

SHUO XIAO, Ph.D.

Assistant Professor

Department of Environmental Health Sciences
Arnold School of Public Health, University of South Carolina
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EDUCATION

- 08/2013 – 12/2016 Postdoctoral Fellow, Northwestern University, Chicago, IL
08/2008 – 08/2013 Ph.D., Toxicology, The University of Georgia (UGA), Athens, GA, USA
09/2006 – 06/2008 MS, Nutrition and Food Toxicology, Peking University, School of Public Health, Beijing, China
09/2001 – 06/2006 BMed, Preventive Medicine, Peking University, School of Public Health, Beijing, China

RESEARCH EXPERIENCE

- 01/2017 – Present Assistant Professor, Director of Reproductive Health & Toxicology Laboratory, Department of Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, Columbia, SC
- The use of microfluidic technology and 3D *in vitro* ovarian follicle culture model to develop a high-throughput *in vitro* female reproductive toxicity screening platform
 - Effect of climate change related environmental toxins on female reproductive health and fertility
 - Female fertility preservation and the effect of chemotherapy on female ovarian function and fertility
- 09/2013 – 12/2016 Postdoctoral Fellow in Dr. Teresa K. Woodruff's laboratory, Department of Obstetrics & Gynecology, Northwestern University, Chicago, IL
- Engineering female reproductive tract in a 3D microfluidic system for drug and environmental chemical toxicity testing (Organ-on-a-chip)
 - *In vitro* 3D human follicle culture as fertility preservation option for young female cancer patients
- 08/2008 – 08/2013 Graduate Research Assistant with Dr. Xiaoqin Ye, Department of Physiology and Pharmacology, Interdisciplinary Toxicology Program, The University of Georgia, Athens, GA
PhD dissertation focuses:
- Effect of environmental endocrine disruptors (EDCs) on embryo implantation and uterine receptivity
 - Molecular mechanisms of embryo transport, implantation, and the establishment of uterine receptivity
- 04/2011 – 06/2011 Research Student in "Frontiers in Reproduction (FIR)", Marine Biological Laboratory (MBL), Woods Hole, MA
- 01/2008 – 07/2008 Clinical Trial Assistant, Bayer Healthcare R&D Dept., Beijing, China
- 08/2006 – 06/2008 Graduate Research Assistant with Dr. Peiyu Wang, Department Nutrition and Food Hygiene, School of Public Health, Peking University Health Science Center, Beijing, China
Thesis: Effects of isoflavone genistein exposure on human breast cancer

cell MCF-7 proliferation and apoptosis
 06/2006 – 07/2006 Visiting Scholar, School of Public Health, Chinese University of Hong Kong,
 Hong Kong, China

TEACHING EXPERIENCE

- 01/2017 – Present Assistant Professor, Department of Environmental Health Sciences, Arnold School of Public Health, University of South Carolina, ENHS321 (Environmental Pollution and Health) and ENHS793-001 (Environment and Women's Reproductive Health)
- 04/2017 – Present Instructor, Frontiers in Reproduction (FIR), In Vitro follicle culture Laboratory, Marine Biological Laboratory (MBL), Woods Hole, MA
- 09/2016 – Present Instructor, Master of Reproductive Science and Medicine, Northwestern University, REPR_SCI 440 (Reproductive Technologies Laboratory) and REPR_SCI 406 (Human Reproductive Development)
- 11/2013 – 12/2016 Academic and research mentor of six master students in Biotechnology Program in Northwestern University
- 04/2015 – 05/2016 Teaching Assistant, Frontiers in Reproduction (FIR), Marine Biological Laboratory (MBL), Woods Hole, MA
- 08/2008 – 05/2013 Teaching assistant, Elements of Physiology (VPHY3100), College of Veterinary Medicine, University of Georgia, Athens, GA

CLINICAL TRAINING AND INTERN

- 05/2005 – 08/2005 Intern, Center for Disease Control and Prevention (CDC) in Nanshan District, Shen Zhen, China
- 02/2004 – 07/2005 Intern, Beijing Railway General Hospital, Beijing, China

PUBLICATIONS (*Corresponding author)

