Cenk CELIK, *PhD*

Research Fellow
cenk.celik@proton.me • ORCID: 0000-0001-8301-0172 • London WC1E 6BT
Research Fellow proficient in conceptualisation and execution of independent projects.
Ethos of transparency, research integrity and keen collaboration in early career research.

Professional Experience

Research Fellow - University College London, United Kingdom — Jun 2023 - present

- Researched tumour dormancy and G0 arrest oesophagus and brain cancer using bulk and single-cell RNA-sequencing

Research Fellow - Nanyang Technological University, Singapore — Mar 2021 - May 2023

- Led a project researching *in vivo* and *in vitro* host-pathogen synergy in wound infection
- Conducted and analysed next-generation sequencing (bulk & single-cell RNA-seq) data by developing pipelines in *R* and *python*
- Supported and supervised undergraduate and PhD students
- Utilised *C. elegans* and rodent disease models for different projects focusing on pathologies of endoplasmic reticulum stress
- Drafted, edited, revised and contributed data to papers for submission in high-impact journals
- Trained new research staff

Research Assistant - National University Hospital System, Singapore — Nov 2019 - Aug 2020

- Produced and analysed data to create representative graphs highlighting results for presentations
- Planned, modified and executed research techniques, procedures and tests for nano-fibrous scaffold fabrication
- Performed statistical, qualitative and quantitative analysis
- Mentored new research staff

Graduate Assistant - National University of Singapore, Singapore — Jan 2016 - May 2018

- Instructed undergraduate students on the fundamentals of cell culture as well as methods for collecting, analysing and reporting data
- Mentored Master's students throughout all phases of their research projects

Education

PhD in Medicine - National University of Singapore, Singapore — Aug 2015 - Aug 2020

- Researched scaffold-mediated stem cell chondrogenesis by pulsed electromagnetic fields
- Published a first-author research article (IF = 10.633) and contributed to another research article (IF = 8.079)
- Presented in two international conferences
- Awarded Singapore International Graduate Award scholarship by NUS
- Awarded Young Orthopaedic Researcher Award by APOA Sports Meeting '19
- Awarded NUS Researcher Travel Grant by the National University of Singapore
- Wrote a book chapter as a first author

MSc in Bioengineering - Ege University, Turkey — Jul 2012 - May 2015

- Produced and characterised hybrid tissue scaffold approaches for 3D vascularised bone tissue
- Awarded TUBITAK 1002 and TUBITAK Career Grant scholarships

BSc in Bioengineering - Ege University, Turkey — Sep 2007 - Jun 2012

- Received Republic of Turkey Prime Minister Scholarship (4 years)
- Awarded and administered TUBITAK 2209 University Students Research Projects Support Program

Publications

Research articles

- Dudkevich R, Koh JH, Beaudoin-Chabot C, **Celik C**, Lebenthal-Loinger S, Karako-Lampert S, Thibault G, Henis-Korenblit S (2022). Neuronal IRE-1 coordinates an organism-wide cold-stress response by regulating fat metabolism. *Cell Reports* 41, 111739. [doi: 10.1016/j.celrep.2022.111739]
- Beaudoin-Chabot C, Wang L, **Celik C**, Abdul-Khalid ATF, Thalappilly S, Xu S, Koh JH, Lim VWX, Low AD, Thibault G (2022). The unfolded protein response reverses the effects of glucose on lifespan in chemically-sterilized *C. elegans*. *Nat Commun* 13, 5889. [doi: 10.1038/s41467-022-33630-0]

