

TAMER T. ÖNDER

Associate Professor

Koç University, School of Medicine

Rumelifeneri Yolu, Sariyer, Istanbul

Tel: +90 212 338 1079 / Fax: +90 212 338 1168

e-mail: tonder@ku.edu.tr Lab website: scl.ku.edu.tr

EDUCATION

Ph.D., Biology, Massachusetts Institute of Technology (MIT), Cambridge, MA 2008

B.A., Molecular Biology and Genetics, Cornell University, Ithaca, NY 2002

PROFESSIONAL EXPERIENCE

Associate Professor , Koç University School of Medicine 2018- Present

Assistant Professor, Koç University School of Medicine 2012-2018

Postdoctoral Research Fellow, Harvard Medical School / Children's Hospital Boston 2008-2012

AWARDS AND HONORS

TUSEB Aziz Sancar Young Investigator Award 2018

Outstanding Faculty Award, Koc University 2018

Turkish Academy of Sciences (TUBA) Young Scientist Award 2015

Sedat Simavi Award in Health Sciences 2014

Elected member of the Science Academy Turkey (Bilim Akademisi) 2014

Pre-doctoral Traineeship Award - Department of Defense BCRP 2007

The Presidential Graduate Fellowship Award - MIT 2003

Summa Cum Laude - Biology, Cornell University 2002

KEY FIGURES

Number of peer-reviewed publications: 23

Number of citations without self-citations (ISI): 5312

H-index: 18

PUBLICATIONS (PEER-REVIEWED)

1. Ebrahimi A, Sevinç K, Sevinç GG, Cribbs AP, Philpott M, Uyulur F, Morova T, Dunford JE, Göklemmez S, Arı Ş, Oppermann U, **Onder TT**. (2019) Bromodomain inhibition of the coactivators CBP/EP300 facilitate cellular reprogramming. *Nature Chemical Biology*. In press.
2. Breindel JL, Skibinski A, Sedic M, Wronski-Campos A, Zhou W, Keller PJ, Mills J, Bradner J, **Onder T**, Kuperwasser C. (2017) Epigenetic Reprogramming of Lineage-Committed Human Mammary Epithelial Cells Requires DNMT3A and Loss of DOT1L. *Stem Cell Reports*. (17) 30282-5.
3. Takata K, Kozaki T, Lee CZW, Thion MS, Otsuka M, Lim S, Utami KH, Fidan K, Park DS, Malleret B, Chakarov S, See P, Low D, Low G, Garcia-Miralles M, Zeng R, Zhang J, Goh CC, Gul A, Hubert S, Lee B, Chen J, Low I, Shadan NB, Lum J, Wei TS, Mok E, Kawanishi S, Kitamura Y, Larbi A, Poidinger M, Renia L, Ng LG, Wolf Y, Jung S, **Onder T**, Newell E, Huber T, Ashihara E, Garel S, Pouladi MA, Ginhoux F. (2017) Induced-Pluripotent-Stem-Cell-Derived Primitive Macrophages Provide a Platform for Modeling Tissue-Resident Macrophage Differentiation and Function. *Immunity*. 47(1):183-198
4. Kurt IC, Sur I, Kaya E, Cingoz A, Kazancioglu S, Kahya Z, Toparlak OD, Senbabaoglu F, Kaya Z, Ozyerli E, Karahüseyinoglu S, Lack NA, Gümüş ZH, **Onder TT**, Bagci-Onder T. (2017) KDM2B, an H3K36-specific demethylase, regulates apoptotic response of GBM cells to TRAIL. *Cell Death Dis*. 8(6):e2897.
5. Zhang J, Ratanasirintrao S, Chandrasekaran S, Wu Z, Ficarro SB, Yu C, Ross CA, Cacchiarelli D, Xia Q, Seligson M, Shinoda G, Xie W, Cahan P, Wang L, Ng SC, Tintara S, Trapnell C, **Onder T**, Loh YH, Mikkelsen T, Sliz P, Teitell MA, Asara JM, Marto JA, Li H, Collins JJ, Daley GQ. (2016) LIN28 Regulates Stem Cell Metabolism and Conversion to Primed Pluripotency. *Cell Stem Cell*. 19(1):66-80.