1. Wang Y, Liu M, Johnson SB, Yuan G, Arriba AK, Zubizarreta ME, Chatterjee S, Nagarkatti M, Nagarkatti P, **Xiao S***. Doxorubicin obliterates mouse ovarian reserve through both primordial follicle atresia and overactivation. *Toxicology and Applied Pharmacology*. 2019, in press.
2. Han F, Ga Y, Hu F, Yu X, Xie H, Li H, Zhao Y, Kimura-hara S, Zhang Y, Zubizarreta M, **Xiao S**, Zhan M, Zheng W. Simultaneous determination of alternative flame-retardant levels including hexabromocyclododecane, tetrabromobisphenol A, six bromophenols, and nine organophosphate esters in water samples by ultra-high performance liquid chromatography-tandem mass spectrometry. *Journal of Chromatography A*. 2019. May 27. doi: 10.1016/j.chroma.2019.05.048
3. Logan S, Gu R, Li W, **Xiao S**, Anazodo A. Infertility in China: Culture, society and a need for fertility counselling. *Asian Pacific Journal of Reproduction*. 2019; 8 (1):1-6. DOI: 10.4103/2305-0500.250416.
4. Andersen CL, Liu M, Wang Z, Ye X, **Xiao S***. Chemotherapeutic agent doxorubicin alters uterine gene expression in response to estrogen in ovariectomized CD-1 adult mice. *Biology of Reproduction*. 2019 Apr 1; 100(4):869-871. doi: 10.1093/biolre/iory259.
5. Wang Y, Chen H, Ju K, Kopp MF, Johnson SB, Farrell KK, Yuan G, Ataman LM, Zheng W, Woodruff TK, **Xiao S***. Female oncofertility attitude and knowledge: a survey of reproductive health professionals in Shanghai, China. *Future Oncology*. 2019 Feb;15(4):371-379. doi: 10.2217/fon-2018-0428.
6. Ju K, Kopp M, Wang Y, Yuan G, Zheng W, Ataman LM, Woodruff TK, Chen Q, **Xiao S***. A Survey Study of Attitude and Knowledge Regarding Female Fertility Preservation

- Among Reproductive Health Professionals in Fujian, China. *Journal of Adolescent Young Adult Oncology*. 2019 Feb;8(1):67-73. doi: 10.1089/jayao.2018.0065.
7. Rios PD, Kniazeva E, Lee HC, **Xiao S**, Oakes RS, Saito E, Jeruss JS, Shikanov A, Woodruff TK, Shea LD. Retrievable hydrogels for ovarian follicle transplantation and oocyte collection. *Biotechnological Bioengineering*. 2018 Aug;115(8):2075-2086. doi: 10.1002/bit.26721.
 8. Wang Y, Liu M, Zhang, J, Liu Y, Kopp M, Zheng W, **Xiao S***. Multidrug resistance protein 1 deficiency promotes doxorubicin-induced ovarian toxicity in female mice. *Toxicological Sciences*. 2018 May 1;163(1):279-292. doi: 10.1093/toxsci/kfy038 (Cover image).
 9. **Xiao S**, Coppeta JR, Rogers HB, Isenberg BC, Zhu J, Olalekan SA, McKinnon KE, Dovic D, Rashedi AS, Haisenleder DJ, Malpani SS, Arnold-Murray CA, Chen K, Jiang M, Bai L, Nguyen CT, Zhang J, Laronda MM, Hope TJ, Maniar KP, Pavone ME, Avram MJ, Sefton EC, Getsios S, Burdette JE, Kim JJ, Borenstein JT, Woodruff TK. A microfluidic culture model of the human reproductive tract and 28-day menstrual cycle. *Nature Communications*. 2017 Mar 28; 8:14584. doi: 10.1038/ncomms14584 (2017 Papers of the Year in NIH/NIEHS).
 10. Laronda MM, Rutz AL, **Xiao S**, Whelan KA, Duncan FE, Roth EW, Woodruff TK, Shah RN. A bioprosthetic ovary created using 3D printed microporous scaffolds restores ovarian function in sterilized mice. *Nature Communications*. 2017 May 16; 8:15261. doi: 10.1038/ncomms15261.
 11. **Xiao S***, Zhang J, Liu M, Iwahata H, Rogers HB, Woodruff TK. Doxorubicin Has Dose-Dependent Toxicity on Mouse Ovarian Follicle Development, Hormone Secretion, and Oocyte Maturation. *Toxicological Sciences*. 2017 Jun 1;157(2):320-329. doi: 10.1093/toxsci/kfx047 (*First and corresponding author)
 12. **Xiao S**, Li R, El Zowalaty A, Diao H, Zhao F, Choi Y and Ye X. Acidification of uterine epithelium during embryo implantation in mice. *Biology of Reproduction*. 2017 Jan 1;96(1):232-243. doi: 10.1095/biolreprod.116.144451.
 13. **Xiao S**, Zhang J, Romero MM, Smith KN, Shea LD, Woodruff TK. *In vitro* follicle growth supports human oocyte meiotic maturation. *Scientific Reports*. 2015 Nov 27; 5:17323. doi: 10.1038/srep17323.
 14. Diao H, Li R, El Zowalaty AE, **Xiao S**, Dudley EA, YE X. Deletion of Lysophosphatidic acid receptor 3 (Lpar3) disrupts fine local balance of progesterone and estrogen signaling in mouse uterus during implantation. *Biology of Reproduction*. 2015, 93 (5): 123. doi: 10.1095/biolreprod.115.131110.
 15. **Xiao S**, Duncan FE, Bai L, Nguyen, CT, Shea LD, Woodruff TK. Size-specific follicle selection improves mouse oocyte reproductive outcomes. *Reproduction*, 2015 Sep;150(3):183-92. doi: 10.1530/REP-15-0175.
 16. Lin Z, Dodd CA, **Xiao S**, Krishna S, Ye X, Filipov NM. Gestational and Lactational Exposure to Atrazine via the Drinking Water Causes Specific Behavioral Deficits and Selectively Alters Monoaminergic Systems in C57BL/6 Mouse Dams, Juvenile and Adult Offspring. *Toxicological Sciences*. 141 (1): 90-102. doi: 10.1093/toxsci/kfu107.
 17. Zhao F, Li R, **Xiao S**, Diao H, El Zowalaty AE. and Ye X. Multigenerational exposure to dietary zearalenone (ZEA), an estrogenic mycotoxin, affects puberty and reproduction in female mice. *Reproductive Toxicology*, 2014, 47: 81-8. doi: 10.1016/j.reprotox.2014.06.005.
 18. Li R, Diao, H, Zhao F, **Xiao S**, and Zowalaty AE, Dudley EA, Mattson MP, Ye, X. Olfactomedin 1 deficiency leads to defective olfaction and impaired female fertility. *Endocrinology*, 2015 Sep;156(9):3344-57. doi: 10.1210/en.2015-1389.
 19. Li R, Zhao F, Diao H, **Xiao S**, and Ye X. Postweaning dietary genistein exposure advances

