In the News

VA Foundation Has New Executive Director

The South Florida Veterans Affairs Foundation for Research and Education, Inc. (SFVAFRE) recruited Katrina B Washburn, Ph.D. as the new Executive Director in January. Katrina has worked at the Miami VA Healthcare System in the Research Service since 2004, including three years as a post-doctoral fellow and eight years as the Health Science Officer in grants and project management. With a strong background in science and research administration, she will lead the Foundation in its mission to promote and support research and education at the Miami VA Healthcare System and Orlando VA Medical Center.

In 2004, Katrina graduated with a Ph.D. in Molecular & Cellular Physiology with a special emphasis in neuroscience from the Sackler School of Graduate Biomedical Sciences, Tufts University in Boston, Massachusetts. Her thesis focused on molecular signaling mechanisms, which control the sense of smell. After completion of her Ph.D. she relocated from Boston to Miami, where she completed a three year post-doctoral fellowship with Joseph Neary, Ph.D., at the University of Miami Miller School of Medicine, studying mechanisms of scar tissue formation in the brain after injury.

Katrina transitioned her career from bench top research to research administration after the Miami VA Research Service offered her a position as Health Science Officer. Although the position was described as a “paper pushing job”, she found enjoyment in assisting other scientists with understanding and navigating the complex
world of grant submission and project administration. Katrina worked closely with Miami VA Leadership and personnel in the Office of Research and Development (ORD), and the Office of Research Oversight (ORO) to write and execute effective research policies. She also managed committees and submitted Merit Review and Career Development Awards. She developed outreach programs to increase awareness of opportunities to do research at the VA including collaborations with the University of Miami Miller School of Medicine and the West Palm Beach VA.

During her time at the Miami VA Healthcare System, she developed a passion for research program development that benefits our nation’s veterans. Although the VA Foundation is distinct from the VA, its purpose is to serve the VA and its veteran population.

As the new Executive Director for the Foundation, Katrina plans to apply her scientific training to the management of the Foundation through assessing situations, developing hypothesis (e.g., new ways to approach problems), implementing pilot projects (testing or performing experiments), data collection, data analysis, presentations, and implementing project initiatives. Katrina trained in “Six Sigma” and other value added techniques to make the administration of the science efficient.

Katrina’s goals are to build a strong, healthy Foundation while promoting transparent and good/ethical business practices. She looks forward to working with the investigators at the Orlando VA Medical Center and the Miami VA Healthcare System to manage research and educational projects devoted to improve health outcomes for veterans and the public. At the heart of her pursuits for excellence in business management of the Foundation is the desire to embody the mission statement:

To promote and support research and educational endeavours at the Miami VA Healthcare System and Orlando VA Medical Center via cooperative arrangements with non-VA sources of funding for the purpose of enhancing quality of healthcare delivery to veterans, their families and the public in general.

**RESEARCH SPOTLIGHT**

Dr. Anat Galor’s clinical laboratory aims to study the relationship between corneal somatosensory nerve function and dry eye. The multidisciplinary team has found that many dry eye patients describe neuropathic pain, including spontaneous eye pain, dysesthesias (unpleasant, abnormal sensation), hyperalgesia (exaggerated pain response), and allodynia (pain response to normally non-noxious stimuli). These complaints were more common in those with more severe and persistent dry eye symptoms. Furthermore, the team found that dry eye symptoms correlated with non-ocular
complaints, such as non-ocular pain, depression, and post-traumatic stress disorder, than with traditionally measured signs of dry eye (tear production, evaporation, corneal damage). This finding further reinforces their hypothesis that dry eye is one of several overlapping pain conditions and that some patients with dry eye need treatment that extends beyond the ocular surface. An open research study to evaluate these questions will soon start a treatment arm, evaluating the use of gabapentin in the treatment of severe persistent dry eye symptoms. Patients with and without dry eye, with normal external eye anatomy are being recruited to participate in the that study. Contact Mireya Hernandez (mireya.hernandez@va.gov; 305 342 1483) for more information.


