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IN THE NEWS

Harvey Cited Among Most Influential in Field of Psychiatry



Philip D. Harvey, Ph.D., professor of psychiatry and behavioral sciences, was included in Thomson Reuters' [Highly Cited Researchers 2014](#), which recognizes scientists whose published works are most cited by fellow researchers. The publication gave Harvey the "mark of exceptional impact."

Dr. Harvey, who is also Chief of the Division of Psychology, specializes in cognitive, severe mental illness, and neuropsychiatric conditions, including traumatic brain injury, dementia and Parkinson's disease. Through his work, he has pioneered standards of care.

O'Leary Retires as VA CRADO



Timothy J. O'Leary, MD, PhD, Chief Research and Development Officer (CRADO) for the Veterans Health Administration retired with over 36 years of distinguished service to the Federal Government, which includes 12 years within the VHA. He also served as a PHS Commissioned Corps Officer for nearly 31 years.

Dr. O'Leary's last day of service to VHA and our Veterans was November 30, 2015.

Dr. O'Leary is highly respected for his medical and scientific knowledge and innovative thinking. Through-out his career, he demonstrated unparalleled professionalism and dedication, and selfless

service to country. Dr. O’Leary’s people-centered leadership won the genuine respect, admiration, and affection of many. His leadership within the Office of Research and Development and steady governance of the program has been Veteran-centric, continually taking into account the entire spectrum of health care issues faced by generations of Veterans – from an aging population to

the newest generation of returning Veterans.

Dr. O’Leary spearheaded and cultivated dynamic collaborations within and beyond the agency that increased the reach, capacity and impact of VA Research. Under his leadership, VA Research partnered with the Department of Defense to address mental health, traumatic brain injury, prosthetics, and other high-

priority topics. During his tenure, VA Research saw new and expanded collaborations with the National Institutes of Health, most recently with the White House Precision Medicine Initiative with the Million Veteran Program. His work led to improved quality of life and health care for our Nation’s Veterans, and has advanced the practice of medicine and the conduct of medical research.

PRESENTATIONS



Gaetan J-R Delcroix, PhD, GRECC Investigator, is first author on a poster presented by GRECC Investigator, Paul C. Schiller, PhD, at the International Society for Cellular Therapy (ISCT) Latin America Regional meeting held in Santiago, Chile in October 2015, entitled “MIAMI cell cartilage formation is

enhanced by Pharmacologically Active Microcarriers, cartilage microparticles and mechanical stimulation”. Co-authors on the presentation included GRECC Investigators Gianluca D’Ippolito, PhD and Teresita Reiner, DVM.



Herman S. Cheung, PhD, GRECC Investigator, was an invited Keynote Speaker at the International Symposium of Stem Cell Translational Medicine, as well as the Annual meeting of 973 National Key Basic Research Program of China, held in

Wenzhou, China in April 2015.

Dr. Cheung was also Chairman and an Invited Speaker of the Session on Neurogenesis at the 30th Asia-Pacific Academy of Ophthalmology Congress in Guangzhou, China in March 2015.

HONORS & AWARDS

Cheung's Students Receive High Honors *Pelaez Named Emerging Vision Scientist*

Daniel Pelaez, PhD, former student of Dr. Herman Cheng, was selected as one of the emerging young US scientists representing Bascom Palmer Eye Institute to present at the US Congress on stem cells and regenerative medicine.

Dr. Pelaez, research assistant professor of ophthalmology, was named a 2015 Emerging Vision Scientist by the National Alliance for Eye and Vision Research (NAEVR/AEVR) for his novel work on stem cells and retinal regeneration.

Pelaez was one of 21 scientists selected from across the United States for the inaugural class of emerging vision researchers.



During the NAEVR two-day Decade of Vision 2010-2020 event held in Washington D.C., he and other scientists presented their innovative work to members of Congress and staff at a reception held in the Rayburn House Office Building on Capitol Hill. ([Read More](#))

Acosta Awarded Bright Futures Foundation Travel Award



Zenith Acosta, (BME PhD candidate in Dr. Herman Cheung's laboratory) was awarded the Bright Futures Foundation travel award. According to Dr. Cheung, James L. Knight Professor, BME, the grant is a noteworthy recognition for a US graduate student whose research concentration is in eye diseases and reflects on the high caliber of doctoral students in the College of Engineering. The award will enable Zenith to attend the NIH Eye Institute's Reconnecting Neurons Audacious Goal (AGI) Workshop in Chicago October 15-16, where she will attend panel discussions and have

the opportunity to network with leading experts in the area of eye disease research. The overall goal of AIG is to facilitate cross-disciplinary research, in order to promote solutions for the most devastating and difficult-to-treat eye diseases. According to Dean Jean-Pierre Bardet, College of Engineering at the University of Miami, Dr. Cheung's doctoral students was another indication of the dedication and pervasive mentorship he provides to all of his research team members.

