

Curriculum Vitae

Personal Information

Name: Lorena Machado Amaral

Gender: Female

Date of birth: July, 20th1984

Language: Portuguese (native speaker)

English (good)

Contact Information::

Phone: +1 (601) 826-3503

E-mail: lmamaral@umc.edu or

lore_toc@hotmail.com

Formal Education/Degree

2017-Pr: Instructor- Department Pharmacology/Toxicology, University of Mississippi Medical Center (UMMC) – Jackson, USA

2016-2017: Scientist— Department Pharmacology/Toxicology, University of Mississippi Medical Center (UMMC) – Jackson, USA

2013-2016: Post-Doctoral Research Fellow – Department Pharmacology/Toxicology, University of Mississippi Medical Center (UMMC) – Jackson, USA

Mentor: Prof. Dr. Birdie B LaMarca

2010-2012: Ph.D.-Department of Pharmacology at FMRP, Laboratory of Cardiovascular Pharmacology / Pharmacogenetics, University of Sao Paulo(USP), Ribeirao Preto, Brazil

Supervisor: Prof. Dr. Jose E. Tanus-Santos

Date of degree: November 27th, 2012

Grantee from: “Fundacao de Amparo a Pesquisa de Sao Paulo” (FAPESP) – Sao Paulo, Brazil

Project title: Effects of inhibiting of inducible nitric oxide synthase in the pathophysiology of experimental preeclampsia

Keywords: preeclampsia, inducible nitric oxide synthase (iNOS), stress oxidative

Major Area: Biological Sciences / **Area:** Pharmacology

2009 - 2010 M.A.- Department of Pharmacology at FMRP, Laboratory of Cardiovascular Pharmacology / Pharmacogenetics University of Sao Paulo (USP), Ribeirao Preto, Brazil

Date of degree: December 8th, 2010

Supervisor: Prof. Dr. Jose E. Tanus-Santos

Grantee from: “Conselho Nacional de Desenvolvimento Cientifico e Tecnologico” (CNPq)

Project title: Effects of genetic polymorphisms of iNOS on the susceptibility to hypertensive diseases of pregnancy

Keywords: preeclampsia, polymorphisms, inducible nitric oxide synthase (iNOS)

Major Area: Biological Sciences / **Area:** Pharmacology

2004-2008: Graduation in Pharmacy – Federal University of Juiz de Fora, Faculty of Pharmacy, Juiz de Fora, Brazil

Professional Experience

2004-08 Pharmacist Course (Pharm.D)- University of Juiz de Fora, Brazil

2005-08 Scientific initiation- Department of Microbiology, Faculty of Pharmacy, Federal University of Juiz de Fora, Juiz de Fora, Brazil

2007-08 Instructor in Pharmacy course at Federal University of Juiz de Fora, MG, Brazil

2009-10 Master's degree-Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Ribeirao Preto, Brazil

2011-12 Instructor in Chemistry course at Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Ribeirao Preto, Brazil

2010-12 Doctorate (Ph.D.)-Faculty of Medicine of Ribeirao Preto, University of Sao Paulo, Ribeirao Preto, Brazil

2013-16 Postdoctoral Research Fellow – Department of Pharmacology, School of Medicine, University of Mississippi Medical Center, Jackson, USA

2016-17 Scientist— Department Pharmacology/Toxicology, University of Mississippi Medical Center (UMMC) – Jackson, USA
2017- Pr Instructor- Department Pharmacology/Toxicology, University of Mississippi Medical Center (UMMC) – Jackson, USA

Academic honors or Awards:

2017: APS Minority Travel Fellowship Awards, Chicago, IL, USA.
2017: Underrepresented Postdoctoral Scientist Travel Award, Chicago, IL, USA.
2016: 20th World Congress of International Society for the Study Hypertension in Pregnancy Travel Award, Sao Paulo, Brazil
2015: Best abstract of AHA Specialty Conferences at Scientific Sessions, Orlando, FL, USA.
2015: Annual Hypertension Conference Travel Awards for New Investigators, Whashington, D.C., USA
2015: WEH/AJP: Regulatory, Integrative, and Comparative Trainee Abstract Award, Boston, USA
2015: Caroline tum Suden/Hellebrandt Professional Opportunity Award, Boston, USA
2014: International Society for Study of Hypertension in Pregnancy President Award: The Most Outstanding Basic Science Oral Presentation in Relation to the Study of Hypertension in Pregnancy, New Orleans, USA
2014: International Society for Study of Hypertension in Pregnancy New Investigator Travel Award, New Orleans, USA
2014: The American Physiological Society Water and Electrolyte Homeostasis Postdoctoral Research with Distinction Award, San Diego, USA

