Remzi Okan Akar, PhD student

EDUCATION

2021 – Ongoing: PhD student in Molecular Oncology, Istinye University, Istanbul/Turkey

2017 – 2020: MS in Cancer Biology and Pharmacology, Istinye University, Istanbul/Turkey

2013 – 2017: BS in Molecular Biology and Genetics, Istanbul Kultur University, Istanbul/Turkey

2009 – 2013: Samiha Ayverdi Anadolu Lisesi, Istanbul/Turkey 3.78 / 5.00

PUBLICATIONS & PRESENTATIONS

D. Karakas; M. Erkisa; **R. O. Akar;** G. Akman; E.Y. Senol; E. Ulukaya "Targeting Periostin Expression Makes Pancreatic Cancer Spheroids More Vulnerable to Natural Killer Cells" (Biomedicines, https://doi.org/10.3390/biomedicines11020270)

Z. Gerçek; U. Yıldız; **R. O. Akar;** E. Ulukaya "Selective Cytotoxicity of Novel Copper (II) Complex on Colon Cancer Cell Lines" (European Journal of Advanced Chemistry Research, https://doi.org/10.24018/ejchem.2022.3.3.115)

M. Erkisa Genel; S. Selvi; I. Yilmaz; **R. O. Akar;** I. Yaylim; A. Şengül; E. Ulukaya "Differential Cytotoxic Activity of a New Cationic Pd (II) Coordination Compound with N4-Tetradentate Hybrid Ligand in Cancer Cell Lines" (Experimed, https://doi.org/10.26650/experimed.1188586)

R. O. Akar; İ. Yılmaz; M. Erkısa; A. Şengül; E Ulukaya "Highly Promising Antitumor Agent of a Novel Platinum(II) Complex Bearing a Tetradentate Chelating Ligand" (ACS Med. Chem. Lett. DOI: 10.1021/acsmedchemlett.9b00676)

S. Bozkurt; F. Yarımcan; H. Ayhan; H. Kotan; H. T. Sezgin; E. Çınar; C. Aynacı; **R. O. Akar**; V. S. Hançer "Investigation of PTGS2, MAGE-A3, CALR, KRT19 and TMPRSS4 expressions in HCT116 colon cancer and PC3 prostate cancer cell lines" (Genetics & Applications, https://doi.org/10.31383/ga.vol4iss2pp37-42.)

E. D. Arısan; **R. O. Akar**; Ö. Rencuzogullari; P. Obakan Yerlikaya; A. Coker Gurkan; B. Akin; E. Dener; E. Kayhan; N. Palavan Unsal "The molecular targets of diclofenac differ from ibuprofen to induce apoptosis and epithelial mesenchymal transition due to alteration on oxidative stress management p53 independently in PC3 prostate cancer cells" (Prostate International, DOI: 10.1016/j.prnil.2019.09.003)

Z. Gercek; U. Yıldız; E. Ulukaya; **R. O. Akar** "Synthesis, DNA binding and cytotoxic activity of newcopper (II) complexes of trisubstituted imidazoles" (Pharmaceutical Chemistry Journal, DOI: 10.1007/s11094-022-02578-2)

D. Karakas; **R. O. Akar**; Z. Gokmen; N. G. Deniz; E. Ulukaya "A Novel 1,4-Naphthoquinone-Derived Compound Induces Mitochondria-Mediated Apoptotic Cell Death in Breast Cancer Cells." (Turk J Biol. DOI: 10.3906/biy-1901-19)

R. O. Akar; S. Selvi; E. Ulukaya; N. Aztopal "Key actors in cancer therapy: Epigenetic modifiers" (Turk J Biol. DOI: 10.3906/biy-1903-39)

M. Erkisa; S. Aydinlik; B. Cevatemre; N. Aztopal; **R. O. Akar**; S. Celikler; V. T. Yilmaz; F. Ari; E. Ulukaya "A promising therapeutic combination for metastatic prostate cancer: Chloroquine as autophagy inhibitor and palladium(II) barbiturate complex" (Biochimie DOI: 10.1016/j.biochi.2020.05.010)

R. O. Akar; K. Adacan; E. Ulukaya "In ovo: Dinasour's offspring as an alternative in vivo model" (Oral presentation at the 2nd International Multidisciplinary Cancer Research Congress, Giresun, 2022)

K. Adacan; **R. O. Akar**; E. Ulukaya "Etoposide Counteracts Against VEGF Enhanced CAM Surfaces to Regulate Neovascularization" (Poster presentation at the 2nd International Multidisciplinary Cancer Research Congress, Giresun, 2022)

G. Torkay; A. Girgin; O. Nejati; **R. O. Akar**; B. Giray; E. Ulukaya; S. Bakırkdere; A. Bal Öztürk "Anticancer, Antibacterial, and Antiangiogenic Effects of Green Synthesized Hemocompatible Silver Nanoparticles" (Oral presentation at the 2nd International Multidisciplinary Cancer Research Congress, Giresun, 2022)

