., KARAKAŞ N.  
7. Multidisipliner Kanser Araştırma ve 1.Temel Onkoloji Kongresi (MOKAD 2018), İzmir, Turkey, 11 October 2018
- VII. **Solid Lipid Emulsions for Delivery of Water-Insoluble Drug Candidates against Leishmaniasis**  
ÜÇİŞİK M. H., İŞLEK KÖKLÜ Z., Keskin E., SUCU B. O., GÜZEL M., ŞAHİN F.  
CLINAM 2018: European Submit for Clinical Nanomedicine, Basel, Switzerland, 2 - 05 September 2018
- VIII. **Emulsome-based targeted delivery of anti-leishmanial compounds to macrophages**

İŞLEK Z., SUCU B. O., KESKİN E., GÜZEL M., ŞAHİN F., ÜÇİŞİK M. H.

11th European and Global Summit for Clinical Nanomedicine, Targeted Delivery and Precision Medicine – The Building Blocks to Personalized Medicine, Basel, Switzerland, 2 - 05 September 2018, pp.232-234

- IX. **Novel Drug Discovery Approaches for Cancer with the Inspiration of a Natural Product - Methyl Jasmonate**  
SUCU B. O., Şavluğ Ö., ÖZDATLI Ş., GÜZEL M.  
25th Biennial Congress of the European Association for Cancer Research (EACR25), Amsterdam, Netherlands, 30 June - 03 July 2018
- X. **Prostat Kanseri Tedavi Etmek İçin Dösetaksel Konjuge, Prostat Spesifik Membran Antijen Hedefli Aptamer Komplekslerinin Geliştirilmesi**  
SUCU B. O., Hussein W., GÜZEL M.  
Uluslararası Katılımlı 6. İlaç Kimyası: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu Kongresi, Antalya, Turkey, 22 - 25 March 2018
- XI. **Hekzokinaz-2 Enzim İnhibitörü Özgün Metil Jasmonat Analoglarının Sentezi ve İn-Vitro Çalışmaları**  
SUCU B. O., Şavluğ Ö., ÖZDATLI Ş., GÜZEL M.  
Uluslararası Katılımlı 6. İlaç Kimyası: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu Kongresi, Antalya, Turkey, 22 - 25 March 2018
- XII. **Lipid-Based Emulsome Nanoformulations for Targeted Delivery of Antiparasites**  
ÜÇİŞİK M. H., İŞLEK KÖKLÜ Z., SUCU B. O., GÜZEL M., ŞAHİN F.  
IV Symposium of Tropical Health / COST Action CM 1307 (WG3 and WG4) Joint Meeting, Pamplona, Spain, 4 - 05 May 2017, pp.1-82
- XIII. **Hekzokinaz-2 Enzim İnhibitörü Olarak Kullanılabilecek Anti-Kanser Ajanı Özgün Metil Jasmonat Analoglarının Sentezi ve İn-Vitro Çalışmaları**  
Şavluğ Ö., SUCU B. O., YOZGAT Y., GÜZEL M.  
5. İLAÇ KİMYASI: İLAÇ ETKİN MADDESİ TASARIMI, SENTEZİ, ÜRETİMİ VE STANDARDİZASYONU KONGRESİ, Turkey, 30 March - 02 April 2017
- XIV. **Özgün Anti-Kanser İlaç Adayı Keşif ve Geliştirme Çalışmaları**  
SUCU B. O., GÜZEL M.  
III. Ulusal Organik Kimya Kongresi, Turkey, 5 - 08 September 2016
- XV. **Leishmaniasis'in Tedavisine Yönelik Özgün İlaç Moleküllerinin Keşfi ve Geliştirme Çalışmaları**  
gölcük a., SUCU B. O., GÜZEL M., ÜÇİŞİK M. H.  
III. Ulusal Organik Kimya Kongresi, Turkey, 5 - 08 September 2016
- XVI. **Synthesis and Biological Evaluation of New A2a Adenosine Receptor Antagonists for the Treatment of Parkinson s Disease**  
ÖZDATLI Ş., SUCU BAVKIR B. O., Hanife P., GÜZEL M.  
International Multidisciplinary Symposium on Drug Research and Development, 15 - 18 October 2015, vol.1, pp.176
- XVII. **Beyond Warburg Effect Treatment of Cancer as a Metabolic Disease**  
GÜZEL M.  
İnternational BAU Drug Design Congress, İstanbul, Turkey, 1 - 03 October 2015
- XVIII. **Novel Targets for Cancer Metabolism**  
GÜZEL M.  
Design of Synthetic Chemical Probes: Tools and Strategies in Medicine & Chemical Biology, İstanbul, Turkey, 13 - 15 September 2015
- XIX. **Novel Drug Candidates for Type 2 Diabetes Mellitus T2DM**  
GÜZEL M.  
Drug Discovery & Therapy World Congress, BOSTON, United States Of America, 22 - 25 July 2015
- XX. **Novel Metabolic Targets For Cancer Therapy**  
GÜZEL M.  
International 3rd Anticancer Agent Development Congress, İzmir, Turkey, 18 - 19 May 2015
- XXI. **Parkinson Hastalığı Tedavisine İçin Yeni A2A Adenosin Reseptör Antagonistlerinin Sentezi Ve**

