



TAGEM
R&D AND INNOVATION

FIELD CROPS CENTRAL RESEARCH INSTITUTE/
ANKARA

Dr. Sümeyra GÜLTEKİN

Biologist

EDUCATION

- PhD.**
2013-2018 Necmettin Erbakan University
Medical Faculty
- MSc.**
2011-2013 Selcuk University
Medical Faculty
- Bachelor's Degree**
2005-2009 Selcuk University
Faculty of Science

CAREER

- 2010-2013 Research Assistant, Meram Faculty of
Medicine, Department of Medical Biology/KONYA
- 2014- Biologist, Field Crops Central Research
Institute-Department of Biotechnology/ ANKARA

ABOUT ME


She was born in 1986 in Ankara, Turkey. She graduated from Selcuk University Biology Department in 2009. She did her master degree in Selcuk University Medical Biology Department between 2011-2013. The researcher had done her PhD studies at Medical Biology Department between 2013-2018.

Particularly, she took part in projects related to the bioactivities and cellular and molecular mechanisms of action of active compound/s in medicinal and aromatic plants.

CONTACT

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Biologist



■ **PROJECTS**

■ **Projects Conducted**

1. SU BAP (Thesis Project), Researcher. The Relationship of Polymorphisms in the Leptin Receptor and Hypoxia-Inducible Factor-1alpha Genes in OSAHS Patients, Selcuk University, 2011, BAP.
2. NEU BAP (Thesis Project), Researcher. Investigation of the anticarcinogenic, anti-inflammatory, antioxidant and apoptotic effects of *Liquidambar orientalis* Mill. var *orientalis* at the cellular and molecular level, Necmettin Erbakan University, 2016, BAP.
3. NEU BAP, Researcher. Evaluation of the anti-cancer potential of *Achillea ketenoglui* (Ankara yarrow) species endemic to Turkey and Casticin flavonoid on colon cancer cells. 08-10-2015/ 08-04-2018.
4. NEU BAP, Researcher. Investigation of the anticarcinogenic effects of *Rheum ribes* plant extracts on colorectal cancer cell lines. 14-04-2016/14-04-2018.
5. NEU BAP: Researcher. Evaluation of the effects of *Liquidambar orientalis* Mill. var *orientalis* and *Rheum ribes* extracts on cell cycle and apoptosis and determination of active ingredient contents using chromatographic methods. 12-10-2017/12-07-2019.
6. Reliable Data Analysis Emerging Biotechnology. Ankara Development Agency. 10/04/2019-28/08/2020.

■ **Ongoing Projects**

1. Tissue Culture Applications and Determination of Some Active Component Contents in Saffron (*Crocus sativus* L.) Plant. Tagem-2022-2024, Budget:76,000TL (Project Leader)
2. Association with Genome of Certain Antioxidant Contents of Some *Triticum monococcum* Genotypes. Tagem-2022-2024 (Project Manager)
3. Development of Molecular Markers Associated with Resistance to Barley Striped Leaf Spot (*Pyrenophora graminea*) and *Bipolaris sorokiniana* Leaf Spot Diseases. Tagem-2022-2024 (Project Manager)
4. Determination of Vernalization and Allelic Variation in Photoperiod Genes in Bread Wheat Genotypes. Tagem-2022-2024 (Project Manager)
5. Comparison of two different oil samples of *Nigella sativa* L. from Turkey and Syria and the anticarcinogenic effects of Thymoquinone on pancreatic cancer cell lines. Necmettin Erbakan University, 2021, BAP.



