

Res. Asst. PhD ESRA NALBAT

Personal Information

Office Phone: [+90 312 210 7725](tel:+903122107725)

Email: esra@metu.edu.tr

Web: <https://avesis.metu.edu.tr/esra>

International Researcher IDs

ScholarID: PW4w9BEAAAAJ

ORCID: 0000-0002-4051-9793

Publons / Web Of Science ResearcherID: AAB-9228-2020

ScopusID: 57217949963

Yoksis Researcher ID: 303615

Education Information

Doctorate, Middle East Technical University, Graduate School of Informatics, Medical Informatics, Turkey 2017 - 2023

Postgraduate, Sabanci University, Institute Of Science, Moleküler Biyoloji, Genetik ve Biyomühendislik Bölümü, Turkey 2014 - 2016

Undergraduate, Istanbul University, Faculty Of Science, Moleküler Biyoloji Ve Genetik Bölümü, Turkey 2010 - 2013

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, IDENTIFICATION OF NOVEL DRUG BINDING SEQUENCE PATTERNS IN PI3K/AKT/MTOR SIGNAL PATHWAY PROTEINS INVOLVED IN LIVER CANCER, Middle East Technical University, Graduate School of Informatics, 2023

Postgraduate, Development of spion-based theranostic nanocarriers for small rna delivery and cancer gene therapy, Sabanci University, Institute Of Science, Department of Molecular Biology, Genetics and Bioengineering, 2016

Research Areas

Biological Information, Biological Modelling, Molecular Biology and Genetics, Molecular Biology of Cancer, Health Sciences

Academic Titles / Tasks

Research Assistant, Middle East Technical University, Graduate School of Informatics, Medical Informatics, 2019 - Continues

Courses

APPLICATIONS OF BIOINFORMATICS IN MOLECULAR BIOLOGY, Postgraduate, 2023 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Vicinal Diaryl-Substituted Isoxazole and Pyrazole Derivatives with in Vitro Growth Inhibitory and in Vivo Antitumor Activity**
Turanlı S, Nalbat E, Lengerli D, İbiş K, Güntekin Ergün S, Akhan Güzelcan E, Muyan M, Cetin-Atalay R, Çallışkan B, Banoğlu E.
ACS Omega, vol.7, no.41, pp.36206-36226, 2022 (SCI-Expanded)
- II. **Synthesis and biological evaluation of novel isoxazole-piperazine hybrids as potential anti-cancer agents with inhibitory effect on liver cancer stem cells**
Ibis K, NALBAT E, ÇALIŞKAN B, KAHRAMAN D. C., Cetin-Atalay R, BANOĞLU E.
EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, vol.221, 2021 (SCI-Expanded)
- III. **CROssBAR: comprehensive resource of biomedical relations with knowledge graph representations.**
DOĞAN T, Atas H, Joshi V, ATAKAN A, Rifaioğlu A. S., NALBAT E, Nightingale A, Saidi R, Volynkin V, Zellner H, et al.
Nucleic acids research, vol.49, no.16, 2021 (SCI-Expanded)
- IV. **Treatment of breast cancer with autophagy inhibitory microRNAs carried by AGO2-conjugated nanoparticles.**
Unal O, Akkoc Y, Kocak M, Nalbat E, Dogan-Ekici A, Yagci A, Gozuacik D.
Journal of nanobiotechnology, vol.18, pp.65, 2020 (SCI-Expanded)
- V. **DEEPScreen: high performance drug-target interaction prediction with convolutional neural networks using 2-D structural compound representations**
RİFAİOĞLU A. S., NALBAT E., Atalay V., Martin M. J., Cetin-Atalay R., DOĞAN T.
CHEMICAL SCIENCE, vol.11, no.9, pp.2531-2557, 2020 (SCI-Expanded)
- VI. **Synthesis and cellular bioactivities of novel isoxazole derivatives incorporating an arylpiperazine moiety as anticancer agents.**
ÇALIŞKAN B, Sinoplu E, Ibis K, Guzelcan E. A., Atalay R. C., BANOĞLU E.
Journal of enzyme inhibition and medicinal chemistry, vol.33, no.1, pp.1352-1361, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Data Centric Molecular Analysis and Evaluation of Hepatocellular Carcinoma Therapeutics Using Machine Intelligence-Based Tools**
Cetin-Atalay R, Kahraman D. C., Nalbat E, Rifaioğlu A. S., Atakan A., Dönmez A., Atas H., Atalay M. V., Acar A. C., Doğan T.
JOURNAL OF GASTROINTESTINAL CANCER, vol.52, no.4, pp.1266-1276, 2021 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Exploring early markers of fibrosis progression in metabolic dysfunction-associated steatotic liver disease in Türkiye**
KAHRAMAN D. C., NALBAT E., ATALAY R., İDİLMAN R.
AASLD-TASL Connect Meeting 2024, İzmir, Turkey, 16 - 17 February 2024
- II. **Repurposing Drugs to Target Molecular Networks in Hepatocellular Carcinoma Cells & Stem Cells for Innovative Treatment Strategies**
NALBAT E., TUNÇBAĞ N., KAHRAMAN D. C., ATALAY R.
4th Open Research Day, Turkey, 01 December 2023

