

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME Ruiz-Ortiz, Lynnette A.	POSITION TITLE Adjunct Professor-Unit of Comparative Medicine- MSC-UPR Staff Scientist-Caribbean Primate Research Center		
eRA COMMONS USER NAME LARUIZ			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Pontifical Catholic University of PR, Ponce, PR	B.A.	1994-1998	General Sciences
Ponce School of Medicine, Ponce, PR	M.S.	2002-2005	Biomedical Sciences
Ponce School of Medicine, Ponce, PR	Ph.D.	2006-2010	Biomedical Sciences
Caribbean Primate Research Center-UPR, PR	Post-doctoral	2010-2012	Reproductive Sciences

A. Personal Statement. Briefly describe why your experience and qualifications make you particularly well-suited for your role (e.g., PD/PI) in the project that is the subject of the application.

I'm the Principal Investigator of the Pilot Study-"Establishment and validation of the rhesus macaque as an animal model of endometriosis", which was funded by the Puerto Rico Clinical & Translational Research Consortium in 2011. This project was coordinate with a great team of expert's scientists in endometriosis and infertility and the animal model of this condition. I have worked in endometriosis research since 2000, at the Endometriosis Research Program at Ponce School of Medicine. Under the guidance and mentoring of Dr. Idhaliz Flores, first as a research technician and later as a graduate student, I worked specifically looking at molecular biomarkers and genetic factors associated with this disease. During my thesis work I collaborated with renowned reproductive endocrinologists, Drs. Pedro Beauchamp and Nabal Bracero, in order to obtain human samples for my studies related to endometriosis-associated infertility. After completion of my doctoral in 2010, I joined the Caribbean Primate Research Center (CPRC) at UPR, as a post-doctoral. I have previous experience in the validation of a rat model of endometriosis as part of collaboration with Dr. Caroline Appleyard and Dr. Michael Vernon (Flores I, 2007). We have also identified a genetic region that may be associated to endometriosis and/or infertility, which was investigated using high-throughput SNP analysis (Ruiz LA, 2010). As a graduate student, I had the unique opportunity to collaborate with Dr. Asgerally Fazleabas (external member thesis committee) then at the University of Illinois-Chicago where I was exposed to his research using endometrial samples of a baboon model of endometriosis. I was trained for 1 month on histological and immunohistochemical techniques in his lab. Throughout these years, I have been able to establish and maintain a strong collaboration with Dr. Flores and Dr. Fazleabas that will allow me to continue studying endometriosis and their symptoms, such as infertility. My expertise in molecular biology and my previous research experiences will contribute to expand the Reproductive Biology Program at the CPRC, with new techniques and new projects involved in the field of biological reproduction.

B. Professional Experience

Abbott Pharmaceuticals, Quality Control Laboratory, Jayuya, Puerto Rico (May 2005- October 2005), *Analyst Chemist.* Performed testing in Assay and Content Uniformity for the Active Ingredient (Levothyroxine Sodium) in Syntroid Tablets. Certificate by

Waters Technologies Corporation for the training: “*Waters 2695 Separation Module User’s*”.

- Ponce School of Medicine,** Research Mentor for Summer Research Program for undergraduate and medical students. (2003-2008).
- National College,
Ponce School of Medicine,** Instructor of Anatomy & Physiology Course. Nursing School- 2008.
Endometriosis Research Program, Ponce, PR (May 2006 – May 2010).
PhD Candidate. Thesis work: “*Identification of Biomarkers for Endometriosis-Associated Infertility*”.
- University of Puerto Rico,** Caribbean Primate Research Center, Sabana Seca, PR (July 2010-2012).
Post-doctoral. Research work: “*Establishment and validation of the rhesus macaque as a model of endometriosis*”.
- University of Puerto Rico,** Unit of Comparative Medicine, Medical Sciences Campus-UPR (January 2011-Present). Adjunct Professor.