- Yang Z, **Celik C**, Parate D, Franco-Obregón A, Lee EH (2022). The application of pulsed electromagnetic field for cartilage regeneration. *Tissue Eng Part A* 28, S-365. [doi: 10.1089/ten.tea.2022.29025.abstracts]
- **Celik C**, Franco-Obregón A, Hui JHP, Lee EH & Yang Z (2021). Directionalities of magnetic fields and topographic scaffolds synergise to enhance MSC chondrogenesis. *Acta Biomater* 119, 169-183. [doi: 10.1016/j.actbio.2020.10.039]
- Parate D, Kadir ND, **Celik C**, Lee EH, Hui JHP, Franco-Obregón A &Yang Z (2020). Pulsed electromagnetic fields potentiate the paracrine function of mesenchymal stem cells for cartilage regeneration. *Stem Cell Res & Ther* 11:46. [doi: 10.1186/s13287-020-1566-5]
- Cetmi SD, Renkler NZ, Kose A, **Celik C** & Oncel SS (2019). Preparation of electrospun polycaprolactone nanofiber mats loaded with microalgal extracts. *Eng Life Sci* 19:691-699. [doi: 10.1002/elsc.201900009]
- Duman OM, **Celik C**, Sarıkanat M & Sendemir A (2014). Investigation of central nervous system neurons under mechanical strain: An *in vitro* traumatic brain injury model. *18th National Biomedical Engineering Meeting*, 1-4. [doi: 10.1109/biyomut.2014.7026384]

Reviews

- **Celik C**, Lee SYT, Yap WS, Thibault G (2023). Endoplasmic reticulum stress and lipids in health and disease. *Progress in Lipid Research* 8, 101198. [doi: 10.1016/j.plipres.2022.101198]

Book chapters

- **Celik C**, Mogal VT, Hui JHP, Loh XJ & Toh WS (2018). Injectable Hydrogels for Cartilage Regeneration. In: Thakur V, Thakur M (eds) Hydrogels. *Gels Horizons: From Science to Smart Materials*. Springer, Singapore. [doi: 10.1007/978-981-10-6077-9_12]
- Karaman O, **Celik C** & Sendemir A (2018). Self-Assembled Biomimetic Scaffolds for Bone Tissue Engineering. In Management Association, I. (Ed.), *Biomedical Engineering: Concepts, Methodologies, Tools and Applications*, 476-504, Hershey, PA: IGI Global. [doi: 10.4018/978-1-5225-3158-6.ch021]

Proceedings

- Lee STL, **Celik C**, Tan AMZ, Veleba M, Kline KA, Thibault G (Dec 3-7, 2022). Dissecting the synergistic role of the unfolded protein response in wound infections [Poster & Oral]. *ACSB & EMBO Meeting*, Washington DC, USA.
- **Celik C**, Yang Z, Franco-Obregón A, Hui JHP (Apr 4-7, 2019). Altering MSC chondrogenesis by PEMF [Oral]. *APOA Sports Meeting 19*, Kuala Lumpur, Malaysia.
- **Celik C**, Yang Z, Franco-Obregón A, Hui JHP (Sep 9-11, 2018). Enhancement of MSC chondrogenesis by PEMF [Poster]. *5th TERMIS World Congress*, Kyoto, Japan.
- Cetmi SD, Renkler NZ, Kose A, **Celik C**, Sendemir A & Oncel SS (Nov 11, 2015). Utilisation of microalgal extracts for construction of tissue scaffolds with electrospinning techniques [Poster]. *7th International Bioengineering Congress*, Izmir, Turkey.
- Duman OM, Tasdemir S, Minaz MC, **Celik C** & Sendemir A (Nov 11, 2013). Fe_3O_4 reinforced polycaprolactone nanofibrous scaffolds [Poster]. *VIth International Bioengineering Congress: Human Welfare*, Kusadasi, Turkey.
- **Celik C**, Karaman O, Sendemir A (Nov 11, 2013). More than a picture: Biomedical Illustration [Oral]. *19th International Biomedical Science and Technology Symposium*, Kusadasi, Turkey.
- **Celik C**, Gorgun C, Sendemir A (Nov 11, 2013). Cell viability of keratinocytes on electrospun Spirulina/PCL composites [Poster]. *19th International Biomedical Science and Technology Symposium*, Kusadasi, Turkey.
- Duman OM, Cogan S, Minaz MC, **Celik C** & Sendemir A (Sep 9, 2013). PCL/Fe_3O_4 Scaffold Production with Electrospinning [Oral]. *Advanced Materials World Congress 2013*, Cesme, Turkey.
- Serdengecti C, Sen I, Duman OM, **Celik C**, Sendemir A & Seki Y (Apr 4, 2013). Production and analysis of parameters affect morphological characters of chitosan nanospheres [Poster]. *1st Ege University Nanotechnology Days*, Izmir, Turkey.
- Duman OM, **Celik C**, Minaz MC, Sendemir A (Apr 4, 2013). Fabrication of PEO/Fe_3O_4 composite tissue scaffolds by electrospinning [Poster]. *1st Ege University Nanotechnology Days*, Izmir, Turkey.
- Demirkaya C, **Celik C**, Sarikanat M, Conk-Dalay M, Sendemir A (May 5, 2012). Applications of microalgae for tissue engineering [Oral]. *Marine Biotechnology and Genomics Workshop*, Bodrum, Turkey.
- **Celik C**, Demirkaya C, Sarikanat M, Conk-Dalay M & Sendemir A (Nov 11, 2011). Effects of microalgae reinforcement on biocompatibility and mechanical properties of tissue engineering scaffolds [Oral]. *1st National Aegean Composite Materials Symposium*, Selcuk, Turkey.

