BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Fischer, Leslie Michele	Research Assistant Professor
eRA COMMONS USER NAME	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Georgia, Athens, GA	B.S.	1986	Genetics
Columbia University, New York, NY	Ph.D.	1993	Biology
University of North Carolina, Chapel Hill, NC	M.P.H.	1999	Nutrition
American Dietetic Association	R.D.	2000	Nutrition

A. Positions and Honors.

Positions and Employment

1987-1989 Teaching Assistant, Columbia University, New York, NY
1990 Instructor, Marine Biology Laboratories, Woods Hole, MA
1993-1995 Assistant Professor of Biology, Bosphorus University, Istanbul, Turkey
1995-1996 Clinical Research Associate, Roche Biomedical Labs, Research Triangle Park, NC
1996-1997 Teaching Assistant, University of North Carolina, Chapel Hill, NC
1999 Clinical Research Intern, Duke University, Durham, NC
1999-2000 Clinical Research Assistant, Duke University, Durham, NC
2000-2003 Research Associate, University of North Carolina, Chapel Hill, NC
2003- Research Assistant Professor, University of North Carolina, Chapel Hill, NC
2005- Chief Scientist, Guiding Stars Scientific Advisory Panel, Hannaford Bros., Scarborough, ME
2007- Clinical Nutrition Specialist, Integrative Health Center, Chapel Hill, NC

Academic Honors

1986 Phi Beta Kappa, University of Georgia, Athens, GA
1984 Alumni Scholar, University of Georgia, Athens, GA
1986 Graduate Faculties Alumni Fellow, Columbia University, New York, NY
1991 James Howard McGregor Prize, Columbia University, New York, NY
1992 Charles A. Huebschman Prize, Columbia University, New York, NY T
1993 John s. Newberry Prize, Columbia University, New York, NY
1995 Member, Delta Omega Public Health Honorary Society, UNC, Chapel Hill, NC
1996 Delta Omega Book Award, UNC, Chapel Hill, NC

B. Selected peer-reviewed publications (in chronological order)

1. He, W., Fischer, L., Sun, S., Bilhartz, D., Zhu, X., Young, C., Kelley, D., and Tindall, D. 1990. Molecular cloning of androgen receptors form divergent species with a polymerase chain reaction technique: complete cDNA sequence of the mouse androgen receptor and isolation of androgen receptor cDNA probes from dog, guinea pig, and clawed frog. BBRC 171:691-704.

2. Fischer, L., and Kelley, D. 1991. Androgen receptor expression and sexual differentiation of effectors for courtship song in Xenopus laevis. Seminars in the Neurosciences 3:469-480.

3. Catz, D., Fischer, L., Moschella, M., Tobias, M., and Kelley, D. 1992. Sexually dimorphic expression of a laryngeal-specific, androgen-regulated myosin heavy chain gene during Xenopus laevis development. Dev. Biol. 154:366-376.

4. Fischer, L., Catz, D., and Kelley, D. 1993. An androgen receptor mRNA isoform associated with hormone induced cell proliferation. Proc. Nat. Acad. Sci. USA 90:8254-8258.

5. Fischer, L., Catz, D., and Kelley, D. 1995. Androgen-directed development of the Xenopus laevis larynx: control of androgen receptor expression and tissue differentiation. Dev. Biol. 170:115-126.

6. Catz, D., Fischer, L., and Kelley, D. 1995. Androgen regulation of a laryngeal-specific myosin heavy chain mRNA isoform whose expression is sexually differentiated. Dev. Biol. 171:448-57.

7. Miltyk, W., Craciunescu, C., Fischer, L. Jeffcoat, R., Koch, M., Lopaczynski, W., Mahoney, C. Jeffcoat, R., Crowell, J., Paglieri, J., and Zeisel, S. 2003. Lack of significant genotoxicity of purified soy isoflavones (genistein, daidzein, and glycitein) in 20 patients with prostate cancer. American Journal of Clinical Nutrition. 77:875-82.

8. Fischer, L., Mahoney, C., Jeffcoat, A., Koch, M., Thomas, B., Valentine, J., Stinchcombe, T., Knowles, J., Crowell, J., and Zeisel, S. 2004. Clinical characteristics and pharmacokinetics of purified soy isoflavones: multiple dose administration to men with prostate neoplasia. Nutr Cancer. 48: 160-170.

9. da Costa, K., Badea, M., Fischer, L., and Zeisel, S. 2004. Elevated serum creatine phosphokinase in choline deficient humans: Mechanistic studies in C2C12 mouse myoblast cells. Am J Clin Nutr. 80:163-170.

