

## **Prof. MEHMET SOMEL**

### **Personal Information**

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### **International Researcher IDs**

ScholarID: MaBeF6YAAAAJ

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Publons / Web Of Science ResearcherID: B-1471-2016

ScopusID: 9743932900

Yoksis Researcher ID: 196686

### **Education Information**

Doctorate, Universitaet Leipzig, Faculty Of Biosciences Pharmacy And Psychology, Germany 2004 - 2008

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Biyoteknoloji (YI) (Tezli), Turkey 2001 - 2003

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, Turkey 1996 - 2001

### **Dissertations**

Doctorate, Exploring Phenotypic Variation with the Transcriptome: Applications in Human Evolution and Ageing, Universitaet Leipzig, Faculty Of Biosciences Pharmacy And Psychology, 2008

Postgraduate, Characterisation of DNA from archaeological wheat (*Triticum L.*) seeds from anatolia, Middle East Technical University, Graduate School of Natural and Applied Sciences, Biyoteknoloji (YI) (Tezli), 2003

### **Research Areas**

Evolution, Population Genetics

### **Academic Titles / Tasks**

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2014 - 2021

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2013 - 2014

Research Assistant, University of California, Berkeley, Letters And Science, Integrative Biology, 2011 - 2013

Research Assistant, Chinese Academy Of Sciences, Cas-Mpg Partner Institute For Computational Biology, 2008 - 2011

Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Biology, 2001 - 2004

### **Advising Theses**

Somel M., Inter-tissue convergence of gene expression and loss of identity during ageing, Doctorate, H.İZGİ(Student), 2023

Somel M., Somatic copy number variant load in neurons of healthy controls and Alzheimer's disease patients, Doctorate, Z.GÖZDE(Student), 2023

Somel M., Resolving reticulate speciation in bisexual and parthenogenetic lizards of genus *Darevskia* in East Anatolia and Caucasus, Doctorate, M.ERDOLU(Student), 2023

Somel M., Archaeogenomics of Anatolian wild ass, Doctorate, M.ÖZKAN(Student), 2023

Somel M., Assessment of genetic relatedness tools for ancient DNA using pedigree simulations, Postgraduate, Ş.AKTÜRK(Student), 2023

Somel M., MTaxi: A comparative tool for taxon identification of ultra low coverage ancient genomes, Postgraduate, G.ATAĞ(Student), 2023

Somel M., Predicting first-degree relationships from ancient samples using deep neural networks, Postgraduate, M.NUR(Student), 2023

Somel M., Meta-analysis of gene expression heterogeneity in brain development and aging, Postgraduate, U.İŞILDAK(Student), 2022

Somel M., Genetic history of Anatolia during Holocene, Doctorate, D.KOPTEKİN(Student), 2022

Somel M., Realistically simulating SARS-CoV-2 wastewater metagenome sequencing data, Postgraduate, F.RABİA(Student), 2022

SOMEL M., Convergent evolution of primate testis transcriptomes in response to mating strategy differences, Postgraduate, E.YAPAR(Student), 2021

SOMEL M., Comparison of methylation patterns in ancient hunter-gatherers and farmers, Postgraduate, S.SEDA(Student), 2021

Somel M., ARCHAEOGENOMIC ANALYSIS OF POPULATION GENETIC RELATIONSHIPS AND KINSHIP PATTERNS IN THE SEDENTARY SOCIETIES FROM NEOLITHIC ANATOLIA, Doctorate, R.YAKA(Student), 2020

Somel M., Testing natural selection on polygenic trait-associated alleles in anatolia using neolithic and present-day human genomes, Postgraduate, E.FER(Student), 2019

Acar A. C., Somel M., De novo SNP calling and demographic inference using trio genome data, Postgraduate, E.BOZLAK(Student), 2019

Somel M., Exploring the evolutionary history of anatolian neolithic sheep using modern and ancient genomics, Postgraduate, E.YURTMAN(Student), 2019

Somel M., Özer A. N., Kuzey iskandinavyalı insan örneklerinde hesaplamalı antik DNA çalışmaları, Postgraduate, N.DUHA(Student), 2018

SOMEL M., Differences in learning performance and related behaviors across three honey bee subspecies from Turkey, Postgraduate, B.ERDEM(Student), 2018

SOMEL M., Testis transcriptome evolution among hominids, Postgraduate, E.SAĞLİCAN(Student), 2018

SOMEL M., Meta analysis of alzheimer's disease at the gene expression level, Postgraduate, H.İzgi(Student), 2017

SOMEL M., Genetic relatedness estimation using ancient genomic data, Postgraduate, A.GHALİCHI(Student), 2017

SOMEL M., Context dependent mutation biases in the human genome, Postgraduate, A.YETKİN(Student), 2017

