

BIOGRAPHICAL SKETCH

NAME Pablo E. Vivas-Mejía		POSITION TITLE Research Assistant Professor	
eRA COMMONS USER NAME (credential, e.g., agency login) pevivas			
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as</i>)			
INSTITUTION AND LOCATION	DEGREE (<i>if applicable</i>)	YEAR(s)	FIELD OF STUDY
Universidad Nacional, Bogotá, Colombia	B.S.	1994	Chemistry
University of Puerto Rico, Rio Piedras	M.S.	1997	Biochemistry
University of Puerto Rico, Rio Piedras	Ph.D.	2001	Biochemistry
University of Puerto Rico, Rio Piedras	Postdoctoral	2002-2004	Molecular Neurobiology
University of Texas, MD Anderson cancer Center	Postdoctoral	2006-2009	Cancer Medicine

A. Positions and Honors

Positions and employment

- 2009- Research Assistant Professor, University of Puerto Rico Comprehensive Cancer Center, Rio Piedras, Puerto Rico
- 2004-2006: Research Associate, Microarrays Facility, Department of Biology, University of Puerto Rico, Rio Piedras.
- 2004-2005: Professor General and Organic Chemistry. Sistema Universitario Ana G. Mendez. San Juan, Puerto Rico.
- 2003: Professor of the Cellular Physiology Graduate Course: mechanism of cell death in health and disease. Department of Biology, University of Puerto Rico, Rio Piedras Campus. August-December.
- 2002: Professor of Organic Chemistry. Sagrado Corazón University, Santurce, Puerto Rico.
- 2000-2001: Professor of Biochemistry. Inter American University of Puerto Rico, Bayamón, Puerto Rico.

Other Experience and Professional Membership

- 2001-present Puerto Rico Chemist License
- 2003-present American Chemical Society Membership
- 2006-present American Association of Cancer Research Membership
- 2001 Short course: Flow cytometry: Theory and Applications July 11-13.
- 2004 Rat and mouse lecture and wet lab. Medical Science Campus. University of Puerto Rico, Medical Sciences Campus, October 4-6.
- 2004 Fluorescent microarrays Agilent Training: RNA amplification, probe preparation, hybridization and scanning. February 3-5.
- 2004 Analysis of microarray data training using Bioconductor tools. Offered by Dr. Vincent Carey (Harvard) and Dr. Rafael Irizarry (John Hopkins). May 20-21.

- 2005 Workshop: Proteomics: From 2D Gel to Mass Spectrometry Analysis. Utah State University Center for Integrated BioSystems. April 19-22.
- 2006 Visit to Los Alamos National Laboratories (Dr. Xian Chen, Proteomic Center. Los Alamos, NM. June-July.
- 2007 Visit to Duke Proteomic Center (Dr. Xian Chen Laboratory), Chapel Hill, NC. June-July
- 2008 Visit to Duke Proteomic Center (Dr. Xian Chen Laboratory), Chapel Hill, NC, June-July.

Honors and Awards

FIPI program M.S. fellowship (1994-1997), University of Puerto Rico, Rio Piedras.

EPSCoR M.S. fellowship (1998), University of Puerto Rico, Rio Piedras.

PR-AABRE Technology Transfer Travel Award. Director: Fernando González, Ph.D. Department of Experimental Therapeutics, University of Texas, M.D. Anderson Cancer Center (Houston, TX). May 15/05 to June 25/05.

Cancer Health Disparities Summit 2008 travel award, Bethesda, MD, July 14–16, 2008.

AACR Minority Scholar Award in Cancer Research, 2009.