Invited Talks

2013 : Progesterone supplementation attenuates hypertension and AT1-AA in response to elevated IL-6 during pregnancy". 3rd ISH New Investigators' Symposium on Hypertension and Cardiovascular Disease. New Orleans, USA
2014: Progesterone supplementation improves blood pressure and uterine artery resistance in response to placental ischemia during pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, USA
2014: 17- Hydroxyprogesterone attenuates hypertension and uterine artery resistance in response to reduced uterine perfusion pressure (RUPP) in pregnant rats." International Society for Study of Hypertension in Pregnancy (ISSHP), New Orleans, USA
2015: Early administration of 17-hydroxyprogesterone caproate improves fetal growth restriction possibly by reducing sFlt-1 and placental cytolytic NK cells in response to placental ischemia during pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, Whashington, D.C., USA
2016: 17-hydroxyprogesterone caproate improves fetal growth restriction possibly by reducing sFlt-1 and placental cytolytic NK cells in the Reduced Uterine Perfusion Pressure (RUPP) rat model of Preeclampsia. 20th World Congress of International Society for the Study Hypertension in Pregnancy Travel Award, Sao Paulo, Brazil

Services (Selected)

2014 Science Fair Judge for Local and District High School Science Fairs
2014-Pr Secondary mentor for Base-Pair students
2013-14 American Physiological Society's Physiology Understand (PhUn) Week Outreach
2014-Pr Instructor in Research Tools Molecular Biology MFM Fellows courses at University of Mississippi Medical Center (Jackson, MS)
2014-Pr Instructor in Medical Pharmacology course at University of Mississippi Medical Center (Jackson, MS)
2017- Bruce Award judges for Experimental Biology 2017
2017- ASPET mentoring program for Experimental Biology

Memberships

2009-11 Brazilian Society for Pharmacology and Experimental Therapeutics
2013-Pr American Heart Association

- 2013-Pr** American Society of Physiology
2014-Pr International Society of Hypertension (ISH)
2014-Pr International Society for Study of Hypertension in Pregnancy (ISSHP)
2014-Pr American Society for Pharmacology and Experimental Therapeutics (ASPET)
2017-Pr GWIMS Membership Committee

Peer-reviewed Original Papers (37 total)