SOMEL M., TUNÇBAĞ N., Transcriptomic network analysis of brain aging and alzheimers disease, Postgraduate, P.Parvizi(Student), 2017

SOMEL M., TUNÇBAĞ N., Transcriptomic network analysis of brain aging and Alzheimer's disease, Postgraduate, P.PARVIZI(Student), 2017

SOMEL M., Understanding domestication process of sheep across Central and Western Anatolia by using ancient DNA, Postgraduate, O.ÖZER(Student), 2017

SOMEL M., Meta analysis of Alzheimer's disease at the gene expression level, Postgraduate, H.İZGİ(Student), 2017

SOMEL M., Meta-analysis of gene expression reversals in ageing brain, Postgraduate, H.MELİKE(Student), 2016

SOMEL M., Notable decrease in transcriptome conservation during mammalian aging, Postgraduate, Z.GÖZDE(Student), 2016

SOMEL M., Evolution of bladder cancer investigated using exome sequencing, Postgraduate, E.ÖZKURT(Student), 2015

## Designed Lessons

Somel M., Atakuman Ç., Sürer E., Digital Archaeology of the Neolithic Transition, Postgraduate, 2018 - 2019

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **READv2: advanced and user-friendly detection of biological relatedness in archaeogenomics**  
Alaçamlı E., Naidoo T., GÜLER M., Sağlıcan E., Aktürk Ş., Mapelli I., Vural K. B., SOMEL M., Malmström H., Günther T.  
Genome Biology, vol.25, no.1, 2024 (SCI-Expanded)
- II. **An explanation for the sister repulsion phenomenon in Patterson's f-statistics**  
Atag G., Waldman S., Carmi S., SOMEL M.  
GENETICS, vol.228, no.3, 2024 (SCI-Expanded)
- III. **The Population History of Domestic Sheep Revealed by Paleogenomes.**  
Kaptan D., Atağ G., Vural K. B., Morell Miranda P., Akbaba A., Yüncü E., Buluktaev A., Abazari M. F., Yorulmaz S., Kazancı D. D., et al.  
Molecular biology and evolution, vol.41, no.10, 2024 (SCI-Expanded)
- IV. **The first complete genome of the extinct European wild ass (*Equus hemionus hydruntinus*)**  
Özkan M., GÜRÜN K., Yüncü E., VURAL K. B., Atağ G., Akbaba A., FİDAN F. R., Sağlıcan E., ALTINIŞIK N. E., Koptekin D., et al.  
Molecular Ecology, vol.33, no.14, 2024 (SCI-Expanded)
- V. **Benchmarking kinship estimation tools for ancient genomes using pedigree simulations**  
Akturk S., Mapelli I., Guler M., Gurun K., Katircioglu B., Vural K. B., Saglıcan E., Cetin M., Yaka R., Sürer E., et al.  
MOLECULAR ECOLOGY RESOURCES, vol.24, no.5, 2024 (SCI-Expanded)
- VI. **Investigating food production-associated DNA methylation changes in paleogenomes: Lack of consistent signals beyond technical noise**  
Çokoğlu S. S., Koptekin D., FİDAN F. R., SOMEL M.  
Evolutionary Applications, vol.17, no.7, 2024 (SCI-Expanded)
- VII. **Ancient Sheep Genomes Reveal Four Millennia of North European Short-Tailed Sheep in the Baltic Sea Region**  
Larsson M. N. A., Morell Miranda P., Pan L., Başak Vural K., Kaptan D., Rodrigues Soares A. E., Kivikero H., Kantanen J., SOMEL M., ÖZER F., et al.  
Genome Biology and Evolution, vol.16, no.6, 2024 (SCI-Expanded)
- VIII. **Population Genomic History of the Endangered Anatolian and Cyprian Mouflons in Relation to Worldwide Wild, Feral, and Domestic Sheep Lineages**  
Atag G., Kaptan D., Yüncü E., VURAL K. B., Mereu P., Pirastru M., Barbato M., Leoni G. G., Güler M. N., Er T., et al.  
Genome Biology and Evolution, vol.16, no.5, 2024 (SCI-Expanded)
- IX. **Comparison and optimization of protocols and whole-genome capture conditions for ancient DNA samples**  
Yaka R., Maja Krzewińska K., Lagerholm V. K., Linderholm A., ÖZER F., SOMEL M., Götherström A.  
BioTechniques, vol.76, no.5, pp.216-223, 2024 (SCI-Expanded)
- X. **Single hybrid population but multiple parental individuals at the origin of parthenogenetic rock lizards *Darevskia sapphirina* and *D. bendimahiensis* Schmidtler, & Eiselt Darevsky (1994) endemic to the area of Lake Van in East Turkey**  
Erdolu M., ŞAHİN M. K., SOMEL M., Yanchukov A.  
Molecular Phylogenetics and Evolution, vol.189, 2023 (SCI-Expanded)
- XI. **The time and place of origin of South Caucasian languages: insights into past human societies, ecosystems and human population genetics**  
Gavashelishvili A., Chukhua M., Sakhltkhutsishvili K., Koptekin D., SOMEL M.  
Scientific Reports, vol.13, no.1, 2023 (SCI-Expanded)
- XII. **Effects of coumaphos on locomotor activities of different honeybee (*Apis mellifera* L.) subspecies**

**and ecotypes**

ARSLAN O. C., ERDEM B., SOMEL M., Giray T., Kence M.