## **Aktivitelerinin Değerlendirilmesi**

ÖZDATLI Ş., SUCU B. O., GÜZEL M.

3.İlaç Kimyası: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu Kongresi, Turkey, 20 - 22 March 2015

- XXII. **Novel GLP 1R Agonists Road to a Benchmark Drug**  
GÜZEL M.  
National Medicinal Chemistry Congress, Antalya, Turkey, 20 - 22 March 2015
- XXIII. **Synthesis of Novel A2A Adenosine Receptor Antagonists Evaluation and SAR of New Molecules**  
ÖZDATLI Ş., SUCU BAVKIR B. O., GÜZEL M.  
National Medicinal Chemistry Congress, Antalya, Turkey, 20 - 22 March 2015
- XXIV. **Novel Glucokinase Activators Road to a Benchmark Drug**  
GÜZEL M.  
International Anatolian Conference on Synthetic Organic Chemistry, Antalya, Turkey, 16 - 19 March 2015
- XXV. **Türkiye de İlaç İstismarı Bonzai İle Ölüm Giden Yol Davetli Yazar**  
GÜZEL M.  
Sağlık Düşüncesi ve Tıp Kültürü Dergisi, Turkey, 14 December 2014, pp.58-61
- XXVI. **Medisinal Kimyanın Yenilikçi İlaç Keşif ve Geliştirmedeki Rolü ve Önemi**  
GÜZEL M.  
İlaç ve Eczacılık Kongresi, 28 - 30 November 2014
- XXVII. **The novel Bach1 inhibitor HPP971 uniquely activates Nrf2 and reduces disease severity in a mouse model of experimental autoimmune encephalomyelitis**  
GÜZEL M.  
2014 Joint ACTRIMS-ECTRIMS Meeting, BOSTON, United States Of America, 9 September - 09 October 2014
- XXVIII. **Türkiye de Yenilikçi İlaç İçin Yol Haritası Davetli Yazar**  
GÜZEL M.  
Sağlık Düşüncesi ve Tıp Kültürü Dergisi, Turkey, 15 June 2014, pp.51-57
- XXIX. **Glucokinase Activators Road to a Benchmark Drug**  
GÜZEL M.  
International BAU Drug Design Congress, İstanbul, Turkey, 17 - 19 April 2014
- XXX. **Novel Bach 1 modulators increase heme oxygenase 1 HMOX 1 and suppress elevation of blood pressure in the Goldblatt model of renovascular hypertension**  
GÜZEL M.  
American Heart Association HBPR symposium, Washington, Kiribati, 5 - 08 September 2013
- XXXI. **Liver Selective Glucokinase Activators A New Treatment Paradigm for Diabetic Patients**  
GÜZEL M.  
Pharmaceutical Developments, BOSTON, United States Of America, 01 November 2009
- XXXII. **TTP355 a Liver Selective Glucokinase Activator**  
GÜZEL M.  
American Diabetes Association, New York, United States Of America, 1 - 03 June 2008
- XXXIII. **Dual Point Binding Enantioselective Catalysts**  
GÜZEL M.  
National Organic Symposium, United States Of America, 13 June 1999
- XXXIV. **Asymmetric Catalysis via Arene Chromium 0 Carbonyl Complexes**  
GÜZEL M.  
ACS 216th National Meeting, BOSTON, United States Of America, 23 August 1998
- XXXV. **Dual Point Binding Enantioselective Lewis Acid Catalysts**  
GÜZEL M.  
National Organic Symposium, United States Of America, 22 June 1997