

## BIOGRAPHICAL SKETCH

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NAME <b>Gonzalo Martín Rivera</b>	POSITION TITLE <b>Assistant Professor</b>
eRA COMMONS USER NAME	

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
College of Veterinary Medicine, National University of Río Cuarto, Argentina	D.V.M.	1982-1988	Veterinary Medicine
College of Agricultural Sciences, National University of Mar de Plata, Argentina	M.S.	1988-1991	Physiology
Cornell University, Ithaca, New York	Ph.D.	1997-2002	Physiology
University of Connecticut Health Center, Farmington, Connecticut	Postdoc	2002-2005	Cell Biology and Signaling

### A. Positions and Employment

- 1989-1991. Fellow of the National Research Council of Argentina (CONICET), Department of Animal Science, National Institute of Agricultural Technology (INTA), Balcarce, Argentina
- 1991-1993. Fellow of the National Research Council (CONICET), Laboratory of Reproduction and Lactation, Mendoza, Argentina
- 1993-1997. Assistant Professor. Department of Animal Reproduction, College of Veterinary Medicine, National University of Río Cuarto, Argentina
- 1997-2002. Graduate Research Assistant. Department of Biomedical Sciences, Cornell University, Ithaca, NY
- 2002-2005. Postdoctoral Fellow. Department of Genetics & Developmental Biology, University of Connecticut Health Center, Farmington, CT
- 2006-2008. Assistant Professor in Residence. Department of Genetics and Developmental Biology. University of Connecticut Health Center, Farmington, CT.
- 2008- Assistant Professor, Department of Veterinary Pathobiology, College of Veterinary Medicine, Texas A&M University. College Station, TX
- 2012- Member of the Interdisciplinary Faculty of Toxicology, Texas A&M University.

### B. Honors and Awards

- 1989-1991      Scholarship, National Research Council (CONICET-Argentina)
- 1991-1993      Scholarship, National Research Council (CONICET-Argentina)
- 1997-1999      Scholarship, Fulbright Commission
- 2003-2005      Graduate Research Assistantship, College of Veterinary Medicine, Cornell University
- 2003-2005      Postdoctoral Fellowship, American Heart Association

### C. Peer-reviewed publications (in chronological order)

1. **Rivera GM**, Alberio RH, Callejas SS, Doray JM. 1994. Advancement of ovulation and oestrus after temporary calf removal and FSH supplementation in postpartum beef cows. *Anim Reprod Sci.* 36:1-11. No PMID.
2. **Rivera GM\***, Goni CG, Chaves MA, Ferrero SB, Bo GA. 1998. Ovarian follicular wave synchronization and induction of ovulation in postpartum beef cows. *Theriogenology* 49: 1365-1375. **\*Corresponding Author.** PMID: 10732073
3. **Rivera GM**, Fortune JE. 2001. Development of co-dominant follicles in cattle is associated with an FSH-dependent insulin-like growth factor binding protein-4 protease. *Biol Reprod* 65:112-118. PMID: 11420230
4. **Rivera GM**, Chandrasekher YA, Giudice LC, Fortune JE. 2001. A role for insulin-like growth factor binding protein-4 proteolysis in the establishment of ovarian follicular dominance in cattle. *Biol Reprod* 65: 102-111. PMID: 11420229
5. Fortune JE, **Rivera GM**, Evans AOC, Turzillo AM. 2001. Differentiation of dominant vs. subordinate follicles in cattle. *Biol Reprod* 65: 648-654. PMID: 11514324
6. **Rivera GM**, Fortune JE. 2003. Selection of the dominant follicle and IGF binding proteins: evidence that pregnancy-associated plasma protein-A (PAPP-A) contributes to Proteolysis of IGF binding protein-5 in bovine follicular fluid. *Endocrinology* 144: 437-446. PMID: 12538602
7. **Rivera GM**, Alanis GA, Chaves MA, Ferrero SB, Morello HH. 2003. Seasonality of estrous and ovulation in Creole goats of Argentina. *Small Ruminant Research* 48:109-117. No PMID
8. **Rivera GM**, Fortune JE. 2003. Proteolysis of IGF binding proteins -4 and -5 in bovine follicular fluid: implications for ovarian follicular selection and dominance. *Endocrinology* 144: 2977-2987. PMID: 12810553
9. Fortune JE, **Rivera GM**, Yang MY. 2004. Follicular development: the role of the follicular microenvironment in selection of the dominant follicle. *Anim. Reprod. Sci.* 82-83: 109-26. PMID: 15271447
10. **Rivera GM**, Briceño CA, Takeshima F, Snapper SB, Mayer BJ. 2004. Inducible clustering of membrane-targeted Src homology 3 (SH3) domains of the adaptor protein Nck triggers localized actin polymerization and elicits cytoskeleton rearrangements. *Current Biology* 14:11-22. PMID: 14711409
11. **Rivera GM**, Antoku S, Gelkop S, Shin NY, Hanks SK, Pawson T, Mayer BJ. 2006. Requirement of Nck adaptors for actin dynamics and cell migration stimulated by PDGF-B. *Proc Natl Acad Sci USA*, 103:9536-41. PMID: PMC1476694
12. Sallee NA, **Rivera GM**, Dueber JE, Vasilescu D, Mullins RD, Mayer BJ, Lim WA. 2008. The pathogen protein EspF(U) hijacks actin polymerization using mimicry and multivalency. *Nature* 454: 1005-8. PMID: 18650806
13. Antoku S, Saksela K, **Rivera GM**, Mayer BJ. 2008. A crucial role in cell spreading for the interaction of Abl PxxP motifs with Crk and Nck adaptors. *Journal of Cell Science* 121: 3071-3082. PMID: 18768933
14. Hu T, Shi G, Larose L, **Rivera GM**, Mayer BJ, Zhou R. 2009. Regulation of process retraction and cell migration by Eph A3 is mediated by the adaptor protein Nck1. *Biochemistry* 48:6369-6378. PMID: 19505147
15. **Rivera GM\***, Vasilescu D, Papayannopoulos V, Lim WA, Mayer BJ. 2009. A reciprocal interdependence between Nck and phosphatidylinositol 4,5 bisphosphate promotes localized N-WASp-mediated actin polymerization in living cells. *Mol. Cell* 36: 525-535. **\*Corresponding Author.** PMID: 19917259

