January 13, 2015

CURRICULUM VITAE

Eduardo Martinez-Ceballos
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Education

Tulane University, New Orleans, LA	Molecular Biology	PhD, 2001
Technological Institute of Durango, Mexico	Biochemical Engineering	MS, 1995
Technological Institute of Durango, Mexico	Chemical Engineering	BS,1992

Employment

January 2015- present	Chair of Biology, Chemistry, and Environmental Toxicology
August 2012- present	Associate Professor, SUBR
August 2007-August 2012	Assistant Professor, SUBR,
January 2007- May 2007	Instructor, SUBR,
October 2006 - July 2007	Postdoctoral Research Associate, SUBR
April 2001 – Sept. 2006	Postdoctoral Fellow, Medical College, Cornell University, NYC

Research Experience

Aug. 2007-present	Academic research training in the fields of carcinogenesis, mouse embryonic stem cell differentiation, and developmental neurology.
Oct. 2006- July 2007	Postdoctoral Research Associate, MBRS SCORE program, Laboratory of Dr. Perpetua Muganda, Southern University, Baton Rouge, Louisiana.
2001 – Sept. 2006	Postdoctoral Fellow, Pharmacology, Laboratory of Dr. Lorraine J. Gudas, Weill Medical College, Cornell University, New York, NY.
1995-2001	Dissertation research in the Laboratory of Dr. Carol A. Burdsal. Tulane University, New Orleans, LA.

Teaching Experience

Aug. 2007 – present	Associate Professor, Department of Biological Sciences, Southern University, Baton Rouge, Louisiana. Courses taught: Principles of Microbiology (undergraduate), Cell and Molecular Biology (undergraduate), Molecular Cell Biology (Master of Sciences program) and Advanced Biochemistry (Environmental Toxicology Ph.D. Program).
Jan. 2007- May 2007	Instructor. Part time. Department of Biological Sciences, Southern University, Baton Rouge, Louisiana. Course taught: Microbial Genetics.

1996-2000	Graduate Teaching Assistant, Tulane University, New Orleans, LA. Mol. Biology and Developmental Biology Laboratories.

Professional Memberships

2006-present	Member, American Association for the Advancement of Sciences
2009-present	Member, American Society for Cell Biology

Honors

2014	Rising Star Researcher. Southern University System, Louisiana.
2011	Faculty Researcher of the Year. College of Sciences, SUBR, Louisiana
2010	Outstanding Research Award, Honors College, SUBR

Publications

1. Addae, C., Cheng, H, and **Martinez-Ceballos, E**. (2013) Effect of the Environmental Pollutant Hexachlorobenzene (HCB) on the Neuronal Differentiation of Mouse EmbryonicStem Cells., IJERPH, 10, 5244-5256.
2. Addae, C., Yi, X., Gernapudi, R., Cheng, H., Musto, A., and **Martinez-Ceballos, E**. (2012) All-trans-retinoid acid induces the differentiation of encapsulated mouse embryonic stem cells into GABAergic neurons, Differentiation, 83, 233-241.
3. Allen W., Munoz-Barona, H., and **Martinez-Ceballos, E.** (2011). Optimization of Electroporation Conditions for DU145 Human Prostate Cancer Cells using Multiobjective Programming, Louisiana Scientist: The Newsletter of the LAS, 2(1), pp. 18-19.
4. **Martinez-Ceballos, E.** and Gudas, L. J. (2008). Role of Hoxa1 during the neuronal differentiation of embryonic stem cells in vitro. J Neurosci Res. 86(13):2809-2819.
5. Yadavilli, S., **Martinez-Ceballos, E.,** Snowden-Aikens, J., Hurst, A., Darby, T., Joseph, T., Albrecht, T., and Muganda, P. M. (2007). Diepoxybutane activates the mitochondrial apoptotic pathway and mediates apoptosis in human lymphoblasts through oxidative stress. Toxicology in Vitro. 21(8):1429-1441.
6. **Martinez-Ceballos, E**., Chambon, P., and Gudas L. J. (2005). Differences in gene expression between wild type and Hoxa1 knockout embryonic stem cells after retinoic acid treatment or LIF removal. Journal of Biological Chemistry 280, 16484-16498.
7. **Martinez-Ceballos, E.** and Burdsal, C.A. (2001). Differential Expression of Chicken *CYP26* in Anterior versus Posterior Limb Bud in Response to Retinoic Acid. Journal of Experimental Zoology 290:136-147.
8. **Martinez-Ceballos, E**. (2001). Regulation of Chick CYP26 by Developmental Signaling Pathways. Dissertation. Tulane University, New Orleans, LA.

Recent National and Regional Meetings

1. Moses, D. and **Martinez-Ceballos, E**. " Inhibition of Retinoic Acid Receptor Beta Enhances the Neuronal Differentiation of Mouse Embryonic Stem Cells". Southeast regional IDeA meeting. Biloxi, MS, November 11-13, 2015.

2. Joseph, S., Moses, D., and **Martinez-Ceballos, E**. " Identification of Cell Signaling Pathways involved in the repression of mouse ES Neuronal Differentiation by RAR Beta". Annual Biomedical Research Conference for Minority Students (ABRCMS). Seattle, WA, November 11-14, 2015.