- puberty without significantly affecting early pregnancy in C57BL/6J female mice. **Reproductive Toxicology**, 2014 Apr;44:85-92. doi: 10.1016/j.reprotox.2013.12.003.
20. Xiao S, Diao H, Zhao F, Li R, and Ye X. Progesterone receptor-mediated upregulation of N-acetylneuraminase pyruvate lyase (NPL) in preimplantation mouse uterine luminal epithelium and dispensable function of NPL in fertility. **PLoS ONE**, 2013 May 31;8(5):e65607. doi: 10.1371/journal.
 21. Xiao S, Diao H, Zhao F, Li R, He N, and Ye X. Differential gene expression profiling of mouse uterine luminal epithelium during periimplantation. **Reproductive Science**, 2014 Mar;21(3):351-62. doi: 10.1177/1933719113497287.
 22. Diao H, Xiao S, Howerth E W, Zhao F, Li R, Ard MB, and Ye X. Broad gap junction blocker carbenoxolone disrupts uterine preparation for embryo implantation in mice. **Biology of Reproduction**, 2013 Aug 15;89(2):31. doi: 10.1095/biolreprod.113.110106.
 23. Diao H, Xiao S, Li R, Zhao F, and Ye X. Distinct spatiotemporal expression of serine proteases *Prss23* and *Prss35* in periimplantation mouse uterus and dispensable function of *Prss35* in fertility. **PLoS ONE**, 2013;8(2):e56757. doi: 10.1371/journal.pone.0056757.
 24. Zhao F, Li R, Xiao S, Diao H, Viveiros MM, Song X. and Ye X. Postweaning dietary exposure to zearalenone (ZEA), a mycotoxin, promotes puberty onset and disrupts early pregnancy events in female mice. **Toxicological Sciences**, 2013 Apr;132(2):431-42. doi: 10.1093/toxsci/kfs343.
 25. Xiao S, Diao H, Smith MA, Song X, Ye X. Pre-implantation exposure to bisphenol A (BPA) affects embryo transport, preimplantation embryo development, and uterine receptivity in mice. **Reproductive Toxicology**, 2011 Dec;32(4):434-41. doi: 10.1016/j.reprotox.2011.08.010.
 26. Diao H, Paria BC, Xiao S, Ye X. Temporal expression pattern of progesterone receptor in the uterine luminal epithelium suggests its requirement during early events of implantation. **Fertility Sterility**, 2011 May;95(6):2087-93. doi: 10.1016/j.fertnstert.2011.01.160.
 27. Diao H, Aplin JD, Xiao S, Chun J, Li Z, Chen S, Ye, X. Altered Spatiotemporal Expression of Collagen Types I, III, IV, and VI in *Lpar3*-Deficient Peri-Implantation Mouse Uterus. **Biology of Reproduction**, 2011 Feb;84(2):255-65. doi: 10.1095/biolreprod.110.086942.
 28. Diao H, Xiao S, Zhao F, and Ye X. Uterine luminal epithelium specific proline-rich acidic protein 1 (*PRAP1*) as a marker for successful embryo implantation. **Fertility Sterility**, 2010 Dec;94(7):2808-11.e1. doi: 10.1016/j.fertnstert.2010.06.034.
 29. Holladay SD, Xiao S, Diao H, Barber J, Nagy T, Ye X, Gogal RM Jr Perinatal bisphenol A exposure in C57BL6/129svj male mice: Potential altered cytokine /chemokine production in adulthood. **Int. J. Environ. Res. Public Health**; 2010 Jul;7(7):2845-52. doi: 10.3390/ijerph7072845.
 30. Diao H, Xiao S, Cui J, Chun J, Xu Y, and Ye X. Progesterone receptor-mediated upregulation of transthyretin (*TTR*) in pre-implantation mouse uterus. **Fertility Sterility**; 2010 May 15;93(8):2750-3. doi: 10.1016/j.fertnstert.2010.01.009.
 31. Xiao S, Wang P, and Zhang Y. Effect of genistein on cell growth of human breast cancer cell MCF-7. **Chinese Journal of Public Health**. 2009, 1(25):65-69.
 32. Xiao S, Wang P, and Zhang Y. Advances in study of isoflavone and breast cancer. **Chinese Journal of Public Health**. 2008, 5(24): 530-531.
 33. Liu ZH, Wang X, Wang HF, Gu Y, Yan L, Yang S, Xu J, Zhao X, Du X, Zang J, Xiao S, Jia, G. Acute toxicity of nano-sized zinc oxide in ICR mice via intratracheal instillation. **Journal of Environment Occupational Medicine**. 2008, 25 (4): 360-362.