- 37- Amaral LM**, Jessica L.Faulkner, Jamil Elfarra, Denise C. Cornelius,Mark W. Cunningham, Tarek Ibrahim,Venkata Ramana Vaka, Jessica McKenzie , Babbette LaMarca. Continued Investigation Into 17-OHPC: Results from the Preclinical RUPP Rat Model of Preeclampsia." Hypertension. 2017, *in press*.
- 36-** Elfarra J, **Amaral LM**, McCalmon M, Scott JD, Cunningham MW Jr, Gnam A, Ibrahim T, LaMarca B, Cornelius DC. Natural Killer Cells Mediate Pathophysiology in Response to Reduced Uterine Perfusion Pressure. Clin Sci (Lond). 2017 Oct 17. pii: CS20171118.
- 35- Amaral LM**, Wallace K, Owens M, LaMarca B. Pathophysiology and Current Clinical Management of Preeclampsia. Curr Hypertens Rep. 2017 Aug; 19(8):61.
- 34-** Ibrahim T, Przybyl L, Harmon AC, **Amaral LM**, Faulkner JL, Cornelius DC, Cunningham MW, Hünig T, Herse F, Wallukat G, Dechend R, LaMarca B. Am J Reprod Immunol. 2017 Jul 6. doi: 10.1111/aji.12724. Proliferation of endogenous regulatory T cells improve the pathophysiology associated with the placental ischaemia of pregnancy.
- 33-** Faulkner JL, **Amaral LM**, Cornelius DC, Cunningham MW Jr, Ibrahim T, Heep A, Campbell N, Usry N, Wallace K, Herse F, Dechend R, LaMarca BD. Vitamin D supplementation reduces some AT1-AA induced downstream targets implicated in preeclampsia including hypertension. *Am J Physiol Regul Integr Comp Physiol*. 2017; 312(1):R125-R131.
- 32-** Cornelius DC, **Amaral LM**, Wallace K, Campbell N, Thomas AJ, Scott J, Herse F,Wallukat G, Dechend R, LaMarca BD. Reduced Uterine Perfusion Pressure T-helper 17 cells cause Pathophysiology Associated with Preeclampsia during Pregnancy. *Am J Physiol Regul Integr Comp Physiol*. 2016; 311(6):R1192-R1199.
- 31-** Santiago-Font JA, **Amaral LM**, Faulkner JL, Ibrahim T, Vaka VR, Cunningham MW Jr, LaMarca BD. Serelaxin improves the pathophysiology of placental ischemia in the Reduced Uterine Perfusion Pressure (RUPP) rat model of Preeclampsia. *Am J Physiol Regul Integr Comp Physiol*. 2016 Dec 1; 311(6):R1158-R1163.
- 30-** Cunningham MW Jr, Williams JM, **Amaral L**, Usry N, Wallukat G, Dechend R, LaMarca B. Agonistic Autoantibodies to the Angiotensin II Type 1 Receptor Enhance Angiotensin II Induced Renal Vascular Sensitivity and Reduce Renal Function During Pregnancy. Hypertension. 2016 Nov; 68(5):1308-1313
- 29-** Luizon MR, Palei AC, Belo VA, **Amaral LM**, Lacchini R, Duarte G, Cavalli RC, Sandrim VC, Tanus-Santos JE. Gene-gene interactions in the NAMPT pathway, plasma visfatin/NAMPT levels, and antihypertensive therapy responsiveness in hypertensive disorders of pregnancy. *Pharmacogenomics J*. 2017; 17(5):427-434.
- 28-** LaMarca BD, Cornelius DC, Harmon AC, **Amaral LM**, Cunningham MW Jr, Faulkner JL, Wallace K. Identifying Immune Mechanisms Mediating the Hypertension During Preeclampsia. *Am J Physiol Regul Integr Comp Physiol*. 2016 Jul 1; 311(1):R1-9.
- 27-** LaMarca B, **Amaral LM**, Harmon AC, Cornelius DC, Faulkner JL, Cunningham MW Jr. Placental Ischemia and Resultant Phenotype in Animal Models of Preeclampsia. *Curr Hypertens Rep*. 2016 Apr;18(5):38.
- 26-** Jorge Neto SD, Machado JS, Araujo Júnior E, Palei AC, Amaral LM, Tanus-Santos JE, Marcolin AC, Duarte G, Sandrim VC, Cavalli RC. Longitudinal assessment of maternal-fetal Doppler parameters and maternal plasma level of matrix metalloproteinases 2 and 9. *J Matern Fetal Neonatal Med*. 2016 Feb 8:1-17 (Ahead of print).
- 25-** Harmon AC, Cornelius DC, **Amaral LM**, Faulkner JL, Cunningham MW Jr, Wallace K¹, LaMarca B. The role of inflammation in the pathology of preeclampsia. Clin Sci (Lond).

2016 Mar 1; 130 (6):409-19.

24- Faulkner JL, Cornelius DC, **Amaral LM**, Harmon AC, Cunningham M W Jr, Darby MM, Ibrahim T, Thomas DS, Herse F, Wallukat G, Dechend R, LaMarca BD. Vitamin D supplementation improves pathophysiology in a rat model of preeclampsia. *Am J Physiol Regul Integr Comp Physiol*. 2016 Feb 15; 310(4):R346-54.

23- Jorge Neto SD, Machado JS, Palei AC, Martins WP, Sandrim VC, Araujo Júnior E, **Amaral LM**, Tanus-Santos JE, Duarte G, Cavalli RC. Assessment of nitrite oxide and maternal-fetal Doppler parameters during pregnancy. *J Matern Fetal Neonatal Med*. 2015 Dec 10:1-16.