*Apidologie*, vol.54, no.4, 2023 (SCI-Expanded)

- XIII. **Mobility and kinship in the world's first village societies**  
Pearson J., Evans J., Lamb A., Baird D., Hodder I., Marciniak A., Larsen C. S., Knüsel C. J., Haddow S. D., Pilloud M. A., et al.  
*Proceedings of the National Academy of Sciences of the United States of America*, vol.120, no.4, 2023 (SCI-Expanded)
- XIV. **Spatial and temporal heterogeneity in human mobility patterns in Holocene Southwest Asia and the East Mediterranean.**  
Koptekin D., Yüncü E., Rodríguez-Varela R., Altınışik N. E., Psonis N., Kashuba N., Yorulmaz S., George R., Kazancı D. D., Kaptan D., et al.  
*Current biology : CB*, vol.33, 2023 (SCI-Expanded)
- XV. **CONGA: Copy number variation genotyping in ancient genomes and low-coverage sequencing data**  
Söylev A., Çokoglu S. S., KOPTEKİN D., Alkan C., SOMEL M.  
*PLoS Computational Biology*, vol.18, no.12, 2022 (SCI-Expanded)
- XVI. **Somatic copy number variant load in neurons of healthy controls and Alzheimer's disease patients**  
Turan Z. G., Richter V., Bochmann J., Parvizi P., Yapar E., Işıldak U., Waterholter S., Leclere-Turbant S., SON Ç. D., Duyckaerts C., et al.  
*Acta Neuropathologica Communications*, vol.10, no.1, 2022 (SCI-Expanded)
- XVII. **A genomic snapshot of demographic and cultural dynamism in Upper Mesopotamia during the Neolithic Transition**  
ALTINIŞIK N. E., Kazancı D. D., Aydoğan A., GEMİCİ H. C., ERDAL Ö. D., SARIALTUN S., VURAL K. B., KOPTEKİN D., GÜRÜN K., Sağlıcan E., et al.  
*Science Advances*, vol.8, no.44, 2022 (SCI-Expanded)
- XVIII. **New insights on commemoration of the dead through mortuary and architectural use of pigments at Neolithic Catalhoyuk, Turkey**  
Schotsmans E., Busacca G., Lin S., Vasić M., Lingle A., Veropoulidou R., Mazzucato C., Tibbetts B., Haddow S., SOMEL M., et al.  
*SCIENTIFIC REPORTS*, vol.12, no.1, 2022 (SCI-Expanded)
- XIX. **Inter-tissue convergence of gene expression during ageing suggests age-related loss of tissue and cellular identity**  
İZGİ H., Han D., Isildak U., Huang S., Kocabiyik E., Khaitovich P., SOMEL M., Dönertaş H. M.  
*eLife*, vol.11, 2022 (SCI-Expanded)
- XX. **Archaeogenetic analysis of Neolithic sheep from Anatolia suggests a complex demographic history since domestication**  
Yurtman E., Ozer O., Yuncu E., Dagtas N. D., Koptekin D., Çakan Y. G., Ozkan M., Akbaba A., Kaptan D., Atag G., et al.  
*Communications Biology*, vol.4, no.1, 2021 (SCI-Expanded)
- XXI. **Collaborate equitably in ancient DNA research and beyond**  
SOMEL M.  
*NATURE*, vol.600, no.7887, pp.37, 2021 (SCI-Expanded)
- XXII. **Human inbreeding has decreased in time through the Holocene**  
Ceballos F. C., Gurun K., ALTINIŞIK N. E., Gemic H. C., Karamurat C., Koptekin D., Vural K. B., Mapelli I., Saglıcan E., SÜRER E., et al.  
*CURRENT BIOLOGY*, vol.31, no.17, pp.3925-3943, 2021 (SCI-Expanded)
- XXIII. **Million-year-old DNA sheds light on the genomic history of mammoths**  
Van Der Valk T., Pecnerova P., Diez-Del-Molino D., Bergstrom A., Oppenheimer J., Hartmann S., Xenikoudakis G., Thomas J. A., Dehasque M., Saglıcan E., et al.  
*NATURE*, vol.591, no.7849, pp.265-282, 2021 (SCI-Expanded)
- XXIV. **Human population dynamics and *Yersinia pestis* in ancient northeast Asia**  
Kilinc G. M., Kashuba N., Koptekin D., Bergfeldt N., Donertas H. M., Rodriguez-Varela R., Shergin D., Ivanov G.,

