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DEPARTMENT OF DEVELOPMENTAL AND REGENERATIVE BIOLOGY
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ACADEMIC APPOINTMENTS	Mount Sinai School of Medicine Department of Developmental and Regenerative Biology and Division of Liver Diseases ~ Department of Medicine Assistant professor	2006-present
	Bosphorus University Department of Molecular Biology and Genetics Istanbul, Turkey Assistant professor	1998-2001
EDUCATION	Mount Holyoke College B.A., Cum Laude Majors: Biology and Anthropology. Thesis: <i>XPF and Xenopsin: Cellular Localization in the Skin and Gastrointestinal Tract of Three Species of Adult and Larval Frogs.</i>	1990
	Harvard Medical School Masters of Medical Sciences, Markey Biomedical Scientist Program.	1994
	Harvard University Ph.D. Division of Medical Sciences. Joan Ruderman, Advisor. Thesis: <i>Components of the Signaling Pathway Leading to Cell Cycle Activation and Meiotic Maturation of Starfish Oocytes.</i>	1998
POST-DOCTORAL TRAINING	Massachusetts Institute of Technology Center for Cancer Research Cambridge, MA Post-doctoral fellow in the laboratory of Nancy Hopkins.	2002-2005
AWARDS	Markey Biomedical Scientist Program NSF International Scholar Kirschstein National Research Service Award Breast Cancer Alliance Young Investigator March of Dimes Basil O'Connor Starter Scholar American Gastroenterological Association Research Scholar Harold and Golden Lampport Research Award	1994 1999 2002 2007 2007 2007 2009
GRANT SUPPORT	ACTIVE 1. . 1 RC1 HD064159-01 NIH/ORF (Score of 20, 1 st percentile) P.I.: KC Sadler; multi-PI with H. Freeze/Burham Institute, M. Lehrman/UT Southwest, R. Steet/Univ. of GA. <i>Testing Substrate-Flux Therapies for Glycosylation Disorders using Zebrafish</i> <u>Goal:</u> To develop zebrafish as a model for congenital disorders of glycosylation and to utilize these models to test drugs that alter substrate flux in the glycosylation pathway to treat these disorders.	
	2. 1 RO1 AA018886-01 NIAAA/NIH	9/15/09-8/2011

PI: KC Sadler

Understanding steatosis using the zebrafish mutant, foie gras

Goal: To determine the function of the novel zebrafish gene, *foie gras* and to establish how mutation of this gene results in steatosis

3. 1 R01 DK080789-01 NIH/DDK

PI: KC Sadler and C Ukomadu (Brigham and Women's Hospital, MA)

Role of Uhrf1 in Liver Development, Regeneration and Carcinogenesis

Goal: To investigate the role of *uhrf1* in liver development and cancer. The relationship between *uhrf1* loss of function and failed liver development will be defined, the significance of Uhrf1 phosphorylation to its activity will be established and the role for *uhrf1* in hepatocellular carcinoma will be investigated.

4. 1 P20 AA017067-01 NIAAA/NIH

07/2008-06/2013

PI: Scott L. Friedman; KC Sadler, subcontractor

Oxidant Stress and Fibrosis in Alcoholic Liver Injury

Goal: To develop an infrastructure for the establishment of an exploratory Alcohol Research Center that focuses on understanding the mechanisms of alcoholic liver injury and fibrosis. My specific role in this project is to develop a zebrafish model of alcoholic liver disease, and to administer a zebrafish core facility.

5. American Gastroenterological Association; Research Scholar Award

07/2008-06/2011

PI: KC Sadler

Using zebrafish to uncover the role of the unfolded protein response in steatosis

Goal: To delineate the contribution of protein glycosylation defects and activation of the unfolded protein response to the development of fatty liver disease in zebrafish

6. Breast Cancer Alliance; Young Investigator Award

01/2008-12/2010

PI: KC Sadler

Identifying UHRF1 target genes in breast cancer and embryogenesis

Goal: UHRF1 is a proposed oncogene in breast cancer and plays a role in embryogenesis and the main goal of this project is to identify downstream target genes that are relevant to breast cancer

7. March of Dimes; Basil O'Connor Starter Scholar Award

02/2008-01/2011

PI: KC Sadler

Uncovering mechanisms of uhrf1 action in liver development

Goal: To identify downstream target genes of UHRF1 that are relevant to liver development in zebrafish.