22- **Amaral LM**, LaMarca B (2015). 17-Hydroxyprogesterone Caproate as a Potential Therapeutic to Add to the Management of Preeclampsia. *J Pharmacol Clin Toxicol* 3(4):1059.

21- Cornelius DC, Castillo J, Porter J, **Amaral LM**, Campbell N, Paige A, Thomas AJ, Harmon AC, Cunningham MW Jr, Wallace K, Herse F, Wallukat G, Dechend R, LaMarca BD. Blockade of CD40 ligand for intercellular communication reduces hypertension, placental oxidative stress, and AT1-AA in response to adoptive transfer of CD4+ T. *Am J Physiol Regul Integr Comp Physiol*. 2015 Nov 15; 309(10):R1243-50.

20- Cornelius DC, **Amaral LM**, Harmon AC, Wallace K, Thomas AJ, Campbell N, Scott J, Herse F, Haase N, Moseley J, Wallukat G, Dechend R, LaMarca BD. An increase population of regulatory T Cells improves the pathophysiology of placental ischemia in a rat model of preeclampsia. *Am J Physiol Regul Integr Comp Physiol*. 2015 Oct 15; 309(8):R884-91

19- **Amaral LM**, Cunningham MW Jr, Cornelius DC, LaMarca B. Preeclampsia: long-term consequences for vascular health. *Vasc Health Risk Manag*. 2015 Jul 15; 11:403-15.

18- Harmon A, Cornelius D, **Amaral L**, Paige A, Herse F, Ibrahim T, Wallukat G, Faulkner J, Moseley J, Dechend R, LaMarca B. IL-10 supplementation increases Tregs and decreases hypertension in the RUPP rat model of preeclampsia. *Hypertens Pregnancy*. 2015 May 2015 Aug; 34(3):291-306

17- Luizon MR, Belo VA, Palei AC, **Amaral LM**, Lacchini R, Sandrim VC, Duarte G, Cavalli RC, Tanus-Santos JE. Effects of NAMPT polymorphisms and haplotypes on circulating visfatin/NAMPT levels in hypertensive disorders of pregnancy. *Hypertension research: official journal of the Japanese Society of Hypertension*. 2015; 38(5):361-6.

16- **Amaral LM**, Cornelius DC, Harmon A, Moseley J, Martin JN Jr, LaMarca B. 17-Hydroxyprogesterone caproate significantly improves clinical characteristics of preeclampsia in the Reduced Uterine Perfusion Pressure Rat Model. *Hypertension*. 2015 Jan; 65(1):225-3.

15- Luizon MR, Palei AC, Sandrim VC, **Amaral LM**, Machado JS, Lacchini R, Cavalli RC, Duarte G, Tanus-Santos JE. Tissue inhibitor of matrix metalloproteinase-1 polymorphism, plasma TIMP-1 levels, and antihypertensive therapy responsiveness in hypertensive disorders of pregnancy. *Pharmacogenomics Journal*. 2014 Dec; 14(6):535-41.

14- **Amaral LM**, Kiprono L, Cornelius DC, Shoemaker C, Wallace K, Moseley J, Wallukat G, Martin JN Jr, Dechend R, LaMarca B. Progesterone supplementation attenuates hypertension and the autoantibody to the angiotensin II type I receptor in response to elevated interleukin-6 during pregnancy. *American Journal of Obstetrics and Gynecology*. 2014 Aug; 211(2):158.e1-6.

13- **Amaral LM**, Pinheiro LC, Guimaraes DA, Palei AC, Sertório JT, Portella RL, Tanus-Santos JE. Antihypertensive effects of inducible nitric oxide synthase inhibition in experimental preeclampsia. *Journal of Cellular and Molecular Medicine*. 2013 Oct; 17(10):1300-7.

12- Machado JS, Palei AC, **Amaral LM**, Bueno AC, Antonini SR, Duarte G, Tanus-Santos JE, Sandrim VC, Cavalli RC. Polymorphisms of the adiponectin gene in gestational hypertension and pre-eclampsia. *Journal of Human Hypertension*. 2014 Feb; 28(2):128-32.

