

## **Kadir Caner Akdemir, Ph.D.**

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### **Education:**

Post-doctoral Fellow	MD Anderson Cancer Center	05/2013-
Ph.D. Bioinformatics	MD Anderson Cancer Center	08/2008 – 05/2013
B.S. Genetic and Bioengineering	Yeditepe University (Istanbul/Turkey)	09/2003 – 06/2007
B.S. Computer Engineering	Yeditepe University (Istanbul/Turkey)	09/2004 – 05/2008

### **Honors and Awards**

2016	NSF, Junior Scientist Travel Award for CSHL Nuclear Organization Meeting
2013	Amazon Cloud AWG credit (\$10K)
2012	Best Poster - MD Anderson Graduate Student Award in Basic Science
2011	Graduate School Travel Award
2010-2012	MD Anderson Center for Cancer Epigenetic Fellowship (full tuition and stipend support)
2003-2008	Yeditepe University Deans Scholar (full tuition and life expense support)

### **Contributed Conference Talks**

2017	Society of Molecular Biology and Evolution Annual Meeting (SMBE 2017), Austin, TX
2017	CSHL System Biology: Global Regulation of Gene Expression, Cold Spring Harbor, NY
2017	Keystone Conference: Epigenetic and Human Diseases, Seattle, WA
2016	Genomics of Common Diseases, Baltimore, MD
2016	CSHL Nuclear Organization and Function, Cold Spring Harbor, NY
2015	Human Genome Organization Annual International Meeting (HUGO 2015), Houston, TX
2014	3 <sup>rd</sup> TCGA Scientific Symposium, NIH, Bethesda, MD

### **Poster Presentations**

2016	Epigenomic 2016, San Juan, PR
2016	NY Epigenomics Symposium, New York Genome Center, New York, NY
2015	Keystone Conference: Epigenomic and DNA Methylation, Keystone, CO
2013	4 <sup>th</sup> NIGMS Workshop on Human Stem Cell Research, NIH, Bethesda, MD
2011	CSHL Genome Informatics, Cold Spring Harbor, NY

## Teaching and Work Experience

2012	Graduate School Bioinformatics Workshop Series Organizer
2007	Harvard Medical School, Summer Intern
2006	Undergraduate Peer Teaching Assistant (C-Programming, Data Structure Labs)

## Publications

### *In progress*

**Akdemir KC**, Le V, Killcoyne S, Amin S, Chan K, Gerstung M, Fitzgerald R, Campbell P, Verhaak RG, Gordenin D, Dixon J, Futreal PA. 2017. Process-specific somatic mutation distributions vary with three-dimensional genome structure. *Submitted to ICGC Steering Committee. Upon approval, this manuscript will be submitted to bioRxiv and a journal. Available upon request.*

**Akdemir KC**, Li Y, Verhaak RG, Beroukhi R, Campbell P, Chin L, Futreal PA. 2017. Spatial genome organization as a framework for somatic variations in human cancers. *BioRxiv. Submitted.*

Nezi L, Te Boekhorst V, Manzo T, Carugo A, De Macedo MP, Villa F, Sarkar S, Chang Q, Li L, **Akdemir KC**, Huang-Hobbs E, Garcia DA, et al. 2016. NEK7-YAP axis drives collective cell invasion in melanoma. *In Revision.*

### *Published*

Genovese G, Carugo A, Tepper J, Robinson FS, Li L, Svelto M, Nezi L, Corti D, Minelli R, Pettazzoni P, Gutschner T, **Akdemir KC**, et al. 2017. Synthetic vulnerabilities of mesenchymal subpopulations in pancreatic cancer. *Nature* 542:362-6

Barthel FP, Wei W, Tang M, Martinez-Ledesma E, Hu X, Amin SB, **Akdemir KC**, Seth S, Song X, Wang Q, Lichtenberg T, Hu J, et al. 2017. Systematic analysis of telomere length and somatic alterations in 31 cancer types. *Nat Genet* 49:349-57

Fiziev P\*, **Akdemir KC\***, Miller JP, Keung EZ, Samant NS, Sharma S, Natale CA, Terranova CJ, Maitituoheti M, Amin SB, Martinez-Ledesma E, Dhamdhare M, et al. 2017. Systematic Epigenomic Analysis Reveals Chromatin States Associated with Melanoma Progression. *Cell Rep* 19:875-89. \* These authors contributed equally