D. Karakas Zeybek; M. Erkisa; **R. O. Akar**; E. Ulukaya "Targeting pancreatic cancer stroma increased Natural killer cell-mediated cytotoxicity in tumor microenvironment-mimicking spheroid" (Poster presentation at the , 2022)

N. Aztopal; **R. O. Akar**; E. Ulukaya "The combinatorial therapy by histone-modifying agents restores Naked levels and inhibits stemness in lung Cancer stem cell" (Poster presentation at the , 2022)

M. Erkisa; **R. O. Akar**; S. Selvi; E. Ulukaya; A. Şengül "A newly synthesized platinum complex as a potent antitumor drug candidate" (Poster presentation at the International Molecular Medicine Symposium, Bahçeşehir University, 2019)

R. O. Akar; Ö. Rencuzogullari; E. D. Arısan; P. Obakan Yerlikaya; A. Coker Gurkan; N. Palavan Unsal "Diclofenac increased ROS generation to proceed EMT processes p53 independently in PC3 cells" (Poster presentation at 6th Stem cell Symposium and Stem cell course, Marmara University, 2017)

R. O. Akar; Ö. Rencuzogullari; E. D. Arısan; P. Obakan Yerlikaya; A. Coker Gurkan; N. Palavan Unsal "Effect of p53 on Diclofenac and Ibuprofen-induced ROS generation-dependent apoptosis on PC3 prostate cancer cells" (Poster presentation at the 6th Congress of Multidisciplinary Cancer Research Congress, 2016)

PATENTS

An antimetastatic agent effective on prostate cancer cells and suitable for use ın the treatment of these diseases (PCT submitted)
A novel therapeutic agent with a cytotoxic effect in triple-negative breast Cancer (PCT submitted)

DEGREES & AWARDS

October 2018, young investigator fellowship from Molecular Cancer Research Association (MOKAD).

June 2017, graduated with second highest GPA (3.39/4.00) in the year level.

September 2016, became semi-finalist in the project competition about diabetic lives which was organized by Sanofi (Sen Bul Diyabet Kolaylaşsın)

May 2012, rewarded bronze medal from Olympiad of inter-high school 4th national social sciences.

LABORATORY AND WORK EXPERIENCE

Co-Founder and CEO, Ovoboard Biyoteknoloji A.Ş. (2022 – Ongoing)

We are working on the investigation of the angiogenic effects of compounds on the chorioallantoic membranes (CAM) of fertilized chicken eggs. In addition, we also test anticancer drug candidate molecules on cell line-derived tumors.

Research Ass. and Researcher, Istinye Uni, Fac. of Med. & Molecular Cancer Research Center (2017 – Ongoing)

I study new-synthesized chemical compounds to investigate their anti-cancer effects and their mechanisms. Two of the studies that I was involved completed and patented. I give lessons as a research assistant in medical biochemistry for medical faculty.

Trainee Researcher, Karolinska Institutet, Cancer Center Karolinska (2018)

During the internship in Professor Leonard Girnita's group at Karolinska Institute, we investigated how Erk and MAPK pathways and IGF1-R affected after IGF and/or pertussis toxin treatment in a time-dependent manner by western blot. The project was about how Mdm 2 fine tune ß-arrestin-mediated IGF1-R biased signaling in U-S-OS (Mdm 2^{high}) and SAOS-2 (Mdm 2^{low}) sarcoma cells.

B.S. Researcher, Istanbul Kultur University, Molecular Cancer Biology Laboratory (2014 – 2017)

I worked at the university laboratory for a project which was about the effect of ibuprofen and diclofenac on apoptosis in PC3 p53$^{-/-}$ and PC3 p53$^{+/+}$ prostate cancer cells. I used Western blot, PCR and cell culture techniques to understand the role of p53 on ibuprofen or diclofenac-caused apoptosis in wild-type p53 null and p53 overexpressed PC3 cells. After this project was completed, I studied to improve data about p53 with different technics (such as IP, flow cytometer etc.) in order to publish an article. I presented these data at the 6th Congress of Multidisciplinary Cancer Research as a poster.

LABORATORY SKILLS

- Use of laboratory animals
- Cell culture techniques
- In Ovo & CAM asay
- Transfection, transformation
- Western blotting (Immunoprecipitation)
- PCR applications
- Flow cytometer applications
- HPLC
- Elisa
- Immunofluorescence
- Chromatin IP

TRANSFERRABLE SKILLS

- Project management
- Creativity
- Collaboration skills
- Adaptability
- Problem-solving
- Time management

COMPUTER SKILLS

- MS Office Programs
- BD Accuri C6
- ImageLab
- ImageJ
- GraphPad