

BIOGRAPHICAL SKETCH

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NAME: Ingrid Sadler-Riggleman

eRA COMMONS USER NAME (credential, e.g., agency login): SadlerRiggleman

POSITION TITLE: Senior Research Associate

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Ulm, Germany	Vordiplom	1978	Biology
University of Munich, Germany	Diploma	1981	Biology
University of Munich, Germany	Ph.D.	1986	Biology
Princeton University, NJ	Postdoc	1989	Cell Biology
University of Utah, UT	Postdoc	1992	Cell Biology

A.

Personal Statement. I have experience in molecular biology, cell biology and genetics and have worked with a variety of organisms and animal models (bacteria, yeast, rats, etc). I am involved with studies in the field of epigenetic transgenerational inheritance. I also function as the lab manager and supervisor for undergraduates in my current position.

B.**Positions and Honors.**

1992-1995 Research Associate in the Department of Genetics and Cell Biology, September 1992 to March 1993, Washington State University,
1993-1995 Research Associate in the USDA/ARS unit, April 1993 to April 1995 Washington State University,
1995-1996 Research Associate in MMBB, May 1995 to November 1996, University of Idaho
1999-present Project Associate Researcher in Dr. Michael Skinner's laboratory, Washington State University

C.**Contributions to Science**

<https://www.ncbi.nlm.nih.gov/pubmed/?term=sadler-riggleman>

Major Contributions:

(1) Elucidation of transcriptional control of sex determination.

Bhandari RK, Schinke EN, Haque MM, **Sadler-Riggleman I**, Skinner MK. (2012) SRY induced TCF21 genome-wide targets and cascade of bHLH factors during Sertoli cell differentiation and male sex determination in rats. Biol Reprod. 87(6):131. PMID: 23034159

Bhandari R, **Sadler-Riggleman I**, Clement T and Skinner MK (2011) Basic Helix-Loop-Helix Transcription Factor TCF21 is a Downstream Target of the Male Sex Determining Gene SRY. PLoS ONE. 11;6(5):e19935. PMID: 21637323

Clement T, Bhandari R, **Sadler-Riggleman I**, Skinner MK (2011) SRY directly regulates the neurotrophin 3 promoter during male sex determination and testis development in rats. Biol Reprod. 85(2):277-84. PMID: 21508350

Muir T, **Sadler-Riggleman I** and MK Skinner (2006) Role of the basic helix-loop-helix protein ITF2 in the hormonal regulation of Sertoli cell differentiation. Molecular Reproduction & Development 73(4):491-500. PMID: 16425294

(2) Elucidation of transcriptional control of testis function.

Muir T, **Sadler-Riggleman I**, Skinner MK. (2005) Role of The Basic Helix-Loop-Helix Transcription Factor, Scleraxis, In the Regulation of Sertoli Cell Function and Differentiation. Mol Endocrinol. 19(8):2164-74. PMID: 15831523

Chaudhary J, **Sadler-Riggleman I**, Ague JM, Skinner MK. (2005) The helix-loop-helix inhibitor of differentiation (ID) proteins induce post-mitotic terminally differentiated Sertoli cells to re-enter the cell cycle and proliferate. Biol Reprod. 72(5):1205-17. PMID:15647457

Chaudhary J, **Sadler-Riggleman I**, and MK Skinner (2004). Identification of a novel Sertoli cell gene product SERT that influences follicle stimulating hormone actions. Gene 324:79-88. PMID: 14693373

Saxlund MA, **Sadler-Riggleman I**, and MK Skinner (2004) Role of Basic Helix-Loop-Helix (bHLH) and CREB Transcription Factors in the Regulation of Sertoli Cell Androgen Binding Protein Expression. Molecular Reproduction and Development 68:269-278. PMID:15112319

(3) Elucidation of epigenetic transgenerational inheritance mechanisms.

Shnorhavorian M, Schwartz SM, Stansfeld B, **Sadler-Riggleman I**, Beck D, Skinner MK. (2017) Differential DNA Methylation Regions in Adult Human Sperm following Adolescent Chemotherapy: Potential for Epigenetic Inheritance. PLoS One 12(2):e0170085. PMID: 28146567

McNew SM, Beck D, **Sadler-Riggleman I**, Knutie SA, Koop JAH, Clayton DH, Skinner MK. (2017) Epigenetic variation between urban and rural populations of Darwin's finches. BMC Evol Biol. 17(1):183. PMID: 28835203

McBirney M, King SE, Pappalardo M, Houser E, Unkefer M, Nilsson E, **Sadler-Riggleman I**, Beck D, Winchester P, Skinner MK. (2017) Atrazine induced epigenetic transgenerational inheritance of disease, lean phenotype and sperm epimutation pathology biomarkers. PLoS One. 12(9):e0184306. PMID: 28931070

Skinner MK, Ben Maamar M, **Sadler-Riggleman I**, Beck D, Nilsson E, McBirney M, Klukovich R, Xie Y, Tang C, Yan W. (2018) Alterations in sperm DNA methylation, non-coding RNA and histone retention associate with DDT-induced epigenetic transgenerational inheritance of disease. Epigenetics Chromatin. 27;11(1):8. PMID: 29482626

(4) Elucidation of transcriptional control of ovary function.

Skinner MK, Schmidt M, Savenkova M, **Sadler-Riggleman I** and EE Nilsson (2008) Regulation of granulosa and theca cell transcriptomes during ovarian antral follicle development. Molec Reprod & Develop 75(9):1457-72. PMID:18288646

E. Nilsson, S. Westfall, **I. Sadler-Riggleman**, T. Larsen, C. McDonald and MK Skinner (2002) An in vivo mouse reporter gene (human secreted alkaline phosphatase) model to monitor ovarian tumor growth and response to therapeutics. *Cancer Chemotherapy and Pharmacology*. 49(2):93-100. PMID: 11862422

D.
Research Support. No Independent Funding