B. Peer-reviewed publications (in chronological order)

1. Vivas-Mejía PE, Rodríguez-Caban JL, Velázquez M, Hernandez-Perez, M, Cox O, González FA. (1997). DNA Binding-independent Anti-proliferative Action of Benzazolo [3,2-a] quinolinium DNA intercalators. *Molecular and Cellular Biochemistry*; 178: 67-77.
2. Vivas-Mejía PE, Cox O, and González FA. (1998). Inhibition of Human Topoisomerase II by Benzazolo [3,2-a] quinolinium Chlorides: Molecular basis of Drug Action. *Molecular and Cellular Biochemistry*, 178: 203-212.
3. Lozano CM, Cox O, Vivas-Mejía PE., Muir MM, Morales JD, Rodríguez-Caban JL, and González FA (1998). Cytotoxic Aionic Tribromo Platinum (II) Complex Containing Benzothiazole and Benzaxole Donors. *Inorganica Chimica Acta*; 271: 137-144.
4. Weisman GA, Griffin K, Santiago-Perez, LI, Liu, J, Krugh B, Flores, RV, Cromar RN, C. Santos-Berrios C, Vivas-Mejía PE, Garrad RC, Gonzalez FA, and Erb L (2001). P2Y2 receptors regulate multiple signal transduction pathways in monocytic cells. *Drug Dev. Res.* 53.
5. Gendron FP, Newbold NL, Vivas-Mejía PE, Wang M, Neary JT, Sun GY, Gonzalez FA, and Weisman, GA. (2003). Signal transduction pathways for P2Y₂ and P2X₇ nucleotide receptors that mediate neuroinflammatory responses in astrocytes and microglial cells. *Biomedical Research*; 14(1): 50-67.
6. Robles, Y, Vivas-Mejía PE, Ortiz-Zuazaga, HG, Félix Y, Ramos X, and Peña de Ortiz S. (2003). Hippocampal gene expression profiling in spatial discrimination learning. *Neurobiology of Learning & Memory*; 80 (80-95).
7. Hwang JY, Mangala LS, Fok JY, Lin YG, Merritt WM, Spannuth WA, Nick AM, Fiterman DJ, Vivas-Mejía PE, Deavers MT, Coleman RL, Lopez-Berestein G, Mehta K, and Sood AK. Clinical and Biological Significance of Tissue Transglutaminase in Ovarian Carcinoma. *Cancer Res.*, Jul 2008; 68: 5849 - 5858.
8. Gray MJ, Dallas NA, Van Buren G, Xia L, Yang AD, Somcio RJ, Gaur P, Mangala LS, Vivas-Mejía PE, Fan F, Sanguino AM, Gallick GE, Lopez-Berestein G, Sood AK, Ellis LM. Therapeutic targeting of Id2 reduces growth of human colorectal carcinoma in the murine liver. *Oncogene*, Sep 22, 2008.
9. Ozpolat B, Akar U, Zorrilla-Calancha I, Vivas-Mejía PE, Acevedo-Alvarez M, and Lopez-Berestein G. Death-Associated Protein 5 (DAP5/p97/NAT1) Contributes to Retinoic Acid-Induced Granulocytic Differentiation and Arsenic Trioxide-Induced Apoptosis in Acute Promyelocytic Leukemia. *Apoptosis : an international journal on programmed cell death* 2008;13 (7):915-28.

10. M Naguib, P Diaz, J J Xu, F Astruc-Diaz, S Craig, P Vivas-Mejia and D L Brown: MDA7: a novel selective agonist for CB₂ receptors that prevents allodynia in rat neuropathic pain models. *British Journal of Pharmacology*, September 2008; doi: 10.1038/bjp.2008.340.

11. Villares GJ, Zigler M, Wang H, Melnikova VO, Wu H, Friedman R, Michael C. Leslie MC, Vivas-Mejia PE, Lopez-Berestein G, Sood AK, and Bar-Eli M. Targeting Melanoma Growth and Metastasis with Systemic Delivery of Liposome-incorporated Protease-Activated Receptor-1 Small Interfering RNA. *Cancer Res.*, Nov 2008; 68: 9078 - 9086.

12. Vivas-Mejia PE. Ozpolant B, Chen X and Lopez-Berestein G. Downregulation of the c-MYC target gene, *peroxiredoxin III*, contributes to Arsenic trioxide-induced apoptosis in acute promyelocytic leukemia. *International Journal of Cancer*. Volume 125, Issue 2, Date: 15 July 2009, Pages: 264-275.

