Handan Melike Dönertaş

melike.donertas@leibniz-fli.de
ORCID: 0000-0002-9788-6535
Google Scholar: rgAMfYcAAAAJ

Leibniz Institute on Aging – Fritz Lipmann Institute
Beutenbergstraße 11, 07745 Jena, Germany

EDUCATION

2016 - 2020 PhD Biological Sciences - University of Cambridge, Fellow of Darwin College
Supervisor: Prof Dame Janet Thornton, FRS
Thesis: Computational studies on ageing and age-related diseases

2014 - 2016 MSc Biology - Middle East Technical University
Supervisor: Prof Mehmet Somel
MSc CGPA: 4.00 / 4.00 (Rank: 1st)
Thesis: Meta-analysis of gene expression reversals in ageing brain

2009 - 2014 BSc Molecular Biology and Genetics - Middle East Technical University
(2009-2010 - English Preparatory School - GPA: 92/100)
BSc CGPA: 3.89 / 4.00 (Rank: 1st)

EXPERIENCE (since PhD)

Jan 2022 - current	EMBO Postdoctoral Fellow, FLI
May 2021 - Dec 2021	Postdoctoral Fellow, MPI-AGE
Jun 2020 - Apr 2021	Postdoctoral Fellow, EMBL-EBI

PROJECT (CO-)SUPERVISION

High School Science Projects	2 EpiSTEM + 1 iGEM project teams
BSc, MSc, PhD students & projects	8 students + 2 iGEM project teams

FUNDING & AWARDS

2023 - 2025	**MSCA Postdoctoral Fellowship** (terminated due to start as a group leader)
2022 - 2024	**EMBO Postdoctoral Fellowship**
2022 - 2026	**Research Grant -** CRC 1310: Predictability in Evolution
2021	**Young Researcher Grant -** CRC 1310 Predictability in Evolution
2018	**Travel Fellowship -** CSHL Meetings (Mechanisms of Aging 2018)
2016 - 2020	**PhD Fellowship -** European Molecular Biology Laboratory
2015	**Travel Fellowship -** EMBL Advanced Training Centre Corporate Partnership Programme (EMBL Cancer Genomics Conference)
2015	**Participation Fellowship -** EMBnet (NETTAB & IB 2015)
2014 - 2016	**MSc Fellowship -** The Scientific and Technological Research Council of Turkey 2211
2013	**ERASMUS+ Internship Grant**
2009 - 2014	**BSc Fellowship -** The Scientific and Technological Research Council of Turkey 2205

TEACHING EXPERIENCE

2021 Workshop Instructor, *Bioinfoconference (Bioinforange Society)*
➔ *Introduction to R*

2020 Workshop Instructor, *RSG Turkey Student Symposium*
➔ *Data visualization with ggplot*

2019 Workshop Instructor, *RSG Turkey Student Symposium*
➔ *Introduction to Scientific Figure Design*

2017	**Co-coordinator,** *EMBL PhD Core Course*
	➔ *Basic Teaching Module*

2017	**Lecturer,** *EMBL PhD Core Course*
	➔ *Unix/Linux Basics; R Markdown; Advanced R*

2014 - 2016	**Teaching Assistant,** *METU Biological Sciences*
	➔ *Introduction to Biometry (R); Biometry (SPSS); Computational Biology Using R*

MISCELLANEOUS

Reviewer for International Journals	Nature Aging, eLife, PLoS Computational Biology, Aging Cell, Aging, Aging and Disease, Journal of Cancer, BioSystems, The Journals of Gerontology: Series A, Molecular Brain
Member of Scientific Associations	**The International Society for Computational Biology (ISCB)** *Member since 2014* **ISCB SC** *Vice-chair of the regional student groups (2019), ET Chair (2022+)* **ISCB SC RSG Turkey** *Member (2013-2018), Chair (2017-2018)* **Ecology and Evolutionary Biology Society Turkey (EkoEvo)** *Member since 2015*
Conference and Event Organisation	ISCBSC Webinar Series, ISCB SCS 2020 Virtual Symposium RSG Turkey Webinars (2014 - 2019), RSG Turkey Student Symposium (2015, 2017, 2018) EEBST 2015 (Annual Ecology and Evolutionary Biology Symposium in Turkey)
Outreach	epiSTEM: Advisor in "Bir Deney Yapalim mi?" Programme and Guest Editor
Training activities	Contirubuted 4 Chapters to the Turkish translation of the R for Data Science book Writing a booklet including introductory-level notes for R programming in Turkish:

