

Faculty

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Rank/Discipline

Assistant Professor
Biochemistry / Cancer Biology
Department of Pharmaceutical
Sciences

Education & Specialty Certification

PhD, Alabama A&M University,
2003; Post Doctoral Cancer
Biology, Vanderbilt University
Medical Center, 2003-2006
&2006-2010.

Magaly Martínez Ferrer, Ph.D.

Research Areas and Active Projects

The main research focus of our laboratory is in the area of prostate cancer related to the role of inflammation and phytochemicals in prostate cancer progression and metastasis. We recently started a project that studies the HPV genotypes prevalent in penile cancer in Puerto Rico.

Active Projects:

- Inflammatory mediators of prostate cancer and responses to curcumin
- Anticarcinogenic effect of Andrographolide in Prostate Cancer
- Autoantibodies as potential biomarkers associated with recurrence of prostate cancer
- HPV genotypes and Gene Expression in Penile Cancer in Puerto Rico

Research Support

K01 CA140711-01 (PI: Martinez-Ferrer) 10/01/2009 – 9/30/2014
NIH/NCI

Project title: Inflammatory Mediators of Prostate Cancer Metastasis and Responses to Curcumin. The goal of this project is to understand the biologic functions of CX3CL1, IL-15, and CCL4 as biomarkers for predicting biochemical recurrence in patients. The early determination for potential metastatic prostate cancer progression can enable appropriate treatment and save patients who would eventually die from recurrence of prostate cancer.

Role: Principal Investigator

Institutional Funds (Seed Money) (Martinez-Ferrer)

3/1/2010-3/1/2015

University of Puerto Rico Comprehensive Cancer Center

Publications

Colón-López V, Ortiz, AP, Soto-Salgado M, **Martínez-Ferrer M**, Puras-Báez A, Suárez E. 2012. Disparities in penile cancer occurrence in Puerto Rican men as compared to the United States Population. *Int Braz J Urol.* 38(6):728-38.

Stabler S, Koyama T, Zhao Z, **Martinez-Ferrer M**, Allen RH, Luka Z, Loukachevitch LV, Clark PE, Wagner C, Bhowmick NA. 2011. Serum methionine metabolites are risk factors for metastatic prostate cancer progression. *PLoS ONE.* 6(8): e22486. doi:10.1371/journal.pone.0022486.

Li X, **Martinez-Ferrer M**, Botta V, Uwamariya C, Banerjee J, Bhowmick NA. 2011. Epithelial Hic-5/ARA55 expression contributes to prostate tumorigenesis and castrate responsiveness. *Oncogene*, Jan 13, 30(2): 167-77.

Martínez-Ferrer M, Afshar-Sherif AR, Uwamariya C, de Crombrughe B, Davidson JM, Bhowmick NA. 2010. Dermal transforming growth factor- β signaling mediates closure and contraction of skin wounds through a Wnt-dependent manner. *American Journal of Pathology.* 176(1):98-107.

Tanaka ST, **Martinez-Ferrer M**, Makari JH, Wills ML, Thomas JC, Adams MC, Brock JW, Pope JC, Bhowmick NA. 2009. Recruitment of Bone Marrow Derived Cells to the Bladder After Bladder Outlet Obstruction. *The Journal of Urology.* 182(4):1769-74.

Blum DL, M'Koma A, Koyama T, Iturregui JM, **Martínez-Ferrer M**, Uwamariya C, Smith JA, Clark PE, Bhowmick NA. 2008. Cytokine markers predict biochemical recurrence of prostate cancer following prostatectomy. *Clin Cancer Res.* 14(23): 7790-7797.

Starkman JS[§], **Martínez-Ferrer M**[§], Iturregui JM, Uwamariya C, Dmochowski RR, Bhowmick NA. 2008. Nicotinic signaling ameliorates acute bladder inflammation induced by protamine sulfate or cyclophosphamide. *Journal of Urology.* 179(6): 2440-2446.