- Kichigin D., Pestereva K., et al.  
SCIENCE ADVANCES, vol.7, no.2, 2021 (SCI-Expanded)
- XXV. **Variable kinship patterns in Neolithic Anatolia revealed by ancient genomes**  
Yaka R., Mapelli I., Kaptan D., Doğu A., Chyleński M., Erdal Ö. D., Koptekin D., Vural K. B., Bayliss A., Mazzucato C., et al.  
Current Biology, vol.31, no.11, 2021 (SCI-Expanded)
- XXVI. **EVOLUTIONARY GENETICS Of dogs and men**  
Pavlidis P., SOMEL M.  
SCIENCE, vol.370, no.6516, pp.522-523, 2020 (SCI-Expanded)
- XXVII. **Temporal changes in the gene expression heterogeneity during brain development and aging**  
Isildak U., SOMEL M., Thornton J. M., Donertas H. M.  
SCIENTIFIC REPORTS, vol.10, no.1, 2020 (SCI-Expanded)
- XXVIII. **Social Memory and Mortuary Practices in Neolithic Anatolia**  
Pilloud M. A., Haddow S. D., Knusel C. J., Larsen C. S., SOMEL M.  
POETICS OF PROCESSING, pp.145-165, 2020 (SSCI)
- XXIX. **Molecular footprint of Medawar's mutation accumulation process in mammalian aging**  
Turan Z. G., Parvizi P., Donertas H. M., Tung J., Khaitovich P., SOMEL M.  
AGING CELL, vol.18, no.4, 2019 (SCI-Expanded)
- XXX. **Ancient Mitochondrial Genomes Reveal the Absence of Maternal Kinship in the Burials of catalhoyuk People and Their Genetic Affinities**  
Chylenski M., Ehler E., SOMEL M., Yaka R., Krzewinska M., Dabert M., Juras A., Marciniak A.  
GENES, vol.10, no.3, 2019 (SCI-Expanded)
- XXXI. **Genomic and Strontium Isotope Variation Reveal Immigration Patterns in a Viking Age Town**  
Krzewinska M., Kjellstrom A., Guenther T., Hedenstierna-Jonson C., Zachrisson T., Omrak A., Yaka R., Kilinc G. M., SOMEL M., Sobrado V., et al.  
CURRENT BIOLOGY, vol.28, no.17, pp.2730-2748, 2018 (SCI-Expanded)
- XXXII. **Investigating Holocene human population history in North Asia using ancient mitogenomes**  
Kilinc G. M., Kashuba N., Yaka R., Sumer A. P., Yuncu E., Shergin D., Ivanov G. L., Kichigin D., Pestereva K., Volkov D., et al.  
SCIENTIFIC REPORTS, vol.8, 2018 (SCI-Expanded)
- XXXIII. **Archaeogenetics of Late Iron Age Cemialo Srt, Batman: Investigating maternal genetic continuity in north Mesopotamia since the Neolithic**  
Yaka R., Birand A., Yilmaz Y., Caner C., Acan S. C., Gunduzalp S., Parvizi P., Ozdogan A. E., Togan I., SOMEL M.  
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY, vol.166, no.1, pp.196-207, 2018 (SCI-Expanded)
- XXXIV. **Variation and Functional Impact of Neanderthal Ancestry in Western Asia**  
Taskent R. O., Alioglu N. D., Fer E., Donertas H. M., SOMEL M., Gokcumen O.  
GENOME BIOLOGY AND EVOLUTION, vol.9, no.12, pp.3516-3524, 2017 (SCI-Expanded)
- XXXV. **Archaeogenomic analysis of the first steps of Neolithization in Anatolia and the Aegean**  
Kilinc G. M., KOPTKIN D., ATAKUMAN Ç., SUMER A. P., DONERTAS H. M., YAKA R., BİLGİN C. C., BÜYÜKKARAKAYA A. M., Baird D., ALTINISIK E., et al.  
PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES, vol.284, no.1867, 2017 (SCI-Expanded)
- XXXVI. **Gene expression reversal toward pre-adult levels in the aging human brain and age-related loss of cellular identity**  
Donertas H. M., İzgi H., Kamacioglu A., He Z., Khaitovich P., Somel M.  
SCIENTIFIC REPORTS, vol.7, 2017 (SCI-Expanded)
- XXXVII. **The Demographic Development of the First Farmers in Anatolia**  
Kilinc G. M., Omrak A., Ozer F., Gunther T., Büyükkarakaya A. M., Bicakci E., Baird D., Donertas H. M., Ghalichi A., Yaka R., et al.  
CURRENT BIOLOGY, vol.26, no.19, pp.2659-2666, 2016 (SCI-Expanded)
- XXXVIII. **Disruption of an Evolutionarily Novel Synaptic Expression Pattern in Autism**  
Liu X., Han D., Somel M., Jiang X., Hui H., Guijarro P., Zhang N., Mitchell A., Halene T., Ely J. J., et al.

