



Name: Rosalina Villalon Landeros, PhD Candidate

Email: villalonland@wisc.edu

Major Professor: Ronald R. Magness, PhD. and Jing Zheng PhD.

Degree Objective: PhD, Endocrinology and Reproductive Physiology

Background:

BS University of California, Davis 06/2010 Neurobiology, Physiology and Behavior

Ph.D University of Wisconsin Madison 08/2017 Endocrinology and Reproductive Physiology

Current Research Project:

The focus of my research is to investigate the effects of estrogen metabolites on uterine vascular development and remodeling during normal pregnancy, including ligand-receptor interactions involved in such processes. In addition, my studies investigate the impact the local gravid environment has on the programming of uterine artery endothelial cells compared to the systemic hormonal milieu during pregnancy. The goal of my research is to expand our understanding the mechanisms of uterine vascular adaptations to pregnancy to lay the groundwork for future research towards novel therapies for pathological pregnancies such as IUGR and preeclampsia.

Honors:

- 2016 Outstanding Oral Presentation Award. SACNAS National Diversity in STEM Conference in Long Beach, CA.
- 2016 One-year free membership to the American Society of Biochemistry and Molecular Biology. (ASBMB).
- 2016 Society for the Advancement of Chicanos and Native Americans in Science Travel Scholarship Recipient.
- 2016 Burroughs Wellcome Travel Fellowship recipient. Society for the Study of Reproduction.
- 2016 Selected for USDA-NIFA-AFRI Merit Award on basis of "excellent abstract" submitted to the Society for the Study of Reproduction Annual Conference. This award was respectfully declined in favor of the Burroughs-Wellcome Travel Fellowship.
- 2016 Ronald K. Meyer, PhD Graduate Trainee Award. Obstetrics and Gynecology Department, UW-Madison.
- 2015 Nominated by Dean Dr. VandenBosch to participate in the AAAS/Science Program for Excellence in Science, and awarded a two-year membership to AAAS.



- 2013 Burroughs Welcome Minority Affairs Travel Fellowship. Society for the Study of Reproduction.
- 2013 Best New Investigator Poster Presentation Award. Society for Gynecologic Investigation Annual Meeting, Orlando FL.
- 2010 The Endocrine Society's Poster Presentation Award at the Society for the Advancement of Chicanos and Native American's in Science, National Conference in Anaheim, CA.

Grants Received:

- 2016-2020 F31 HD088096. NIH Predoctoral Fellowship. Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellowships to Promote Diversity in Health-Related Research. **PI: Rosalina Villalon Landeros**, Sponsors: Ronald R. Magness, PhD. Ian M. Bird, PhD.

Awarded in first submission

Percentile score: 19

Award amount: \$36,137/yr

- 2012-2014 R25 GM083252 NIH Grant. Training, Education, and Mentoring in Science (TEAM-Science). NIH/NIGMS Initiative for Maximizing Student Development (IMSD), University of Wisconsin, Madison. PI: Molly Carnes, MD, MS. Trainer: Ronald R. Magness, PhD

Publications:

1. **Rosalina Villalon Landeros**, Sheikh O Jobe, Gabrielle Aranda-Pino, Gladys E. Lopez, Jing Zheng, Ronald R Magness. Convergent MAPKs Signaling Mediate Estradiol-17 β and Catecholestradiol-Induced Uterine Artery Endothelial Cell Proliferation. Hypertension. Submitted for publication, **Dec. 2016. Currently under revision.**
2. Vladimir E. Vargas, **Rosalina Villalon Landeros**, Gladys E. Lopez, Jing Zheng, Ronald R. Magness. Uterine artery leptin receptors during the ovarian cycle and pregnancy regulate angiogenesis in ovine uterine artery endothelial cells. Biology of Reproduction. Submitted for publication, **Nov 2016. Currently under revision.**
3. Mayra Pastore R., **Rosalina Villalón L.**, Gladys López, Jesús Iruretagoyena, y Ronald Magness. Regulación del Flujo Sanguíneo Uterino. I. Funciones de Estrógeno y Receptores Estrogénicos α/β en el Endotelio Vascular Uterino durante el Embarazo. [Regulation of uterine blood flow. I. Functions of estrogen and estrogen receptor α/β in the uterine vascular



endothelium during pregnancy]. *Revista Chilena de Obstetricia y Ginecologia. Rev Chil Obstet Ginecol.* 2014. 79(2):129-139. Spanish. PMID: 26113750

