

PUBLICATIONS

News Releases

1. **Gao H**, Yallampalli U, Yallampalli C. How a Low-Protein Diet Predisposes Offspring to Adulthood Hypertension. *Science Daily*; July 25, 2012.
2. **Gao H**, Yallampalli U, Yallampalli C. High protein and low protein diet health effects. *Examiner*; April 26, 2013.
3. **Gao H**, Liebenthal DA, Yallampalli U, Yallampalli C. Adrenomedullin promotes trophoblast stem cell differentiation. *World Biomedical Frontiers*; July 11, 2015

Book Chapter

Gao H. (2020) Amino Acids in Reproductive Nutrition and Health. In: Wu G. (eds) Amino Acids in Nutrition and Health. Advances in Experimental Medicine and Biology, vol 1265. Springer, Cham. https://doi.org/10.1007/978-3-030-45328-2_7

Peer-reviewed scientific articles

1. She W, Wang B, Yao R, Goetzinger K, Wu S, **Gao H**, Yang P. Obesity impacts placental function through activation of p-IRE1a-XBP1s signaling. *Front Cell Dev Biol.* 2023 PMID: 36819099
2. Wu B, Tian S, Hu R, **Gao H**, Yan B, Wang H, Zheng Y, Zhang Y, Wang Y. Unbalanced development and progressive repair in human early mosaic and chimeric embryos. *Medical Hypotheses.* 2022; 168, 110967
3. Wu B, Chen Y, Clarke R, Akala E, Yang P, He B, **Gao H***. AMPK signaling regulates mitophagy and mitochondrial functions in human trophoblast cell line BeWo. *Frontiers in Bioscience-Landmark.* 2022; 27 (4):118. PMID: 35468677 (*Corresponding author)
4. Williams N, Vella R, Zhou Y, **Gao H**, Mass K, Townsel C, Campbell W, Luo G. Investigating the Origin of the Fetal Gut and Placenta Microbiome in Twins. *Journal of Maternal-Fetal & Neonatal Medicine.* 2022; 35:7025-7035. PMID: 34130585
5. Yang H, He B, Yallampalli C, **Gao H***. Fetal macrosomia in a Hispanic and Latinx predominant cohort and altered expressions of genes related to placental lipid transport and metabolism. *Int J Obes (Lond).* 2020; 44:1743-1752. PMID: 32494035 (*Corresponding author)
6. Kramer AC, Steinhauser CB, Gao H, Seo H, McLendon BA, Burghardt RC, Wu G, Bazer FW, Johnson GA. Steroids Regulate SLC2A1 and SLC2A3 to Deliver Glucose into Trophoblast for Metabolism via Glycolysis. *Endocrinology.* 2020; 161: bqaa098. PMID: 32556218
7. Chen X, Wu B, Wang S, Liu J, **Gao H**, Zhou F, Nan N, Zhang B, Wang J, Xu X, He B. Hypoxia: involved but not essential for endometrial breakdown in mouse menstrual-like model. *Reproduction.* 2020; 159:133-144. PMID: 31917674
8. **Gao H***. Amino Acids in Reproductive Nutrition and Production. *Adv Exp Med Biol.* 2020;1265:111-131. PMID: 32761573 (*Corresponding author)
9. Wang SF, Chen XH, He B, Yin DD, **Gao H**, Zhao HQ, Nan N, Guo SG, Liu JB, Wu B, Xu XB. Acute restraint stress triggers progesterone withdrawal and endometrial breakdown and shedding through corticosterone stimulation in mouse menstrual-like model. *Reproduction* 2019; 157:149-161. PMID: 30601756
10. **Gao H***, Ho E, Balakrishnan M, Yechoor V, Yallampalli C. Decreased insulin secretion in pregnant rats fed a low protein diet. *Biol Reprod* 2017; 97:627-635. PMID: 29025046 (*Corresponding author)
11. **Gao H**, Ho E, Yallampalli C. Ghrelin doesn't limit insulin release in pregnant rats fed low protein diet. *Front Biosci.* 2017; 22:1523-1533. PMID: 28410130