PLOS BIOLOGY, vol.14, no.9, 2016 (SCI-Expanded)

- XXXIX. **Determining the origin of synchronous multifocal bladder cancer by exome sequencing**  
Acar O., Ozkurt E., Demir G., Sarac H., ALKAN C., Esen T., SOMEL M., LACK N.  
BMC CANCER, vol.15, 2015 (SCI-Expanded)
- XL. **Transcriptomic insights into human brain evolution: acceleration, neutrality, heterochrony**  
SOMEL M., Rohlf S., Liu X.  
CURRENT OPINION IN GENETICS & DEVELOPMENT, vol.29, pp.110-119, 2014 (SCI-Expanded)
- XLI. **Whole genome sequencing of Turkish genomes reveals functional private alleles and impact of genetic interactions with Europe, Asia and Africa**  
Alkan C., Kavak P., Somel M., Gokcumen O., Ugurlu S., Saygi C., Dal E., Bugra K., GÜNGÖR T., Sahinalp S. C., et al.  
BMC GENOMICS, vol.15, 2014 (SCI-Expanded)
- XLII. **Shared signatures of social stress and aging in peripheral blood mononuclear cell gene expression profiles**  
Snyder-Mackler N., SOMEL M., Tung J.  
AGING CELL, vol.13, no.5, pp.954-957, 2014 (SCI-Expanded)
- XLIII. **Altitude adaptation in Tibetans caused by introgression of Denisovan-like DNA**  
Huerta-Sanchez E., Jin X., Asan A., Bianba Z., Peter B. M., Vinckenbosch N., Liang Y., Yi X., He M., Somel M., et al.  
NATURE, vol.512, no.7513, pp.194-210, 2014 (SCI-Expanded)
- XLIV. **Population Genomics Reveal Recent Speciation and Rapid Evolutionary Adaptation in Polar Bears**  
Liu S., Lorenzen E. D., Fumagalli M., Li B., Harris K., Xiong Z., Zhou L., Korneliusson T. S., Somel M., Babbitt C., et al.  
CELL, vol.157, no.4, pp.785-794, 2014 (SCI-Expanded)
- XLV. **Classic Selective Sweeps Revealed by Massive Sequencing in Cattle**  
Qanbari S., Pausch H., Jansen S., Somel M., Strom T. M., Fries R., Nielsen R., Simianer H.  
PLOS GENETICS, vol.10, no.2, 2014 (SCI-Expanded)
- XLVI. **Evolution of Human Longevity Uncoupled from Caloric Restriction Mechanisms**  
Zhao G., Guo S., Somel M., Khaitovich P.  
PLOS ONE, vol.9, no.1, 2014 (SCI-Expanded)
- XLVII. **A Scan for Human-Specific Relaxation of Negative Selection Reveals Unexpected Polymorphism in Proteasome Genes**  
Somel M., Sayres M. A. W., Jordan G., Huerta-Sanchez E., Fumagalli M., Ferrer-Admetlla A., Nielsen R.  
MOLECULAR BIOLOGY AND EVOLUTION, vol.30, no.8, pp.1808-1815, 2013 (SCI-Expanded)
- XLVIII. **Early gene expression divergence between allopatric populations of the house mouse (*Mus musculus domesticus*)**  
Bryk J., Somel M., Lorenc A., Teschke M.  
ECOLOGY AND EVOLUTION, vol.3, no.3, pp.558-568, 2013 (SCI-Expanded)
- XLIX. **Human brain evolution: transcripts, metabolites and their regulators**  
Somel M., Liu X., Khaitovich P.  
NATURE REVIEWS NEUROSCIENCE, vol.14, no.2, pp.112-127, 2013 (SCI-Expanded)
- L. **Widespread splicing changes in human brain development and aging**  
Mazin P., Xiong J., Liu X., Yan Z., Zhang X., Li M., He L., Somel M., Yuan Y., Chen Y. P., et al.  
MOLECULAR SYSTEMS BIOLOGY, vol.9, 2013 (SCI-Expanded)
- LI. **Accelerated aging-related transcriptome changes in the female prefrontal cortex**  
Yuan Y., Chen Y. P., Boyd-Kirkup J., Khaitovich P., Somel M.  
AGING CELL, vol.11, no.5, pp.894-901, 2012 (SCI-Expanded)
- LII. **A Comparison of Brain Gene Expression Levels in Domesticated and Wild Animals**  
Albert F. W., Somel M., Carneiro M., Aximu-Petri A., Halbwax M., Thalmann O., Blanco-Aguilar J. A., Plyusnina I. Z., Trut L., Villafuerte R., et al.  
PLOS GENETICS, vol.8, no.9, 2012 (SCI-Expanded)
- LIII. **Mechanisms of Dietary Response in Mice and Primates: A Role for EGR1 in Regulating the Reaction to Human-Specific Nutritional Content**  
Weng K., Hu H., Xu A. G., Khaitovich P., Somel M.