AWARDS:

- Tuition Award from Marine Biological Laboratory (MBL) Course;** “*Frontiers in Reproduction*”, Woods Hole, MA. May 5 to June 17, 2007.
- FASEB/MARC Travel Award** to attend the 2007 Society for the Study of Reproduction meeting, San Antonio, Texas. July 21-25, 2007.
- Won 2nd Prize**-Fourth Annual Scientific Conference, Basic Science/Oral presentation at Ponce School of Medicine, Ponce, PR. June 7, 2008.
- Travel Award from American Physiological Society (APS)** to attend the short course of APS Professional Skills Training; “*Writing and Reviewing for Scientific Journals*”. Orlando, Florida. February 14-17, 2009.
- FASEB/MARC Travel Award** to attend the 2009 Society for the Study of Reproduction meeting, Pittsburgh, Pennsylvania. July 18-22, 2009.
- FASEB/MARC Travel Award** to attend the 2010 Society for the Study of Reproduction meeting, Milwaukee, Wisconsin. July 30-August 3, 2010.
- MERCK Health Innovation Award** under the Category of Clinical Research for the project; “*Single-nucleotide polymorphisms in LOXL4 and C3 genes are associated with increased risk for endometriosis and endometriosis-associated infertility*”, at San Juan, Puerto Rico. June 2nd, 2011.
- Burrowth Wellcome Travel Award** to attend the 2012 Society for the Study of Reproduction meeting, State College, Pennsylvania. August 12-15, 2012.
- Recipient of the National Institutes of Health (NIH)- Contraception and Infertility Loan Repayment Program (LRP)** funded by the National Institute of Child Health and Human Development (NICHD) for the project; *Development of an animal model of endometriosis-associated infertility using the rhesus macaques.* 7/1/2012 - 6/30/2014.
- Tuition Award to attend the course:** *Frontiers in Stem Cells in Cancer*, sponsored by the NIH, at Ponce School of Medicine & Health Sciences on February 3-8, 2013

AFFILIATIONS:

- Member, American Association for Laboratory Animal Science (2012-Present)
- Member, Puerto Rico Physiological Society (2010-2011)
- Member, Society for the Study of Reproduction (2006-Present)
- Member of the Graduate Student Association, Ponce School of Medicine (2002-2010)
- PhD Students Academic Senate Representative (2006-2008)
- Member, Puerto Rican Foundation of Endometriosis Patients (2006-present)

C. MANUSCRIPTS:

Flores I, Rivera E, **Ruiz LA**, Santiago OI, Vernon MW, Appleyard CB. Molecular profiling of experimental endometriosis identified gene expression patterns in common with human disease. *Fertility and Sterility*. 2007 May; 87(5):1180-99. PMID: 17478174.

Ruiz A, Salvo V, **Ruiz LA**, Báez P, García M, Flores I. Basal and Steroid Hormone-Regulated Expression of CXCR4 and CXCL12 in Human Endometrium and Endometriosis. *Reproductive Sciences*. 2010 Oct;17(10):894-903. PMID: 20720261.

Ruiz LA, Dutil J, Ruiz A, Fourquet J, Abac S, Laboy J, Lancaster J, Flores I. SNPs in the Complement Component 3 (C3) and Lysyl Oxidase-like Protein 4 (LOXL4) genes are associated with increased risk for endometriosis and/or infertility. *Fertility and Sterility*. 2011 Aug;96(2):512-5. PMID: 21733505.

MANUSCRIPTS IN PREPARATION:

Ruiz LA, Beauchamp P, Bracero N, Bayona M, Mavrogianis PA, Fazleabas A, Flores I. Dysregulation of lysyl oxidase family of proteins in endometrium of women with endometriosis-associated infertility and in a baboon model of endometriosis.

Ruiz LA and collaborators...Are non-human primate models of endometriosis still necessary?

Abstracts and Presentations:

Flores I, Rivera E, **Ruiz LA**, Santiago OI, Vernon MW and Appleyard CB. Molecular profiling of experimental endometriosis identified gene expression patterns in common with human disease. *2007 Frontiers in Reproduction Symposium*. June 16, 2007 at Woods Hole, MA. Oral presentation.