4. Mayra Pastore R., **Rosalina Villalón L.**, Gladys López, Jesús Iruretagoyena, y Ronald Magness. Regulación del Flujo Sanguíneo Uterino. II. Funciones de Estrógeno y Receptores Estrogénicos α/β en las acciones Genómicas y No-genómicas del Endotelio Uterino. [Regulation of uterine blood flow. II. Functions of estrogen and estrogen receptor α/β in genomic and non-genomic actions of the uterine endothelium]. *Revista Chilena de Obstetricia y Ginecologia Rev Chil Obstet Ginecol.* 2014. 79(3):218-228. Spanish. PMID: 26113751
5. Laredo SA, **Villalon Landeros R**, Trainor BC. Rapid effects of estrogens on behavior: environmental modulation and molecular mechanisms. *Front Neuroendocrinol.* (2014) Oct;35(4):447-58 PMID:24685383
6. Laredo S.A., **Landeros R.V.**, Dooley J.C., Steinman M.Q., Orr V. Silva A.L., Crean K.K., Robles C.F., Trainor B.C. Nongenomic effects of estradiol on aggression under short day photoperiods. *Hormones and Behavior.* 2013. Aug;64(3):557-565. PMID:23763907
7. Kao E, **Villalon R**, Ribeiro S, Berger T. Role for endogenous estrogen in prepubertal Sertoli cell maturation. *Anim Reprod Sci.* 2012 Nov;135(1-4):106-12 PMID:23041111
8. **Villalon Landeros R**, Morisseau C, Yoo HJ, Fu SH, Hammock BD, Trainor BC. Corn cob bedding alters the effects of estrogens on aggressive behavior and reduces estrogen receptor alpha expression in the brain. *Endocrinology.* 2012 Feb;153(2):949-53. PMID:22186416
9. Trainor BC, Pride MC, **Villalon Landeros R**, Knoblauch NW, Takahashi EY, Silva AL, Crean KK. Sex differences in social interaction behavior following social defeat stress in the monogamous California mouse (*Peromyscus californicus*). *PLoS ONE.* 2011 Feb;6(2) e17405. PMID:21364768

National Presentations:

Oral:

Rosalina Villalon Landeros Chi Zhou, Jing Zheng, Ronald R. Magness. Role of Estrogen and Its Metabolites in Uterine Artery Endothelial Cells Migration from a Model of Unilateral Pregnant Sheep. Society for Reproductive Investigation, Orlando, Florida, **March 2017**.

Rosalina Villalon Landeros, Jing Zheng, Ronald R Magness. Programming of Endothelial Cells in Uterine Arteries of Unilateral Pregnant Sheep. Society for the Advancement of Chicanos and Native Americans in Science, National Diversity in STEM Conference. Long Beach, CA. **October 2016**.

Vladimir E. Vargas, **Rosalina Villalon Landeros**, Gladys E. Lopez, Jing Zheng, and Ronald R. Magness. Globular Adiponectin and Leptin Differentially Modulate Proliferative Responses in Uterine Artery Endothelial Cells from Nonpregnant and Pregnant Sheep. Society for Reproductive Investigation, Montreal, Canada, **March 2016**.



Rosalina Villalon Landeros, S. Omar Jobe, Jing Zheng, Ronald R. Magness. 4-Methoxyestradiol Induces Proliferation through a $G_{\alpha i}$ Protein Coupled Receptor-Dependent Mechanism in Uterine Artery Endothelial Cells Derived from Pregnant Ewes. Society for Reproductive Investigation, San Francisco, CA, **March 2015**.

Poster:

Gabi Aranda-Pino, **Rosalina Villalon Landeros**, Omar S. Jobe, Ronald R. Magness. Activation of Mitogen-Activated Protein Kinases Facilitating Catecholestrogen-Induced Uterine Artery Endothelial Cell Proliferation. Society for the Advancement of Chicanos and Native Americans in Science, National Diversity in STEM Conference. Long Beach, CA. **October 2016**.

Rosalina Villalon Landeros, Jing Zheng, Ronald R Magness. Programming of Endothelial Cells from Uterine Arteries Ipsilateral and Contralateral to the Gravid Uterine Horn of Unilateral Pregnant Sheep. Society for the Study of Reproduction, San Diego, CA. **July 2016**.

Vladimir E. Vargas, **Rosalina Villalon Landeros**, Gladys E. Lopez, Jing Zheng, and Ronald R. Magness. *Ex Vivo* OB-Rb Leptin Receptor Expression in Uterine Arteries during the Luteal and Follicular Phases of the Ovarian Cycle and Late Pregnancy: Role of Leptin-induced Angiogenic Responses in Sheep Uterine Artery Endothelial Cells. Society for the study of Reproduction annual meeting, San Juan, Puerto Rico, **June 2015**.

Rosalina Villalon Landeros, S. Omar Jobe, Gladys E. Lopez, Jing Zheng, Ronald R Magness O-Methylated Metabolites of Catecholestrogens and Catecholamines Induce Similar Angiogenic Responses in Uterine Artery Endothelial Cells Derived from Pregnant Sheep. Society for the Study of Reproduction annual meeting, Grand Rapids, Michigan, **June 2014**

Rosalina Villalon Landeros, S. Omar Jobe, Mayra B. Pastore, and Ronald R. Magness Department of Obstetrics & Gynecology, Perinatal Research Labs. University of Wisconsin-Madison, Madison WI. Ovine Uterine Artery Endothelial Cell ER- α , ER- β , and GPR30 Expression during the Luteal Phase, Follicular Phase, and Pregnancy. Society for the Study of Reproduction annual meeting. Montreal, Quebec, Canada, **July 2013**

Villalon Landeros R, SO Jobe, J Zheng, RR Magness. Dept. Ob/Gyn Perinatal Res Labs, Univ of WI-Madison. 4-Methoxyestradiol Induced Proliferation of Uterine Artery Endothelial Cells Occurs via Activation of p38, p42/44 and JNK MAPKs and Independent of Estrogen and Adrenergic Receptors. Society for Gynecologic Investigation annual meeting, Orlando Florida, **March 2013**.