PRESENTATIONS (selected few in the last 5 years)

➔ (Invited Talk) Cambridge Longevity Society, 2022 (virtual event)
➔ (Invited Talk) ITU Journal Talks, 2022 (virtual event)
➔ (Invited Talk) GTU BIOS Bioengineering Congress 2021, Gebze, Turkey (virtual due to Covid19)
➔ (Invited Talk) IEEE GTU EMBS G.E.N.4 2021, Gebze, Turkey (virtual due to Covid19)
➔ (Invited Talk) Aykut Kence Evolution Conference 2021, Ankara, Turkey (virtual due to Covid19)
➔ (Selected talk) HIBIT 2020, Istanbul, Turkey (virtual due to Covid19)
➔ (Selected talk) CSHL Mechanisms of Aging Conference 2020, NY, USA (virtual due to Covid19)
➔ (Selected talk) ISMB 2020, Montreal, Canada (virtual due to Covid19)
➔ (Selected talk) ISMB/ECCB 2019, Basel, Switzerland
➔ (Selected talk) EEBST 2019, Ankara, Turkey
➔ (Poster) CSHL Mechanisms of Aging Conference 2018, NY, USA
➔ (Invited talk) RSG Turkey Webinar Series 2018
➔ (Selected talk) Healthy Ageing: From Molecules to Organisms 2018, Cambridge, UK
➔ (Invited talk) Wolfson College Data Science Seminars 2017, Cambridge, UK
➔ (Selected talk) HIBIT 2017, Guzelyurt, Northern Cyprus

RESEARCH ARTICLES

* denotes equal contribution

1. Izgi, H., Han, D., Isildak, U., Huang, S., Kocabiyik, E., Khaitovich, P.*, Somel, M.*, & **Dönertaş, H. M.*** (2022). Inter-tissue convergence of gene expression during ageing suggests age-related loss of tissue and cellular identity. *eLife*, *11*.
2. **Dönertaş, H. M.**, Fabian, D. K., Fuentealba, M., Partridge, L., & Thornton, J. M. (2021). Common genetic associations between age-related diseases. *Nature Aging*, *1*(4), 400–412.
3. Yapar, E.*, Saglican, E.*, **Dönertaş, H. M.***, Özkurt, E., Yan, Z., Hu, H., Guo, S., Erdem, B., Rohlfs, R. V., Khaitovich, P., & Somel, M. (2021). Convergent evolution of primate testis transcriptomes reflects mating strategy. In *bioRxiv* (p. 010553) (*under review - Evolution*)

4. Fabian, D. K., **Dönertaş, H. M.**, Fuentealba, M., Partridge, L., & Thornton, J. M. (2021). Transposable element landscape in Drosophila populations selected for longevity. *Genome Biology and Evolution*.

5. Fuentealba, M., Fabian, D. K., **Dönertaş, H. M.**, Thornton, J. M., & Partridge, L. (2021). Transcriptomic profiling of long- and short-lived mutant mice implicates mitochondrial metabolism in ageing and shows signatures of normal ageing in progeroid mice. *Mechanisms of Ageing and Development*, *194*, 111437.

6. Kılınç, G. M., Kashuba, N., Koptekin, D., Bergfeldt, N., **Dönertaş, H. M.**, Rodríguez-Varela, R., Shergin, D., Ivanov, G., Kichigin, D., Pestereva, K., Volkov, D., Mandryka, P., Kharinskii, A., Tishkin, A., Ineshin, E., Kovychev, E., Stepanov, A., Dalén, L., Günther, T., … Götherström, A. (2021). Human population dynamics and Yersinia pestis in ancient northeast Asia. *Science Advances*, *7*(2), eabc4587.

7. Işıldak, U., Somel, M., Thornton, J. M., & **Dönertaş, H. M.** (2020). Temporal changes in the gene expression heterogeneity during brain development and aging. *Scientific Reports*, *10*(1), 4080.

8. Turan, Z. G., Parvizi, P., **Dönertaş, H. M.**, Tung, J., Khaitovich, P., & Somel, M. (2019). Molecular footprint of Medawar's mutation accumulation process in mammalian aging. *Aging Cell*, *348*, e12965.