Proficiencies

• *R/RStudio* • Python 3 • *UNIX/Bash* • Cell Ranger • Loupe Browser • NGS data analysis (bulk & single-cell RNA-seq)
• Documentation/Version control (GitHub, .Rmd, Benchling) • Image processing • Photoshop • Illustrator

Core Competencies

• Single-cell & bulk RNA-seq • qPCR • Western blot • Cell culture • Confocal imaging • Immunofluorescence
• Handling of mice & rats • Lentiviral transfection/transduction • Primer design • Single-cell isolation • Flow cytometry

Active Memberships

- **Society for Cell Biology Singapore** - Member Sep 2022 - May 2023
- **Diversity, Inclusion & Equity Committee at NTU School of Biological Sciences** - Member Mar 2022 - May 2023

Certifications

- **Responsible Care and Use of Laboratory Animals** - SingHealth, Apr '21, Credential ID: SEMC/RCULAC/2021/040
- **Genomic Data Science Specialisation** - John Hopkins University, Sep '20, Credential ID: D7S7D536DXDD
- **Data Analysis for Life Science** - HarvardX, Aug '20, Credential ID: a1cb1feb86a24a6b8d28873249cf1bad
- **Python Data Science** - edX & IBM, Jun '20, Credential ID: 8e35eee7e19b4071a2a1109e599b8800

Awards & Honours

- **Translational Researcher Programme** - 10X Genomics, Inc., Singapore Feb 2022
- **Young Orthopaedic Researcher** - APOA Sports Meeting '19, Kuala Lumpur Apr 2019
- **Researcher Travel Grant** - National University of Singapore, Singapore Sep 2018
- **Singapore International Graduate Award** - National University Singapore, Singapore Aug 2015 - Aug 2019
- **Research Scholarship** - TUBITAK 1002, Turkey Jun 2014 - May 2015
- **Research Scholarship** - TUBITAK Career Grant, Turkey Sep 2012 - Sep 2013
- **University Students' Research Project Support Program** - TUBITAK 2209, Turkey Sep 2011 - Jan 2012
- **Prime Minister Scholarship** - General Directorate of Credit and Dormitories Agency, Turkey Jan 2008 - Jun 2012

Volunteering

- **Instructor** - KizCode Oct 2021 - Present
- **Executive Committee Member** - Singapore-Turkey Friendship Association May 2016 - Jun 2018
- **Organising Committee** - 19th International Biomedical Science & Technology Symposium Nov 2012 - Dec 2012
- **Organising Committee** - 6th International Bioengineering Congress Nov 2012 - Dec 2012