10. Busby M, Fischer L, da Costa K, Thompson D, Mar M, and Zeisel S. 2004. Choline- and betaine-defined diets for use in clinical research and for the management of trimethylaminuria. J Am Diet Assoc. 104(12):1836-45.

11. da Costa K, Gaffney C, Fischer L, and Zeisel S. 2005. Choline deficiency in mice and humans is associated with increased plasma homocysteine concentration after a methionine load. Am J Clin Nutr. 81(2):440-4.

12. Fischer L, Scearce J, Mar M, Patel J, Blanchard R, Macintosh B, Busby M, and Zeisel S. 2005. Ad libitum choline intake in healthy individuals meets or exceeds the proposed adequate intake level. J Nutr. 135(4):826-9.

13. Song J, da Costa K, Fischer L, Kohlmeier M, Kwock L, Wang S, and Zeisel S. 2005. Polymorphism of the PEMT gene and susceptibility to nonalcoholic fatty liver disease (NAFLD). FASEB J. 19(10):1266-71.

14. Kohlmeier M, da Costa K, Fischer L, and Zeisel S. 2005. Genetic variation of folate-mediated one-carbon transfer pathways predicts susceptibility to choline deficiency in humans. Proc Natl Acad Sci. 102(44):16025-30.

15. da Costa, K, Niculescu, M, Craciunescu, C, Fischer, L, and Zeisel, S. 2006. Choline deficiency increases lymphocyte apoptosis and DNA damage in humans. Am J Clin Nutr, 84(1): 88-94.

16. da Costa, K, Kozyreva, O, Song, J, Galanko, J, Fischer, L, and Zeisel, S. 2006 Common genetic polymorphisms affect the human requirement for the nutrient choline. Faseb J., 20 (9): 1336-44.

17. Niculescu, M, Pop, E, Fischer, L, and Zeisel, S. 2007 Dietary isoflavones differentially induce gene expression changes in lymphocytes from postmenopausal women who form equol as compared with those who do not. J Nutr Biochem, 18:380-90.

18. Fischer, L, daCosta, K, Kwock, L, Stewart, P, Lu, T, Stabler, S, Allen, R, and Zeisel,S. 2007. Sex and menopausal status influence human dietary requirements for the nutrient choline. Am J Clin Nutr, 85:1275-85.

19. Niculescu MD, da Costa KA, Fischer LM, Zeisel SH. 2007. Lymphocyte gene expression in subjects fed a low-choline diet differs between those who develop organ dysfunction and those who do not. Am J Clin Nutr, 86:230-9.

20. Pop EA, Fischer LM, Coan AD, Gitzinger M, Nakamura J, Zeisel SH. 2008. Effects of a high daily dose of soy isoflavones on DNA damage, apoptosis, and estrogenic outcomes in healthy post-menopausal women – a Phase 1 clinical trial. Menopause, 15(4 Pt 1):684-92.

21. Craciunescu CN, Niculescu MD, Guo Z, Johnson AR, Fischer L, Zeisel SH. 2009. Dose response effects of dermally applied diethanolamine on neurogenesis in fetal mouse hippocampus and potential exposure of humans. Toxicol Sci.,107(1):220-6.

C. Research Support

DK55865 (S. Zeisel, Principal Investigator) 02/01/07-01/31/12
NIDDK
Human Requirements for the Nutrient Choline
Purpose: To refine understanding of how factors such as estrogen status and common genetic polymorphisms influence dietary requirements of the essential nutrient choline.
Role: Co-investigator (Project Director)

Egg Nutrition Center (S. Zeisel, Principal Investigator) 07/01/07-9/01/09
Impact of Single Nucleotide Polymorphisms in Genes Related to Choline Metabolism on Choline Status in Lactating Women and Relation to Dietary Intake
Purpose: To determine if women with single nucleotide polymorphisms in genes related to choline synthesis and/or metabolism have to consume diets much higher in choline in order to sustain pregnancy and produce breast milk of optimal choline content.
Role: Co-investigator (Project Director)

Mead Johnson Center for Excellence in Children's Nutrition 08/01/07-7/30/09
Effects of Docosahexaenoic Acid and Choline Supplementation on Intelligence, Memory, and Attention in Typically Developing Toddlers
Purpose: To examine whether choline and/or docosahexaenoic acid supplementation over 6 months results in increased cognitive development in toddlers.
Role: Principal Investigator