9. Kedlian, V. R.*, **Dönertaş, H. M.***, & Thornton, J. M. (2019). The widespread increase in inter-individual variability of gene expression in the human brain with age. *Aging*.

10. Fuentealba, M., **Dönertaş, H. M.**, Williams, R., Labbadia, J., Thornton, J. M., & Partridge, L. (2019). Using the drug-protein interactome to identify anti-ageing compounds for humans. *PLoS Computational Biology*, *15*(1), e1006639.

11. **Dönertaş, H. M.**, Fuentealba Valenzuela, M., Partridge, L., & Thornton, J. M. (2018). Gene expression-based drug repurposing to target aging. *Aging Cell*, *17*(5), e12819.

12. Taskent, R. O., Alioglu, N. D., Fer, E., **Dönertaş, H. M.**, Somel, M., & Gokcumen, O. (2017). Variation and Functional Impact of Neanderthal Ancestry in Western Asia. *Genome Biology and Evolution*, *9*(12), 3516–3524.

13. Kılınç, G. M., Koptekin, D., Atakuman, Ç., Sümer, A. P., **Dönertaş, H. M.**, Yaka, R., Bilgin, C. C., Büyükkarakaya, A. M., Baird, D., Altınışık, E., Flegontov, P., Götherström, A., Togan, İ., & Somel, M. (2017). Archaeogenomic analysis of the first steps of Neolithization in Anatolia and the Aegean. *Proceedings. Biological Sciences / The Royal Society*, *284*(1867).

14. **Dönertaş, H. M.**, İzgi, H., Kamacıoğlu, A., He, Z., Khaitovich, P., & Somel, M. (2017). Gene expression reversal toward pre-adult levels in the aging human brain and age-related loss of cellular identity. *Scientific Reports*, *7*(1), 5894.

15. Kılınç, G. M., Omrak, A., Özer, F., Günther, T., Büyükkarakaya, A. M., Bıçakçı, E., Baird, D., **Dönertaş, H. M.**, Ghalichi, A., Yaka, R., Koptekin, D., Açan, S. C., Parvizi, P., Krzewińska, M., Daskalaki, E. A., Yüncü, E., Dağtaş, N. D., Fairbairn, A., Pearson, J., … Götherström, A. (2016). The Demographic Development of the First Farmers in Anatolia. *Current Biology: CB*, *26*(19), 2659–2666.

16. **Dönertaş, H. M.***, Martínez Cuesta, S.*, Rahman, S. A., & Thornton, J. M. (2016). Characterising Complex Enzyme Reaction Data. *PLoS One*, *11*(2), e0147952.

REVIEW ARTICLES

17. Fabian, D. K., Fuentealba, M., **Dönertaş, H. M.**, Partridge, L., & Thornton, J. M. (2021). Functional conservation in genes and pathways linking ageing and immunity. *Immunity & Ageing: I & A*, *18*(1), 23.

18. **Dönertaş, H. M.***, Fuentealba, M.*, Partridge, L., & Thornton, J. M. (2019). Identifying Potential Ageing-Modulating Drugs In Silico. *Trends in Endocrinology and Metabolism: TEM*, *30*(2), 118–131.

EDITORIALS

19. Kaya, Y., Karakulak, T., Saylan, C. C., Ravza Gür, E., Tatlıdil, E., Güleşen, S., Dinçaslan, F. B., & **Dönertaş, H. M.** (2022). Lessons from a ten-year-long journey: building a student-driven computational biology society across Turkey. *F1000Research*, *11*(98), 98.

20. Cuypers, W. L.*, **Dönertaş, H. M.***, Grewal, J. K.*, Fatima, N., Donnelly, C., Mer, A. S., Krieger, S., Cuypers, B., & Rahman, F. (2021). Highlights from the 16th International Society for Computational Biology Student Council Symposium 2020. *F1000Research*, *10.*

21. Shome, S., Parra, R. G., Fatima, N., Monzon, A. M., Cuypers, B., Moosa, Y., Coimbra, N. D. R., Assis, J., Giner-Delgado, C., **Dönertaş, H. M.**, Cuesta-Astroz, Y., Saarunya, G., Allali, I., Gupta, S., Srivastava, A., Kalsan, M., Valdivia, C., J Olguin-Orellana, G., Papadimitriou, S., … Rahman, F. (2019). Global network of computational biology communities: ISCB's Regional Student Groups breaking barriers. *F1000Research*, *8.*