

PERSONAL INFORMATION

Serkan Kır, Ph.D.

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EDUCATION

- 2011 **Ph.D.** in Cell and Molecular Biology
Department of Pharmacology, *University of Texas Southwestern Medical Center*, Dallas, TX, USA
Supervisors: Prof. David Mangelsdorf and Prof. Steven Kliewer
- 2006 **B.S.** in Molecular Biology and Genetics
Department of Molecular Biology and Genetics, Bilkent University, Ankara, Turkey

CURRENT POSITION

- 2017 – **Assistant Professor**
Department of Molecular Biology and Genetics, Koç University, Istanbul, Turkey

PREVIOUS POSITIONS

- 2012 – 2017 **Postdoctoral fellow**
Laboratory of Prof. Bruce Spiegelman
Department of Cancer Biology, Dana-Farber Cancer Institute, *Harvard Medical School*, Boston, MA, USA
- 2006 – 2012 **Doctoral candidate and postdoctoral fellow**
Laboratory of Prof. David Mangelsdorf and Prof. Steven Kliewer
Department of Pharmacology, *University of Texas Southwestern Medical Center*, Dallas, TX, USA

RESEARCH FUNDING

- Dissecting tumour-induced signalling pathways driving energy wasting
EMBO Installation Grant, €150,000 **2019-2022**
- Investigating the Role of OSMR Signalling in Tumour-driven Loss of Muscle Tissue
TUBITAK 1001 Research Grant (118Z791), ₺720,000 **2019-2022**
- Examining the Role of EDA-A2 Protein in Cancer-associated Muscle Wasting
TUBITAK 3501 Career Development Grant (118Z167), ₺225,000 **2018-2021**
- Roles of Tumor-derived PTHrP in Skeletal Muscle Atrophy and Cancer Cachexia
K99/R00 NIH Pathway to Independence Award, National Cancer Institute, USA,
K99CA197410, PI: S. Kir, \$991,512 **2016-2021**
- Identification of Factors That Induce Brown Fat Activity in Cancer Cachexia
Damon Runyon Postdoctoral Fellowship (DRG-2153-13), USA, PI: S. Kir, \$220,000 **2013-2016**

PATENT

Kır S and Spiegelman BM. Compositions and methods for modulating thermogenesis using PTH-related and EGF-related molecules. Int. Appl. WO2015017529, February 5, 2015.

PUBLICATIONS

Song W, **Kir S**, Hong S, Hu Y, Wang X, Binari R, Tang HW, Chung V, Banks AS, Spiegelman B, Perrimon N. Tumor-Derived Ligands Trigger Tumor Growth and Host Wasting via Differential MEK Activation. *Dev Cell* (2019) 48: 277-286.

Fan Y, Hanai JI, Le PT, Bi R, Maridas D, DeMambro V, Figueroa CA, **Kir S**, Zhou X, Baron R, Mannstadt M, Baron R, Bronson RT, Horowitz MC, Wu JY, Belizikian JP, Martin JT, Dempster DW, Rosen CJ, Lanske B. Parathyroid hormone directs bone marrow mesenchymal cell fate. *Cell Metab* (2017) 25: 661-672.

Kir S, Spiegelman BM. Cachexia and brown fat: a burning issue in cancer. *Trends in Cancer* (2016) 2: 461-463.

Kir S, Komaba H, Garcia AP, Konstantinos E, Suh H, Lanske B, Hodin RA, Spiegelman BM. PTH/PTHrP receptor mediates cachexia in models of kidney failure and cancer. *Cell Metab* (2016) 23: 315-323.

Commented by: Allison SJ. Chronic kidney disease: Role of PTH/PTHrP receptor in cachexia. *Nat Rev Nephrol* (2016) 12: 62.

Wyatt CM, Mitch ME. In experimental chronic kidney disease or cancer, parathyroid hormone is a novel mediator of cachexia. *Kidney Int.* (2016) 89: 973-975.

Svensson KJ, Long JZ, Jedrychowski MP, Cohen P, Lo JC, Serag S, **Kir S**, Shinoda K, Tartaglia JA, Rao RR, Kajimura S, Gygi SP, Spiegelman BM. A secreted Slit2 fragment regulates adipose tissue thermogenesis and metabolic function. *Cell Metab* (2016) 23: 454-466.

Kir S, White JP, Kleiner S, Kazak L, Cohen P, Baracos VE, Spiegelman BM. Tumour-derived PTH-related protein triggers adipose tissue browning and cancer cachexia. *Nature* (2014) 513: 100-104.

Commented by: McCarthy N. Cachexia: Running on empty. *Nat Rev Cancer* (2014) 14: 576-577.

Holmes D. WAT browning--key feature of cancer-associated cachexia. *Nat Rev Endocrinol* (2014) 10:578.

Guntur AR, Doucette CR, Rosen CJ. PTHrP comes full circle in cancer biology. *Bonekey Rep* (2015) 4:621.

Kir S, Zhang Y, Gerard RD, Kliewer SA, Mangelsdorf DJ. Nuclear receptors HNF4a and LRH-1 cooperate in regulating Cyp7a1 in vivo. *J Biol Chem* (2012) 287: 41334-41.

Goetz R, Ohnishi M, **Kir S**, Kurosu H, Wang L, Pastor J, Ma J, Gai W, Kuro-O M, Razzaque MS, Mohammadi M. Conversion of a paracrine fibroblast growth factor into an endocrine fibroblast growth factor. *J Biol Chem* (2012) 287: 29134-46.