Other Presentations:

Oral:

Rosalina Villalon Landeros, Jing Zheng, Ronald R Magness. Programming of Endothelial Cells from Uterine Arteries Ipsilateral and Contralateral to the Gravid Uterine Horn of Unilateral Pregnant Sheep. Endocrinology and Reproductive Physiology Program Symposium. **June 2016**



Keona Thompson, **Rosalina Villalon Landeros**, S. Omar Jobe, Jing Zheng, Ronald R. Magness. "Role of Estrogen Metabolites in the Uterine Artery Endothelial Cells during Pregnancy." Rural and Urban Scholars in Community Health (RUSCH) Program, Final Presentations. **July 2013**.

Poster:

Gabrielle Aranda-Pino, Rosalina Villalon Landeros, Jason L. Austin, Ronald R. Magness. Maintenance of Fetal Oxygen Consumption in Singleton vs. Multi-fetal Pregnancies. Bio 152. Undergraduate Research Poster Presentations. **December 2016**.

Kazushi Watanabe*, Rosalina Villalon Landeros*, Ronald R. Magness. Adrenergic Receptor-Mediated Prostacyclin Production Stimulated by Estradiol-17 β and the Catecholestradiols in Ovine Uterine Artery Endothelial Cells. Obstetrics and Gynecology Research Day. **May 2016**.

Rosalina Villalon Landeros, Mayra B. Pastore, Chariesse A. Ellis, Gladys E. Lopez, Ronald R. Magness. Endothelial Cell Nitric Oxide Production Induced by Estradiol Metabolites. Endocrinology and Reproductive Physiology Program Annual Symposium, Madison Wisconsin, **June 2015**.

Chariesse Ellis, **Rosalina Villalon Landeros**, Mayra B. Pastore, Ronald R. Magness. "Vasodilator Production by Ovine Uterine Artery Endothelial Cells (UAECs): Effects of Estrogen Metabolites on Nitric Oxide Production". Undergraduate Research Conference, UW-Madison. **April 2015**

Teaching and Mentorship:

09/2015-
current Mentee: Gabrielle Aranda-Pino, undergraduate student. Project: Estrogen induced signaling in uterine artery endothelial cells and understanding blood flow and oxygen homeostasis in multifetal pregnancies.

Extent of Training: basic research/laboratory methods, data documentation, manuscripts, abstracts and poster and oral preparation and presentation.

12/2015-
05/2016 Mentee: Dr. Kazishi Watanabe, visiting scientist. Project title "Investigation of receptor mediated Estrogen Metabolite-Induced Prostacyclin Production in Uterine Artery Endothelial Cells Derived from Pregnant Sheep."

Research presented at Ob/Gyn Research Day, UW-Madison.

Extent of training: experimental design, basic research/laboratory methods, data analysis, and abstract, poster, and manuscript preparation.

09/2014-
05/2015 Mentee: Chariesse Ellis, undergraduate student, member of the undergraduate student research program (USR). Project title "Vasodilator Production by Ovine Uterine Artery Endothelial Cells (UAECs): Effects of Estrogen Metabolites on Nitric Oxide Production."



Research presented at the Undergraduate Research Symposium, UW-Madison.

Extent of training: basic research/laboratory methods, data documentation, and abstract and poster preparation.

Summer
2013

Mentee: Keona Thompson, undergraduate student from the RUSCH summer program. Project title "Investigation of Receptor-Mediated 4-methoxyestradiol-Induced P-UAEC Proliferation."

Research presented at the RUSCH Program Final presentation, UW-Madison.

Extent of training: basic research/laboratory methods, data documentation, and abstract and oral presentation preparation.

Leadership Service:

- 2013-Present Student Committee member. Endocrinology and Reproductive Physiology Program. Annual Research Symposium planning committee member. University of Wisconsin-Madison. During academic year 2015-2016, I have assumed role of leader in planning this symposium.
- 2016 Trainee Volunteer at the Society for the Study of Reproduction Annual Meeting.
- Spring 2016 Student Volunteer. Endocrinology and Reproductive Physiology Program Prospective Student Recruitment.
- 2014-Present Committee member. Endocrinology and Reproductive Physiology Program. Annual Research Symposium Planning Committee. University of Wisconsin-Madison.
- 2014-2015 Program Retreat planning committee member (Leader). Endocrinology and Reproductive Physiology Program. University of Wisconsin-Madison.
- 2015, 2016 Committee member. Obstetrics and Gynecology Department Chester B. Martin MD Graduate Training Program Mentorship Award.
- 2013-2014 Trainee committee member. Society for the Study of Reproduction Minority Affairs.
- 2013 Trainee Volunteer. Society for the Study of Reproduction Annual Meeting.