

## Biographical Sketches

TEAM LEAD			
NAME: <b>DANIEL PELAEZ</b>			
Position and Institution:		Research Assistant Professor Department of Ophthalmology, Bascom Palmer Eye Institute University of Miami Miller School of Medicine	
<b>Education and Training</b>			
Institution and Location	Degree	Date	Field of Study
Tulane University, New Orleans LA	B.S.E	05/2005	Biomedical Engineering
University of Miami, Coral Gables FL	M.S.E	05/2007	Biomedical Engineering
University of Miami, Coral Gables FL	Ph.D.	05/2011	Biomedical Engineering
<b>Personal Statement and Expertise</b>			
I am a biomedical engineering with expertise in stem cell and developmental biology, and tissue engineering. My research has focused on neurogenesis of various stem cell populations, as well as the design and use of biomaterial scaffolds to induce functional differentiation of stem cells. I have designed, built and published on several tissue bioreactor systems to enhance stem cell-derived tissue functional outcomes. My laboratory collaborates extensively with the Harbour laboratory on characterization of retinoblastoma epigenetics, differentiation therapy, and hypoxic adaptation of these tumors.			
<b>Selected Publications</b>			
<ol style="list-style-type: none"> <li>1. <u>Daniel Pelaez</u>, Chun-Yuh Huang, Herman S. Cheung. Dynamic Compression Maintains Viability and Induces Chondrogenesis of Human Mesenchymal Stem Cells in Fibrin Gel Scaffolds. <i>Stem Cells and Development</i>. 2009; January/February, 18(1): 93-102.</li> <li>2. <u>Daniel Pelaez</u>, Chun-Yuh Huang, Herman S. Cheung. Isolation of Pluripotent Neural Crest Derived Stem Cells from Adult Human Tissues by Connexin 43 Enrichment. <i>Stem Cells and Development</i>. 2013 Nov 1;22(21):2906-14.</li> <li>3. Galina Dvorianchikova, Isabel Perea-Martinez, Steve Pappas, Ariel Faye Barry, Dagmara Danek, Xenia Dvorianchikova, <u>Daniel Pelaez</u>, Dmitry Ivanov. Molecular Characterization of Notch1 Positive Progenitor Cells in the Developing Retina. <i>PLoS One</i>. 2015 Jun 19;10(6):e0131054.</li> <li>4. Veronica Fortino, Ren Shiang Chen, <u>Daniel Pelaez</u>, Herman S. Cheung. Neurogenesis of Neural Crest-Derived Periodontal Ligament Stem Cells by Defined Media. <i>J Cell Physiol</i>. 2014 Apr; 229(4):479-88</li> <li>5. <u>Daniel Pelaez</u>. Stem Cells for Microenvironmental Modulation and Retinal Regeneration. Current Tissue Engineering. <i>Current Tissue Engineering</i>. 2016 Apr; 5(1):52-59</li> </ol>			

TEAM MEMBER 1			
NAME: <b>JAMES WILLIAM HARBOUR</b>			
Position and Institution:		Professor and Vice Chairman for Translational Research, Director of Ocular Oncology. Department of Ophthalmology, Bascom Palmer Eye Institute and Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine	
<b>Education and Training</b>			
Institution and Location	Degree	Date	Field of Study
Texas A&M University, College Station TX	B.S.	06/85	Biochemistry (Summa cum laude)
Johns Hopkins University, Baltimore MD	M.D.	06/90	Medicine
Wills Eye Hospital, Philadelphia, PA	-	06/94	Residency in Ophthalmology
Bascom Palmer Eye Institute, Miami FL	-	06/95	Retina Fellowship
University of California, San Francisco CA	-	06/96	Ocular Oncology Fellowship

Washington University School of Medicine, St. Louis, MO	-	06/97	Post-Doctoral Cancer Research
<b>Personal Statement and Expertise</b>			
I am an ocular oncologist and cancer researcher. My research focuses on genetic and genomic events associated with tumor progression and metastasis in eye cancers. A major focus of the Harbour lab is understanding the molecular mechanisms governing the initiation, progression and metastasis of retinoblastoma (RB), the most common eye cancer in children. RB gene mutations are the initiating events in this cancer; I have published articles related to the function of the RB gene and protein in leading journals such as Science, Cell and JCB. Over the past several years, the focus of my research has shifted to the discovery and understanding of molecular lesions that occur later in RB progression that are responsible for invasion, seeding, and metastasis that put the patient at risk of cancer-related death. Through the use of next-generation sequencing and stem cell biology strategies, novel pathways and targets for treatment have been discovered and are currently being explored in the laboratory.			
<b>Selected Publications</b>			
<ol style="list-style-type: none"> <li>1. <u>Harbour JW</u>, Lai S-L, Whang-Peng J, Gazdar AF, Minna JD, Kay FJ. Abnormalities in structure and expression of the human retinoblastoma gene in small cell lung cancer. Science 1988; 241:353-7. [PMID: 2838909]</li> <li>2. <u>Harbour JW</u>, Luo RX, Dei Santi A, Postigo AA, Dean DC. Cdk phosphorylation triggers sequential intramolecular interactions that progressively block Rb functions as cells move through G1. Cell 1999; 98:859-69. [PMID: 10499802]</li> <li>3. Zhang HS, Gavin M, Dahiya A, Postigo AA, Ma D, Luo RX, <u>Harbour JW</u>, Dean DC. Exit from G1 and S phase of the cell cycle is regulated by repressor complexes containing HDAC-Rb-hSWI/SNF and Rb-hSWI/SNF. Cell 2000; 101:79-89. [PMID: 10778858]</li> <li>4. Brantley MA, <u>Harbour JW</u>. Inactivation of retinoblastoma protein in uveal melanoma by phosphorylation of sites in the COOH-terminal region. Cancer Res 2000; 60:4320-3. [PMID: 10969768]</li> </ol>			

TEAM MEMBER 2			
NAME: <b>ZENITH ACOSTA TORRES</b>			
Position and Institution:		Graduate Research Assistant/McKnight Doctoral Fellow Department of Biomedical Engineering, University of Miami	
<b>Education and Training</b>			
Institution and Location	Degree	Date	Field of Study
Florida International University, Miami FL	BSc.	08/2010	Biomedical Engineering
University of Miami, Coral Gables FL	MSc.	12/2013	Biomedical Engineering
University of Miami, Coral Gables FL	Ph.D.	12/2018	Biomedical Engineering
<b>Personal Statement and Expertise</b>			
I have a broad background in biomedical engineering with specific training and expertise in the field of biomaterials and bioreactors for the purpose of stem cell differentiation. My current research focuses on utilizing my knowledge and expertise in tissue engineering to model retinal development and retinoblastoma tumor formation.			
<b>Selected Publications</b>			
1. Kittivarakarn, P., Penna, M., <u>Acosta, Z.</u> , <u>Pelaez, D.</u> et al. Cardiomyotic induction and proliferation of dental stem cells on electrospun scaffolds. AIMS Bioengineering 2016; 3(2): 139-155.			
2. <u>Pelaez, D.</u> , <u>Acosta Torres, Z.</u> , Ng, T.K., et al. Cardiomyogenesis of periodontal ligament-derived stem cells by dynamic tensile strain. Cell Tissue Res 2016; 367(2), 229-241.			