Miom VA Collaborates with Multidisciplinary Team


V O Okoh¹, N A Garba¹, R B Penney², J Das¹, A Deoraj¹, K P Singh³, S Sarkar⁴, Q Felty¹, C Yoo⁵, R M Jackson⁶ and D Roy¹,⁶

¹Department of Environmental and Occupational Health, Florida International University, 11200 SW 8th Street, Miami, FL 33199-0001, USA; ²Department of Environmental and Occupational Health, University of Arkansas for Medical Sciences, Little Rock, AR, 72204, USA; ³Department of Environmental Toxicology, The Institute of Environmental and Human Health (TIEHH), Texas Tech University, Lubbock, TX 79409, USA; ⁴Department of Neuroscience and Cell Biology, UTMB, Galveston, TX 77555, USA; ⁵Department of Biostatistics, Florida International University, Miami, FL 33199, USA and ⁶Research Service, VA Medical Center,1201 NW 16th Street, Miami, FL 33125, US

Background: 17b-Oestradiol (E2)-induced reactive oxygen species (ROS) have been implicated in regulating the growth of breast cancer cells. However, the underlying mechanism of this is not clear. How ROS through a novel redox signaling pathway involving nuclear respiratory factor-1 (NRF-1) and p27 contribute to E2-induced growth of MCF-7 breast cancer cells was shown.  

Methods: Chromatin immunoprecipitation, qPCR, mass spectrometry, redox western blot, colony formation, cell proliferation, ROS assay, and immunofluorescence microscopy were used to study the role of NRF-1.

Results: The major novel finding of this study is the demonstration of oxidative modification of phosphatases PTEN and CDC25A by E2-generated ROS along with the subsequent activation of AKT and ERK pathways that culminated in the activation of NRF-1 leading to the upregulation of cell cycle genes. 17b-Oestradiol-induced ROS by influencing nuclear
proteins p27 and Jab1 also contributed to the growth of MCF-7 cells. **Conclusions:** Taken together, the results present evidence in the support of E2-induced ROS-mediated AKT signalling leading to the activation of NRF-1-regulated cell cycle genes as well as the impairment of p27 activity, which is presumably necessary for the growth of MCF-7 cells. These observations are important because they provide a new paradigm by which oestrogen may contribute to the growth of breast cancer.

**Harvey Makes Presentation on Memory at the Vatican**

**Philip D. Harvey, PhD** presented a lecture entitled *Memory and Cognitive Dysfunction in Schizophrenia* at an International Conference on Memory in the Diseased Brain held at Vatican City. He was one of two Americans invited to speak at the conference held January 27.

Harvey is the author of four books on psychological assessment, schizophrenia and aging. He has received several awards including the Inaugural Schizophrenia International Research Society Clinical Scientist Distinguished Contributions award in 2012, the 2014 Alexander Gralnick Schizophrenia Research award from the American Psychiatric Foundation, and the 2014 Department of Veterans Affairs John Blair Barnwell Award.

Harvey’s research has focused on cognition and functioning, especially as they relate to aging in schizophrenia. He specializes in cognition, severe mental illness and neuropsychiatric conditions, including traumatic brain injury, dementia and Parkinson’s disease.
Kevin M. Curtis, PhD was awarded an Early Career Travel Award from the Endocrine Society to present his talk entitled \( TAp63\gamma \) and \( \Delta Np63\beta \) promote osteoblastic differentiation of human mesenchymal stem cells: regulation by Vitamin D3 metabolites at the Endocrine Society National Meeting in San Diego, CA on March 5-8, 2015. Co-authors on the presentation included Kristina K. Aenlle, PhD, GRECC Investigator, Rachel N. Frisch, University of Miami undergraduate, and Guy A. Howard, PhD, GRECC Research Director. Dr. Curtis has also been invited to present his research findings on Vitamin D and bone-marrow derived adult stem cells at the Annual Vitamin D Workshop in Delft, Netherlands.

Hermes Florez, MD, MPH, PhD, GRECC Director is a member of the Editorial Board for the Journal of Geriatric Cardiology, and a member of the Editorial Board for Investigacion Clinica.