Kir S, Kliewer SA, Mangelsdorf DJ. Roles of FGF19 in liver metabolism. *Cold Spring Harb Symp Quant Biol* (2011) 76:139-44.

Li T, Holmstrom SR, **Kir S**, Umetani M, Schmidt DR, Kliewer SA, Mangelsdorf DJ. The G protein-coupled bile acid receptor, TGR5, stimulates gallbladder filling. *Mol Endocrinol* (2011) 25: 1066-71.

Kir S, Beddow SA, Samuel VT, Miller P, Previs SF, Suino-Powell K, Xu HE, Shulman GI, Kliewer SA, Mangelsdorf DJ. FGF19 as a postprandial, insulin-independent activator of hepatic protein and glycogen synthesis. *Science* (2011) 331: 1621-24.

Commented by: Kim-Muller JY, Accili D. Selective Insulin Sensitizers. *Science* (2011) 331: 1529-31.

Gur-Dedeoglu B, Konu O, **Kir S**, Ozturk AR, Bozkurt B, Ergul G, Yulug IG. A resampling-based meta-analysis for detection of differential gene expression in breast cancer. *BMC Cancer* (2008) 8: 396.

Chan EY, **Kir S**, Tooze SA. siRNA screening of the kinome identifies ULK1 as a multidomain modulator of autophagy. *J Biol Chem* (2007) 282: 25464-74.

INVITED PRESENTATIONS

- Dissecting Tumour-induced Signalling Pathways Driving Energy Wasting **2018**
EPFL (Ecole Polytechnique Fédérale in Lausanne), Switzerland
Istanbul Technical University, Department of Molecular Biology and Genetics, Istanbul, Turkey
Bilkent University, Department of Molecular Biology and Genetics, Ankara, Turkey
- Cachexia and Brown Fat: A Burning Issue in Cancer **2017**
University of Texas Southwestern Medical Center, Department of Molecular Biology, Dallas, TX, USA
University of Pennsylvania Perelman School of Medicine, Department of Cancer Biology, Philadelphia, PA, USA
Duke University School of Medicine, Department of Pharmacology & Cancer Biology, Durham, NC, USA
The University of Utah, Department of Biochemistry, Salt Lake City, UT, USA
University of Colorado School of Medicine, Department of Pharmacology, Denver, CO, USA
University of Illinois at Chicago, Department of Physiology and Biophysics, Chicago, IL, USA
- Finding New Players and Novel Mechanisms in Cancer Cachexia **2016**
University of California Los Angeles, Department of Molecular & Medical Pharmacology, Los Angeles, CA, USA
Memorial Sloan Kettering Cancer Center, New York, NY, USA
Columbia University, Department of Genetics & Development, New York, NY, USA
- Adipose Tissue Browning in Cancer Cachexia **2014**
Tufts University School of Medicine, Center of Cancer Systems Biology, Boston, MA, USA

PRIZES AND AWARDS

- EMBO Installation Grant, Istanbul, Turkey **2018**
- K99/R00 NIH Pathway to Independence Award, Dana-Farber Cancer Institute, Boston, MA, USA **2016**
- Travel Award, Dana-Farber Cancer Institute, Postdoctoral and Graduate Student Association, Boston, MA, USA **2014**
- Best Mature Project Poster Award, Cancer Biology Retreat, Dana-Farber Cancer Institute, Boston, MA, USA **2014**
- Damon Runyon Postdoctoral Fellowship Award, Dana-Farber Cancer Institute, Boston, MA, USA **2012**
- Alfred Gilman Memorial Student Award for Excellence in Research, University of Texas Southwestern Medical Center, Dallas, TX, USA **2011**
- Best Student Presentation Award, Cell Regulation Symposium, University of Texas Southwestern Medical Center, Dallas, TX, USA **2011**
- Travel Award, University of Texas Southwestern Medical Center Graduate Student Organization, Dallas, TX, USA **2011**
- Summer Studentship, Cancer Research UK, London Research Institute, UK **2005**
- Summer Studentship Award, University of Oxford, Genetics Society of United Kingdom **2004**
- Undergraduate Scholarships, Bilkent University, Ankara, Turkey and TUBITAK (The Scientific and Technological Research Council of Turkey) **2002**

TEACHING ACTIVITIES

- 2019 – Assistant Professor – Molecular Regulation of Cell Metabolism, Koç University, Istanbul, Turkey
- 2018 – 2019 Assistant Professor – Genetics II, Koç University, Istanbul, Turkey
- 2018 – Assistant Professor – Life Sciences, Koç University, Istanbul, Turkey
- 2017 – Assistant Professor – Advanced Studies in Cellular Signaling, Koç University, Istanbul, Turkey

INSTITUTIONAL RESPONSIBILITIES

- 2017 – Faculty member, Koç University, Istanbul, Turkey
- 2017 – Member of the Animal Laboratory Accreditation Committee; member, Koç University, Istanbul, Turkey
- 2017 – Member of the Animal Research Local Ethics Committee; member, Koç University, Istanbul, Turkey
- 2017 – 2018 Member of the Faculty Search Committee, Department of Molecular Biology and Genetics, Koç University, Istanbul, Turkey

COMMISSIONS OF TRUST

- 2018 Panel member, TUBITAK Health Sciences Research Support Group
Neurochemistry Panel
- 2018 – Reviewer, BBA Molecular and Cell Biology of Lipids
- 2014 – Reviewer, Journal of Cachexia, Sarcopenia and Muscle
- 2012 – Reviewer, Molecular and Cellular Biology