Smyk M\*, **Akdemir KC\***, Stankiewicz P. 2017. SOX9 chromatin folding domains correlate with its real and putative distant cis-regulatory elements. *Nucleus* 8:182-7. \* These authors contributed equally

Szafranski P, Gambin T, Dharmadhikari AV, **Akdemir KC**, Jhangiani SN, Schuette J, Godiwala N, Yatsenko SA, Sebastian J, Madan-Khetarpal S, Surti U, Abellar RG, et al. 2016. Pathogenetics of alveolar capillary dysplasia with misalignment of pulmonary veins. *Hum Genet* 135:569-86

Lissanu Deribe Y, Shi Y, Rai K, Nezi L, Amin SB, Wu CC, **Akdemir KC**, Mahdavi M, Peng Q, Chang QE, Hornigold K, Arold ST, et al. 2016. Truncating PREX2 mutations activate its GEF activity and alter gene expression regulation in NRAS-mutant melanoma. *Proc Natl Acad Sci U S A* 113:E1296-305

Jain AK, Xi Y, McCarthy R, Allton K, **Akdemir KC**, Patel LR, Aronow B, Lin C, Li W, Yang L, Barton MC. 2016. LncPRESS1 Is a p53-Regulated LncRNA that Safeguards Pluripotency by Disrupting SIRT6-Mediated De-acetylation of Histone H3K56. *Mol Cell* 64:967-81

Carugo A, Genovese G, Seth S, Nezi L, Rose JL, Bossi D, Cicalese A, Shah PK, Viale A, Pettazzoni PF, **Akdemir KC**, Bristow CA, et al. 2016. In Vivo Functional Platform Targeting Patient-Derived Xenografts Identifies WDR5-Myc Association as a Critical Determinant of Pancreatic Cancer. *Cell Rep* 16:133-47

Rai K, **Akdemir KC**, Kwong LN, Fiziev P, Wu CJ, Keung EZ, Sharma S, Samant NS, Williams M, Axelrad JB, Shah A, Yang D, et al. 2015. Dual Roles of RNF2 in Melanoma Progression. *Cancer Discov* 5:1314-27

Keung EZ, **Akdemir KC**, Al Sannaa GA, Garnett J, Lev D, Torres KE, Lazar AJ, Rai K, Chin L. 2015. Increased H3K9me3 drives dedifferentiated phenotype via KLF6 repression in liposarcoma. *J Clin Invest* 125:2965-78

**Akdemir KC** as part of Analysis Working Group. Cancer Genome Atlas N. 2015. Genomic Classification of Cutaneous Melanoma. *Cell* 161:1681-96

**Akdemir KC**, Chin L. 2015. HiCPlotter integrates genomic data with interaction matrices. *Genome Biol* 16:198

**Akdemir KC\***, Jain AK\*, Allton K, Aronow B, Xu X, Cooney AJ, Li W, Barton MC. 2014. Genome-wide profiling reveals stimulus-specific functions of p53 during differentiation and DNA damage of human embryonic stem cells. *Nucleic Acids Res* 42:205-23. \* These authors contributed equally

Henry SP, Liang S, **Akdemir KC**, de Crombrughe B. 2012. The postnatal role of Sox9 in cartilage. *J Bone Miner Res* 27:2511-25

Wilson MA, Koutelou E, Hirsch C, **Akdemir K**, Schibler A, Barton MC, Dent SY. 2011. Ubp8 and SAGA regulate Snf1 AMP kinase activity. *Mol Cell Biol* 31:3126-35

Tsai WW, Wang Z, Yiu TT, **Akdemir KC**, Xia W, Winter S, Tsai CY, Shi X, Schwarzer D, Plunkett W, Aronow B, Gozani O, et al. 2010. TRIM24 links a non-canonical histone signature to breast cancer. *Nature* 468:927-32

Kurinna S, Stratton SA, Tsai WW, **Akdemir KC**, Gu W, Singh P, Goode T, Darlington GJ, Barton MC. 2010. Direct activation of forkhead box O3 by tumor suppressors p53 and p73 is disrupted during liver regeneration in mice. *Hepatology* 52:1023-32