Dr. Sümeyra GÜLTEKİN Biologist

TAGEM
R&D AND INNOVATION

■ **PUBLICATIONS**

■ **INTERNATIONAL ARTICLES AND PAPERS**

■ **Articles Published in International Journals**

1. Demirel HS, Tasdemir P, **Cetinkaya S**, Cınar I, Kucukkartallar T, Dursun G. Colorectal Cancer Risk in Relation to Hypoxia Inducible Factor-1 α (Hif-1 α) and Von Hippel-Lindau (VHL) Gene Polymorphisms. International Journal of Hematology and Oncology. 2017: 27(1);13-20. (IF):1.492
2. Khan H, Sureda A, Belwal T, **Cetinkaya S**, Süntar İ, Tejada S, Devkota HP, Ullah H, Aschner M. Polyphenols in the treatment of autoimmune diseases. Autoimmun Rev. 2019 Jul;18(7):647-657. (IF):8.964
3. İ Çınar Ayan, **S Çetinkaya**, HG Dursun, İ Süntar. Bioactive Compounds of *Rheum ribes* L. and its Anticancerogenic Effect via Induction of Apoptosis and miR-200 Family Expression in Human Colorectal Cancer. Nutrition and Cancer, 1-16. 2020/7/20. (IF):2.363
4. İpek Süntar, **Sümeyra Çetinkaya**, Ülkü Selcen Haydaroğlu, Solomon Habtemariam. Bioproduction process of natural products and biopharmaceuticals: Biotechnological aspects. Biotechnology Advances. 2021, 50:107768. <https://doi.org/10.1016/j.biotechadv.2021.107768> (IF:13.68)
5. Süntar, I., **Çetinkaya, S.**, Panieri, E., Saha, S., Buttari, B., Profumo, E., & Saso, L. (2021). Regulatory Role of Nrf2 Signaling Pathway in Wound Healing Process. Molecules (Basel, Switzerland), 26(9), 2424. <https://doi.org/10.3390/molecules26092424> (IF:3.309)
6. **Sümeyra Çetinkaya**, İlknur Çınar Ayan, İpek Süntar, Hatice Gül Dursun (2021). The phytochemical profile and biological activity of *Liquidambar orientalis* Mill. var. *orientalis* via NF- κ B and apoptotic pathways in human colorectal cancer. Nutrition and Cancer. <https://doi.org/10.1080/01635581.2021.1952455> (IF:2.9)
7. İÇ Ayan, **S Çetinkaya**, HG Dursun, CE Güneş, S Şirin (2021). Anticancer Effect and Phytochemical Profile of the Extract from *Achillea ketenoglui* against Human Colorectal Cancer Cell Lines. Anti-cancer Agents in Medicinal Chemistry. <https://doi.org/10.2174/1871520621666210908110422> (IF:2.27)
8. Çınar Ayan, İ., **Çetinkaya, S.**, Dursun, H. G., & Süntar, İ. (2021). Bioactive Compounds of *Rheum ribes* L. and its Anticancerogenic Effect via Induction of Apoptosis and miR-200 Family Expression in Human Colorectal Cancer Cells. *Nutrition and cancer*, 73(7), 1228–1243. <https://doi.org/10.1080/01635581.2020.1792947> (IF:2.9)



Dr. Sümeyra GÜLTEKİN Biologist

TAGEM
R&D AND INNOVATION

9. **Cetinkaya S.**, Süntar I. (2021) Garlic: Allyl Sulfur Compounds and Cancer Prevention. In: Jafari S.M., Nabavi S.M., Silva A.S. (eds) Nutraceuticals and Cancer Signaling. Food Bioactive Ingredients. Springer, Cham. https://doi.org/10.1007/978-3-030-74035-1_11

International Papers, Seminars, etc.

1. **Sümeyra Çetinkaya**, İlknur Çınar, İpek Süntar, Hatice Gül Dursun. 5th International -Eurasian Congress on Natural Nutrition, Healthy Life & Sport. NATURAL 2019, Ankara. Investigation of the cellular and molecular effects of *Liquidambar orientalis* Mill. var. *orientalis* on HCT-116 and HT-29 cell lines and determination of bioactive metabolite profile. (ORAL PRESENTATION)
2. **Sümeyra Gültekin**, İpek Süntar. Recent developments of dietary supplements and polyphenols on immune system: mechanism of action and clinical implications. 5th International Symposium on Phytochemicals in Medicine and Food (5-ISPMF), 2021, China. (ORAL PRESENTATION)
3. Haydaroglu, U. S., **Cetinkaya, S.** (2020). Evaluation of different sterilization methods for propagation of saffron (*Crocus sativus*) in tissue culture. 3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020), S710, 19-20 Mart 2020, Ankara.
4. **Cetinkaya, S.**, Haydaroglu, U. S. (2020). Effective combinations of media components for saffron (*Crocus sativus*) micropropagation. 3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020), S713, 19-20 Mart 2020, Ankara.
5. İlknur Çınar, Canan Eroğlu, **Sümeyra Çetinkaya**, Seda Şirin, Ercan Kurar, H. Gül Dursun. Investigation of apoptotic effect of *Achillea ketenoglui* extract on colorectal cancer cells. MOLBIOTECH, 2018, Konya.
6. **Sumeyra Cetinkaya**. Nutrigenomics and miRNAs. III. International Congress on Social Science, 2018, Uzbekistan.
7. İlknur Cinar, **Sumeyra Cetinkaya**, H. Gul Dursun. *Rheum ribes* extract increase the expression level of miR-200 family in human colorectal cancer cells. Proceedings 2017, 1(10), 1060; doi:10.3390/proceedings1101060.
8. **Sumeyra Cetinkaya**, İlknur Cinar, H. Gul Dursun. Potential effects of *Liquidambar orientalis* Mill. against HT-29 and HCT-116 cell lines. Proceedings 2017, 1, 1061; doi:10.3390/proceedings1101061.