12. Ghaghada KB, Starosolski ZA, Bhayana S, Stupin I, Patel CV, Bhavane RC, **Gao H**, Bednov A, Yallampalli C, George V, Annapragada A. Pre-clinical evaluation of a nanoparticle-based blood-pool contrast agent for MR imaging of the placenta. *Placenta* 2017; 57:60–70. PMID: 28864020
13. Steinhäuser CB, Wing TT, **Gao H**, Li X, Burghardt RC, Wu G, Bazer FW, Johnson GA. Identification of appropriate reference genes for qPCR analyses of placental expression of SLC7A3 and induction of SLC5A1 in porcine endometrium. *Placenta* 2017; 52: 1-9. PMID: 28454689
14. Shetty AN, Pautler R, Ghaghada K, Rendon D, **Gao H**, Starosolski Z, Bhavane R, Patel C, Annapragada A, Yallampalli C, Lee W. Corrigendum: A liposomal Gd contrast agent does not cross the mouse placental barrier. *Sci Rep.* 2017; 7:39724. PMID: 28205586
15. Shetty AN, Pautler R, Ghaghada K, Rendon D, **Gao H**, Starosolski Z, Bhavane R, Patel C, Annapragada A, Yallampalli C, Lee W. A liposomal Gd contrast agent does not cross the mouse placental barrier. *Sci Rep.* 2016; 6:27863. PMID: 27298076
16. **Gao H**, Tanchico DT, Yallampalli U, Yallampalli C. A Low-protein diet enhances angiotensin II production in the lung of pregnant rats but not nonpregnant rats. *J Pregnancy.* 2016; 4293431. PMID: 27195150
17. **Gao H**, Sisley S, Yallampalli C. Blunted hypothalamic ghrelin signaling reduces diet intake in rats fed a low protein diet in late pregnancy. *Physiol Rep.* 2015; 3(12). PMID: 26660550
18. **Gao H**, Tanchico DT, Yallampalli U, Balakrishnan MP, Yallampalli C. Ghrelin signaling in appetite regulation is uncoupled in pregnant rats fed a low protein diet. *Physiol Rep.* 2015; 3(4). PMID: 25907788
19. **Gao H**, Liebenthal DA, Yallampalli U, Yallampalli C. Adrenomedullin promotes trophoblast stem cell differentiation. *Biol Reprod.* 2014; 91(3):65 PMID: 25061099
20. Kong X, Wang X, Yin Y, Li X, **Gao H**, Bazer FW, and Wu G. Putrescine Stimulates the mTOR Signaling Pathway and Protein synthesis in Porcine Trophectoderm Cells. *Biol Reprod.* 2014; 91(5):106. PMID: 25253735
21. Wu B, Chen X, He B, Liu S, Li Y, Wang Q, **Gao H**, Wang S, Liu J, Zhang S, Xu X, Wang J. ROS are critical for endometrial breakdown via NF- κ B-COX-2 signaling in a female mouse menstrual-like model. *Endocrinology.* 2014; 155(9):3638-48. PMID: 24926822
22. Kim J, Song G, Wu G, **Gao H**, Johnson GA, and Bazer FW. Arginine, Leucine, and Glutamine Stimulate Proliferation of Porcine Trophectoderm Cells Through the MTOR-RPS6K-RPS6-EIF4EBP1 Signal Transduction Pathway. *Biol Reprod* 2013; 88:113. PMID:23486913
23. **Gao H**, Yallampalli U, Yallampalli C. Gestational Protein Restriction Increases Angiotensin II Production in Rat Lung. *Biol Reprod* 2013; 88:64. PMID: 23365412
24. **Gao H**, Yallampalli U, Yallampalli C. Gestational protein restriction affects trophoblast differentiation. *Front Biosci (Elite Ed).* 2013; 5:591-601. PMID: 23277015
25. **Gao H**, Yallampalli U, Yallampalli C. Gestational Protein Restriction Reduces Expression of Hsd17b2 in Rat Placental Labyrinth. *Biol Reprod* 2012; 87(3):68. PMID: 22837477
26. Sathishkumar K, Balakrishnan M, Chinnathambi V, **Gao H**, Yallampalli C. Temporal alterations in vascular angiotensin receptors and vasomotor responses in offspring of protein-restricted rat dams. *Am J Obstet Gynecol* (2012) 206(6):507. PMID: 22537420
27. **Gao H**, Kunju Reddiar Sathishkumar, Uma Yallampalli, Meena Balakrishnan, Xilong Li, Guoyao Wu, Chandra Yallampalli. Maternal protein restriction regulates IGF2 system in placental labyrinth. *Front Biosci (Elite Ed).* 2012; 4:1434-50. PMID: 22201967
28. **Gao H**, Yallampalli U, Yallampalli C. Maternal Protein Restriction Reduces Expression of Angiotensin I Converting Enzyme 2 in Rat Placental Labyrinth Zone in Late Pregnancy. *Biol Reprod* 2012; 86(2):31. PMID: 22011389
29. **Gao H**, Yallampalli U, Yallampalli C. Protein Restriction to Pregnant Rats Increases the Plasma Levels of Angiotensin II and Expression of Angiotensin II Receptors in Uterine Arteries. *Biol Reprod* 2012; 86(3):68. PMID: 22088913

