

BIOGRAPHICAL SKETCH

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NAME Cooke, Paul S.		POSITION TITLE Professor	
eRA COMMONS USER NAME P-COOKE			
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Westminster College, Fulton, MO	B.A.	1978	Biology
University of California-Berkeley	Ph.D.	1983	Physiology
University of California-San Francisco	Postdoc	1984-1987	Reproductive Biology

A. Professional Experience:

1984-1987 University of California-San Francisco, NIH Postdoctoral Fellow
 1987-1993 University of Illinois at Urbana-Champaign, Assistant Professor
 1993-1998 University of Illinois at Urbana-Champaign, Associate Professor
 1998-present University of Illinois at Urbana-Champaign, Professor
 2002-present Chair; Morphology Division, Department of Veterinary Biosciences, Univ. of Illinois
 2004-Present Billie A. Field Endowed Chair in Reproductive Biology, University of Illinois

Awards & Honors:

2004-present Billie A. Field Endowed Chair in Reproductive Biology, University of Illinois
 2004 Dr. Gordon and Mrs. Helen Krueger All-Around Excellence Award, College of Veterinary Medicine, University of Illinois
 2001 Pfizer Animal Health Award for Research Excellence, College of Veterinary Medicine, University of Illinois
 2000 Research Excellence Award, University of Illinois
 1997-2000 University Scholar, University of Illinois
 1996 Young Andrologist Award, American Society of Andrology
 1993 The Levine Award for Research, University of Illinois
 1988, 1989, Incomplete List of Teachers Ranked Excellent, University of Illinois
 1991, 1995,
 1999-2002, 2006, 2007

Professional Activities:

Associate Editor: *Biology of Reproduction* (2009-)

Editorial Boards: *J. of Andrology* (1995-1997); *J. Endocrinol. Reprod.* (1997-2000); *Endocrinology* (1998-2001); *Dom. Animal Endocrinol.* (2000-2003); *J. Endocrinol.* (2001-2007); *Biol. Reprod.* (2006-2008); *Toxicol. Appl. Pharmacol.* (2008-2010)

NIH:

Ad hoc NIH Study Section member: *Reproductive Biology*, June, 2001; *Integrative Clinical Endocrinology & Reproduction*, June, 2005, June and October, 2006; *Development* 1, February, 2007; *Cellular Aspects of Diabetes and Obesity (CADO)*, Feb. 2008; *Reproduction, Andrology and Gynecology* (October, 2007; June, 2008)

NIEHS Superfund Basic Research Program Review. Panel Member, October, 2004; October, 2005

Panel Member, Nat'l Tox. Program Review of Genistein, Res. Triangle Park, NC, June, 2006