Dr. Sümeyra GÜLTEKİN Biologist

TAGEM
R&D AND INNOVATION

9. İlknur Çınar, **Sümeyra Çetinkaya**, İpek Süntar, Hatice Gül Dursun. Investigation of the cytotoxic effects of *Rheum ribes* (root and stem) plant extracts on HT-29 colorectal cancer cell line. IVEK 3rd International Convention of Pharmaceuticals and Pharmacies 2017, İstanbul.
10. **Sümeyra Çetinkaya**, İlknur Çınar, Seda Şirin, Hatice Gül Dursun. Cytotoxic effects of methanol and water extracts of *Achillea flaxoglui* (Ankara Yarrow) species endemic to Turkey on colorectal cancer cell lines. IVEK 3rd International Convention of Pharmaceuticals and Pharmacies 2017, İstanbul
11. İlknur Çınar, **Sümeyra Çetinkaya**, H.Gül Dursun, İpek Süntar. Evaluation of cytotoxic effects of *Rheum ribes* (root and stem) extracts on HCT 116 colorectal cancer cells. Uluslararası tıbbi ve aromatik bitkiler kongresi 2017, Konya.
12. Çınar İlknur, Eroğlu Canan, Avcı Ebru, **Çetinkaya Sümeyra**, Dursun Hatice Gül, Kurar Ercan. Investigation of cytotoxic and anti-metastatic effects of *Rheum ribes* methanol extract on MCF-7 breast cancer cells. 6.Multidisipliner Kanser Araştırma Kongresi 2016, Konya.
13. Çınar İlknur, Eroğlu Canan, Avcı Ebru, **Çetinkaya Sümeyra**, Dursun Hatice Gül, Kurar Ercan. Apoptotic effects of *Rheum ribes* plant extract on MCF-7 cancer cell lines. 41st FEBS congress 2016, Kuşadası.
14. P. Tasdemir, S. Demirel, H. G. Dursun, I. Cinar, **S. Cetinkaya**, A. B. Turhan. Colorectal cancer risk in relation to Hypoxia Inducible Factor-1 α (HIF1 α) and Von Hippel-Lindau (VHL) gene polymorphisms. European Journal of Human Genetics. 22 (1), 468, 2014, Italy.

NATIONAL ARTICLES AND PAPERS

▪ Articles Published in National Journals

1. ÇINAR I, **Çetinkaya S**, DURSUN H.G. Epigenetic Changes and Therapeutic Applications of miRNAs in Cancer. Turkish Journal of Scientific Reviews, 9 (1): 72-78, 2016.
2. **Sümeyra Çetinkaya**, İlknur Çınar, Hatice Gül Dursun. The Role in Tumor Process of Endoplasmic Reticulum Stress and Anticancer Treatments. Journal of Harran University Medical Faculty 2016; 13(1): 124-133.
3. Saygın Hasan Demirel, **Sümeyra Çetinkaya**. Hypoxia-Induced Factor-1: Physiological and Pathological Response of Cell to Hypoxia. 2014; 4-4: 171-177; doi: 10.5505/sakaryamj.2014.15010.
4. **Çetinkaya S.**, DURSUN H.G. Cell Survival and Death Decision in Endoplasmic Reticulum Stress. Sakarya Tıp Dergisi 2016, 6(2):73-80, doi: 10.5505/sakaryamedj.2016.03371.



Dr. Sümeyra GÜLTEKİN Biologist



▪ National Papers, Seminars, etc.