INVITED CONFERENCE PRESENTATIONS

1. **Xiao S.** Reproductive Cycle-on-a-chip. *45th Annual Conference of International Embryo Technology Society (IETS). Pre-conference Symposium, Domestic Animal Biomedical Embryology Committee.* New Orleans. January 19-21, 2019.
2. **Xiao S.** The Use of Organ-on-a-Chip Technology for Female Reproductive Toxicity Screening. *Society of Toxicology (SOT) FutureToxIV.* Arlington, VA. November 14-16, 2018.
3. **Xiao S.** The Use of Microfluidic and 3D Printing Technologies in Female Fertility Preservation and Reproductive Toxicology. *30th anniversary of successful application in assisted reproductive technology.* March 30-April 1, Beijing, China.
4. **Xiao S.** A microfluidic culture model of the human reproductive tract: screening of female reproductive toxic chemicals. *FDA/SOR Colloquium on Emerging Toxicological Science Challenges in Food and Ingredient Safety.* US Food and Drug Administration (FDA), Washington DC, October, 24, 2017.
5. **Xiao S.** Microphysiological Modeling of the Female Reproductive Track. *57th Annual Meeting of the Society of Toxicology (SOT),* March 12-16, 2017. Baltimore, MD.
6. **Xiao S.** Oncofertility: Fertility preservation for young female cancer patients. *Annual symposium of women's fertility preservation.* October 18, 2017. Xiamen, Fujian, China.
7. **Xiao S.** Establishing an integrated ex-vivo female reproductive tract in the microfluidic platform: screening of reproductive toxic chemotherapeutics. *Annual symposium of women's fertility preservation.* October 18, 2017. Xiamen, Fujian, China.

INVITED SEMINARS

1. **Xiao S.** The use of multiple cutting-edge technologies to develop a high-throughput in vitro female reproductive toxicity screening platform. Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA. May 20-21, 2019.
2. **Xiao S.** The use of microfluidic technology for female reproductive toxicological study. School of Public Health, Nanjing Medical University. Nanjing, China. June 13, 2018.
3. **Xiao S.** Using the bioengineering methods to perform female reproductive toxicology research. *Department of Chemistry and Biochemistry, University of South Carolina.* Columbia, SC. February 20, 2018.
4. **Xiao S.** Engineering female ovarian cycle and reproductive tract for female reproductive toxicology studies. *Department of Cell Biology and Anatomy, School of Medicine, University of South Carolina,* Columbia, SC, February 19, 2017.

PRESENTATIONS AT CONFERENCES

1. Rogers HB, Zhang Y, Zhu J, Iwahata H, Wang Y, Fabre K, Maratea K, Woodruff TK, **Xiao S.** Testing the female reproductive toxicity of pharmaceutical compounds using tissue engineering and microfluidic culture technologies. *Society of Toxicology (SOT) FutureToxIV.* Arlington, VA. November 14-16, 2018 (Poster).
2. Andersen CL, Liu M, Wang Z, Ye X, **Xiao S.** Chemotherapeutic agent doxorubicin alters uterine gene expression in response to estrogen in ovariectomized CD-1 adult mice. Southeastern Society of Toxicology Annual Meeting (SESOT). October 25-26, 2018, Gainesville, FL (Poster).
3. Wang Y, Liu M, Zhang J, Liu Y, Kopp M, Zheng W, **Xiao S.** Multidrug resistance protein 1 deficiency promotes doxorubicin-induced ovarian toxicity in female mice. *51th Annual Meeting of the Society for Study of Reproduction (SSR),* July 10-13, 2018. New Orleans, LA (Poster).
4. Wang Y, Liu M, Zhang J, Liu Y, Kopp M, Zheng W, **Xiao S.** Multidrug resistance protein 1 deficiency promotes doxorubicin-induced ovarian toxicity in female mice. *2018 Triangle*