PUBLICATIONS

Story by Murray Epstein, MD

In the August issue of the prestigious American Journal of physiology, Professor Murray Epstein published an important article on the legendary Catalan surgeon Joseph Trueta, which was invited to occupy the prestigious Nuffield Chair in Orthopedics at Oxford University.

The basis and impetus for this article and the story it related was an exchange of letters between Professor Murray Epstein and Professor Trueta, focusing on Trueta's seminal research on the physiology of the kidney with an emphasis on the renal circulation.



Epstein's article reviews the pioneering and visionary contributions of the Catalan surgeon Joseph Trueta (1897–1977) to the changes in renal circulation that contribute to the pathogenesis of Acute Renal Failure (ARF). An erudite scientist with eclectic interests in physiology, orthopedics, politics, music and medical history, Trueta's initial involvement in wound healing as a trauma surgeon during the Spanish Civil War and the London Blitz was what prompted him to embark on what was to him a new field of research endeavor – the physiology of the kidney. When called out to clinically manage wounded patients during the London Blitz, Trueta asked an obvious but heretofore ignored question – “Why would a crushed arm or leg produce anuria with a shutdown of kidney function?” What was the connection between the macerated and crushed limb and kidney function? Trueta postulated that a trauma-induced “neural effect” on the renal vasculature, with resultant renal arterial constriction could cause Acute Renal Failure (ARF).

To test his hypothesis, Trueta assembled an experienced radiologist, a renowned physiologist, and a renal pathologist to study ARF in Oxford. *(Continue on Page 8)*

Professor Trueta at Oxford with the Queen Mother Elizabeth on the dedication of the Nuffield Infirmary, Oxford University, England.

Philip D. Harvey, PhD, Mihaela Aslan, Mengtian Du, Hongyu Zhao, Larry J. Siever, Ann Pulver, J. Michael Gaziano, John Concato. **Factor Structure of Cognition and Functional Capacity in Two Studies of Schizophrenia and Bipolar Disorder: Implications for Genomic Studies.** *(Most recent CSP 572 paper accepted for publication in Neuropsychology)*

Objective: Impairments in cognition and everyday functioning are common in schizophrenia and bipolar disorder. Based on two studies of schizophrenia (SCZ) and bipolar I disorder (BPI) with similar methods, this paper presents factor analyses of cognitive and functional capacity (FC) measures. The overall goal of these analyses was to determine whether performance-based assessments should be examined individually, or aggregated on the basis of the correlational structure of the tests and as well as to evaluate the similarity of factor structures in SCZ and BPI.

Method: Veterans Affairs (VA) Cooperative Studies Program study #572, evaluated cognitive and FC measures among 5,414 BPI and 3,942 SZ patients. A second study evaluated similar neuropsychological (NP) and FC measures among 368 BPI and 436 SZ patients. Principal components analyses, as well as exploratory and confirmatory factor analyses, were used to examine the data.

Results: Analyses in both datasets suggested that NP and FC measures were explained by of a single underlying factor in BPI and SCZ patients, both when analyzed separately or as in a

combined sample. The factor structure in both studies was similar, with or without inclusion of FC measures; homogeneous loadings were observed for that single factor across cognitive and FC domains across the samples.

Conclusions: The empirically derived factor model suggests that NP performance and FC are best explained as a single latent trait applicable to people with schizophrenia and bipolar illness. This single measure may enhance the robustness of the analyses relating genomic data to performance-based phenotypes. ([Read More](#))

Herman Cheung, PhD

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Xianyang Zhanga,^{b,c,1} Tengjiao Cuia,^{b,c} Jinlin Heb,^c Haibo Wang,^b Renzhi Caia,^{b,c} Petra Popovics^{b,d}, Irving Vidaurre^{b,c}, Wei Shaa,^b Janine Schmidd, Barbara Ludwig, Norman L. Block^{b,c,e,f}, Stefan R. Bornsteind, and Andrew V. Schallyb,^{c,e,f,g,1} [Beneficial effects of growth hormone-releasing hormone agonists on rat INS-1 cells and on streptozotocin-induced NOD/SCID mice.](#) *PNAS.* November 3, 2015 vol. 112 no. 44