8. Experimental Therapeutics Institute, Mount Sinai School of Medicine

01/2009-12/2009

PI: KC Sadler and R. Cagan

A Novel Screen for Therapeutics to Treat Fatty Liver Disease

Goal: To screen for compounds that block insulin signaling in *Drosophila* and then test these for their ability to protect against fatty liver in multiple zebrafish models of this disease.

PENDING

1. 1R01DK088669-01 NIH/NIAAA & Trans-NIH Zebrafish Initiative (under review)

P.I.: KC Sadler

A Zebrafish Organelle Toolbox

Goal: To establish a series of transgenic zebrafish expressing fluorescent protein markers of subcellular structures and organelles in either all cells or specifically in hepatocytes.

2. Tisch Cancer Institute Developmental Funds

P.I. KC Sadler and J. Llovet

*Zebrafish Models of Hepatocellular Carcinoma***COMPLETED**

1. National Science Foundation; International Research Scholar. 1999-2000
PI: KC Sadler
Identification of PI3-kinase targets in the signaling pathway leading to meiotic maturation in starfish oocytes.
2. National Science Foundation; International Collaborative Project Award. 1999-2002
Co-P.I.s: Mehmet Toner and KC Sadler
Cryopreservation of starfish oocytes.
3. Turkish Scientific and Technical Research Council. 2000-2001
PI: KC Sadler
Identification of the 1-MA receptor and downstream signaling targets in starfish oocytes.
4. Turkish Scientific and Technical Research Council/CNRS; 2001-2002
International Collaborative Project Award with A. Picard, Banyuls sur Mer.
Co-P.I.s: André Picard and KC Sadler
Defining the role of MAP kinases during apoptosis of starfish eggs.
5. NIH/CHHD; Kirschstein National Research Service Awards. 2002-2004
PI: KC Sadler
Regulation of cell division and apoptosis in zebrafish.

TEACHING

Harvard University, Teaching Fellow 1991-1998

- Molecular Biology and Biochemistry (laboratory section; 2 semesters).
- Developmental Biology (1 semester).
- Introduction to Cell Biology (2 semesters).
- Basic Principles of Biochemistry and Cell Biology (1 semester).
- Biochemistry of Disease (Harvard Medical School, 1 semester).

Bosphorus University 1998-2001

- Undergraduate: General Biology II (6 semesters), Cell Biology (2 semesters), Developmental Biology (2 semesters), Senior Seminar on Research Practices (2 semesters).
- Graduate: Developmental Biology (1 semester), Graduate Seminar: The Cell Cycle (1 semester).
- Research projects supervised: 2 M.S. students, 6 undergraduate honors students.

Mount Sinai School of Medicine 2006-9

- Introduction to Journal Club
- Core II: Developmental Biology; organogenesis lectures
- Meet the Authors
- Science Rave: Zebrafish Module

INVITED TALKS

2009

Mount Sinai School of Medicine, Department of Genetics and Genomics
Hepatocellular Carcinoma Symposium, New York
Mount Sinai School of Medicine, Department of Medicine Research Lecture Series
Digestive Diseases Week, Hepatology Research
FASEB Summer Research Conference: From the Unfolded Protein Response in Endoplasmic Reticulum to Disease (selected from abstract)
International Symposium on Alcoholic Liver and Pancreatic Disease (ALPD) and Cirrhosis

2008

FASEB Summer Research Conference: Liver Growth, Development and Disease

Mid-Atlantic Regional Zebrafish Meeting
 Hepatocellular Carcinoma Symposium, New York
 Mount Sinai School of Medicine, Division of Nephrology
 Mount Sinai School of Medicine, Department of Pathology

- 2007 Albert Einstein College of Medicine, Liver Center
 University of Michigan, Department of Pharmacology
 Digestive Disease Week
 New York Metropolitan Zebrafish Meeting
 Mount Sinai School of Medicine, Department of Oncological Sciences
- 2006 FASEB Summer Research Conference: Liver Growth, Development and Disease
 (selected from abstract)
 American Association for the Study of Liver Disease (selected from abstract)
 Mount Sinai School of Medicine, Department of Pediatrics