- Consortium for Reproductive Biology (TCRB)*, February 10, 2018. National Institute of Environmental Health Sciences (NIEHS), Durham, NC (Poster).
5. **Xiao S**, Zhang J, Liu M, Iwahata H, Rogers HB, Woodruff TK. Doxorubicin Has Dose-Dependent Toxicity on Mouse Ovarian Follicle Development, Hormone Secretion, and Oocyte Maturation. *50th Annual Meeting of the Society for Study of Reproduction*, June 13-16, 2017. Washington DC (Poster).
 6. **Xiao S**, Coppeta J, Isenberg B, Borenstein JT, Getsios S, Kim JJ, Pavone ME, Sefton, EC, Woodruff TK. Microfluidic platform supports mouse ovarian follicle development and recapitulates human 28-day menstrual cycle. *Annual Meeting of the Society of Toxicology*, March 14-18, 2016. New Orleans, LA. (Poster)
 7. **Xiao S**, and Woodruff TK. *In vitro* follicle growth support human oocyte meiotic maturation. *7th Annual Illinois Symposium on Reproductive Sciences*, University of Illinois, Urbana-Champaign, Oct 12th, 2015 (Platform presentation)
 8. Zhang J, **Xiao S**, Woodruff TK. *In vitro* exposure of doxorubicin inhibits mouse multilayer secondary follicle growth, survival, hormone secretion, and induces follicle apoptosis. *7th Annual Illinois Symposium on Reproductive Sciences*, University of Illinois, Urbana-Champaign, Oct 12th, 2015 (Poster)
 9. **Xiao S**, Coppeta J, Isenberg B, Borenstein JT, Getsios S, Kim JJ, Pavone ME, Sefton EC, Woodruff TK. Microfluidic platform supports mouse ovarian follicle development and recapitulates human 28-day menstrual cycle. *48th Annual Meeting of the Society for Study of Reproduction*, June 17-22, 2015. San Juan, Puerto Rico. (Poster)
 10. **Xiao S**, Duncan F, Bai L, Nguyen C, Shea L, Woodruff TK. Personalized follicle monitoring improves oocyte reproductive outcomes during encapsulated *in vitro* follicle growth (eIVFG) in mouse and human. National Centers for Translational Research In Reproduction and Infertility (NCTRI), May 19-20, National Institute of Health, Bethesda, MD (Platform presentation)
 11. **Xiao S**, and Woodruff TK. Personalized follicle monitoring improves oocyte reproductive outcomes during encapsulated *in vitro* follicle growth (eIVFG) in mouse and human. *34th Minisymposium on Reproductive Biology*, Jan 26, 2015. Chicago, IL (Platform presentation)
 12. **Xiao S**, Duncan F, Bai L, Nguyen C, Shea L, Woodruff T. Stage-specific follicle selection improves mouse oocyte meiotic and developmental outcomes during *in vitro* follicle growth (IVFG). *Gordon Conference Mammalian Reproduction*, August 10-15, 2014, New London, NH (Poster)
 13. **Xiao S**, Duncan F, Hornick J, Woodruff TK. Markers that predict oocyte meiotic competence during *in vitro* follicle growth. *Endocrine society annual meeting*, Chicago, IL, 2014 (Poster)
 14. **Xiao S**, Diao H, and Ye X. Bafilomycin A1, a V-ATPase Inhibitor, inhibits Embryo Implantation via Local Uterine Fat Pad Injection. *Southeast Society of Toxicology Annual Meeting*, October 8-9, 2012, Athens, GA. (Poster)
 15. El Zowalaty AE, **Xiao S**, Diao H, and Ye X. Expression of FXFD family of small ion transport regulators in wild type and *Lpar3^{-/-}* periimplantation mouse uterus. *Southeast Society of Toxicology Annual Meeting*, October 8-9, 2012, Athens, GA. (Poster)
 16. Li R, Diao H, **Xiao S**, Zhao F, and Ye X. Effects of Post-weaning Genistein Exposure on Uterine Development and Spermatogenesis. *Southeast Society of Toxicology Annual Meeting*, October 8-9, 2012, Athens, GA. (Poster)
 17. **Xiao S**, Diao H, and Ye X. Bafilomycin A1, a V-ATPase Inhibitor, inhibits Embryo Implantation via Local Uterine Fat Pad Injection. *45th Annual Meeting of the Society for Study of Reproduction*, August 12-15, 2012. State College, PA. (Poster)