6. Fidan K, Ebrahimi A, Çağlayan ÖH, Özçimen B, **Önder TT**. (2016) Transgene-Free Disease-Specific iPSC Generation from Fibroblasts and Peripheral Blood Mononuclear Cells. *Methods Mol Biol*. 1353:215-31.
7. Fidan K, Kavaklıoğlu G, Ebrahimi A, Özlü C, Ay NZ, Arzu Ruacan, Ahmet Gül, **Önder TT**. (2015) Generation of integration-free induced pluripotent stem cells from a patient with Familial Mediterranean Fever (FMF). *Stem Cell Research*. Volume 15, Issue 3: 694-696.
8. Unternaehrer J, Zhao R, Kim K, Cesana M, Powers JT, Ratanasirintrao S, **Önder T**, Shibue T, Weinberg RA, Daley GQ. (2014) The Epithelial-Mesenchymal Transition Factor SNAI1 Paradoxically Enhances Reprogramming. *Stem Cell reports*. Nov 11; 3:1-8
9. Das PP, Shao Z, Beyaz S, Apostolou E, Pinello L, De Los Angeles A, O'Brien K, Atsma JM, Fujiwara Y, Nguyen M, Ljuboja D, Guo G, Woo A, Yuan GC, **Önder T**, Daley G, Hochedlinger K, Kim J, Orkin SH. (2014) Distinct and combinatorial functions of Jmjd2b/Kdm4b and Jmjd2c/Kdm4c in mouse embryonic stem cell identity. *Mol Cell*. 53(1):32-48
10. Zhu J, Adli M, Zou JY, Verstappen G, Coyne M, Zhang X, Durham T, Miri M, Deshpande V, De Jager PL, Bennett DA, Houmard JA, Muoio DM, **Önder TT**, Camahort R, Cowan CA, Meissner A, Epstein CB, Shores N, Bernstein BE. (2013) Genome-wide Chromatin State Transitions Associated with Developmental and Environmental Cues. *Cell*. 152(3):642-54.
11. Shyh-Chang N, Locasale JW, Lyssiotis CA, Zheng Y, Teo RY, Ratanasirintrao S, Zhang J, **Önder T**, Unternaehrer JJ, Zhu H, Asara JM, Daley GQ, Cantley LC. (2013) Influence of Threonine Metabolism on S-Adenosylmethionine and Histone Methylation. *Science*. 339(6116):222-6.
12. **Önder TT** and Daley GQ. (2012) New lessons learned from disease modeling with induced pluripotent stem cells. *Curr Opin Genetics Dev*. Oct;22(5):500-8.
13. **Önder TT**, Kar N, Cherry A, Sinha AU, Bernt K, Zhu N, Cahan P, Mancarci O, Unternaehrer J, Gupta PB, Lander ES, Armstrong, Daley GQ. (2012) Chromatin-modifying enzymes as modulators of reprogramming. *Nature*. 483: 598-602.
14. Kuo T, Chen C, Baron D, **Önder TT**, et al. (2011) Midbody accumulation through evasion of autophagy contributes to cellular reprogramming and tumorigenicity. *Nature Cell Biology*. 13(10):1214-23.
15. Rai P, Young JJ, Burton DG, Giribaldi MG, **Önder TT**, Weinberg RA. (2011) Enhanced elimination of oxidized guanine nucleotides inhibits oncogenic RAS-induced DNA damage and premature senescence. *Oncogene*. 30(12):1489-96.
16. Loewer S, Cabili MN, Guttman M, Loh Y, Thomas K, Park IH, Garber M, Curran M, **Önder T**, et al. (2011) Large intergenic non-coding RNA-RoR modulates reprogramming of human induced pluripotent stem cells. *Nature Genetics*. 42(12):1113-7.
17. Ma L, Young J, Prabhala H, Mestdagh P, Muth D, Teruya-Feldstein J, Reinhardt F, **Önder TT**, et al. (2010) miR-9, a MYC/MYCN-activated microRNA, regulates E-cadherin and cancer metastasis. *Nature Cell Biology*. 12(3):247-56.
18. Kojima Y, Acar A, Eaton EN, Mellody KT, Scheel C, Ben-Porath I, **Önder TT**, et al. (2010) Autocrine TGF-beta and Stromal cell-derived factor-1 (SDF-1) signaling drives the evolution of tumor-promoting mammary stromal myofibroblasts. *Proc Natl Acad Sci USA*. 107(46):20009-14.
19. Taube JH, Herschkowitz JI, Komurov K, Zhou AY, Gupta S, Yang J, Hartwell K, **Önder TT**, et al. (2010) Core epithelial-to-mesenchymal transition interactome gene-expression signature is associated with claudin-low and metaplastic breast cancer subtypes. *Proc Natl Acad Sci USA*. 107(35):15449-54.
20. Gupta PB*, **Önder TT***, Jiang G, Tao K, Kuperwasser C, Weinberg RA, Lander ES. (2009) Identification of selective inhibitors of cancer stem cells by high-throughput screening. *Cell*. 138(4):645-59. * Co-author
21. Rai P, **Önder TT**, Young JJ, Pang B, McFaline J, Dedon P, and Weinberg RA. (2009) Continuous elimination of oxidized nucleotides is necessary to prevent onset of cellular senescence. *Proc Natl Acad Sci USA*. 106(1):169-74.
22. **Önder TT**, Gupta PB, Mani SA, Yang J, Lander ES, Weinberg RA. (2008) Loss of E-cadherin promotes metastasis via multiple downstream transcriptional pathways. *Cancer Research*. 68(10):3645-54.
23. Scheel C, **Önder T**, Karnoub A and Weinberg RA. (2007) Adaptation versus Selection: The Origins of Metastatic Behavior. *Cancer Research*. 67(24):11476-9.

