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Education

University of Southern California,
Los Angeles, CA — Ph.D. 2010 Molecular Microbiology and Immunology
California State University, Dominguez Hills
Carson, CA — B.S. 2003 General Biology

Professional Experience

Assistant Professor, 2013-Present
La Jolla Bioengineering Institute
Postdoctoral Scientist, 2010-2012
La Jolla Bioengineering Institute
Graduate Research Assistant, 2004-2009
Dept. of Molecular Microbiology and Immunology

Honors, Awards

FASEB travel award 2013
FASEB travel award 2012
Postdoctoral Research Supplement Award, NIH/NHLBI, 8/2010 - 2/2013
National Institute of Aging F31 Award, 2005-2009
Public Health Services Predoctoral Training Grant, 2004
Graduated with Honors, General Biology, 2003
Marc U*STAR Award, 2002
MBRS-RISE Award, 2001

Professional Memberships:

American Association for the Advancement of Science
Sigma Xi, The Scientific Research Society

Undergraduate Trainees

Saurabh D Rane- University of California, San Diego (2013)
Nicholas Johnsen-University of California, San Diego (2012)
Francisca Ryani-University of California, San Diego (2012)
Nicole Baumgarther-University of California, San Diego (2011)
Hesam Tavakoli- University of California, San Diego (2010)

Invited Lectures and Presentations

"Mechanism of *Staphylococcus Aureus* resistance to platelet microbicidal proteins and the role of membrane fluidity" presentation was Runner-up in the California State University Student Research Competition 2003 Biological and Agricultural Sciences category.

"A filtering strategy identifies a forkhead box transcription factor as a downstream effector of lamin A dysfunction" The Progeria Research Foundation Workshop on Progeria, Boston, MA (April 2010).

"PTH1R & 5HT1b receptors are involved in mediating the actions of LCPUFAs" The American Society for Bone and Mineral Research, San Diego, CA (October 2011).

" Mechanical stress stimulates conformational changes in 5-hydroxytryptamine receptor 1B in bone cells" NHLBI Cardiovascular Diversity Research Supplement Awardee Session, Orlando, FL (November 2011).

" Mechanical stress stimulates conformational changes in serotonin receptor 1B" Center for Behavioral Cardiovascular Heath, Columbia University Medical Center, New York, NY (February 2012).

"Development and application of G-protein and GPCR biosensors to study cellular signaling" The Scripps Research Institute, San Diego, CA (February 2013).

Publications:

1. **J. Candelario**, S. Sudhakar, S. Navarro, S. Reddy, L. Comai, Perturbation of wild-type lamin A metabolism results in a progeroid phenotype, Aging Cell, 3 (2008) 355-67. http://onlinelibrary.wiley.com/doi/10.1111/j.1474-9726.2008.00393.x/pdf

2. B. Li, S. Jog, **J. Candelario**, S. Reddy, L. Comai, Altered nuclear functions in progeroid syndromes: a paradigm for aging research, ScientificWorldJournal, 9 (2009) 1449-62. http://downloads.tswj.com/2009/261056.pdf

3. **J. Candelario,** S. Borrego, S. Reddy, L. Comai, Accumulation of distinct prelamin A variants in human diploid fibroblasts differentially affects cell homeostasis, Exp Cell Res,317(3)(2011)319-29. http://www.sciencedirect.com/science/article/pii/S0014482710004805

4. **J. Candelario**, Y. L. Chen, P. Marjoram, S. Reddy, L. Comai, A filtering strategy identifies FOXQ1 as a potential effector of lamin A dysfunction, Aging, 4(8)(2012) 567-577 http://www.impactaging.com/papers/v4/n8/full/100483.html

5. **J. Candelario** and Mirianas Chachisvilis, Mechanical stress stimulates conformational changes in 5-hydroxytryptamine receptor 1B in bone cells, Cell and Molecular Bioengineering, 3 (2012) 277-286 http://rd.springer.com/article/10.1007/s12195-012-0232-0

6. **J. Candelario**, H. Tavakoli and M. Chachisvilis, PTH1 Receptor is Involved in Mediating Cellular Response to Long-Chain Polyunsaturated Fatty Acids, 7 (2012) e52583 http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0052583

7. **J. Candelario** and M. Chachisvilis, Real time detection of G protein activation using monomolecular Gγ FRET sensors, (2013) J Recept Signal Transduct Res 33(1): 63-72. http://informahealthcare.com/doi/pdf/10.3109/10799893.2012.759589

Professional Service:

Peer reviews articles for PLOS ONE.

Skills Areas:

Microbiology

Aseptic techniques, microbial selection, identification, fluorescence and confocal microscopy, handling of pathogens, plasmid amplification, spectrophotometry, flowcytometry, media preparation, selective LB agar plate preparation, bacterial streaking.

Biochemistry

Protein production, expression analysis,purification, SDS-PAGE, Western Blot, Immunoprecipitation, co-immunoprecipitations, in vitro enzyme assays, ELISA, protein preparation, extraction/purification and analysis, preparation of nuclear and cytoplasmic extracts, recombinant protein production in baculovirus systems, recombinant protein production in lentivirus system, sonication, protein silver staining, coomassie blue, ponceau.

Molecular Biology

PCR, RT-PCR, Q-PCR MyiQ2 Real-Time PCR Detection System, DNA cloning, DNA extraction/preparation/purification, gel electrophoresis, labeling, DNA sequence analysis, DNA-DNA hybridization, bacterial transformation, clone analysis, restriction enzyme digestion of DNA, Southern blot, site-directed mutagenesis, library construction, plasmid preparation, agarose gel electropheresis, RNA isolation, cDNA library synthesis, Nanodrop spectrophotometer, Victor spectrophotometer, S^{35} metabolic labeling, H^{3} metabolic labeling, scintillation analysis

Cell Biology

Cell culture, accumulated population doublings growth curves, transient transfection of cultured cells, transduction of cultured cells via lentivirus or retrovirus, dounce homogenizer, animal dissection, hemocytometer cell count, fluorescence activating cell sorting (FACS), antibiotics for gene transfer and selection, TUNEL assay, senescence associated beta-galactosidase assay, immunocytochemistry, transcription via BrU incorporation, fluorescence and confocal microscopy.

Bioinformatics

Affymetrix hgu133plus2 microarray gene chip, GeneChip Human Exon 1.0 ST array, Microarray affymetrix MAS5 and RMA, SScore algorithm, PARTEK software for integrated genomics, Ingenuity pathway analysis, Database for Annotation Visualization and Integrated Discovery (DAVID), Gene Set Enrichment Analysis (GSEA), g:Profiler, Treeview, Gene Cluster

Computer software literacy

Operating Systems: IBM/PC/ Macintosh. Software: Windows, Microsoft Office package, Word processing, Excel, Powerpoint, Sigma Plot, Adobe Photoshop, Adobe Illustrator, data analysis and molecular biology software, NCBI BLAST, PyMol, Jmol, DNA Strider, GraphPad Prism, DNA primer design Genosys DNA Calculator, Primer 3, Net Primer, MyHits Protein Analysis, LAS-4000 Image Reader, Versadoc Gel Imager,

Gene Genius Imager, and OriginPro.

Biophysics
Fluorescence resonance energy transfer (FRET), designing and construction of FRET sensors, picoseconds time-resolved fluorescence microscopy, and SPEX Fluorolog-3 spectrofluorometer.

Animal models
Experience working with rabbit endocarditis, mice aging, and octopus animal models.