18. Li R, Diao H, **Xiao S**, Zhao F, and Ye X. Effects of Post-weaning Genistein Exposure on Uterine Development and Spermatogenesis. *45th Annual Meeting of the Society for Study of Reproduction*, August 12-15, 2012. State College, PA. (Poster)
19. Diao H, **Xiao S**, and Ye X. Dual effects of RU486 on embryo implantation. 2nd SKLRB Symposia on "Frontiers in Reproductive Biology", May 6-11, 2012, Beijing, China. (Poster)
20. **Xiao S**, Diao H, and Ye X. Bafilomycin A1, a V-ATPase Inhibitor, inhibits Embryo Implantation via Local Uterine Fat Pad Injection. *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. April 13, 2012. Athens, GA. (Poster)
21. Li R, Diao H, **Xiao S**, Zhao F, and Ye X. Effects of Post-weaning Genistein Exposure on Uterine Development and Spermatogenesis. *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. April 13, 2012. Athens, GA. (Poster)
22. **Xiao S**, Diao H, Zhao F, and Ye X. Effects of preimplantation bisphenol-A (BPA) exposure on preimplantation embryo development and transport and uterine receptivity in mice. *44th Annual Meeting of the Society for Study of Reproduction*, July 31-August 4, 2011. Portland, OR. (Poster)
23. Diao H, **Xiao S**, and Ye X. Dose-response and time-course effects of RU486 on uterine progesterone receptor expression and embryo implantation. *44th Annual Meeting of the Society for Study of Reproduction*, July 31-August 4, 2011. Portland, OR. (Poster)
24. Zhao F, Diao H, **Xiao S**, Li R, and Ye, X. Effect of zearalenone (ZEA) on embryo implantation in mice. *44th Annual Meeting of the Society for Study of Reproduction*, July 31-August 4, 2011. Portland, OR. (Poster)
25. Li R, Diao H, **Xiao S**, Zhao F, and Ye, X. Distinct spatiotemporal expression of *Anpep* and *Olfm1* in mouse periimplantation uterus. *44th Annual Meeting of the Society for Study of Reproduction*, July 31-August 4, 2011. Portland, OR. (Poster)
26. Ye X, **Xiao S**, Diao H, and Zhao F. Effects of preimplantation bisphenol-A exposure on embryo transport, embryo implantation, and postnatal body weight in C57BL6 mice. *50th Annual Meeting of the Society of Toxicology*, March 6-10, 2011. Washington, D.C. (Poster)
27. **Xiao S**, Diao H, Zhao F, and Ye X. Effect of preimplantation Bisphenol-A exposure on uterine receptivity in mice. *Science Vet Med symposium*, October 14, 2010. University of Georgia, Athens, GA. (Platform presentation)
28. Zhao F, Diao H, **Xiao S**, Li R, and Ye X. Mechanism study of methoxychlor (MXC) on embryo implantation. *Science Vet Med symposium*, October 14, 2010. University of Georgia, Athens, GA. (Poster)
29. Li R, Diao H, **Xiao S**, Zhao F, and Ye X. Spatiotemporal expression and regulation of *Gpr128* and *Olfm1* in mouse uterus. *Science Vet Med symposium*, October 14, 2010. University of Georgia, Athens, GA. (Poster)
30. **Xiao S**, Diao H, Zhao F, and Ye X. Effect of preimplantation Bisphenol-A exposure on uterine receptivity in mice. *Southeastern Regional Society of Toxicology Annual Meeting*, October 11-12, 2010. University of Georgia, Athens, GA. (Poster)
31. Zhao F, Diao H, **Xiao S**, Li R, and Ye X. Mechanism study of methoxychlor (MXC) on embryo implantation. *Southeastern Regional Society of Toxicology Annual Meeting*, October 11-12, 2010. University of Georgia, Athens, GA. (Poster)
32. Li R, Diao H, **Xiao S**, Zhao F., and Ye, X. Spatiotemporal expression and regulation of *Gpr128* and *Olfm1* in mouse uterus. *Southeastern Regional Society of Toxicology Annual Meeting*, October 11-12, 2010. University of Georgia, Athens, GA. (Poster)
33. **Xiao S**, Diao H, Zhao F, and Ye X. Effect of preimplantation Bisphenol-A exposure on uterine receptivity in mice. *43th Annual Meeting of the Society for Study of Reproduction*, July 30-August 3, 2010. Milwaukee, WI. (Poster)