[§] **The first 2 authors contributed equally in the preparation of this manuscript.**

Martínez-Ferrer M, Iturregui JM, Uwamariya C, Starkman J, Sharif-Afshar AR, Suzuki K, Visedsindh W, Matusik RJ, Dmochowski RR, Bhowmick NA. 2008. Role of nicotinic and estrogen signaling during experimental acute and chronic bladder inflammation, *American Journal of Pathology.* 172(1):59-67.

Martínez-Ferrer M., Verghese M., Walker L.T., Chawan C.B., Shakelford L. 2006. Lycopene reduces azoxymethane induced colon tumors in Fisher 344 rats. *Nutrition Research*. 26:2: 84-91.

Martínez-Ferrer M., Harper C. 2004. Reduction of Microbial Growth and Improvement of Storage Quality in Fresh-Cut Pineapple After Methyl Jasmonate Treatment. *Journal of Food Quality*. 28 (2005) 3-12.

Martínez-Ferrer M., Harper C., Pérez-Muñoz F., Chaparro M. 2002. Modified atmosphere packaging of minimally processed mango and pineapple fruits. *J. Food Science*. 67(8): 3365-3371.

Presentations

Rohena-Rivera K, Sanchez-Vazquez MM, Casillas-González J, Merly N, Martínez-Ferrer M. 2013. CCL4 induces the expression of alpha-smooth muscle actin and phospho-histone-3. 104^h Annual Meeting Proceedings of the American Association for Cancer Research.

Rohena-Rivera K, Sanchez-Vazquez MM, Casillas-González J, Martínez-Ferrer M. 2012. Chemokines alter invasion and adhesion of prostate cancer cells, and promote tumor growth. 13th RCMI International Symposium on Health Disparities. San Juan, PR.

Banerjee A, Casillas J, Sanchez M, Rohena K, Martinez-Ferrer M. Andrographolide suppresses prostate cancer cell migration and alters the expression of vimentin, ZO-1 and MMP-11. 2012. 103th Annual Meeting Proceedings of the American Association for Cancer Research.

Martínez-Ferrer M, Qi Y, Sanchez M, Bhowmick NA. Inflammatory Mediators of Prostate Cancer Metastasis. 2011. 102th Annual Meeting Proceedings of the American Association for Cancer Research.

Colon-Lopez V, Ortiz AP, Soto-Salgado M, Martinez-Ferrer M, Puras A, Suarez E. Incidence and mortality rates of penile cancer among men in Puerto Rico and the United States. 2011. 102th Annual Meeting Proceedings of the American Association for Cancer Research.

Martínez-Ferrer M, Koyama T, Iturregui JM, Bhowmick NA. Identification of differentially expressed serum autoantibodies in recurrent prostate cancer patients. 2009. 100th Annual Meeting Proceedings of the American Association for Cancer Research.

Li X, Martinez-Ferrer M, Uwamariya C, Botta V, Bhowmick N. Prostate epithelial Hic-5 expression inhibits tumorigenicity and restores responsiveness to castration. 2009. 100th Annual Meeting Proceedings of the American Association for Cancer Research.

Tanaka ST, Wolter CE, Martinez-Ferrer M, Uwamariya C, Iturregui JM, de Crombrughe B, Adams MC, Brock JW, Pope JC, Dmochowski RR, Bhowmick NA: Bladder hypertrophy resulting from partial outlet obstruction is ameliorated by sildenafil in a TGF- β dependent mechanism. AAP section on urology and pediatric urology nurse specialists (PUNS), International children's continence society (ICCS), and Society for fetal urology (SFU) joint meeting. 2008. Boston, MA.

Martínez-Ferrer M, Iturregui JM, Sharif-Afshar AR, Kichiya S, Matusik R, Bhowmick N: Role of nicotinic and estrogen signaling during experimental acute and chronic bladder inflammation in mice. Proceedings Society of Urodynamics and Female Urology (SUFU) 2007 Annual Meeting.