B. Publications, 2005-2008 (from a total of 133):

1. Holsberger DR, Buchold GM, Castro Leal M, Kiesewetter SE, O'Brien DA, Hess RA, França LR, Kiyokawa H, **Cooke PS** (2005) Cell cycle inhibitors p27^{Kip1} and p21^{Cip1} regulate murine Sertoli cell proliferation. *Biology of Reproduction* 72:1429-1436.
2. Fritz WA, Lin T-M, Moore RW, **Cooke PS**, Peterson RE (2005) In utero and lactational 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) exposure: Effects on the prostate and its response to castration in senescent C57BL/6J mice. *Toxicological Sciences* 86:387-395.
3. Naaz A, **Cooke PS** (2005) Effects of estrogens and the phytoestrogen genistein on adipogenesis and lipogenesis in males and females. *Birth Defects Research Part A: Clinical and Molecular Teratology* 73:472-473.
4. Selvaraj V, Bunick D, Finnegan-Bunick C, Johnson RW, Wang H, Liu L, **Cooke PS** (2005) Gene expression profiling of 17 β -estradiol and genistein effects on mouse thymus. *Toxicological Sciences* 87:97-112.
5. **Cooke PS**, Holsberger DR (2005) Thyroid hormone regulation of Sertoli cell proliferation may be mediated through the cell cycle inhibitors p27^{Kip1} and p21^{Cip1}. *Journal of Endocrinology and Reproduction* 8:86-97.
6. **Cooke PS**, Holsberger DR, Franca LR (2005) Thyroid hormone regulation of Sertoli cell development. In: **Sertoli Cell Biology**, M Griswold, M Skinner (eds.), Academic Press, New York, NY. 217-226.
7. **Cooke PS**, Selvaraj V, Yellayi S (2005) Phytoestrogen effects on immunity. In: **Endocrine Disruptors in Life Science-Molecular Mechanism of Health Effects**. T Iguchi and T Inoue (eds.), Springer-Verlag, Japan, Ltd., Tokyo, Japan, pp. 255-261
8. Holsberger DR, Kiesewetter SE, **Cooke PS** (2005) Regulation of neonatal Sertoli cell development by thyroid hormone receptor α 1. *Biology of Reproduction* 73:396-403.
9. Holsberger DR, **Cooke PS** (2005) Understanding the role of thyroid hormone in Sertoli cell development: a mechanistic hypothesis. *Cell and Tissue Research* 322:133-140.
10. Mukai M, Dong Q, Hardy MP, Kiyokawa H, **Cooke PS** (2005) Altered prostatic epithelial proliferation, prostatic development and serum testosterone in mice lacking cell cycle regulators p27^{Kip1} and/or p21^{Cip1}. *Biology of Reproduction* 73:951-958.
11. **Cooke PS**, Selvaraj V, Yellayi S (2006) Genistein, estrogen receptors and the acquired immune response. *Journal of Nutrition* 136:704-708.
12. Hess RA, **Cooke PS**, Hofmann M-C, Murphy KM (2006) Mechanistic insights into the regulation of the spermatogonial stem cell niche. *Cell Cycle* 5:e1-e7.
13. **Cooke PS**, Hess RA, Simon L, Schlessner HN, Carnes K, Tyagi G, Hofmann M-C, Murphy KM (2006) The transcription factor Ets-Related Molecule (ERM) is essential for stem cell maintenance and self-renewal. *Animal Reproduction* 3:98-107.
14. Sridharan S, Simon L, Meling DD, Cyr DG, Gutstein DE, Fishman GI, Guillou F, **Cooke PS** (2007) Proliferation of adult Sertoli cells following conditional knock out of the gap junctional protein GJA1 (Connexin 43) *Biology of Reproduction* 76:804-812.
15. **Cooke PS**, Holsberger D, Cimafranca M, Meling D, Beals C, Nakayama K, Nakayama K, Kiyokawa H (2007) The F box protein Skp2 regulates adipose mass and adipocyte number in vivo. *Obesity* 15:1400-1408