11- Miyague AH, Martins WP, Machado JS, Palei AC, **Amaral LM**, Teixeira DM, Sandrim VC, Sertorio JT, Tanus-Santos JE, Duarte G, Cavalli RC. Maternal Flow-Mediated Dilation and Nitrite Concentration During Third Trimester of Pregnancy and Postpartum Period. *Hypertension in Pregnancy*. 2013; Aug; 32(3):225-34.

- 10-** Sertório JT, Lacchini R, **Amaral LM**, Palei AC, Cavalli RC, Sandrim VC, Duarte G, Tanus-Santos JE. Haptoglobin polymorphism affects nitric oxide bioavailability in preeclampsia. *J Hum Hypertens*. 2013; Jun; 27(6):349-54.
- 9-** Luizon MR, **Amaral LM**, Palei AC. Matrix metalloproteinases (MMPs) and tissue inhibitors of MMPs genetic polymorphisms and plasma levels in hypertensive disorders of pregnancy. *J Hum Hypertens*. 2013; Apr; 27(4):278-9.
- 8-** Rezende VB, Sandrim VC, PALEI AC, **Machado L**, Cavalli RC, Duarte G, Tanus-Santos JE. Vitamin D receptor polymorphisms in hypertensive disorders of pregnancy. *Mol Biol Rep*. 2012; 39(12):10903-6.
- 7-** PALEI AC, Sandrim VC, **Amaral LM**, Machado JSR, Cavalli RC, Lacchini R, Duarte G, Tanus-Santos JE. Association of matrix metalloproteinase (MMP)-9 polymorphisms with plasma MMP-9 levels and with responsiveness to anti-hypertensive therapy in preeclampsia and gestational hypertension. *Pharmacogenomics J*. 2012; 12(6):489-98.
- 6.** Palei AC, Sandrim VC, **Amaral LM**, Machado JS, Cavalli RC, Lacchini R, Duarte G, Tanus-Santos JE. Effects of matrix metalloproteinase (MMP)-2 polymorphisms on responsiveness to antihypertensive therapy of women with hypertensive disorders of pregnancy. *Basic & Clinical Pharmacology & Toxicology*. 2012 Oct; 111(4):262-7.
- 5-** Palei AC, Sandrim VC, **Amaral LM**, Machado JS, Cavalli RC, Duarte G, Tanus-Santos JE. Association between matrix metalloproteinase (MMP)-2 polymorphisms and MMP-2 levels in hypertensive disorders of pregnancy. *Experimental and Molecular Pathology*. 2012; 92(2):217-21
- 4-** Sandrim VC, Palei AC, Sertório JT, **Amaral LM**, Cavalli RC, Tanus-Santos JE. Alterations in cyclic GMP levels in preeclampsia may reflect increased B-type natriuretic peptide levels and not impaired nitric oxide activity. *Clinical Biochemistry*. 2011; 52(2):402-7
- 3-** **Amaral LM**, Palei AC, Sandrim VC, Luizon MR, Cavalli RC, Duarte G, Tanus-Santos JE. Maternal iNOS genetic polymorphisms and hypertensive disorders of pregnancy. *Journal of Human Hypertension*. 2012; 26 (9):547-52.
- 2-** Palei AC, Sandrim VC, **Amaral LM**, Machado JS, Cavalli RC, Lacchini R, Duarte G, Tanus-Santos JE. Matrix metalloproteinase-9 polymorphisms affect plasma MMP-9 levels and antihypertensive therapy responsiveness in hypertensive disorders of pregnancy. *Pharmacogenomics Journal*. 2012; 12(6):489-98.
- 1-** de Almeida CG, Garbois GD, **Amaral LM**, Diniz CC, Le Hyaric M. Relationship between structure and antibacterial activity of lipophilic N-acyldiamines. *Biomedicine & Pharmacotherapy*. 2010; 64(4):287-90.