OTHER PUBLICATIONS (BOOK CHAPTERS, PERSPECTIVES, ETC.)

1. **Onder TT** (2013). "Mechanisms of Somatic Cell Reprogramming" in Stem Cells: Current Challenges and New Directions / Stem Cell Biology and Regenerative Medicine Volume 33, 2013, pp 301-316
2. **Onder TT**, Daley GQ. (2011) microRNAs become macro players in somatic cell reprogramming. *Genome Med.* Jun 22;3(6):40

INVITED TALKS/SEMINARS

1. A chemical screen identifies a role for P300 and CBP in reprogramming. *2nd International Conference on Stem Cells*, Rhodes, Greece 2017
2. Mechanisms and applications of somatic cell reprogramming, *EMBO YIP Stem Cell Meeting*, Paris, France, 2014
3. Chromatin modifying enzymes as regulators of somatic cell reprogramming, *Botnar Research Center, University of Oxford*, 2014
4. Induced pluripotent stem cell generation: Molecular Mechanisms and Application, *Bilkent University*, Ankara, Turkey, 2014
5. Chromatin modifiers in Reprogramming, *Helmholtz Centre Institute of Stem Cell Research*, Munich, Germany, 2013

PATENTS

1. Prediction of monitoring cancer therapy response based on gene expression profiling. PCT/US2011/046325
2. Methods for identification and use of agents targeting cancer stem cells. PCT/US2011/0191868
3. Inhibition and enhancement of reprogramming by chromatin modifying enzymes. PCT/US2012/000514

GRANTS

1. Newton Advanced Fellowship (2016-2019)
2. EMBO Installation Grant 2543 (2013-2018)
3. EU FP7 Marie Curie Integration Grant 333918 - Chromatin Modifiers in Reprogramming (2013-2017)
4. TUBITAK 1003 - Project No 213S182 : Development of technologies for the generation and differentiation of Induced pluripotent stem cells (iPSCs) and their applications to cell-based therapies. (2014-2017)
5. TUBITAK 3501 - Proje No 212T095: Identifying the function of histone methyltransferase Suv39H1 in reprogramming and generation of induced pluripotent stem cells (2013-2016)
6. TUBITAK 1002 - Project No 115Z706: Identification of the interactome of Dot1L, a histone methyl transfease, during reprogramming (2016)

TEACHING ACTIVITIES

MBGE110 Introduction to Cellular and Molecular biology

MBGE532 Stem Cell Biology

CAMM590 Special Topics in Genome Engineering

NEOP302 Molecular Basis of Cancer

INSTITUTIONAL RESPONSIBILITIES

Coordinator, Molecular Biology and Genetics Graduate Program, Koc University	2015-present
Member, faculty search and evaluation committee, Department of Chemical and Biological Engineering, Koc University	2016-present
Member, faculty search and evaluation committee, Department of Molecular Biology and Genetics, Koc University	2015-2016
Head, KU School of Medicine Committee on Medical Student Research	2016-present

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

American Association for the Advancement of Science (AAAS)
International Society for Stem Cell Research (ISSCR)
Turkish American Scientists & Scholars Association (TASSA)
Bilim Akademisi (Science Academy - Turkey)