Herman Cheung, PhD, GRECC Investigator participated as a member of an NIH Study section for Arthritis, Connective Tissue & Skin (ACTS), Musculoskeletal, Oral and Skin Sciences (MOSS).

Balakrisna (Bal) Lokeshwar, PhD, GRECC Investigator, participated in a study section meeting of the NIH/Center for Scientific Review Meeting, on Cancer Chemo-Dietary Prevention (CDP).

Carlos Perez-Stable, PhD, GRECC Investigator, participated as a member of a DoD grant review committee.

Paul C. Schiller, PhD, GRECC Investigator presented a poster of his research entitled \textit{MIAMI Cell Hyaline Cartilage Formation is Enhanced by TGF-\( \beta \)3-Releasing Pharmacologically Active Microcarriers and Human Cartilage Microparticles} at the 2015 annual meeting of the Orthopaedic Research Society in Las Vegas, NV, March 28-31, 2015. Co-authors included Gaetan J-R Delcroix, PhD, Gianluca D’Ippolito, PhD, Teresita Reiner, DVM, Theodore I. Malinin, MD and H. Thomas Temple, MD, Professor of Orthopaedics, University of Miami, and Claudia N. Montero-Menei, PhD, Professor, University of Angers, France.
Human tear serotonin levels correlate with symptoms and signs of dry eye at the Association of Vision and Research in Ophthalmology, in Denver, CO on May 2015. Serotonin, a neurotransmitter known to be involved in nociceptor sensitization, is present in human tears. The purpose of the study was to correlate tear serotonin levels, as a marker of nociceptor sensitization, to facets of dry eye (DE) including symptoms and signs.

Corneal mechanical pain thresholds are associated with dry eye and ocular pain symptoms at the Association of Vision and Research in Ophthalmology, in Denver, CO on May 2015. The purpose was to study the utility of the Belmonte aesthesiometer as a quantitative sensory testing instrument for measuring evoked sensory responses on the cornea in subjects with dry eye symptoms.

Ocular pain is associated with dry eye symptoms at the American Pain Society meeting in Palm Springs, CA in May 2015. Dry eye is a heterogeneous condition whose signs have been defined as disturbances of tear function and abnormalities of the ocular surface and whose symptoms include visual disturbances and discomfort. The primary purpose of the study was to determine whether patients with dry eye describe “eye pain” as a clinically important symptom by evaluating the prevalence, severity, and quality of eye pain in a male veteran population.

HONORS & AWARDS

Harvey to Accept the John B. Barnwell Award

On behalf of the Veterans Health Administration and the Clinical Science Research & Development (CSR&D) division of the Office of Research and Development, Philip D. Harvey, PhD has been unanimously selected by a review group consisting of VA researchers and clinicians to receive the John B. Barnwell Award for Outstanding Achievement in Clinical Science. This award was presented to Dr. Harvey on April 8, 2014 at the Miami VA. The John B. Barnwell Award was established to annually recognize an investigator who has added significantly to the understanding and improvement of health care services for America’s Veterans, has inspired new VA investigators through excellence in training and mentorship and has enhanced the national visibility and reputation of VA research.

Dr. Harvey has been a VA clinician-scientist for more than 26 years. He is acknowledged for significant contributions to understanding of cognitive and functional deficits in with schizophrenia, including his leadership roles on VA Cooperative Studies Program (CSP)#572: Genetics of Functional Disability in Schizophrenia and Bipolar Illness, A National Institute of Mental Health sponsored Validation of Everyday Real-World Outcomes (VALERO), and the Social Cognition Psychometric Evaluation (SCOPE) project. The contributions of Dr. Harvey have a broad impact on the clinical care of Veterans.

Journal Honors VA Pathologist with Dedicated Issue

The academic journal Neurochemical Research bestowed a rare honor upon Miller School of Medicine physician-scientist Michael D. Norenberg, MD, professor of pathology, biochemistry and molecular biology, neurology and neurological surgery, and a member of the staff of the Miami VA Medical Center, by dedicating its February issue to his contributions to the fields of neuroscience and neuropathology.