Posters and Presentations

Abstracts (Selected from 39)

- 32. Lorena M. Amaral**, Jesse Cottrell, Ashlyn Harmon, Denise C. Cornelius, Mark W. Cunningham Jr., Gerd Wallukat, Florian Herse, Tarek Ibrahim, Ralf Dechend, and Babbette LaMarca. Interleukin-4 supplementation improves chronic inflammation and hypertension in response to placental ischemia during pregnancy
- 31.** Mark W. Cunningham Jr. , Venkata Ramana Vaka, **Lorena Amaral**, Fan Fan, Tarek Ibrahim, Richard J. Roman, and Babbette LaMarca. Angiotensin II Type 1 Receptor Autoantibody Inhibition Improves Blood Pressure and Markers of Neurological Damage and Oxidative Stress in Brains of Placental Ischemic Rats during Pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, CA, 2017.
- 30.** Tarek Ibrahim, Ashlyn C. Harmon, Denise C. Cornelius, **Lorena Amaral**, Mark Cunningham, Kedra Wallace, Babbette LaMarca. Preeclamptic Placental CD4+ T Cells Cause Preeclamptic Like Features in Normal Pregnant Nude Athymic Rats. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, CA, 2017.
- 29.** Venkata Ramana Vaka, Kristen M. McMaster, Mark W. Cunningham Jr, Tarek Ibrahim, **Lorena M. Amaral**, Denise Cornelius, Babbette LaMarca. Circulating Factors in Response

to Placental Ischemia Cause Vascular Endothelial Mitochondrial Oxidative Stress. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, CA, 2017.

28. Mark Wayne Cunningham, Jr., Javier Castillo, Venkata Ramana Vaka, **Lorena Amaral**, Denise Cornelius, Frank Spradley, Tarek Ibrahim, Nathan Campbell, Nathan Usry, Jan Williams, Babbette LaMarca. Inhibition of Angiotensin II Type 1 Receptor Agonistic Autoantibody Binding Improves Maternal Outcomes in Rats with Placental Ischemia. Experimental Biology, Chicago, IL, 2017.

27. Venkata Ramana Vaka, Kristen M. McMaster, Mark W. Cunningham Jr, **Lorena M. Amaral**, Tarek Ibrahim, Denise Cornelius, Babbette LaMarca. Natural Killer Cells Contribute to Placental Mitochondrial Dysfunction in Response to Placental Ischemia in Reduced Uterine Perfusion Pressure (RUPP) Rat Model of Preeclampsia. Experimental Biology, Chicago, IL, 2017.

26. **Lorena M. Amaral**, Jamil Elfarra, Denise C. Cornelius, Jessica L Faulkner, Mark W. Cunningham Jr., Babbette LaMarca. 17-hydroxyprogesterone caproate improves fetal growth restriction possibly by reducing inflammation and placental cytolytic NK cells in response to placental ischemia during pregnancy. Experimental Biology, Chicago, IL, 2017

25. **Lorena M. Amaral**, Jamil Elfarra, Denise C. Mark W. Cunningham Jr., Tarek Ibrahim, Babbette LaMarca. 17-hydroxyprogesterone caproate improves and placental cytolytic NK cells in response to placental ischemia during pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, Orlando, FL, 2016.

24. **Lorena M. Amaral**, Jamil Elfarra, Denise C. Cornelius, Jessica L Faulkner, Mark W. Cunningham Jr., Taia R. McAfee, D'andrea S.Thomas, Babbette LaMarca. Early administration of 17-hydroxyprogesterone caproate improves fetal growth restriction possibly by reducing sFlt-1 and placental cytolytic NK cells in response to placental ischemia during pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, Washington, D.C., USA, 2015.

23. **Amaral LM**, Faulkner JL, Cornelius DC, Moseley J, Martin JN Jr, LaMarca B. "Early administration of 17-hydroxyprogesterone caproate to Reduced Uterine Perfusion Pressure (RUPP) rat model of preeclampsia improves inflammation, uterine artery vasoconstriction and blood pressure during pregnancy". Experimental Biology Meeting, Boston, USA, 2015.

22. **Amaral LM**, Santiago-font JA, Gillis E, Moseley J, Sasser JM, LaMarca B. "Serelaxin improves blood pressure and uterine artery resistance in the reduced uterine perfusion pressure (RUPP) rat model of preeclampsia". Experimental Biology Meeting, Boston, USA, 2015.

21. Cornelius DC, Castillo J, **Amaral LM**, Wallace K, Moseley J, LaMarca B. "T cell-dependent B cell activation mediates pathophysiology in response to CD4+ T cells from reduced uterine perfusion pregnant rats" Experimental Biology Meeting, Boston, USA, 2015.