Martínez-Ferrer M, Iturregui JM, Sharif-Afshar AR, Kichiya S, Matusik R, Bhowmick N: Role of nicotinic and estrogen signaling during experimental bladder inflammation in mice. Proceedings Society for Basic Urologic Research (SBUR) 2006 Annual Meeting, 2006, #57:194.

Poster presentation at the 2005 Edward A. Smuckler Memorial Pathobiology of Cancer Workshop (Snowmass, CO., 2005) – $\alpha_2\beta_1$ Integrin and Mammary Gland Development.

Poster presentation at the 95th AACR Annual Meeting Orlando, FL, 2004) - Anticarcinogenic activity of lycopene during initiation and progression stages of colon carcinogenesis in Fisher 344 male weanling rats. 95th Annual Meeting Proceedings of the American Association for Cancer Research. 45(2nd edition, March): 364.

Poster presentation at the 94th AACR Annual Meeting (Washington, D.C., 2003) - Modulation of the expression of ras-p21 by lycopene during azoxymethane induced colon carcinogenesis in Fisher 344 male rats. 94th Annual Meeting Proceedings of the American Association for Cancer Research. 44(2nd edition, July): 285.

Poster presentation at the 13th Biennial Research Symposium (Atlanta, Georgia, 2003) – Lycopene modulates expression of ras-p21 in azoxymethane induced colon carcinogenesis in Fisher 344 male rats.

Poster presentation at the 2002 Institute of Food Technologist Annual Meeting & Food Expo (Anaheim, CA, 2002) – Anticarcinogenic activity of lycopene in colon of Fisher 344 male rats.

Poster presentation at the 2002 Experimental Biology Annual Meeting (New Orleans, Louisiana, 2002) – Lycopene and its role in azoxymethane induced colon carcinogenesis. The FASEB Journal. 16(5): 1006.

INVITED PRESENTATIONS

Martinez-Ferrer, M. Invited Speaker. Inflammatory Mediators of Prostate Cancer Metastasis. Puerto Rico Urological Association Annual Meeting, San Juan, PR, October 2, 2010.

Martinez-Ferrer, M. Invited Speaker. Inflammation and Prostate Cancer. Triple-S Educational Workshops, San Juan & Ponce, PR, September 22-23, 2010.

Martinez-Ferrer, M. Invited Speaker. Getting Involved: Our Families, Our Community, Our Nation. National Hispanic Heritage Month 2008, Nashville, TN. September 2008.

Martínez-Ferrer M. Invited Speaker. Role of nicotinic and estrogen signaling during experimental acute and chronic bladder inflammation in mice. Society of Urodynamics and Female Urology (SUFU) 2007 Annual Meeting.

MEDIA

Los estudios clinicos de hoy, la medicina del mañana – En la busqueda de nuevas soluciones a los problemas de cancer. El Nuevo Dia. Oct 14, 2010, Supplement Page 2.

Lo que usted debe saber sobre el Cáncer de Próstata en Puerto Rico. Boletin Centro Comprensivo de Cancer. September 2010 #2.

A detectar a tiempo el Cancer de Prostata. El Vocero. Sept 6, 2010. Page 27.

Alerta contra el cancer de prostata. Mi Revista. Sep 2010, Page 31.

Prostate Cancer Awareness. Channel 6 – Contigo. September 2010.

Prostate Cancer Detection. Channel 13 – Entre ellas. September 2010.

Prostate Cancer Detection, Treatment and Research . WRTU-FM 89.7 &WRUO-FM 88.3 – Radio show Piedra Papel y Tijera. September 2010.

Prostate Cancer Research and Detection. Channel 4 – Noticentro 4, Noticias de Salud. September 2010.

Examen de vida para hombres. El Nuevo Dia. Aug 29, 2010, Section Vivir a Plenitud, Page 60.

Prometedora Investigacion – Investigadora puertorriqueña realiza un estudio sobre tres marcadores de cancer de prostata. El Nuevo Dia. June 8, 2010, Section Por Dentro, Page 4-5.

Prometedora Vacuna. El Nuevo Dia. May 30, 2010. Section Ciencia Salud, Page 6.