30. Kong X, Tan B, Yin Y, **Gao H**, Li X, Jaeger LA, Bazer FW, and Wu G. Arginine stimulates the mTOR signaling pathway and protein synthesis in porcine trophectoderm cells. *J Nutr Biochem* 2012 23:1178-83. PMID: 22137265
31. Sathishkumar K, Elkins R, Chinnathambi V, **Gao H**, Hankins GDV, Yallampalli C. Prenatal testosterone-induced fetal growth restriction is associated with down-regulation of rat placental amino acid transport. *Reprod Biol Endocrinol* 2011; 9:110. PMID:21812961
32. Bazer FW, Song G, Kim J, Erikson DW, Johnson GA, Burghardt RC, **Gao H**, Satterfield MC, Spencer TE, and Wu G. MTOR cell signaling: Effects of select nutrients and secreted phosphoprotein 1 on development of mammalian conceptuses. *Mol Cell Endocrinol* 2011; 354(1-2):22-33. PMID: 21907263
33. Ross GR, Yallampalli U, Gangula PR, Reed L, Sathishkumar K, **Gao H**, Chauhan M, Yallampalli C. Adrenomedullin relaxes rat uterine artery: mechanisms and influence of pregnancy and estradiol-17 β . *Endocrinology* 2010; 151:4485-93. PMID: 20631002
34. McKnight JR, Satterfield MC, Li X, **Gao H**, Wang J, Li D, Wu G. Obesity in pregnancy: problems and potential solutions. *Front Biosci* 2010; 3:442-56. PMID: 21196324
35. **Gao H**, Spencer TE, Wu G, Bazer FW. Uteroferrin (ACP5) in the ovine uterus: I. regulation by pregnancy and progesterone. *J Anim Sci Biotech* 2010; 1: 137-50.
36. Satterfield MC, **Gao H**, Li X, Wu G, Johnson GA, Spencer TE, Bazer FW. Select nutrients and their associated transporters are increased in the ovine uterus following early progesterone administration. *Biol Reprod* 2010; 82: 224-31. PMID: 19696016.
37. Tan B, Yin Y, Kong X, Li P, Li X, **Gao H**, Li X, Huang R, Wu G. L-Arginine stimulates proliferation and prevents endotoxin-induced death of intestinal cells. *Amino Acids* 2010; 38: 1227-35. PMID: 19669080.
38. Bazer FW, **Gao H**, Johnson GA, Wu G, Bailey DW, Burghardt RC. Select nutrients and glucose transporters in pig uteri and conceptuses. *Soc Reprod Fertil Suppl.* 2009; 66:335-6. PMID: 19848301.
39. Tang SS, **Gao H**, Zhao Y, Ma S. Aneuploidy and DNA fragmentation in morphologically abnormal sperm. *Int J Androl* 2009; 32: 1–18. PMID: 19732195.
40. **Gao H**, Wu G, Spencer TE, Johnson GA, Li X, Bazer FW. Select nutrients in the ovine uterine lumen: I. Comparison of amino acids, glucose and ions in uterine fluids from cyclic and pregnant ewes. *Biol Reprod* 2009; 80: 86-93. PMID: 18753605.
41. **Gao H**, Wu G, Spencer TE, Johnson GA, Bazer FW. Select nutrients in the ovine uterine lumen: II. Glucose transporters in the uterus and peri-implantation conceptuses. *Biol Reprod* 2009; 80: 94-104. PMID: 18753604.
42. **Gao H**, Wu G, Spencer TE, Johnson GA, Bazer FW. Select nutrients in the ovine uterine lumen: III. Cationic amino acid transporters in ovine uterus and peri-implantation conceptuses. *Biol Reprod* 2009; 80:602-9. PMID: 19038856.
43. **Gao H**, Wu G, Spencer TE, Johnson GA, Bazer FW. Select nutrients in the ovine uterine lumen: IV. Neutral and acidic amino acid transporters in ovine uterus and peri-implantation conceptuses. *Biol Reprod* 2009; 80: 1196-208. PMID: 19176878.
44. **Gao H**, Wu G, Spencer TE, Johnson GA, Bazer FW. Select nutrients in the ovine uterine lumen: V. Nitric oxide synthase, GTP cyclohydrolase and ornithine decarboxylase in ovine uteri and peri-implantation conceptuses. *Biol Reprod* 2009; 81:67-76. PMID: 19246319.
45. **Gao H**, Wu G, Spencer TE, Johnson GA, Bazer FW. Select nutrients in the ovine uterine lumen: VI. Expression of FK506-binding protein 12-rapamycin complex-associated protein 1 (FRAP1) and associated regulators and effectors of mTORC1 and mTORC2 complexes in ovine uteri and peri-implantation conceptuses. *Biol Reprod* 2009; 81:87-100. PMID: 19299312.
46. Li X, Bazer FW, **Gao H**, Jobgen W, Johnson GA, Li P, McKnight JR, Satterfield MC, Spencer TE, Wu G. Amino acids and gaseous signaling. *Amino Acids.* 2009; 37:65-78. PMID: 19266154.