20. Cornelius DC, Wallace K, **Amaral LM**, Scott JD, Moseley J, LaMarca B. "Placental ischemia-induced T_H17 cells mediate the pathophysiology associated with preeclampsia". Experimental Biology Meeting, Boston, USA, 2015.

19. Cunningham MW Jr., Faulkner J, **Amaral L**, Cornelius D, Kramer R, LaMarca B. "Agonistic autoantibodies to the angiotensin II Type 1 receptor enhance ANGII binding on vascular endothelial cells". Experimental Biology Meeting, Boston, USA, 2015.

18. Faulkner JL, Darby MM, Cornelius DC, Harmon AC, **Amaral LM**, Moseley J, Herse F, Wallukat G, Dechend R, LaMarca B. "Treatment with Vitamin D attenuates blood pressure and immune activation in a preeclamptic rat model". Experimental Biology Meeting, Boston, USA, 2015.

17. Santiago-font JA, **Amaral LM**, Moseley J, LaMarca B, Sasser JM. "Serelaxin reduces mean arterial pressure (MAP) and improves fetal growth in the RUPP rat model of Preeclampsia". (Accepted for Poster Presentation at SMFM's 35th Annual Meeting: The pregnancy meeting, San Diego, USA, 2015).

16. **Amaral LM**, Moseley J, Cornelius DC, Martin JN Jr, LaMarca B. "17-Hydroxyprogesterone attenuates hypertension and uterine artery resistance in response to

reduced uterine perfusion pressure (RUPP) in pregnant rats.” International Society for Study of Hypertension in Pregnancy (ISSHP), New Orleans, USA, 2014. *Oral presentation*

15. Amaral LM, Moseley J, Cornelius DC, Martin JN Jr, LaMarca B. “Progesterone supplementation improves blood pressure and uterine artery resistance in response to placental ischemia during pregnancy”. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, USA, 2014. *Oral Presentation*

14. Faulkner JL, Darby MM, Cornelius DC, Harmon AC, **Amaral L**, Moseley J, Herse F, Wallukat G, Dechend R, LaMarca B. “Treatment with Vitamin D attenuates blood pressure as well as immune activation in a preeclamptic rat model”. International Society for the Study of Hypertension in Pregnancy (ISSHP) New Orleans, USA, 2014. *Oral presentation*

13. Cornelius DC, Castillo J, Porter J, Campbell N, Thomas A, **Amaral LM**, Wallace K, Moseley J, LaMarca B. T cell-dependent B cell activation plays a role in mediating hypertension and pathophysiology in response to CD4+ T cell from reduced uterine perfusion pressure pregnant rats High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, USA, 2014.

12. Ibrahim T, Pryzbyl L, Harmon AC, Cornelius DC, Moseley J, **Amaral LM**, Faulkner JL, Dechend R, LaMarca B. Proliferation of endogenous T-reg cells improves the pathophysiology associated with placental ischemia of pregnancy. High Blood Pressure Council (HBPR) Scientific Sessions, San Francisco, USA, 2014.

11. Amaral LM, Kiprono L, Wallace K, Frazier K, Moseley J, Martin JN Jr, LaMarca B. “Progesterone supplementation improves blood pressure and uterine artery resistance and hypoxia-stimulated placental cytokines during pregnancy”. Experimental Biology Meeting. San Diego, USA, 2014. Published in FASEB J April 2014 28:860.16.

10. Scott J, Wallace K, Cornelius DC, **Amaral L**, Moseley J, LaMarca B. Oxidative stress signaling in response to CD4+T cells stimulated via placental ischemia plays an important role in hypertension during preeclampsia. Experimental Biology Meeting 2014, San Diego, CA. Published in FASEB J April 2014 28:860.14

9. Moseley J, Castilho J, **Amaral L**, Cornelius D and LaMarca B. “Specific inhibition of AT1-Aas by direct binding improves maternal and fetal outcome in response to placental ischemia during pregnancy: emphasizing the importance of novel drug development in the treatment of preeclampsia”. Experimental Biology Meeting. San Diego, USA, 2014. Published in FASEB J April 2014 28:860.15.