PLOS ONE, vol.7, no.8, 2012 (SCI-Expanded)

- LIV. **Extension of cortical synaptic development distinguishes humans from chimpanzees and macaques**  
Liu X., Somel M., Tang L., Yan Z., Jiang X., Guo S., Yuan Y., He L., Oleksiak A., Zhang Y., et al.  
GENOME RESEARCH, vol.22, no.4, pp.611-622, 2012 (SCI-Expanded)
- LV. **MicroRNA-Driven Developmental Remodeling in the Brain Distinguishes Humans from Other Primates**  
Somel M., Liu X., Tang L., Yan Z., Hu H., Guo S., Jiang X., Zhang X., Xu G., Xie G., et al.  
PLOS BIOLOGY, vol.9, no.12, 2011 (SCI-Expanded)
- LVI. **Development and application of a modified dynamic time warping algorithm (DTW-S) to analyses of primate brain expression time series**  
Yuan Y., Chen Y. P., Ni S., Xu A. G., Tang L., Vingron M., Somel M., Khaitovich P.  
BMC BIOINFORMATICS, vol.12, 2011 (SCI-Expanded)
- LVII. **Rapid metabolic evolution in human prefrontal cortex**  
Fu X., Giavalisco P., Liu X., Catchpole G., Fu N., Ning Z., Guo S., Yan Z., Somel M., Paeaebo S., et al.  
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol.108, no.15, pp.6181-6186, 2011 (SCI-Expanded)
- LVIII. **MicroRNA, mRNA, and protein expression link development and aging in human and macaque brain**  
Somel M., Guo S., Fu N., Yan Z., Hu H. Y., Xu Y., Yuan Y., Ning Z., Hu Y., Menzel C., et al.  
GENOME RESEARCH, vol.20, no.9, pp.1207-1218, 2010 (SCI-Expanded)
- LIX. **Intergenic and Repeat Transcription in Human, Chimpanzee and Macaque Brains Measured by RNA-Seq**  
Xu A. G., He L., Li Z., Xu Y., Li M., Fu X., Yan Z., Yuan Y., Menzel C., Li N., et al.  
PLOS COMPUTATIONAL BIOLOGY, vol.6, no.7, 2010 (SCI-Expanded)
- LX. **Evolution of Neuronal and Endothelial Transcriptomes in Primates**  
Giger T., Khaitovich P., Somel M., Lorenc A., Lizano E., Harris L. W., Ryan M. M., Lan M., Wayland M. T., Bahn S., et al.  
GENOME BIOLOGY AND EVOLUTION, vol.2, pp.284-292, 2010 (SCI-Expanded)
- LXI. **A Humanized Version of Foxp2 Affects Cortico-Basal Ganglia Circuits in Mice**  
Enard W., Gehre S., Hammerschmidt K., Hoelter S. M., Blass T., Somel M., Brueckner M. K., Schreiweis C., Winter C., Sohr R., et al.  
CELL, vol.137, no.5, pp.961-971, 2009 (SCI-Expanded)
- LXII. **Transcriptional neoteny in the human brain**  
Somel M., Franz H., Yan Z., Lorenc A., Guo S., Giger T., Kelso J., Nickel B., Dannemann M., Bahn S., et al.  
PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol.106, no.14, pp.5743-5748, 2009 (SCI-Expanded)
- LXIII. **Evolution of Primate Gene Expression: Drift and Corrective Sweeps?**  
Chaix R., Somel M., Kreil D. P., Khaitovich P., Lunter G. A.  
GENETICS, vol.180, no.3, pp.1379-1389, 2008 (SCI-Expanded)
- LXIV. **Human and Chimpanzee Gene Expression Differences Replicated in Mice Fed Different Diets**  
Somel M., Creely H., Franz H., Mueller U., Lachmann M., Khaitovich P., Paeaebo S.  
PLOS ONE, vol.3, no.1, 2008 (SCI-Expanded)
- LXV. **Identification and analysis of genomic regions with large between-population differentiation in humans**  
Myles S., Tang K., Somel M., Green R. E., Kelso J., Stoneking M.  
ANNALS OF HUMAN GENETICS, vol.72, pp.99-110, 2008 (SCI-Expanded)
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## Articles Published in Other Journals