34. Ye X, Diao H, **Xiao S**, and Zhao F. Sustained progesterone receptor expression in day 4.5 LPA₃-deficient luminal epithelium. *43th Annual Meeting of the Society for Study of Reproduction*, July 30-August 3, 2010. Milwaukee, WI. (Poster)
35. Diao H, **Xiao S**, Zhao F, and Ye X. Proline-rich acidic protein 1 (*PRAP1*) as a marker for established uterine receptivity. *43th Annual Meeting of the Society for Study of Reproduction*, July 30-August 3, 2010. Milwaukee, WI. (Poster)
36. Zhao F, Diao, H, **Xiao S**, and Ye, X. Transcriptional regulation of *Lpar3* by progesterone receptor. *43th Annual Meeting of the Society for Study of Reproduction*, July 30-August 3, 2010. Milwaukee, WI. (Poster)
37. **Xiao S**, Diao H, and Ye X. Bisphenol-A affects uterine gene expression but has no adverse effect on uterine receptivity in mice. *49th Annual Meeting of the Society of Toxicology*, March 7-11, 2010. Salt Lake City, UT. (Poster)
38. **Xiao S**, Diao H, and Ye X. Effects of perinatal Bisphenol-A exposure in mice. *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. March 3, 2010. Athens, GA. (Platform presentation)
39. Zhao F, Diao H, **Xiao S**, and Ye X. Transcriptional regulation of *Lpar3* by progesterone receptor. *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. March 3, 2010. Athens, GA. (Poster)
40. Ye X, Chun J, **Xiao S**, and Diao H. Lysophosphatidic acid signaling in uterine receptivity and embryo spacing. *3rd Asia Pacific Congress on Controversies in Obstetrics, Gynecology and Infertility (COGI)*, November 12-15, 2009. Beijing, China. (Platform presentation)
41. **Xiao S**, Diao H, and Ye X. Perinatal exposure to Bisphenol-A via maternal treatment has no adverse effect on uterine receptivity of both mother and offspring mice. *42th Annual Meeting of the Society for Study of Reproduction*, July 18-22, 2009. Pittsburgh, PA. (Poster)
42. Diao H, **Xiao S**, and Ye X. Lysophosphatidic acid signaling in human luminal endometrial epithelial ECC-1 cell line. *42th Annual Meeting of the Society for Study of Reproduction*, July 18-22, 2009. Pittsburgh, PA. (Poster)
43. Ye X, Chun J, **Xiao S**, Diao, H. Potential biomarkers for uterine receptivity in LPA₃-deficient females. *42th Annual Meeting of the Society for Study of Reproduction*, July 18-22, 2009. Pittsburgh, PA. (Poster)
44. Ye X, **Xiao S**, Diao, H. Effects of perinatal Bisphenol-A exposure in mice. *48th Annual Meeting of the Society of Toxicology*, March 15-19, 2009. Baltimore, MD. (Poster)
45. **Xiao S**, Diao H, and Ye X. Effects of perinatal Bisphenol-A exposure in mice. *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. March 5, 2009. Athens, GA. (Poster)

PATENT

- Teresa K. Woodruff, Ji-Yong Julie Kim, Joanna E. Burdette, Spiro Getsios, Sevim Yildiz Arslan, **Shuo Xiao**, Jie Zhu. 3D Microphysiologic System. Appl. No.: 14/607,862

PROFESSIONAL AFFILIATIONS

- Society of Toxicology (SOT) (2009 – present)
- Society for the Study of Reproduction (SSR) (2009 – present)
- Society of Endocrinology (ENDO) (2014-present)

HONORS and AWARDS

- Best Reproductive and Developmental Toxicology Paper in *Toxicology Sciences* in 2017, Reproductive and Developmental Toxicology Specialty Section (RDTSC), Society of Toxicology (SOT) Annual Meeting, San Antonio, TX, 2018.
- Charles River Best Abstract Award, American Association of Chinese in Toxicology (AACT), Society of Toxicology (SOT) Annual Meeting, Baltimore, MD, 2017.
- Best postdoctoral publication award, 2016 Midwest-SOT annual meeting, Chicago, IL, April, 15th, 2016.
- Postdoctoral Professional Developmental Travel Award at Northwestern University, Chicago, IL, 2016
- 1st place oral presentation award, 7th Annual Illinois Symposium on Reproductive Sciences, University of Illinois, Urbana-Champaign, Oct 12th, 2015
- Larry Ewing Memorial Trainee Travel Award (LEMTTF), *Annual Meeting of the Society for Study of Reproduction*, San Juan, Puerto Rico, 2015
- National Centers for Translational Research In Reproduction and Infertility (NCTRI) travel award, National Institute of Health, Bethesda, MD, May 19-20, 2015
- Constance Campbell Best Oral Presentation Award, Minisymposium on Reproductive Biology, Northwestern University, Chicago, IL, 2015
- Constance Campbell Trainee Travel (C2T2) Award, Center at Reproductive Science of Northwestern University, Chicago, IL, 2015
- Postdoctoral Professional Developmental Travel Award at Northwestern University, Chicago, IL, 2015
- Frontiers in Reproduction Abstract Award, ICE/ENDO, Chicago, IL, 2014
- Dissertation Completion Award (\$12,000), Graduate School, University of Georgia, 2012-2013
- First Place, Student Poster Presentation Award, *Southeast Society of Toxicology Annual Meeting*, Athens, GA, 2012
- Second Place, Student Poster Presentation Award, *University of Georgia Interdisciplinary Toxicology Program Annual Retreat*. Athens, GA, 2012
- "Frontiers in Reproduction" Scholarship (\$5,000), Marine Biological Laboratory, Woods Hole, MA, 2011
- Larry Ewing Memorial Trainee Travel Award (LEMTTF), *44th Annual Meeting of the Society for Study of Reproduction*, Portland, OR, 2011
- ITP Student Research Grant (\$3,500), Interdisciplinary Toxicology Program, University of Georgia, Athens, GA, 2011
- Larry Ewing Memorial Trainee Travel Award (LEMTTF), *43th Annual Meeting of the Society for Study of Reproduction*, Milwaukee, WI, 2010
- First Place, Student Poster Presentation Award, *Southeastern Regional Society of Toxicology Annual Meeting*, Athens, GA, 2010
- Duomeizi Scholarship, Peking University, Beijing, China, 2007
- Liu Shize Fellowship, Peking University, Beijing, China, 2005
- Renhe Fellowship, Peking University, Beijing, China, 2002
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PROFESSIONAL SERVICES