8. Castillo J, Porter J, **Amaral L**, Cornelius DC, Wallace K, LaMarca B. 2014. “Inhibition of AT1-AAAs by interrupting lymphocyte communication or by direct binding reduces blood pressure in response to placental ischemia of pregnancy; emphasizing the importance of novel drug development in the treatment of preeclampsia”. Society for Maternal Fetal Medicine annual meeting, New Orleans, USA, 2014.

7. Amaral LM, Cornelius DC , Kiprono L, Shoemaker C, Wallace K, Moseley J, Wallukat G, Martin JN Jr, Dechend R, LaMarca B. “Progesterone supplementation attenuates hypertension and AT1-AA in response to elevated IL-6 during pregnancy”. 3rd ISH New Investigators’ Symposium on Hypertension and Cardiovascular Disease. New Orleans, USA, 2013. *Oral Presentation*

6. Amaral LM, Cornelius DC , Kiprono L, Shoemaker C, Wallace K, Moseley J, Wallukat G, Martin JN Jr, Dechend R, LaMarca B. “Progesterone supplementation attenuates hypertension and AT1-AA in response to elevated IL-6 during pregnancy”. High Blood Pressure Research Council (HBPR) Scientific Sections, New Orleans, USA, 2013.

5. Amaral LM, Pinheiro LC, Guimaraes DA, Palei AC, Sertório JT, Portella RL, Tanus-Santos JE. “Antihypertensive effects of inducible nitric oxide synthase inhibition in experimental preeclampsia.” HBPR Scientific Sections. Washington, USA, 2012. Published in J Cell Mol Med. 2013 Jul 24.

4. Machado JS , Palei AC, **Amaral LM**, Bueno A C, Antonini SR, Duarte G, Tanus-Santos JE, Sandrim VC, Cavalli RC. “Polymorphisms of the adiponectin gene in gestational hypertension and pre-eclampsia”. 18th ISSHP World Congress. Geneva, Switzerland, 2012. Published in Journal of Human Hypertension. 2014.

3. PALEI AC, Sandrim VC, **Amaral LM**, Machado JS, Cavalli RC, Gerlach RF, Tanus-Santos JE, Granger, JP. "Association between Matrix Metalloproteinase (MMP)-2 polymorphisms and plasma MMP-2 levels in hypertensive disorders of pregnancy." High Blood Pressure Research Council (HBPR) Scientific Sessions, Orlando, USA, 2011. Published *Exp Mol Pathol.* 2012; 92(2):217-21.

2. AMARAL LM, Palei AC, Sandrim VC, Luizon MR, Cavalli RC, Duarte G, Tanus-Santos JE. Maternal iNOS genetic polymorphisms and hypertensive disorders of pregnancy. Workshop of Atherosclerosis and Vascular Biology - Translating Vision: from laboratory to clinic. Brazil, 2010. Published in Journal of Human Hypertension. Sep, 2012.

1. AMARAL LM, Palei AC, Sandrim VC; Cavalli R C; Tanus-Santos JE. "Increased circulating cell-free DNA levels in preeclampsia and gestational hypertension." 42^o SBFTE Meeting. Brazil, 2010.

Research Support

Oct 2016 -Oct 2018 AMAG Pharmaceuticals. Title: "17-Hydroxyprogesterone Caproate Supplementation: A Novel Therapeutic for the Management of Preeclampsia?" Role: **Amaral Co-investigator** / LaMarca (PI)

Feb 2011-Nov 2012: Predoctoral fellowship from 'Fundação de Amparo à Pesquisa de São Paulo' (FAPESP), Sao Paulo, Brazil. Title: "Effects of inducible nitric oxide synthase inhibition in experimental pre-eclampsia."

Feb 2009-Dec2010 Graduate fellowship from 'Conselho Nacional de Desenvolvimento Científico e Tecnológico' (CNPq), Brazil. Title: "Effects of genetics polymorphisms of iNOS on the susceptibility in hypertensive disorders of pregnancy".

Apr 2007-Aug 2008 Undergraduate fellowship from Federal University of Juiz de Fora, MG, Brazil. Title: "Pharmaceutical Care"

Aug 2008-Dez 2008 Undergraduate fellowship from Federal University of Juiz de Fora, MG, Brazil. Title: "Relationship between structure and antibacterial activity of lipophilic N-acyldiamines".