3. Refuge, D; **Martinez-Ceballos, E.** "Gene expression profiling of mouse ES cells by RNA-seq." Society of Toxicology Regional Meeting. Oxford, MS, Oct 23, 2014 to Oct 24, 2014.
4. Dominique Townsend, Xiaoping Yi, **Martinez-Ceballos, E.** "Construction of the Hoxa1 network using time-series gene expression Data ." Society of Toxicology Regional Meeting. Oxford, MS , Oct 23, 2014 to Oct 24, 2014.
5. Smith, Augusta; Yi, Xiaoping, **Martinez-Ceballos, E.** "Inferring the cancer-related HoxA1 Gene Regulatory Network." Society of Toxicology Regional Meeting . Oxford, MS, Oct 23, 2014 to Oct 24, 2014.
6. Refuge, D; **Martinez-Ceballos, E.** BKX Conference. Houston, TX, 3/12/14.
7.. Mente, N.; **Martinez-Ceballos, E.** BKX Conference. Houston, TX, 3/12/14.
8. Townsend, D.; **Martinez-Ceballos, E.** BKX Conference. Houston, TX, 3/12/14.
9. **Martinez-Ceballos, E.** "Generation of GABAergic Neurons from Encapsulated Mouse ES Cells and their use in Toxicology Research." Invited speaker, LSMSA seminar series. Natchitoches, LA, Apr 19, 2013.
10. **Martinez-Ceballos, E.** "Generation of GABAergic Neurons from Encapsulated Mouse ES Cells." Stem Cells & Biomedical Research Seminar Series, Biomedical Engineering, Louisiana Tech University. Ruston, LA, Jan 18, 2013.
11. Addae, C., Yi, X., Gernapudi, R., Cheng, H., Musto, A., and **Martinez-Ceballos, E.** (2012). Generation of GABAergic neurons from Mouse Embryonic Stem Cells (Oral presentation by Martinez-Ceballos, E.). FASEB Annual Retinoids Meeting, Snowmass, CO.
12. Addae, C. and **Martinez-Ceballos, E.** (2011). All -Trans-Retinoid Acid Induces the Differentiation of Encapsulated Mouse Embryonic Stem Cells into GABAergic Neurons. IDeA meeting. New Orleans, LA.
13. Addae, C. and **Martinez-Ceballos, E.** (2011). Effect of hexachlorobencene (HCB) on the neuronal differentiation of Mouse Embryonic Stem Cells. BKX meeting. Atlanta, GA.
14. **Martinez-Ceballos, E.** (2010). Oral presentation at the 9th. LBRN Annual Meeting, Shreveport, LA.
15. Addae, C. and **Martinez-Ceballos, E.** (2010). Effect of Hydrogel Encapsulation on the Neuronal Differentiation of Wt versus Hoxa1 K.O. Mouse ES Cells. Louisiana Academy of Sciences 84th. Annual Meeting, Alexandria, LA.
16. Addae, C. and **Martinez-Ceballos, E.** (2009). Regulation of Hoxa1 Signaling during the Differentiation of Mouse ES Cells. Annual ASCB meeting. San Diego, CA.
17. Dixon, L. and **Martinez-Ceballos, E.** (2009). Activation of Cell Survival Pathways in Prostate Cancer Cells treated with DEB. Annual ASCB meeting. San Diego, CA.
18. **Martinez-Ceballos, E.** (2008). Proteomic Profiling of Diepoxybutane-treated Human Lymphoblasts. Annual ASCB meeting. San Francisco, CA.
19. Joseph, T., Cole, R., August, K., and **Martinez-Ceballos, E.** (2008). Mechanism of DEB action in p53-deficient human lymphocytes. Twenty-Second Annual Julia M. Martin SUBR College of Sciences Symposium. Southern University and A&M. Baton Rouge, LA.

Synergistic Activities

Produced laboratory manual for Cell and Molecular Biology course (undergraduate) at SUBR. *The manual is free of charge for students enrolled in the class.*

International referee for the scientific publication "Enlaces Academicos" of the Juarez University of Durango, Mexico, 2009-present.

Provides research opportunities during the summer months to K-12 students through SUBR's TRIO Upward Bound program.

Recent Advisees (Underlined students graduated with thesis)

Undergraduate: Katacha August (2008); Rokeisha Cole (2008); Tranole Joseph (2008); Withney Allen (2011), Ashley Hurst (2014).
Graduate (Masters): Henry Palfrey (2010); Jasmine Jones (2012); Kendrick Nelson (2012); Niharika Mente (2015); Tromel Willis (2015).
Graduate (Doctoral): Janana Snowden (2011); Lea Dixon (2012); Cynthia Addae, (2012); Ramkishore Gernapudi, (2012).

Current students: Danielle Refuge, PhD student; Dominique Townsend, PhD student; Augusta Smith, PhD student; Nisha Vithlani, Masters student; Sri Deepika Kona, Masters student; Angelle Bradford, Masters student; Serenthia Joseph, undergraduate; Jene Clayton, undergraduate.

Ongoing and Completed Research Support

NIH R15 1R15NS091949-01
"Regulation of Hoxa1 Gene Expression in Mouse Embryonic Stem Cells"
Project: $331,560; **4/1/15-3/31/18**
The goal of this project is to understand the molecular mechanism by which the expression of Hoxa1 is regulated in mouse ES cells. The results from these studies will be of relevance to the areas of Developmental Biology, Organ and Tissue Replacement, and Cancer Research, among others.

INBRE (LSU, NIH)
"Regulation of Mouse ES Cell Differentiation into Neurons by Hoxa1"
Project: $790,378.00; **5/1/10-4/30/15**
Role: PI
The goal of this project is examine the mechanism by which Retinoic Acid, Retinoic Acid metabolites, and Hoxa1 induce the differentiation of mouse ES cells along a neuroectodermal lineage.