**I. MTaxi: A comparative tool for taxon identification of ultra low coverage ancient genomes**

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## Books & Book Chapters

**I. The role of neoteny in human evolution: from genes to the phenotype**

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**II. Intramural burials in Neolithic Anatolia: What do they tell us about social organisation?**

SOMEL M., ALTINIŞIK N. E., ERDAL Y. S., ATAKUMAN Ç., ÖZER F.

in: Kinship, Sex, and Biological Relatedness : The contribution of archaeogenetics to the understanding of social and biological relations. 15. Mitteldeutscher Archäologentag vom 6. bis 8. Oktober 2022 in Halle (Saale), Heidelberg: Propylaeum, 2023 (Tagungen des Landesmuseums für Vorgeschichte Halle, Band 26), Meller, H.; Krause, J.; Haak, W.; Risch, R., Editor, Propylaeum, Halle (Saale), pp.137-147, 2023

**III. From Bones to Genomes: Current Research on the Population History of Prehistoric Anatolia**

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**IV. Ancient genomics in Neolithic Central Anatolia and Çatalhöyük**

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in: Peopling the Landscape of Çatalhöyük: Reports from the 2009-2017 Seasons, Ian Hodder, Editor, The British Institute of Archaeology at Ankara , Ankara, pp.395-405, 2021

## Refereed Congress / Symposium Publications in Proceedings

**I. Ancient genomics in Anatolia: challenges and opportunities**

SOMEL M.

THE 12TH INTERNATIONAL SYMPOSIUM ON HEALTH INFORMATICS AND BIOINFORMATICS, 17 - 19 October 2019

**II. Discovery of Structural Variations in Ancient Genomes**

SÖYLEV A., ALKAN C., SOMEL M.

Twelfth International Symposium on Health Informatics and Bioinformatics, İzmir, Turkey, 17 - 19 October 2019

**III. An Archaeogenomic Investigation of Consanguinity During the Neolithic Transition**

Taskent R. O., Sumer A. P., Koptekin D., Ozkan M., Ceballos F. C., Gokcumen O., SOMEL M.

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**IV. Archaeogenomic Insights into Anatolian Demographic History During the Holocene**



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- V. **Understanding migration of shhep from its domestication center in Southeast Anatolia to West Anatolia by using of ancient mtDNA: Preliminary results**  
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4. Ecology and Evolutionary Biology Symposium, İstanbul, Turkey, 11 - 13 July 2017
- VI. **Meta-Analysis of Alzheimer's Disease at the Gene Expression Level**  
İZGİ H., SOMEL M.  
10th International Symposium on Health Informatics and Bioinformatics, 28 - 30 June 2017
- VII. **Diverse Patterns of Neanderthal Introgression in Western Asia**  
Taskent R. O., Alioglu D., Fer E., Donertas H. M., SOMEL M., Gokcumen O.  
86th Annual Meeting of the American-Association-of-Physical-Anthropologists (AAPA), Louisiana, United States Of America, 19 - 22 April 2017, vol.162, pp.377
- VIII. **Mechanisms of convergent testis transcriptome evolution in primates**  
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- IX. **Mobility in Neolithic Central Anatolia: A Comparison of Dental Morphometrics and aDNA**  
Pilloud M. A., SOMEL M., Haddow S. D., Knusel C. J., Larsen C. S., Ozbasaran M., ERDAL Ö. D., Baird D., Pearson J., Gotherstrom A., et al.  
86th Annual Meeting of the American-Association-of-Physical-Anthropologists (AAPA), Louisiana, United States Of America, 19 - 22 April 2017, vol.162, pp.316
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- XI. **Autism spectrum disorder in context of human brain evolution**  
LIU X., SOMEL M.  
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- XII. **Neanderthal Introgression to Western Asian Human Populations**  
Taskent R. O., Xu D., Alioglu D., Donertas H. M., Fer E., SOMEL M., Gokcumen O.  
85th Annual Meeting of the American-Association-of-Physical-Anthropologists, Georgia, United States Of America, 13 - 16 April 2016, vol.159, pp.310-311
- XIII. **Archaeogenomic analysis of ancient Anatolians: first genetic indication for Neolithic cultural diffusion in the Near East**  
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85th Annual Meeting of the American-Association-of-Physical-Anthropologists, Georgia, United States Of America, 13 - 16 April 2016, vol.159, pp.297-298
- XIV. **Molecular evolution of mammalian testes under polyandry and monandry**  
SOMEL M., SAĞLICAN E., ROHLFS R., ÖZKURT E., HAİYANG H., ERDEM B., KHAITOVICH P.  
15th Congress of the European Society for Evolutionary Biology (ESEB 2015), 10 - 12 August 2015
- XV. **Neanderthal introgression into Western Asian human populations**  
Taşkent R. Ö., Alioğlu D., Gökçümen Ö., SOMEL M.  
Ecology and Evolutionary Biology Symposium, Turkey 2015, Turkey, 6 - 07 August 2015
- XVI. **Notable Decrease in Transcriptome Conservation During Mammalian Brain Aging**  
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Society for Molecular Biology and Evolution 2015 Meeting, 12 - 16 July 2015
- XVII. **Whole genome sequencing of Turkish genomes reveals functional private alleles and impact of**