- III. **Exploring novel vicinal diaryl-substituted isoxazole and pyrazole derivatives as cytotoxic compounds for targeting breast cancer: Mechanisms and therapeutic potential**
NALBAT E., GÜNTEKİN ERGÜN S., TURANLI S., LENGERLİ D., ÇALIŞKAN B., BANOĞLU E., ATALAY R.
XVIII. Tıbbi Biyoloji ve Genetik Kongresi, Ankara, Turkey, 26 - 29 October 2023
- IV. **Breaking Barriers in Cancer Treatment: Unleashing the Power of Drug Repurposing**
NALBAT E.
3rd International Multidisciplinary Cancer Research Congress, İstanbul, Turkey, 7 - 09 September 2023
- V. **Network-based drug repurposing approach identifies novel drugs and drug combinations against HCC**
NALBAT E., TUNÇBAĞ N., KAHRAMAN D. C., ATALAY R.
AASLD-TASL Digital Hepatology Meeting, Ankara, Turkey, 28 - 29 April 2023
- VI. **Network-based in silico modeling for drug repurposing and in vitro validation in hepatocellular carcinoma**
Nalbat E., Tunçbağ N., Atalay R.
15th International Symposium on Health Informatics and Bioinformatics (HIBIT), Mersin, Turkey, 20 - 21 October 2022, pp.1-2
- VII. **Synthesis and Biological Evaluation of Novel Isoxazole-Piperazine Hybrids as Potential Anticancer Agents with Inhibitory Effects on Liver Cancer Stem Cells**
İbiş K., Nalbat E., Çalışkan B., Atalay R., Banoğlu E.
VI. Ulusal Farmasötik Kimya Kongresi, İstanbul, Turkey, 26 - 29 August 2022, pp.58-61
- VIII. **BAZI VİSİNAL DİARİL HETEROSİKLİK BİLEŞİKLERİN ANTİKANSER AKTİVİTELERİNİN ARAŞTIRILMASI**
Turanlı S., Nalbat E., Akhan Güzelcan E., Atalay R., Çalışkan B., Banoğlu E.
VI. Ulusal Farmasötik Kimya Kongresi, İstanbul, Turkey, 26 - 29 August 2022, pp.40-42
- IX. **Identification of undefined off-targets of novel drugs and drug combinations with network-based in silico modeling and in vitro validation in hepatocellular carcinoma**
Nalbat E., Tunçbağ N., Atalay R.
EACR 2022 Annual Meeting, Sevilla, Spain, 20 - 23 June 2022, pp.3-4
- X. **Anticancer activity of novel vicinal diaryl isoxazole compounds in hepatocellular carcinoma**
Nalbat E., Akhan Güzelcan E., Turanlı S., Lengerli D., Çalışkan B., Banoğlu E., Atalay R.
EASL Liver Cancer Summit 2022, 3 - 04 February 2022, pp.137-138
- XI. **Novel isoxazole- piperazine derivatives inhibit the stemness of HCC cells**
NALBAT E., İBİŞ K., ÇALIŞKAN B., BANOĞLU E., ATALAY M. V., ATALAY R.
AASLD-TASL Digital Hepatology Meeting, Ankara, Turkey, 15 January 2022, pp.5-6
- XII. **In vitro validation of drug-target interactions revealed in silico by Comprehensive Resource of Biomedical Relations with Network Representations and Deep Learning (CROssBAR) in HCC**
NALBAT E., RİFAİOĞLU A. S., DOĞAN T., Martin M. J., Cetin-Atalay R., ATALAY M. V.
AACR Annual Meeting, ELECTR NETWORK, 22 - 24 June 2020, vol.80
- XIII. **Synthesis of New Vicinal Diaryl Five-Membered Heterocyclic Compounds with Potential Anticancer Activity**
TURANLI S., LENGERLİ D., ÇALIŞKAN B., AKHAN GÜZELCAN E., NALBAT E., ATALAY R., BANOĞLU E.
8th International Drug Chemistry Conference, 27 February - 01 March 2020
- XIV. **CROssBAR: Comprehensive Resource of Biomedical Relations with Network Representations and Deep Learning”, Oral presentation**
Atalay M. V., Doğan T., Atalay R., Nalbat E., Rifaioğlu A. S., Ataş H., Martin M.
27th Conference on Intelligent Systems for Molecular Biology and 18th European Conference on Computational Biology, Basel, Switzerland, 21 - 25 July 2019
- XV. **In silico modeling and in vitro validation of undefined off-target of drugs in hepatocellular carcinoma**
Sinoplu E., Tuncbag N., Kahraman D. C., Atalay R. C.
Annual Meeting of the American-Association-for-Cancer-Research (AACR), Georgia, United States Of America, 29 March - 03 April 2019, vol.79

