

BIOGRAPHICAL SKETCH

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NAME Silvia Mabel Goicoechea		POSITION TITLE Assistant Professor	
eRA COMMONS USER NAME SILVIA_GOICOECHEA			
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
National University of Mar del Plata, Argentina	B.S.	1987	Biology
National University of Mar del Plata, Argentina	Ph.D.	1997	Biochemistry
Univ. of Alabama at Birmingham	post-doc	1998-2002	Cell Biology

A. Positions and Honors

1989-1991 - Graduate Research Fellowship, National University of Mar del Plata, Argentina
 1996 - Argentine Society of Biochemistry, Travel Award
 1997-1998 - Postdoctoral Fellowship, National University of Mar del Plata, Argentina
 2001 - Postdoctoral Career Enhancement Award, University of Alabama at Birmingham, USA
 2000-2002 - Post-doctoral Fellowship, American Heart Association, USA
 2004-2010 - Research Instructor, Department of Cell and Molecular Physiology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.
 2007 - Center for Women's Health Research, UNC, Award for Excellence
 2008- Susan G. Komen for the Cure-AACR Scholar Award
 2010 to present- Assistant Professor, Department of Cell and Molecular Physiology, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.

B. Peer-Reviewed Publications.

1- The actin associated protein palladin is important for the early smooth muscle cell differentiation. Jin L, Gan Q, Zieba BJ, Goicoechea SM, Owens GK, Otey CA, Somlyo AV. PLoS One. Sep 22;5(9):e12823. 2010
 2- Isoform-specific upregulation of palladin in human and murine pancreas tumors. Goicoechea SM, Bednarski B, Stack C, Cowan DW, Volmar K, Thorne L, Cukierman E, Rustgi AK, Brentnall T, Hwang RF, McCulloch CA, Yeh JJ, Bentrem DJ, Hochwald SN, Hingorani SR, Kim HJ, Otey CA. PLoS One. 2010 Apr 26;5(4):e10347.
 3- Cytoplasmic Ig-domain proteins: Cytoskeletal regulators with a role in human disease. Otey CA, Dixon R, Stack C, Goicoechea SM. Cell Motil Cytoskeleton. 66(8):618-34, 2009
 4- Palladin contributes to invasive motility in human breast cancer cells. Goicoechea SM, Bednarski B, García-Mata R, Prentice-Dunn H, Kim HJ and Otey CA. Oncogene. 28(4):587-98, 2009
 5- Roles of the small GTPases RhoA and Rac1 in cell behavior. Carol Otey, Silvia Goicoechea and Rafael Garcia-Mata. F1000 Biology Reports 1:4, 2009
 6- Characterization of cortactin as an in vivo Protein Kinase D substrate: interdependence of sites and potentiation by Src. Line De Kimpe, Katrien Janssens, Rita Derua, Milena Armacki, Silvia Goicoechea, Carol Otey, Etienne Waelkens, Sandy Vandoninck, Jackie R. Vandenheede, Thomas Seufferlein, and Johan Van Lint. Cell. Signal. 21(2):253-63, 2009
 7- The role of palladin in actin organization and cell motility. Silvia Goicoechea, Daniel Arneman and Carol Otey. Eur J Cell Biol. 87(8-9):517-25, 2008

8- Palladin binds to Eps8 and enhances the formation of dorsal ruffles and podosomes in vascular smooth muscle cells. Goicoechea SM, Arneman D, Disanza A, Garcia-Mata R, Scita G and Otey C. J. Cell Science 119(Pt 16):3316-24, 2006

9- Low density lipoprotein receptor-related protein is a calreticulin co-receptor that signals focal adhesion disassembly. A.W. Orr, C. Pedraza, M.A. Paller, C. Elzie, SM Goicoechea, D. Strickland, J. Murphy-Ullrich. J. Cell Biol. 161(6):1179-89, 2003

10- Anti-adhesive Activity of Thrombospondin is Mediated by The N-terminal Domain of Cell Surface Calreticulin. Goicoechea SM, Pallero MA, Eggleton P, Michalak M., Murphy-Ullrich JE. J Biol Chem. 277(40):37219-28, 2002

11- Nck-2 interacts with focal adhesion kinase and modulates cell motility. Goicoechea, SM; Tu, Y; Hua, Y; Chen, K; Shen, T-L; Guan, J-L; Wu, C. Int. J. Biochem. Cell. Biol. 1255:1-15, 2002

12- Cell surface calreticulin-thrombospondin de-adhesive activity in Calreticulin in Health and Disease. SM Goicoechea and J.E.Murphy-Ullrich. In Calreticulin 2nd Edition. Ed. Paul Eggleton and Marek Michalak. Landes Bioscience, Georgetown, Texas (2002).

13- Thrombospondin mediates focal adhesion disassembly through interactions with cell surface calreticulin. Goicoechea SM, Orr WA, Pallero MA, Eggleton P, Murphy-Ullrich JE. J. Biol. Chem. 275(46):36358-68, 2000

14 - The LIM-only protein PINCH is a binding protein for the integrin-linked kinase (ILK). Tu, Y; Li, F; Goicoechea, SM; Wu, C, Molecular and Cellular Biology, 19(3):2425, 1999

15- Integrin-linked protein kinase regulates fibronectin matrix assembly, E-cadherin expression and tumorigenicity. Wu, C; Keightley, SY; Leung-Hegesteijn, CH; Radeva, G; Coppolino, M; Goicoechea, SM; McDonald, JA; Dedhar, S. J. Biol. Chem. 273(1):528-536, 1998

C. Research Support

Ongoing

University Cancer Research Fund (UCRF)

Core Facility Pilot Project Award

2010-2011

“Establishment of an *in vivo* model of metastatic pancreatic adenocarcinoma in mice to study the role of palladin in tumor growth”

With the services of the Animal Studies Core Facility, we will induce orthotopic tumor formation in nude mice by pancreatic implantation of subcutaneous donor tumors. We will inject together engineered RFP-Mia-PaCa tumor cells and stably transfected palladin knockdown and overexpression tumor associated fibroblasts. We will evaluate the role of palladin in tumor growth and metastasis. Thus, this study has the potential to identify palladin as a molecular target for pancreatic cancer therapeutics.

Recently completed support

AHA 0635025N

7/1/06 – 6/30/10

“Involvement of palladin/Eps8 interaction in stress fiber and dorsal ruffle formation”

Characterization of the interaction between palladin and Eps8 in detail by identifying binding sites on both proteins, and determination of the role of palladin/Eps8 interaction in the formation of PDGF-induced ruffles and in vascular smooth muscle cell function.

Role: P.I.