### **genetic interactions with Europe, Asia and Africa**

Gokcumen O., Alkan C., Kavak P., SOMEL M., Ugurlu S., Dal E., Bugra-Bilge K., Gungor T., Sahinalp C., Ozeren N., et al. 83rd Annual Meeting of the American-Association-of-Physical-Anthropologists, Calgary, Canada, 8 - 12 April 2014, vol.153, pp.126-127

### **XVIII. Bringing the understanding of evolution to Turkish public: A volunteer organization model for developing countries**

Ozpolat B. D., Akcay A., Somel N., Somel M.

69th Annual Meeting of the Society-for-Developmental-Biology/Japanese-Society-of-Developmental-Biologists, New-Mexico, United States Of America, 5 - 09 August 2010, vol.344, pp.439

## **Supported Projects**

Somel M., Atakuman Ç., Sürer E., Erdal Y. S., Özer F., Altınışık N. E., H2020 Project, NEOGENE: Archaeogenomic Analysis of Genetic and Cultural Interactions in Neolithic Anatolian Societies (ERC NO: 772390), 2018 - 2024

SOMEL M., TÜBİTAK Project, Orta Anadolu Neolitik Yerleşimlerinde Sosyal Yapının Antik Genom Analizi Yoluyla İncelenmesi, 2017 - 2020

SOMEL M., TÜBİTAK International Multi-Cooperation Project, Single cell genomics of the brain in healthy controls and disease (Tekil hücre genom analizi yoluyla sağlıklı ve hasta bireylerin beyinlerinin incelenmesi), 2015 - 2018

SOMEL M., İZGİ H., TÜBİTAK Project, Sistem biyolojisi yaklaşımı ile yaşlanan beyin dokusunda hücresel ağ entropisinin tanımlanması, 2016 - 2017

SOMEL M., TÜBİTAK Project, Niğde Tepecik-Çiftlik ve Konya Çatalhöyük Kazılarında Ait İnsan Kemiklerinden Antik DNA Eldesi ve Genom Dizilemesi Yoluyla Orta Anadolu Neolitik Çağ İnsan Popülasyonlarının Karakterizasyonu, 2015 - 2017

SOMEL M., Project Supported by Other Official Institutions, Yeni nesil moleküler veri analizi yoluyla genom ve transkriptom evriminin incelenmesi, 2015 - 2016

SOMEL M., TÜBİTAK Project, Bir Ön Çalışma Olarak Çemialo Sırtı Yerleşim Yerinden Elde Edilmiş 2500-3000 Yıllık İnsan Dış Örneklerinden Otantik Antik DNA Eldesi ve mtDNA Haplogrup Tayini, 2014 - 2016

SOMEL M., TÜBİTAK Project, Kalori Kısıtlamasının Beyin Yaşlanmasına Etkileri, 2014 - 2015

SOMEL M., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014

Somel M., Project Supported by Public Organizations in Other Countries, MicroRNA regulation of conserved aging-related gene expression changes in mouse and primate brains, 2011 - 2012

Somel M., Project Supported by Public Organizations in Other Countries, Identification of the molecular basis of human aging and longevity, 2010 - 2011

## **Memberships / Tasks in Scientific Organizations**

European Molecular Biology Organization (EMBO) Scientific Exchange Grants Advisory Board, Member of Advisory Board, 2020 - Continues, Germany

European Society for Evolutionary Biology (ESEB), Member of Advisory Board, 2019 - 2023, Netherlands

Ekoloji ve Evrimsel Biyoloji Derneği, Executive Board Member, 2015 - 2021, Turkey

## **Metrics**

Publication: 105

Citation (WoS): 3426

Citation (Scopus): 3973

H-Index (WoS): 23

H-Index (Scopus): 26

## **Awards**

Somel M., Üstün Başarılı Genç Bilim İnsanlarını Ödüllendirme Programı, Türkiye Bilimler Akademisi, November 2015

Somel M., BAGEP, Bilim Akademisi Derneği, June 2014

## **Non Academic Experience**

European Molecular Biology Organization