13. Mian M.K. Shahzad , Chunhua Lu, Jeong-Won Lee, Rebecca L. Stone, Rahul Mitra, Lingegowda S. Mangala, Yiling Lu, Keith A. Baggerly, Christopher G. Danes, Alpa M. Nick, Jyotsnabaran Halder, Hye-Sun Kim, Pablo Vivas-Mejia, Charles N Landen, Gabriel Lopez-Berestein, Robert L Coleman, Anil K. Sood. Dual targeting of EphA2 and FAK in ovarian carcinoma. *Cancer Biology & Therapy*, June 1, 2009. 8 (11).

14. Lingegowda S. Mangala, Vesna Zuzel, Rosemarie Schmandt, Erik S. Leshane, Jyotsna B. Halder, Guillermo N. Armaiz-Pena, Whitney A. Spannuth, Takemi Tanaka, Mian M.K. Shahzad, Yvonne G. Lin, Alpa M. Nick, Christopher G. Danes, Jeong-Won Lee, Nicholas B. Jennings, Pablo E. Vivas-Mejia, Judith K. Wolf, Robert L. Coleman, Zahid H. Siddik, Gabriel Lopez-Berestein, Svetlana Lutsenko, and Anil K. Sood. Therapeutic targeting of ATP7B in Ovarian Carcinoma. *Clin Cancer Res*. 2009 Jun 1;15(11):3770-80.

15. Takemi Tanaka, Lingegowda S Mangala, Pablo E Vivas-Mejia, Rene A Nieves, Aman P Mann, Edna Mora, Hee-Dong Han, Mian M K Shahzad, Xuewu Liu, Chunhua Lu, Rohan Bhavane, Jianhua Gu, Ciro Chiappini, Jean Fakhoury, Biana Godin-Vilentchouk, Rebecca L Stone, Alpa M Nick, Gabriel Lopez-Berestein, Anil K Sood, and Mauro Ferrari. Sustained siRNA Delivery by Mesoporous Silicon Particles for Cancer Treatment. **Submitted: Nature Biotech.**

16. Juliana Maria Benito, Pablo Vivas-Mejia, Ariel Fernandez, Hee-Dong Han, Lingegowda Mangala, Angela M. Sanguino, Yvonne G. Lin, Alpa M. Nick, Rebecca L. Stone, Hye Sun Kim, Francois-Xavier Claret, William Bornmann, Bryan T.J. Hennessy, Zhengong Peng, Anil K. Sood, and Gabriel Lopez-Berestein: JNK-1 Inhibition Leads to Antitumor Activity in Ovarian Cancer. **Resubmission: Clinical Cancer Research.**

17. Anil K. Sood, Jyotsnabaran Halder, Guillermo N. Armaiz-Pena, Alpa M. Nick, Rebecca L. Stone, Whitney A. Spannuth, Michael T. Deavers, Julie K. Allen, Liz Y. Han, Aparna A. Kamat, Mian M.K. Shahzad, Bradley W. McIntyre5, Claudia M. Diaz-Montero, Nicholas B. Jennings, Yvonne G. Lin, William M. Merritt, Koen DeGeest, Pablo E. Vivas-Mejia, Gabriel Lopez-Berestein, Michael D. Schaller, Steven W. Cole, Susan K. Lutgendorf. Neuroendocrine Modulation of Anoikis. **Submitted: Journal of clinical Investigation.**

18. Vivas-Mejia PE. Martinez, M, Ozpolant B, Chen X and Lopez-Berestein G. Isotope-coding comparative proteomics reveals that the eukaryotic translation initiation factor, EIF4E plays a central role in ATRA-resistance of acute promyelocytic leukemia cells. **In preparation: target journal: Blood.**

Poster and Oral Presentations (since 2004)

Vivas-Mejia, Pablo E. Laser Capture Microdissection and microarray analysis of gene expression. Ponce School of medicine (December 5/04). Invited lecture.

Vivas-Mejia, P.E. Sánchez B., and Hernández, J. Gene Expression Profiles After a Long-term Enriched Environment in the Alzheimer Disease-Like Tg2576 transgenic Mice. *XIII annual Puerto Rico Neuroscience conference*. 2004. Poster.