47. Chen L, Li P, Wang J, Li X, **Gao H**, Yin Y, Hou Y, Wu G. Catabolism of nutritionally essential amino acids in developing porcine enterocytes. *Amino Acids*. 2009; 37: 143-52. PMID: 19291365.
48. Jobgen WS, Fu WJ, **Gao H**, Li P, Meininger CJ, Smith SB, Spencer TE, Wu G. High fat feeding and dietary L-arginine supplementation differentially regulate gene expression in rat white adipose tissue. *Amino Acids* 2009; 37: 187-98. PMID: 19212806.
49. Wu G, Bazer FW, Datta S, **Gao H**, Johnson GA, Lassala A, Li P, Satterfield MC, Spencer TE. Intrauterine growth retardation in livestock: Implications, mechanisms and solutions. *Arch Animal Breeding* 2008; 51: Special Issue, 4-10.
50. Kim J, Song G, **Gao H**, Farmer JL, Satterfield MC, Burghardt RC, Wu G, Johnson GA, Spencer TE, Bazer FW. Insulin-like growth factor 2 (IGF2) activates PI3K-AKT1 and MAPK cell signaling pathways and stimulates proliferation and migration of ovine trophectoderm cells. *Endocrinology* 2008; 149: 3085-3094. PMID: 18339715.
51. Kirkpatrick G, Ferguson KA, **Gao H**, Tang SS, Chow V, Ho Yuen B, Ma S. A comparison of sperm aneuploidy rates between infertile men with normal and abnormal karyotypes. *Human Reprod* 2008; 23: 1679-83. PMID: 18436578.
52. Hatakeyama C, **Gao H**, Harmer K, Ma S. Meiotic segregation patterns and ICSI pregnancy outcome of a rare (13;21) Robertsonian translocation carrier: a case report. *Human Reprod* 2006; 21: 976-9. PMID: 16361287.
53. Tang SS, **Gao H**, Robinson WP, Ho Yuen B, Ma S. An association between sex chromosomal aneuploidy in sperm and an abortus with 45, X of paternal origin: possible transmission of chromosomal abnormalities through ICSI. *Human Reprod* 2004; 19: 147-51. PMID: 14688173.
<https://www.ncbi.nlm.nih.gov/myncbi/haijun.gao.2/bibliography/public/>