



Hatice Kaya

Home : Metin Oktay Mahallesi, 197. sokak, Çankaya, No:2/6 , 06530, Ankara, Türkiye

Email: hatice.kaya0405@gmail.com **Phone**: (+90) 5549570730

Date of birth: 04/05/1989 **Nationality**: Turkish

OBJECTIVE

About me

I am a detail-oriented and self-driven professional with a strong scientific passion and commitment, who places a high value on fairness, collaboration, and cultivating a harmonious work environment that enhances productivity. With excellent communication skills, creativity, and a research-focused mindset, I am dedicated to staying informed about the latest technological advancements and consistently refining my skills. I excel in both collaborative team settings and independent work, always aiming to complete tasks with thoroughness and diligence, while maintaining a proactive attitude towards continuous learning and professional growth.

WORK EXPERIENCE

Sentebiolab Genetik Biyoteknoloji Ticaret A.Ş

City: Ankara | **Country**: Türkiye

[20/01/2025 – Current] **R&D Expert**

Sentebiolab provide products and services in the field of molecular biology such as oligonucleotide, primers and DNA probes, synthetic genes and cloning. In the laboratory, high-throughput primer-probe synthesis is performed to fulfill customers' demands for use in molecular and genomic research. I am responsible for the activities of the R&D department. Currently contributing to the development of a non-invasive early diagnostic assay for colorectal cancer (CRC), aimed at overcoming the limitations of traditional screening methods. Actively involved in hands-on laboratory experiments, data analysis, and reporting of findings. Additionally, contributing to a European-scale project focused on scaling up innovative and sustainable solutions for broader dissemination and impact.

E-Kalite software

City: Ankara | **Country**: Türkiye

[04/12/2023 – 08/04/2024] **Data analyst**

I worked as a data analyst at the E-Kalite software company. My main responsibility here was to find data on pharmaceutical companies, primarily those researching and producing diagnostic kits, from open sources on the internet, extract the data, create company profiles for the Pharmacircle project, and update the information of existing companies by following the reports and news published by these companies. This application, for which I am responsible for ensuring the data remains up-to-date, searchable, and reflective of the companies' developments, products, and R&D activities, is presented to major pharmaceutical companies.

Boğaziçi University

City: Istanbul | **Country**: Türkiye

[20/05/2021 – 20/05/2023] **University research assistant**

I worked for two years on a project to produce bone tissue scaffolds from natural and synthetic polymers using a 3D printer. I managed the project by preparing and following up on the project's procurement requests and by carrying out the experimental work

packages specified in the project. I analyzed the data obtained during the study, evaluated the results based on the literature and wrote the term and final reports.

Boğaziçi University

City: Istanbul | **Country:** Türkiye

[15/07/2019 – 18/09/2020] **University research assistant**

I worked as a researcher in the project titled "Investigation of Mechanical Properties of Injectable Bone Scaffolds Reinforced with Carbon Nanostructures and Their Effect on Osteogenic Differentiation" granted by TUBITAK. Within the scope of the project, calcium phosphate powders were trapped in methyl cellulose gel phase and the resulting bone tissue scaffold was reinforced with carbon nanostructures to increase mechanical properties. I carried out chemical, physical and mechanical characterizations of the obtained biomaterial. Then, in order to analyze the biocompatibility of the biomaterial, I performed cell studies and tests showing the adhesion, viability and cell differentiation of pre-osteoblast cells on the material.

rDNA bioengineering Ar-Ge

Country: Türkiye

[15/04/2016 – 15/05/2016] **Intern**

I was involved in the development of a real-time PCR-based multiplex diagnostic kit for the diagnosis of bacterial causes of neonatal sepsis.

aRDİ Farma

City: Istanbul | **Country:** Türkiye

[15/07/2013 – 15/08/2013] **Intern**

I had the opportunity to be involved in sub-processes such as Product Development, Analytical Development, Bioavailability & Bioequivalence Studies in a company that develops new products in line with their strategic goals for both the Turkish market and other markets, for both local and multinational companies. I participated in the analytical characterization studies of the active ingredient of the drug being developed under the guidance of an expert chemist, using the HPLC chromatographic method. Additionally, I had the chance to participate in and observe the compatibility studies of the active ingredient with excipients under the guidance of a pharmacist.

Intitution of Refik Saydam sanitation, Ankara

City: Ankara | **Country:** Türkiye

[15/06/2011 – 15/08/2011] **Intern**

Bacterial, parasitic, fungal and viral agents that threaten public health and cause health problems in humans from clinical and non-clinical samples; I participated in microbiological examinations for diagnosis, verification and typing and laboratory studies for microbiological agents. I participated in the diagnosis and identification of bacterial, parasitic agents that cause disease by using methods such as ELISA, staining of samples (such as stool, blood, urine) received at the institute.