The Introduction to the special issue stated that Dr. Norenberg’s “thorough analytical attitude to the microscopy of brain tissue, combined with intuitive feeling for the biology of the central nervous system, have led to breakthrough observations regarding the role of astrocytes in the normal and pathological brain”.
EVENTS

Miami VA Celebrates Research Week
May 18- Poster Session
May 20- Special Seminar

In conjunction with National VA Research Week May 18-22, the Miami VA Healthcare System will present a special Research Program on May 18 and 20. The theme this year is “VA Research – 90 Years of Excellence!”

VA Research Week annually celebrates the achievements of VA researchers and the role they play in providing high quality care for Veterans and advancing medical science. It also serves to educate Veterans, the public, and the media about the research being conducted at our medical center and its impact on treating and preventing disease and disability. The program will begin at noon on May 18 with the Annual Miami VA Research Week Poster Session featuring a display of research posters investigators. If you are interested in submitting an abstract, please contact Isabel Perez at iperez4@med.miami.edu or Isabel.Perez1@va.gov before April 15.

The program will continue on May 20 with a special seminar presented by Philip Harvey, PhD, professor of psychiatry and behavioral sciences and recent winner of the 2014 John Blair Barnwell Award. The award recognized Dr. Harvey for his exemplary involvement in and service to the VA, as well as his significant contributions to the understanding of cognitive and functional deficits in patients with schizophrenia.

PUBLICATIONS


L. Lindley, KM. Curtis, A. Sanchez-Mejias, ME. Rieger, DJ. Robbins and KJ. Briegel. The WNT-controlled transcriptional regulator

LBH is required for mammary stem cell expansion and maintenance of the basal lineage. Development. 2015. 142, 1-12.


Ng TK, Huang L, Cao D, Yip YW, Tsang WM, Yam GH, Pang CP, Cheung HS.


Schulman IH, Suncion V, Karantalis V, Balkan W, Hare JM; Cardiovascular Cell Therapy Research Network. *Clinical research skills development program in cell-based regenerative medicine.* Stem Cells Transl Med 4:118-22, 2015

Dulce RA, Mayo V, Rangel EB, Balkan W, Hare JM. *Interaction between neuronal nitric oxide synthase signaling and temperature influences sarcoplasmic reticulum calcium leak: Role

Pelaez D, Cheung HS. Dynamic tensile strain induces cardiomyogenesis of periodontal ligament-derived stem cells. Differentiation. 2015, in press

Endocrine, Polypeptide and Cancer Institute
Qin YJ, Chan SO, Chong KKL, Li BFL, Yip YWY, Tam POS, Ng TK, Chen H, Zhang M, Block NL, Cheung HS, Schally AV, and Pang CP. Alleviation of ocular inflammation in experimentally induced acute uveitis by an antagonist of growth hormone-releasing hormone receptors. PNAS 2014 Dec. 23; 111(51):18303-08
Kanashiro-Takeuchi RM, Szalontay L, Schally AV, Takeuchi LM, Popovics P, Jasberenyi M, Vidaurre I, Zarandi M, Cai RZ, Block NL, Hare JM, and Rick FG. New therapeutic approach to heart failure due to myocardial infarction based on targeting growth hormone-releasing hormone receptor. Journal of the American Heart Association: Accepted for publication
Florea V, Majid SS, Kanashiro-Takeuchi RM, Cai RZ, Block NL, Schally AV, Hare JM, Rodrigues CO. Agonists of Growth Hormone Releasing Hormone Stimulate Self-Renewal of Cardiac Stem Cells and promote their survival. PNAS: On line Nov. 7, 2014
Ullrich M, Bergmann R, Peitzsch M, Cartellieri M, Qin N, Ehrrhart-Bornstein M, Block NL, Schally AV, Pietzsch J, Eisenhofer G,


Abstract:

**Aims/hypothesis:** The Diabetes Prevention Program (DPP) lifestyle intervention successfully achieved its goal of increasing leisure physical activity levels. This current study examines whether the lifestyle intervention also changed time spent being sedentary and the impact of sedentary time on diabetes development in this cohort.