Vivas-Mejia, P.E., Bulent, O., Chen, X., and Lopez-Berestein G. Isotope-coding comparative proteomics reveals that peroxiredoxins and other mitochondrial effectors play a central role during differentiation and apoptosis of acute promyelocytic leukemia cells following ATRA treatment. *AACR meeting, 2007, Los Angeles, CA. Poster.*

Vivas-Mejia, P.E., Bulent, O., Chen, X., and Lopez-Berestein G. Peroxiredoxin III contributes to Arsenic-induced apoptosis in APL cells. *AACR meeting, 2008, San Diego, CA. Poster.*

Seung Wook Kim, Alpa Nick, Lingegowda Mangala, Whitney Spanuth, Jeong-Won Lee, Mian Shahzad, **Pablo Vivas-Mejia**, Robert Coleman, Gabriel Lopez-Berestein, and Anil Sood. Biological significance of paxillin in ovarian carcinoma. *AACR Meeting , 2008, San Diego, CA. Poster.*

Pavel Levin, Thiruvengadam Arumugam, Xue Pan, **Pablo Vivas-Mejia**, Anil Sood, Gabriel Lopez-Berestein, and Craig Logsdon. Neutral liposome-coupled siRNA delivery against EphA2 receptor sensitizes gemcitabine resistant orthotopic pancreatic tumors *in vivo*. *AACR Meeting , 2008, San Diego, CA. Poster.*

Yvonne Lin, Jee-Young Hwang, Lingegowda Mangala, Jansina Fok, William Merritt, Whitney Spanuth, Alpa Nick, **Pablo Vivas-Mejia**, Michael Deavers, Robert Coleman, Gabriel Lopez-Berestein, Kapil Mehta, and Anil Sood. Biological and therapeutic implications of tissue transglutaminase (TG2) silencing in advanced ovarian carcinoma. *AACR Meeting , 2008, San Diego, CA. Poster.*

Pablo Vivas-Mejia. Downregulation of the c-MYC Target Gene, Peroxiredoxin III, Contributes to Arsenic Trioxide-Induced Apoptosis in APL. *Cancer Health Disparities Summit 2008, Bethesda, MD, July 14–16, 2008. Oral Presentation.*

Pablo E. Vivas-Mejia, Anil Sood, and Gabriel Lopez-Berestein. Targeting survivin in taxane-resistant ovarian cancer using liposomal siRNA. *100th AACR Annual Meeting, 2009 (Denver, CO). Poster.*

Meleine M. Martinez-Sosa, **Pablo E. Vivas-Mejia**, Bulent Ozpolat, Xian Chen, Gabriel Lopez-Berestein. Isotope-coding quantitative proteomics reveals that autophagy-related proteins could contribute to the ATRA-resistant phenotype of acute promyelocytic leukemia cells. *100th AACR Annual Meeting, 2009 (Denver, CO). Poster.*

Research Funding

Completed

1. Past: BRIN-PR. Grant No. P20RR16470. Minority Biomedical Support, \$ 87,000/year", August/03-July/04. Program Director: Fernando González, Ph.D. "Gene expression profile in homogeneous cell populations from Alzheimer Disease-Like Tg2576 transgenic mouse brain". Principal Investigator: P.E. Vivas-Mejia, 25% effort.
2. Past: PR-AABRE Technology Transfer Travel Award. \$10,000. program Director: Fernando González, Ph.D. Proteomics (2D-PAGE and SELFI-TOF). Dr. Gabriel Lopez-Berestein Laboratory. Department of Experimental Therapeutics, M.D. Anderson Cancer Center (Houston, TX). Summer/2005.

Patents Application

Pending

Sustained nucleic acid delivery by multistage nanovector. Mauro Ferrari, Takemi Tanaka, Anil Sood, Gabriel Lopez-Berestein, Lingegowda Mangala, **Pablo E. Vivas-Mejia**. MDA08-104.

Therapeutic targeting of Src using siRNA in neutral liposomes. Anil Sood, Gabriel Lopez-Berestein, Guillermo Armaiz-Peña, **Pablo E. Vivas-Mejia**. MDA08-107.