Ruiz LA, Ruiz A, Abac S, Zavala D, Laboy J, Caiseda D, Flores I. Sensitivity and Specificity of Potential Blood Biomarkers for Endometriosis. *Society for the Study of Reproduction 40th Annual Meeting*, July 21-26, 2007, in San Antonio, Texas. Poster presentation.

Ruiz LA, Ruiz A, Abac S, Zavala D, Laboy J, Caiseda D, Flores I. Sensitivity and Specificity of Potential Blood Biomarkers for Endometriosis. *Caribe-Gyn Meeting, Ponce Hilton Hotel, in Ponce, Puerto Rico*, August 10-12, 2007. Poster presentation.

Ruiz LA, Flores I, Mavrogianis P, Salvo V, Hasting J, Fazleabas A. Identification of Biomarkers for Endometriosis-Associated Infertility. *Ponce School of Medicine- Fourth Annual Scientific Conference*. Won 2nd Prize for Oral Presentation in the Basic Sciences Category, June 7, 2008.

Ruiz LA, Beauchamp P, Bracero N, Salvo V, Fazleabas A, Flores I. Lysyl oxidase is differentially expressed in women with endometriosis-associated infertility compared to fertile women. *64th Annual meeting for the American Society for Reproductive Medicine* at San Francisco, CA. Nov. 8-12, 2008. Poster presentation.

Ruiz LA, Beauchamp P, Bracero N, Salvo V, Bayona M, Fazleabas A, Flores I. Lysyl oxidase is differentially expressed in women with endometriosis-associated infertility compared to fertile women. *4th APS Professional Skills Training: "Writing and Reviewing for Scientific Journals"*. Manuscript draft & abstract. February 14-17, 2009 at Orlando, Florida.

Ruiz A, Salvo V, **Ruiz LA**, Báez P, García M, Flores I. Basal and Steroid Hormone-Regulated Expression of CXCR4 and CXCL12 in Human Endometrium and Endometriosis. *Society for the Study of Reproduction 42th Annual Meeting*, July 18-22, 2009, in Pittsburgh, Pennsylvania. Poster presentation.

Principal Investigator/Program Director (Last, First, Middle): Ruiz, Lynnette A.

Ruiz LA, Dutil J, Ruiz A, Fourquet J, Abac, Flores I. Association between single nucleotide polymorphisms and endometriosis and endometriosis-associated infertility. *Society for the Study of Reproduction: 43rd Annual Meeting*, 30 July-3 August 2010. Milwaukee, Wisconsin. Poster presentation.

Ruiz LA, Fazleabas A, Flores I, Bracero N, Gonzalez J, Kraiselburd E. The development of the rhesus macaque as a model for the study of endometriosis: a pilot study. 31st Annual Forum in Research and Education of the Medical Sciences Campus. San Juan, PR May3-6, 2011. Poster presentation.

Ruiz LA, Fazleabas A, Flores I, Bracero N, Gonzalez J, Kraiselburd E. Are non-human primate models of endometriosis still necessary? RCMI International Symposium on Health Disparities. December 10-13, 2012. San Juan, PR. Poster presentation.

D. RESEARCH SUPPORT:

1 454RR026139-01A1 NCRR-NIH Ruiz, L (PI) \$50,000 9/1/10-6/30/11

Establishment and validation of the rhesus monkey model of endometriosis (pilot project)

Puerto Rico Clinical Translational Research Consortium (PRCTR)

Role: Principal Investigator - Pilot Project

The objective of this pilot project is to establish and validate the monkey model of endometriosis at the UPR-Caribbean Primate Center.

FELLOWSHIPS:

R01 Supplement Grant #HD050559-S1 – NICHD, NIH, Flores I, PI. (December 2006-June 2010)

NIH/MBRS Graduate Student fellowship (January 2003-May 2005)