**Methods:** 3,232 DPP participants provided baseline data. Sedentary behaviour
was assessed via an interviewer administered questionnaire and reported as time spent watching television specifically (or combined with sitting at work). Mean change in sedentary time was examined using repeated measures ANCOVA. The relationship between sedentary time and diabetes incidence was determined using Cox proportional hazards models.

Results: During the DPP follow-up (mean: 3.2 years), sedentary time declined more in the lifestyle than the metformin or placebo participants (p<0.05). For the lifestyle group, the decrease in reported mean television watching time (22 [95% CI 26, 17] min/day) was greater than in the metformin or placebo groups (p<0.001). Combining all participants together, there was a significantly increased risk of developing diabetes with increased television watching (3.4% per hour spent watching television), after controlling for age, sex, treatment arm and leisure physical activity (p<0.01), which was attenuated when time-dependent weight was added to the model.

Conclusions/Interpretation: In the DPP, the lifestyle intervention was effective at reducing sedentary time, which was not a primary goal. In addition, in all treatment arms, individuals with lower levels of sedentary time had a lower risk of developing diabetes. Future lifestyle intervention programs should emphasis reducing television watching and other sedentary behaviours in addition to increasing physical activity.

Trial registration: ClinicalTrials.gov NCT00004992

**FUNDING**

South Florida VA Foundation for Research & Education, Inc.

**Executed Cooperative Research and Development Agreements**

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Project</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Miami Miller School of Medicine. Phase I CT CRADA</td>
<td>Alveolar Macrophages as a Reservoir for HIV-1.</td>
<td>Michael Campos, MD</td>
</tr>
<tr>
<td>Novartis Pharmaceutical Corporation – PI CRADA</td>
<td>A Defining Direct Neuroprotective Actions of Gilenya (fingolimod) in Human Neuronal Cell Cultures</td>
<td>Micheline McCarthy, MD, PhD</td>
</tr>
<tr>
<td>Osiris Therapeutics, Inc. – Phase IV CT CRADA</td>
<td>A multicenter, open-label, single-arm study to evaluate the safety and efficacy of Grafixcore® for the treatment of complex diabetic foot wounds with exposed tendon and/or bone.</td>
<td>Gary Rothenberg, DPM</td>
</tr>
<tr>
<td>OPKO Diagnostics, LLC- Phase II CT CRADA</td>
<td>The OPKO Diagnostics 4Kscore™ as a Predictor of Prostate Cancer Prior to Biopsy in African American Men</td>
<td>Seth Spector, MD</td>
</tr>
<tr>
<td>Sunovion Pharmaceutical, Inc. Phase IV CT CRADA</td>
<td>A Comparative Effectiveness and Safety Study of Arformoterol Tartrate Inhalation Solution and Tiotropium Bromide on Re-Hospitalization in COPD Subjects.</td>
<td>Michael Campos, MD</td>
</tr>
</tbody>
</table>
## CRADAs Under Negotiation

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>PI</th>
<th>Sponsor</th>
<th>PI</th>
<th>Sponsor</th>
<th>PI</th>
<th>Sponsor</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boehringer-Ingelheim Pharmaceutical, Inc.</td>
<td>Seemant Chaturvedi, MD</td>
<td>Spiration, Inc.</td>
<td>Gregory Holt, MD</td>
<td>AbbVie, Inc.</td>
<td>Lennox Jeffers, MD</td>
<td>Quintiles, Inc.</td>
<td>Lennox Jeffers, MD</td>
</tr>
</tbody>
</table>

---

**Miami VA R&D Newsletter**

is a service of the Research Service Office at the Miami VA Healthcare System.

To view past issues, visit [http://sfvafre.org/newsletter.php](http://sfvafre.org/newsletter.php)

**Submissions**

Faculty and staff submissions can be e-mailed to the Office of Research Communications at iperez4@med.miami.edu or Isabel.Perez1@va.gov.

**Editor**

Isabel Perez

*Published quarterly by the Miami VA Research Service Office.*