PUBLICATIONS

1. Zhao X, Gao C, Gouon-Evans V, Monson C, Matsumoto N, **Sadler KC*** and Friedman SL*. *Klf6/copeb* is required for endoderm development and hepatic outgrowth in zebrafish and mouse ES cells. Submitted.
 * equal contribution.
2. Chu J and **Sadler KC** A New School in Liver Development: Lessons from Zebrafish *Hepatology*. *In press*.
3. Eichenbaum JW, Cinaroglu A, Eichenbaum KD, **Sadler KC** (2009) A zebrafish retinal graded photochemical stress model. *J Pharmacol Toxicol Methods* 59: 121-127.
4. Passeri MJ, Cinaroglu A, Gao C, **Sadler KC** (2009) Hepatic steatosis in response to acute alcohol exposure in zebrafish requires sterol regulatory element binding protein activation. *Hepatology* 49: 443-452.
5. Toyoshima Y, Monson C, Duan C, Wu Y, Gao C, Yakar S, **Sadler KC** and LeRoith D. (2008) The role of insulin receptor signaling in zebrafish embryogenesis. *Endocrinology*. 149:5996-6005
6. Sakaguchi T, **Sadler KC**, Crosnier C and Stainier D. (2008) Endothelial signals modulate hepatocyte apico-basal polarization in zebrafish. *Current Biology*. 18(20): 1565-1571.
7. **Sadler KC**, Krahn KN, Gaur N and Ukomadu C (2007) Liver growth in the embryo and during liver regeneration in zebrafish requires the cell cycle regulator, *uhrf1*. *Proc Natl Acad Sci U S A* 104: 1570-1575.
8. **Sadler KC**, Amsterdam A, Soroka C, Boyer J, and Hopkins N (2005). A genetic screen in zebrafish identifies *VPS18*, *NF2a* and the novel gene, *foie gras*, as genes involved in liver disease *Development* 132: 3561-3572.
9. Hamaratoğlu, F, Eroğlu, A, Toner, M and **Sadler, KC** (2005) Cryopreservation of starfish oocytes. *Cryobiology* 50 (1): 38-47.
10. Amsterdam A, **Sadler KC**, Lai K, Farrington S, Bronson RT, Lees JA, Hopkins N (2004) Many Ribosomal Protein Genes Are Cancer Genes in Zebrafish. *PLoS Biology* 2(5): 0690-0698.
11. **Sadler, KC**, Yüce, O, Hamaratoğlu, F, Vergé, V, Peaucellier, G and Picard, A (2004) MAP kinases regulate unfertilized egg apoptosis and fertilization suppresses death via Ca²⁺ signaling. *Mol. Reprod. and Dev.* 67(3): 366 - 383
12. Köseoglu, M, Eroğlu, A, Toner, M, **Sadler, KC** (2001) Intracellular ice forms at high temperatures during starfish oocyte cryopreservation. *Cryobiology* 43(3):248-59.
13. Yuce, O and **Sadler, KC** (2001) Post-meiotic unfertilized starfish oocytes die by apoptosis. *Dev Biol.* 237:29-44.
14. **Sadler KC** and Ruderman J (1998) Components of the signaling pathway linking
 15. the 1-methyladenine receptor to MPF activation and maturation in starfish oocytes. *Dev. Biol.* 197: 25-38.
Cover image.
16. Cornell-Bell AH, Otake LR, **Sadler K**, Thomas PG, Lawrence S, Olsen K, Gumkowski F, Peterson JR, Jamieson JD (1993) Membrane glycolipid trafficking in living, polarized pancreatic acinar cells: assessment by confocal microscopy. *Meth. Cell Bio.* 38:221-40.

17. Cornell-Bell AH, Otake LR, **Sadler K**, Thomas PG, Lawrence S, Olsen K, Gumkowski F, Peterson JR and Jamieson J. Membrane Glycolipid Trafficking in Living, Polarized Pancreatic Acinar Cells: Assessment by Confocal Microscopy *In* "Cell Biological Applications of Confocal Microscopy" (B. Matsumoto, ed.), pp. 222-241. Academic Press, 1993.
18. **Sadler KC**, Bevins CL, Kaltenbach JC (1992) Localization of xenopsin and xenopsin precursor fragment immunoreactivities in the skin and gastrointestinal tract of *Xenopus laevis*. *Cell Tissue Res.* 270: 257.
19. Moore KS, Bevins CL, Tomassini N, Huttner KM, **Sadler K**, Moreira JE, Reynolds J, Zasloff M (1992) A novel peptide-producing cell in *Xenopus*: Multinucleated gastric mucosal cell strikingly similar to the granular gland of the skin. *J. Histo. Cyto.* 40 (3): 367.