EDUCATION AND TRAINING

[15/09/2017 – 20/02/2024] **Doctor of Philosophy**

Bogazici University, Institute of Biomedical Engineering <https://bme.bogazici.edu.tr/>

City: Istanbul | **Country:** Türkiye

[15/09/2014 – 15/08/2017] **Master of Science**

Bogazici University, Institute of Biomedical Engineering <https://bme.bogazici.edu.tr/>

City: Istanbul | **Country:** Türkiye

[15/02/2012 – 07/07/2012] **Erasmus Exchange Student program**

Wroclaw University of Science and Technology, Chemistry Department <https://pwr.edu.pl/en/>

City: Wroclaw | **Country:** Poland

[02/09/2009 – 03/09/2013] **Bachelor of Science**

Yıldız Technical University, Department of Bioengineering <https://www.yildiz.edu.tr/>

City: Istanbul | **Country:** Türkiye

PUBLICATIONS

[2026] **Early-Stage Detection of Colorectal Cancer with a Dual-Matrix DNA Methylation qPCR Panel: A Clinical Cohort**

The article is under review.

Authors: Çağrı ŞAKALAR, Gamze ÇUBUKCI, Serap DEDE, Saygın ALTINER, Aydın YAVUZ, Gizem, Rabia Hande ŞAHİNGÖZ, Hatice KAYA, Mevlüt Recep PEKÇİCİ, Abdullah DURHAN
| **Journal Name:** BMC Cancer

[2025] **Gelatin and hydroxyapatite concentration improves rheological properties of 3D printed HA/Gel/CMC bone scaffolds**

Reference: Arıcı, Ş., Kaya, H., Ege, D. (2025). Gelatin and hydroxyapatite concentration improves rheological properties of 3D-printed HA/Gel/CMC bone scaffolds. Biomedical Physics & Engineering Express

[2025] **nano-HA and Gel Improves Mechanical Performance and Biomineralization of 3D printed nano-HA/Gel/CMC Bone Scaffolds**

Reference: Arıcı, Ş., Güven, A., Kaya, H., Baştan, F. E., & Ege, D. (2025). nano-HA and Gel Improves Mechanical Performance and Biomineralization of 3D-printed nano-HA/Gel/CMC Bone Scaffolds. Nano Trends, 100097.

[2023] **CNT incorporation improves the resolution and stability of porous 3D printed PLGA/HA/CNT scaffolds for bone regeneration.**

Reference: Kaya, H. et al. (2018) 'L-Arginine modified multi-walled carbon nanotube/sulfonated poly(ether ether ketone) nanocomposite films for biomedical applications', Applied Surface Science. Elsevier B.V., 444, pp. 168–176. doi: 10.1016/j.apsusc.2018.03.046

[2018] **L-Arginine modified multi-walled carbon nanotube/sulfonated poly(ether ether ketone) nanocomposite films for biomedical applications**

Reference: Kaya, Hatice, et al. "CNT incorporation improves the resolution and stability of porous 3D printed PLGA/HA/CNT scaffolds for bone regeneration." Biomedical Materials 18.5 (2023): 055028.

BOOK CHAPTERS

[30/06/2017] **Wiley-Scrivener,**

Handbook of Composites from Renewable Materials, Polymeric Composites Chapter: 5 Principle Renewable Biopolymers and Their Biomedical Applications

CONFERENCES AND SEMINARS

[15/09/2017] **25th European Orthopedic Research Society** Germany

Development of Carbon Nanotube (CNT)/Polyether Ether Ketone (PEEK) Composites For Femur Replacement

[15/10/2017] **International Congress on Chemistry and Materials Science, Materials Research Society**
Boston

Potential Enhancement of Osseointegration with Carbon Nanotube/Sulfonated Poly(ether ether ketone)

HONOURS AND AWARDS

[01/08/2020] **TUBITAK BİDEB 2211-A Scholarship Awarding institution:** The Scientific and Technological Research Council of Turkey (TÜBİTAK)

TÜBİTAK provided double scholarship opportunities to students who met certain success criteria. I benefited from this grant for 3 years during my doctoral studies.

[15/07/2019] **TUBITAK 1001 - 117M231 ARDEB Scholarship Awarding institution:** The Scientific and Technological Research Council of Turkey (TÜBİTAK)

The project, which received a substantial grant, was led by my supervisor, and I was involved as a researcher for 14 months.

[01/02/2018] **Bogazici University Foundation Scholarship Awarding institution:** Bogazici University Foundation (BÜVAK)

The foundation provided scholarships to students who demonstrated success in their field of study for 3 years.

[01/08/2017] **YOK 100/2000 PhD Scholarship Awarding institution:** Council of Higher Education

TÜBİTAK grants doctoral students who focus on a principal subject for the legal duration of doctoral education (4 years). One of the principal subjects was medical devices, in which I specialized in additively manufacturing 3D bone tissue scaffolds to promote bone regeneration.

LANGUAGE SKILLS

Mother tongue(s): Turkish

Other language(s):

English

LISTENING B2 READING C1 WRITING C1

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

MS Office | Graphing and data analysis: OriginLab | Statistical analysis using SPSS & GraphPad | SSPSS | Primer Designing by Primer 3 software | Good knowledge of GraphPad Prism | Statistical analysis (SPSS, Jamovi) | Graphing and Data Analysis: OriginLab | scientific research methodology

HOBBIES AND INTERESTS

Cycling, hiking and crafting.