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Agonists of growth hormone-releasing hormone (GHRH) have been previously reported to promote growth, function, and engraftment of islet cells

following transplantation. Here we evaluated recently synthesized GHRH agonists on the proliferation and biological functions of rat pancreatic β -cell

line (INS-1) and islets. In vitro treatment of INS-1 cells with GHRH agonists increased cell proliferation, the expression of cellular insulin, insulin-like

growth factor-1 (IGF1), and GHRH receptor, and also stimulated insulin secretion in response to glucose challenge. Exposure of INS-1 cells to GHRH agonists, MR-356 and MR-409, induced activation of ERK and AKT pathways. Agonist MR-409 also significantly increased the levels of cellular cAMP and the phosphorylation of cAMP response element binding protein (CREB) in INS-1 cells. Treatment of rat islets with

agonist, MR-409 significantly increased cell proliferation, islet size, and the expression of insulin. In vivo daily s.c. administration of 10 µg MR-409 for 3 wk dramatically reduced the severity of streptozotocin (STZ)-induced diabetes in nonobese diabetic severe combined immunodeficiency (NOD/SCID) mice. The maximal therapeutic benefits with respect to the efficiency of engraftment, ability to reach normoglycemia, gain in body weight, response to

high glucose challenge, and induction of higher levels of serum insulin and IGF1 were observed when diabetic mice were transplanted with rat islets preconditioned with GHRH agonist, MR-409, and received additional treatment with MR-409 posttransplantation. This study provides an improved approach to the therapeutic use of GHRH agonists in the treatment of diabetes mellitus. ([Read more](#))

Murray Epstein, MD *(continued from Page 4)*

They investigated the renal circulation of rabbits in response to diverse traumatic conditions by injecting a radio-opaque substance, using cine-radiography to visualize the flow of blood through the renal vasculature. Trueta's suggestion of renal cortical ischemia and diversion of blood to the less resistant medullary circulation (Trueta shunt) was criticized by the leading renal physiologist in the world at that time, Professor Homer Smith and his coworkers. In contrast to Homer Smith's data, which were derived and inferred solely from clearance studies and renal arteriovenous oxygen, (which are indirect determination, for which an effect can only be inferred), Trueta used the diametrical

opposite method of "direct" observation of the renal circulation.

Their differing methodologies, direct visualization of the renal circulation as opposed to inferred computations from clearance studies, accounts for some of their conflicting theories. Nevertheless, Trueta's proposal of disparate renal flow compartments focused attention on intrarenal hemodynamics. Trueta's focus on renal cortical ischemia was ultimately validated at Harvard Medical School by the studies of Professor of Physiology, Clifford Barger, in the dog and subsequently by two research fellows in the Renal Division, Drs. Norman Hollenberg and Murray Epstein, in normal

human subjects and in patients with acute renal failure.

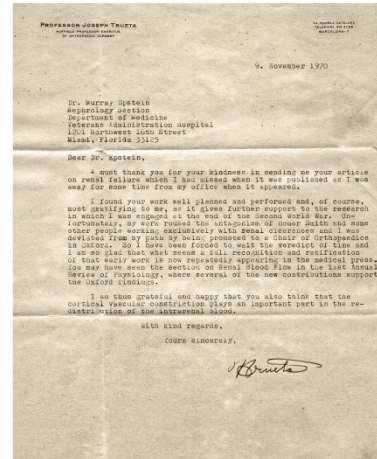
A year later Dr. Epstein moved to Miami to join the faculty of the University of Miami School of Medicine, and the Miami VA Medical Center. He wrote a letter to Professor Trueta, then retired and living in his beloved city Barcelona. Dr. Epstein described the studies that validated the Trueta hypothesis, and included reprints of their published articles. Professor Trueta responded with a letter dated November 9, 1970, addressed to Dr. Epstein at his new address at the Miami VA Hospital, acknowledging these studies in humans that vindicated his "Oxford theory" of renal cortical ischemia.

Two years ago, Dr. Epstein decided to write this story. He traveled to Barcelona on several occasions, and met with both Trueta's 91 year old daughter, Sra. Amèlia Trueta Llacuna, and several of Trueta's former research collaborators. Sra. Trueta also facilitated Dr. Epstein's free access to the Archival Collection of the Biblioteca Catalunya where he read and reviewed the original letters and research notebooks of Professor Trueta. These unique primary sources serve as the foundation for Dr.

Epstein's article published in the American Journal of Physiology. Dr. Epstein concluded the article with a quote from Claude Bernard, Trueta's hero and the father of physiology that aptly summarizes the Trueta-Homer Smith conflict, and serves as an important principle to aspiring researchers everywhere.

“When the observed evidence is opposed to a theory prevailing at the moment, one must accept the data and give up the theory, even when it

is supported by famous names and widely accepted” (Claude Bernard, 1865).



FUNDING

CSP #594 - Comparative Effectiveness in Gout: Allopurinol vs. Febuxostat

The VA Central Office approved Miami VA as a proposed site for participation in CSP #594, “Comparative effectiveness in gout: allopurinol vs. febuxostat.” The kickoff for the study will take place in June 2016, and intake of patients will begin in July 2016.

The study funds provide for up to 4 years of funding for a full time Nurse Coordinator position (GS2/SIII). Startup funds are available for the period of 3 months before the beginning of the active phase. In addition, a half-time research assistant (GS-7/1) will be provided between 6-

12 months of the study onset, once the site has enrolled 30 participants.

The study protocol is being completed and will be distributed upon VA Central Office approval.

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