16. Jansen HT, Kirby JD, **Cooke PS**, Arambepola N, Iwamoto GA (2007) Endocrine, anatomical, and behavioral abnormalities associated with transient neonatal hypothyroidism in the golden hamster (*Mesocricetus auratus*): Evidence supporting a role for thyroid hormones in the normal development of the male reproductive axis. *Physiology and Behavior* 90:771-781.
17. Goyal HO, Braden TD, **Cooke PS**, Szewczykowski MA, Williams CS, Dalvi P, Williams JW, Newbold RR, Herbert RA (2007) Estrogen receptor- α mediates estrogen-inducible abnormalities in the developing penis. *Reproduction* 133:1057-1067.
18. Simon L, Ekman GC, Tyagi G, Hess RA, Murphy KM, **Cooke PS** (2007) Common and distinct factors regulate expression of ERM and GDNF, Sertoli cell proteins essential for spermatogonial stem cell maintenance. *Experimental Cell Research* 313:3090-3099.
19. Sridharan S, Brehm R, Bergmann M, **Cooke PS**, (2007) Role of connexin 43 in Sertoli cells of testis. *Ann NY Acad Sci* 1120:131-143.
20. Morrow CMK, Hostetler CE, Griswold MD, Hofmann M-C, Murphy KM, **Cooke PS**, Hess RA (2008) ETV5 is required for continuous spermatogenesis in adult mice and may mediate blood-testes barrier function and testicular immune privilege. *Ann NY Acad Sci* 1120:144-151.
21. Schlessner HN, Simon L, Hofmann MC, Murphy KM, Hess RA, **Cooke PS** (2008) Effects of ets variant gene 5 (ERM) on testis and body growth, time course of spermatogonial stem cell loss and fertility in mice. *Biology of Reproduction* 78:483-489.
22. Yao L, AgoulNIK A, **Cooke PS**, Meling DD, Sherwood OD. (2008) Evidence that relaxin acts on stromal cells to promote cell proliferation and inhibit apoptosis in the mouse cervix and vagina. *Endocrinology* 149:2072-2079.
24. **Cooke PS**, Gore AC, Crews D, Simon L, Cimafranca MA (2008) **Environmental Endocrine Disruptors and Male Reproductive Toxicology**. In: *Comprehensive Toxicology*, 2nd edition, Volume 11, P. Hoyer and J. Richburg (eds.), Elsevier Press, Oxford, England (in press)
25. Mukai M, Lin T-M, Peterson RE, **Cooke PS**, Tischkau SA (2008) Behavioral rhythmicity of mice lacking AhR and attenuation of light-induced phase shift by 2,3,7,8-tetracholordibenzo-p-dioxin *Journal of Biological Rhythms* 23:200-210.
26. Yao L, AgoulNIK A, Cooke PS, Meling DD, Sherwood OD. Relative roles of the epithelial and stromal tissue compartment(s) in mediating the actions of relaxin and estrogen on cell proliferation and apoptosis in the mouse lower reproductive tract. *Annals of the New York Academy of Sciences* (in press)

C. Research Support:

COOKE, PAUL S.

ACTIVE

1) P. Cooke, PI of one component of P01 (W. Helferich, Univ. of Illinois, PI of the overall P01)

Source: NIH (Program Project through NIA; P01 AG24387)

Title: Phytoestrogens and aging: Dose, timing and target tissue

Total direct support for entire P01: \$6,309,328. Direct costs from NIH for P. Cooke are \$901,017, and \$167,534 from University of Illinois, for a total of \$1,068,551 in overall direct support.

Period: 07/01/04-06/30/09

Description: This P01 Program Project analyzes phytoestrogen effects on aging.

2) P. Cooke is one of 5 PIs in this Center grant (M. Bagchi, Univ. of Illinois, Center Director)

Source: NIH, U54 Center Grant (U54 HD055787)

Title: Hormone-Regulated Pathways Controlling Implantation and Fertility

Total direct costs: \$6,137,365

Period: 03/01/08-02/28/13

Description: Rodent model systems will be used to examine the mechanism by which hormones regulate implantation.

3) P. Cooke, PI (subcontract in a larger NIH MERIT grant; R. Peterson, University of Wisconsin, PI; total direct costs for yrs. 1-10: \$2,500,000)

Source: NIH

Title: Reproductive and developmental toxicity of dioxin

Total direct costs to P. Cooke: \$125,564

Period: 09/01/00-07/31/10

Description: Rodent model systems will be used to examine the mechanism by which 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) inhibits prostatic development.

4) P. Cooke, co-project director (S. Donovan, Univ. of Illinois, PI)

Source: USDA

Title: Training in Human Nutrition

Total direct costs: \$138,000

Period: 07/01/05-06/30/08

Description: This grant will involve determining the role of soy on human health.

5) P. Cooke, PI (W. Helferich, Univ. of Illinois, PI of the overall P01)

Source: NIH (Program Project through NIA; P01 AG24387)

Title: Research Supplement to Promote Diversity in Health-Related Research

Total direct costs: \$66,533

Period: 08/16/07-08/15/09

Description: This supplement provides a graduate fellowship that covers salary, tuition and travel money for Juanmahel Davila, a minority graduate student in the lab.

5) P. Cooke, Preceptor (S. Schantz, University of Illinois, PI)

Source: NIH

Title: Research Training Program in Environmental Toxicology

Total direct costs: \$1,373,798

Period: 4/1/05-3/31/10

Description: This grant supports 4 predoctoral and 3 postdoctoral trainees in environmental toxicology; P. Cooke is one of 10 core members of this training grant.