



Kardelen Tüfekçi

Date of birth: 14/03/1996 Email address: kardelen.tufekci@yeditepe.edu.tr

Work: Istanbul (Turkey)

WORK EXPERIENCE

TU Delft, Faculty of Mechanical Engineering, Biomechanical Engineering – Delft, Netherlands

Erasmus+ PhD Mobility

[15/08/2024 – 15/04/2025]

3D bioprinting of hard-soft tissue interfaces

Yeditepe University, Department of Genetic and Bioengineering, Biotechnology – Istanbul, Turkey

University Research Assistant

[01/09/2018 – Current]

Tasks:

- Generation of cell-laden osteochondral tissue substitutes via 3D Bioplotter (EnvisionTEC, Germany)
- 3D Bioprinting of synthetic and natural polymers
- 3D Bioprinting of hydrogels
- Decellularization of soft tissues
- Teaching Assistant in the Classical and Molecular and Genetics Laboratory in Genetics and Bioengineering Department

Merck Sharp & Dohme (MSD) – United States

Clinical Trial Coordinator

[23/10/2020 – 07/08/2024]

Tasks:

- Trial and site administration:
Track (e.g. essential documents) and report
Ensure collation and distribution of study tools and documents
- Document management:
Prepare documents and correspondence
- Budgeting, Agreement and Payments:
Develop, control, update and close-out country and site budgets
Calculate and execute payments (to investigators, vendors, grants)
Ensure adherence to financial and compliance procedures

Sabancı University, Integrated Manufacturing Technologies Research and Application Center – Istanbul, Turkey

Internship

[25/06/2018 – 10/08/2018]

Tasks:

- 3D Bioprinting of vascular constructs
3D printing of Pluronic F-127 and alginate
Create a model and algorithm to print for an artery structure

EDUCATION AND TRAINING

Integrated PhD

Yeditepe University [01/09/2021 – Current]

City: Istanbul | Country: Turkey | Field(s) of study: Department of Genetic and Bioengineering, Biotechnology | Final grade: 3.79

Bachelor degree

Istanbul Kültür University [01/09/2014 – 01/06/2018]

City: Istanbul | Country: Turkey | Field(s) of study: Molecular Biology and Genetics, Science and Literature | Final grade: 3.00/4.00 | Thesis: Molecular Mechanism of Aging in Caenorhabditis Elegans Model Organism

Bachelor degree

Anadolu University [01/09/2015 – 01/06/2018]

City: Eskişehir | Country: Turkey | Field(s) of study: Laboratory Assistants and Veterinary Laboratory Services, Veterinary | Final grade: 2.80/4.00

LANGUAGE SKILLS

Mother tongue(s): Turkish

Other language(s):

English

LISTENING C1 READING C1 WRITING C1
SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Spanish

LISTENING A1 READING A1 WRITING A1
SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1

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

SKILLS

AutoDESK AutoCAD (Optimal Knowledge) / GraphPad Prism / ImageJ / MS Office (MS Word, MS Powerpoint, MS Excel, MS)

PUBLICATIONS

[2022]
[Tüfekçi K, Büyük Nİ, Cumbul A, Ayşan E, Torun Köse G. A novel method for providing scaffold: Decellularization of parathyroid capsule. J Biomater Appl.](#)

[2022]
Taşkın S, Tüfekçi K, Çolak Ö, Evaluation of the effects of PPAR-gamma agonism and ischemic preconditioning on ischemia reperfusion injury of the rat inferior epigastric arter skin flap Under preperation

[2022]
Menteşe T, Tüfekçi K, Çolak Ö, The effect of 3D printed hyperelastic bone on heterotopic bone formation Under preperation

HOBBIES AND INTERESTS

Horse Riding

Pole Dance

Gardening

Pilates

CERTIFICATES

[15/09/2022 – 17/09/2022]

The Global Regenerative Congress

[02/09/2019 – 11/09/2019]

Certificate of animal use in experimental research- Yeditepe University Animal research local ethics committee

[25/06/2018 – 10/08/2018]

3D Bioprinting- Sabanci University

[11/05/2017]

Successfully completed C1 level (Advanced) in English- American Culture Education Institutions- EUROPEAN LANGUAGE PORTFOLIO Portfolio code: 745848

[01/11/2012 – 21/12/2012]

Elocution- Ministry of Education- İSMEK

[14/09/2021]

Dynamic Mechanical Analyzer (DMA q800) - TA Instruments

SKILLS AND TECHNIQUES

Additive Manufacturing Technologies

- 3D Printing of Hyperelastic Bone, Fluffy PLGA, PCL (various MW), PLGA, PLA, PLLA, PBS-u, PE, PU)
- Bioink (Xantan gum, Locust bean gum, Alginate, Pluronic F-127, Methyl cellulose)

Tissue Engineering Techniques

- EnvisionTEC 3D Bioplotter
- Decellularization
- Electrospinning
- Wet spinning
- sGAG assay
- Cell viability assay (MTS, MTT, XTT, Cell Titer Glo 3D Cell viability, Presto blue assay, and live-dead assay),
- Biomechanical analysis (DMA q800, Instron mechanical device)
- Biodegradation analysis
- Histological analysis (hematoxylin-eosin, Masson's trichrome staining, Periodic acid schiff staining)
- Isolation of primer cells (Nasal chondrocyte cells, rat bone marrow stem cells (RBMSCs))
- Differentiation of RBMSCs to adipogenic, osteogenic, and chondrogenic lineages
- Characterization of differentiated RBMSCs (Von-kossa staining, Alizarin red staining, Alcian blue staining, Oil red o staining, and ALP assay)

Molecular Biology Techniques

- DNA / RNA isolation
- Bacterial transformation, transfection, and cloning
- Mammalian cell culture
- PCR
- Flow cytometry
- Fluorescence microscopy
- Immunohistochemical analysis

Model Organism Studies (*Caenorhabditis elegans*)

- Investigation of spermidine or roscovitine induced autophagy mechanism on longevity and lipogenesis in *Caenorhabditis elegans* model organism
- Maintenance and Culturing of *Caenorhabditis elegans*
- Lifespan Assay
- Protein Extraction from *C.elegans*
- Genetic transformation by microinjection of DNA into the syncytial gonad