

TAMER T. ÖNDER

Assistant Professor

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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

Assistant Professor, Koç University School of Medicine 2012-present

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

Postdoctoral Research Fellow, Whitehead Institute for Biomedical Research 2008

AWARDS AND HONORS

Pre-doctoral Traineeship Award - Department of Defense BCRP 2007

The Presidential Graduate Fellowship Award - MIT 2003

Summa Cum Laude - Biology, Cornell University 2002

PUBLICATIONS

1. 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, **Onder 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.
2. Shyh-Chang N, Locasale JW, Lyssiotis CA, Zheng Y, Teo RY, Ratanasirintrao S, Zhang J, **Onder 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.
3. **Onder 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.
4. **Onder TT**, Kara 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.
5. Kuo T, Chen C, Baron D, **Onder TT**, et al. Midbody accumulation through evasion of autophagy contributes to cellular reprogramming and tumorigenicity. *Nature Cell Biology*. 13(10):1214-23.
6. **Onder TT**, Daley GQ. (2011) microRNAs become macro players in somatic cell reprogramming. *Genome Med*. Jun 22;3(6):40.
7. Rai P, Young JJ, Burton DG, Giribaldi MG, **Onder TT**, Weinberg RA. (2011) Enhanced elimination of oxidized guanine nucleotides inhibits oncogenic RAS-induced DNA damage and premature senescence. *Oncogene*. 30(12):1489-96.
8. Loewer S, Cabili MN, Guttman M, Loh Y, Thomas K, Park IH, Garber M, Curran M, **Onder T**, et al. (2011) Large intergenic non-coding RNA-RoR modulates reprogramming of human induced pluripotent stem cells. *Nature Genetics*. 42(12):1113-7.
9. Ma L, Young J, Prabhala H, Mestdagh P, Muth D, Teruya-Feldstein J, Reinhardt F, **Onder TT**, et al. (2010) miR-9, a MYC/MYCN-activated microRNA, regulates E-cadherin and cancer metastasis. *Nature Cell Biology*. 12(3):247-56.
10. Kojima Y, Acar A, Eaton EN, Mellody KT, Scheel C, Ben-Porath I, **Onder TT**, et al. (201) Autocrine TGF- β 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.

11. Taube JH, Herschkowitz JI, Komurov K, Zhou AY, Gupta S, Yang J, Hartwell K, **Onder TT**, et al. (201) 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.
12. Gupta PB*, **Onder 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. * Equal contribution.
13. Rai P, **Onder 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.
14. **Onder 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.
15. Scheel C, **Onder T**, Karnoub A and Weinberg RA. (2007) Adaptation versus Selection: The Origins of Metastatic Behavior. *Cancer Research*. 67(24):11476-9.

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

GRANTS

1. TUBITAK 3501 - Proje No 212T095: Identifying the function of histone methyltransferase Suv39H1 in reprogramming and generation of induced pluripotent stem cells
2. EMBO Installation Grant 2543
3. EU FP7 Marie Curie Integration Grant 333918 - Chromatin Modifiers in Reprogramming

INVITED TALKS

1. "Molecular Mechanisms of Somatic Cell Reprogramming" Moleküler Biyoloji Derneği 1. Uluslararası Kongresi, Istanbul 2012
2. "Somatic Cell Reprogramming" 21. Century Drug Design and Medicine, Istanbul 2012
3. "Reprogramming and iPS cells" International Students' Stem Cell Congress of Turkey, Istanbul 2012
4. "Inhibition and Enhancement of Reprogramming and iPS Cell Generation by Chromatin Modifying Enzymes" 1. Kök Hücre Araştırmaları Kongresi, Sapanca 2011
5. "Kök Hücrelerin İyisi ve Kötüsü: Kanser Kök Hücreleri ve İndukelenebilir Pluripotent Kök Hücreleri (iPS)". TÜBA V. Kök Hücre Sempozyumu, Ankara 2010
6. "Loss of E-cadherin leads to the acquisition of multiple distinct traits that are necessary for metastasis", International Congress of Molecular Medicine, Istanbul 2007

CONFERENCE PRESENTATIONS

1. International Society for Stem Cell Research (ISSCR) Annual Meeting, Boston, MA 2013
2. EMBO Epigenetics and Chromatin Meeting, Heidelberg, Germany, 2013
3. EMBO YIP Meeting, Heidelberg, Germany, 2013
4. International Society for Stem Cell Research (ISSCR) Annual Meeting, Yokohama, Japan 2012
5. Howard Hughes Medical Institute (HHMI) Annual meeting, Chevy Chase, MD 2012
6. International Society for Stem Cell Research (ISSCR) Annual Meeting, Toronto, Canada 2011
7. TASSA Annual conference, Boston, MA 2008
8. Era of Hope Breast Cancer Meeting, Baltimore, MD 2008
9. International Society for Stem Cell Research (ISSCR) Annual Meeting, Philadelphia, PA 2008
10. Gordon Research Conference on cell adhesion and signaling, South Hadley, MA 2006