16. Hou TY, Monk JM, Fan YY, Barhoumi R, Chen YQ, **Rivera GM**, McMurray DN, Chapkin RS. 2012. n-3 polyunsaturated fatty acids suppress phosphatidylinositol 4,5-bisphosphate-dependent actin remodelling during CD4+ T-cell activation. *Biochem J.* 443:27-37. PubMed PMID: 22250985.
17. Ditlev JA, Michalski PJ, Huber G, **Rivera GM**, Mohler WA, Loew LM, Mayer BJ. 2012. Stoichiometry of Nck-dependent Actin Polymerization in Living Cells. *J Cell Biol.* 197:643-58 PMID: 22613834
18. Chaki, S.P., Barhoumi, R., Berginski M.E., Sreenivasappa, H., Trache, A., Gomez, S.M., and **Rivera, G.M.\*** 2013. Nck enables directional cell migration through the coordination of polarized membrane protrusion with adhesion dynamics. *Journal of Cell Science (in press)*  
**\*Corresponding Author.**

#### **D. Research Support**

##### **Ongoing:**

1. Texas A&M University. Start-up funds. Gonzalo M. Rivera (PI). 7/01/2008-6/30/2013  
Funds to support initial laboratory set up, equipment acquisition, and personnel salaries.
2. American Heart Association, Beginning Grant-in-Aid (12BGIA9030042). 1/01/2012-12/31/2013.  
Gonzalo M. Rivera (PI).  
Title: Defining functional interactions in the activation of N-WASp-dependent actin polymerization.  
The goal of this project is to determine how the crosstalk between signals mediated by phosphoinositides and tyrosine phosphorylation modulate actin dynamics.
3. A&M Cancer Research Incentive Grant. Gonzalo M. Rivera (PI). 7/01/2012-6/30/2013. Title: Identification and validation of novel molecular targets for invasive prostate cancer. The goal of this project is to conduct a siRNA-based screen of trafficking genes to identify targets involved in the surface delivery/secretion of MMP and ADAM metalloproteinases.

##### **Completed:**

1. Postdoctoral Fellowship, American Heart Association (AHA 0325791T). 7/01/2003-6/30/2005  
Gonzalo M. Rivera (PI)  
Title: Effects of membrane aggregation of Nck SH3 domains in actin polymerization  
The goal of this project was to develop a strategy for the manipulation of signaling proteins at the plasma membrane and characterize cytoskeletal rearrangements in living cells.
2. Scientist Development Grant, American Heart Association  
Gonzalo M. Rivera (PI)  
7/01/07-6/30/11  
Title: Regulation of cell motility by SH2/SH3 domain-containing adaptors  
The goal of this project is to understand the role of the SH2/SH3 domain-containing adaptors in regulation of membrane protrusion dynamics and adhesion turnover.