- XVI. **Abstract 996: In silico modeling and in vitro validation of undefined off-target of drugs in hepatocellular carcinoma**
NALBAT E., TUNÇBAĞ N., KAHRAMAN D. C., ATALAY R.
AACR Annual Meeting 2019, Atlanta, United States Of America, 29 March - 03 April 2019
- XVII. **SYNTHESIS, CYTOTOXICITY AND STRUCTURE-ACTIVITY RELATIONSHIPS OF NOVEL ISOXAZOLE DERIVATIVES AS ANTICANCER AGENTS**
İbiş K., ÇALIŞKAN B., AKHAN GÜZELCAN E., Sinoplu E., ATALAY R., BANOĞLU E.
RICT 2018, 4 - 06 July 2018
- XVIII. **SYNTHESIS AND ANTIPROLIFERATIVE EVALUATION OF NOVEL ISOXAZOLE-PIPERAZINE HYBRIDS**
ÇALIŞKAN B., Sinoplu E., İbiş K., AKHAN GÜZELCAN E., ATALAY R., BANOĞLU E.
RICT 2018, 4 - 06 July 2018

Supported Projects

Nalbat E., Project Supported by Higher Education Institutions, Yeni Kinazolinon Türevi Çözünür Epoksit Hidrolaz (sEH) İnhibitörlerinin Geliştirilmesi-Öncelikli Alan Araştırma Projesi, 2021 - 2024

ATALAY M. V., NALBAT E., Project Supported by Higher Education Institutions, İzoksazol türevli antikanser özellikli bileşiklerin karaciğer kanseri kök hücreleri üzerindeki etki mekanizmasının incelenmesi, 2021 - 2024

ATALAY M. V., TÜBİTAK International Bilateral Joint Cooperation Program Project, Derin Öğrenme Teknikleri Ve Ağ Analizi Yöntemleriyle Hazırlanmış Kapsamlı Biyomedikal İlişkiler Kaynağı, 2017 - 2020

Patent

Nalbat E., Tunçbağ N., Atalay R., AMRİNONE İLE BRİGATİNİB İLAÇ KOMBİNASYONUNUN KARACİĞER KANSERİNDE KULLANIMI, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2021 020093 , Standard Registration, 2023

Nalbat E., Tunçbağ N., Atalay R., SİNYAL AĞI ANALİZLERİ İLE KARACİĞER KANSERİNE KARŞI İLAÇ KOMBİNASYONLARININ TESPİTİ, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2021 020090 , Standard Registration, 2023

Nalbat E., Tunçbağ N., Atalay R., BRİGATİNİB İLE SUNİTİNİB İLAÇ KOMBİNASYONUNUN KARACİĞER KANSERİNDE KULLANIMI, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2021 020102 , Standard Registration, 2022

Memberships / Tasks in Scientific Organizations

Medical Biology and Genetics Society, Member, 2023 - Continues, Turkey

European Association for Cancer Research, Member, 2022 - Continues, England

Moleküler Kanser Araştırma Derneği (MOKAD), Member, 2022 - Continues, Turkey

European Association for the Study of the Liver, Member, 2021 - Continues, Switzerland

Türk Karaciğer Araştırmaları Derneği, Member, 2020 - Continues, Turkey

American Association for Cancer Research (AACR), Member, 2017 - Continues, United States Of America

Metrics

Publication: 25
Citation (WoS): 224
Citation (Scopus): 243
H-Index (WoS): 5

H-Index (Scopus): 5

Scholarships

100/2000 YÖK PhD Scholarship, YOK, 2017 - 2019

Awards

EACR 2024 Travel Grant, European Association For Cancer Research, January 2024

Nalbat E., Tunçbağ N., Atalay R., PATENTLETÜRKİYE Üniversiteler Arası Patent Yarışması, Türk Patent Ve Marka Kurumu, April 2023

METU - 4th Open Research Day - Best Poster Award, Orta Doğu Teknik Üniversitesi, January 2023

ODTÜ YILIN DOKTORA TEZİ ÖDÜLÜ, Orta Doğu Teknik Üniversitesi, January 2023

Üniversiteler Arası Patent Yarışması, T.C Sanayi Ve Teknoloji Bakanlığı, January 2023

2022 FAALİYET YILI AKADEMİK PERFORMANS DEĞERLENDİRME ÖDÜLÜ, Orta Doğu Teknik Üniversitesi, January 2022

XVI. Dr. Aysun ve Ahmet Küçükkel Tıp Ödülleri, Güven Sağlık Grubu, January 2022

Nalbat E., American Association for Cancer Research (AACR) Global-Scholar-In-Training Awards (GSITA) program, American Association For Cancer Research, June 2020

HIBIT2018-En İyi Poster Ödülü, Antalya Bilim Üniversitesi, January 2018