- Editorial Board Member, *Reproductive Toxicology* (2017-Present)
- Editorial Board Member, *Journal of Fertility Preservation* (2019-Present)
- Faculty Senate of Admission Committee of University of South Carolina (2017-Present)

- Program Committee member, Society for Society of Reproduction (2018-Present)
- Advisor of Trainee Affairs, Society for Society of Reproduction (2017-Present)
- Board officer (Postdoctoral Representative) of Midwest Regional Chapter of Society of Toxicology (SOT, 2014-2017)
- Program Committee member (Trainee representatives), Society for Society of Reproduction (2015-2017)
- President of The University of Georgia Student Toxicology Society (UGATOX) (2012-2013)
- Volunteer at the 44th Annual Meeting of the Society for Study of Reproduction, July 31-August 4, 2011. Portland, OR
- Volunteer at the 43th Annual Meeting of the Society for Study of Reproduction, July 30-August 3, 2010. Milwaukee, WI

PEER-REVIEW SERVICE FOR SCIENTIFIC JOURNALS

- *Nature Communications*
- *Biology of Reproduction*
- *Toxicological Sciences*
- *Reproductive Toxicology*
- *Developmental Biology*
- *Reproduction*
- *Reproductive Biology and Endocrinology*
- *Frontiers in Endocrinology*
- *PLOS One*
- *Experimental Biology and Medicine*
- *Journal of Assisted Reproduction and Genetics*
- *Cell Biology International*
- *Scientific Reports*
- *Carcinogenesis*

RESEARCH SUPPORT

ONGOING RESEARCH SUPPORT

NIH/NIEHS

K01 ES030014

Xiao (PI)

12/15/2018-11/30/2021

Development of a High-Throughput Platform for Screening Ovotoxic Chemicals

The goal of this project is to use the vitrification technology and a high-content confocal imaging system to establish a high-throughput female reproductive toxicity platform.

Role: **PI**

NSF

1832901

Xiao (PI)

10/01/2018-09/30/2020

R11 Track-4: Using the cryopreservation and microfluidic technologies to engineer bottlenose dolphin ovarian function in vitro for testing marine contaminants' female reproductive toxicity

The goal of this project is to cryopreserve the bottlenose dolphin ovarian tissues to study how marine contaminants will adversely impact female bottlenose dolphin's reproductive health.

Role: **PI**

NIH/NIGMS

P20GM103641

Nagarkatti (PI)

09/01/2018-05/31/2023

Center for Dietary Supplement and Inflammation Phase-2

The goal of this Center Project is to investigate how botanicals can attenuate inflammation and be used to prevent and/or treat inflammatory diseases.

Pilot Project: The effect of Sparstolonin B (SsnB) supplementation on attenuating doxorubicin (DOX)-induced ovarian inflammation

Role: ***Pilot Project PI***

NIH/NIEHS

P01 ES028942-01

Scott (PI)

09/30/2018-06/30/2023

Interactions of Climate Change on Oceans and Human Health (CAPICCOHH): Assessment of Effects on Ocean Health Related Illness and Disease and Development of Prevention Strategies to Better Protect Public Health

Project 4: Effect of Selected Climate Change-Affected Pathogens and Pollutants on Critical Organs, Inflammation and Human Disease

The goal of this project is to investigate the impact and link of climate change-induced toxins on human health including both of liver inflammation and female ovarian functions and fertility.

Role: ***Co-I of Project 4***

Arnold School of Public Health

No Award Number

Xiao (PI)

01/01/2017-12/30/19

Arnold School of Public Health Start-Up Research Fund

This new faculty start-up fund is to support the establishment of my Reproductive Health & Toxicology Laboratory including purchase of equipment, supplies, reagents, personnel and the preliminary works of my research studies

Role: ***PI***

COMPLETED RESEARCH SUPPORT

NIH/NIEHS/NCATS (Prime: Northwestern University)

UH3TR001207

Woodruff (PI)

02/01/2017-06/30/2017

Pilot project: Establish a high-throughput *in vitro* female reproductive toxicity screening system

The project aimed to use the *in vitro* follicle growth model and microfluidic technology to establish the high throughput female reproductive toxicity screening system

Role: ***PI***