1. Sümeyra Çetinkaya, Serkan Küçüktürk, İlknur Çınar, Şebnem Yosunkaya, A. Bülent Turhan. The association of Lys109Arg polymorphism in the leptin receptor (LEPR) gene with obesity in individuals with obstructive sleep apnea/hypopnea syndrome (OSAHS). 13. National Congress of Medical Biology and Genetics, 2013, Kuşadası.
2. İlknur Çınar, Sümeyra Çetinkaya, Serkan Küçüktürk, Şebnem Yosunkaya, H. Gül Dursun, A. Bülent Turhan. Haplotype analysis of polymorphisms of the leptin receptor gene in individuals with obstructive sleep apnea/hypnea syndrome (OSAHS). 13. National Congress of Medical Biology and Genetics, 2013, Kuşadası.
3. İlknur Çınar, Serkan Küçüktürk, Sümeyra Çetinkaya, Şebnem Yosunkaya. The Effect of 1128T>C Polymorphism in Neuropeptide Y Gene on Obesity and Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS). XII with international participation. Metabolic diseases and nutrition congress, 2013, Eskişehir.
4. Sümeyra Cetinkaya, Serkan Kuccukturk, İlknur Cinar, Sebnem Yosunkaya. Lys656Asn Polymorphism in the Leptin Receptor (LEPR) Gene Is Associated with Obesity in Patients with Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS). XII. Metabolic Diseases and Nutrition Congress, 2013, Eskişehir.
5. Sümeyra Cetinkaya, İlknur Cinar, Saygin Demirel, A. Bulent Turhan, H. Gul Dursun. Identification and analysis of polymorphisms in hypoxia inducible factor-1 α (HIF-1 α) and von hippel lindeu (VHL) genes using bioinformatics tools. 13. National Congress of Medical Biology and Genetics, 2013, Kuşadası.
6. Sümeyra Cetinkaya, Serkan Kuccukturk, İlknur Cinar, Sebnem Yosunkaya. Investigation of Pro582Ser Polymorphism in Hypoxia Inducible Factor-1 α (HIF-1 α) Gene in Individuals with Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS). XII. Metabolic Diseases and Nutrition Congress, 2013, Eskişehir.
7. İlknur Çınar, Serkan Küçüktürk, Sümeyra Çetinkaya, Şebnem Yosunkaya. Effect of Leptin Receptor (LEPR) Pro1019Pro Polymorphism on Obstructive Sleep Apnea/Hypopnea Syndrome (OSAHS). XII with international participation. Metabolic diseases and nutrition congress, 2013.
8. Yosunkaya Sebnem, Kuccukturk Serkan, Cetinkaya Sumeysra, Cinar İlknur. Evaluation of sleep breathing disorders in a patient with Prader-Willi Syndrome (PWS). 12. National Congress of Medical Biology and Genetics, 2011. Türkiye Klinikleri J med sci 2011;31,163-164.



Dr. Sümeyra GÜLTEKİN Biologist



OTHER PUBLICATIONS

Ph.D. Thesis, Master Thesis, Reports, Books etc.

Membership, Training, Course, Meeting, Congress, Symposium and Other Activities

- V. Stem Cell Symposium Ankara 2010
- 12th National Medical Biology and Genetics Congress Antalya-2011
- 13th National Medical Biology and Genetics Congress Kuşadası-2013
- 12th Metabolic Diseases and Nutrition Congress with International Participation Eskişehir-2013
- Turkish-German Year of Science Workshop (Molecular Methods in Plant Breeding Ankara-2014 and Microbial Biotechnology)
- 6th Multidisciplinary Cancer Research Congress Konya-2016
- III. International Conference on New Trends in Chemometrics Antalya 2016 and Application
- National Molecular Biology and Biotechnology Congress Konya-2016
- IVEK 3rd International Convention of Pharmaceuticals and Pharmacies Istanbul-2017
- International Congress of Medicinal and Aromatic Plants Konya-2017
- II. International Congress on Social Science Uzbekistan-2018
- 7th International Molecular Biology and Biotechnology Congress Konya-2018
- TAGEM “Medicinal and Aromatic Plant with High Yield and Quality Criteria Ankara-2019 Workshop on Problems Encountered in Cultivation, Processing and Marketing and Solutions
- 3rd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2020)
- 5th International Symposium on Phytochemicals in Medicine and Food (5-ISPMF) China-2021
- International Biotechnology Congress (Bio Türkiye) -2021
- COMCEC-COMSTECH Training and Workshop New Breeding Technologies for Food and Nutritional Security-2021
- Smart Improvement with KASP (supported by Ankara Development Agency, TR51/19/TD/0030)
- Statistical Methods for Informatics training (supported by Ankara Development Agency, TR51/19/TD/0114)
- Bioinformatics Applications in Genetic Studies’ Training (supported by Ankara Development Agency, TR51/19/TD/0114)



Organization of international congress/workshop/symposium

- III. International Conference on New Trends in Chemometrics and Applications-2016
- Turkish-German Year of Science Workshop (Molecular Methods in Plant Breeding and Microbial Biotechnology)-2014
- TAGEM Biotechnology Workshop-2019
- Biotech Studies Days Webinar-2021

Editorship in an International Refereed Journal

- Biotech Studies Journal (Manager Editor)

Editorship in an International Refereed Scientific Journal

- 06/2020-Ongoing: Biotech Studies (TAGEM Journals)