The Legacy of Dr. David Robertson
Diagnosis and Treatment of Autonomic Disorders

May 3-4, 2018

David Robertson, M.D.
Elton Yates Professor of Medicine, Pharmacology & Neurology
Vanderbilt University Medical Center
Dr. Robertson graduated from Vanderbilt University in 1969 with a B.A. in Germanic and Slavic Languages. He attended the Amamaganaean Institute in Copenhagen, Denmark before receiving his medical degree from Vanderbilt University Medical School in 1973. He went on to complete an internship and residency in Medicine at Johns Hopkins Hospital. Robertson was a postdoctoral fellow in Clinical Pharmacology at Vanderbilt for two years before accepting a position as Assistant Chief of Service in Medicine and Instructor in Medicine at Johns Hopkins in 1977. In 1978, Robertson returned to Vanderbilt as Assistant Professor of Medicine and Pharmacology, and created the Autonomic Dysfunction Center with his wife, Dr. Rose Marie Robertson. Dr. Robertson also co-created the Center for Space Physiology and Medicine at Vanderbilt along with F. Andrew Gaffney MD. Dr. Robertson was a member of the Neurolab research crew who investigated the effects of space missions on astronauts’ autonomic system, and his team captured microneurography readings transmitted from space.

In 1993, Dr. Robertson also became the Director of the Medical Scientist Training Program, and he served in the position of Director of the Division of Movement Disorders in the Department of Neurology until 2000. Along with his recent roles as a Professor of Medicine, Pharmacology and Neurology and the distinguished Elton Yates Professor of Autonomic Disorders, Dr. Robertson has served as the Director of the Clinical Research Center in the Vanderbilt Institute for Clinical & Translational Research for 30 years and Director of the Autonomic Dysfunction Center for 39 years.

The Vanderbilt Autonomic Dysfunction Center was the first center devoted exclusively to the diagnosis and treatment of disorders of autonomic blood pressure regulation. Under the leadership of Dr. David Robertson, the Autonomic Dysfunction Center has become an international referral center for patients with various forms of chronic intermittent hypotension, postural orthostatic tachycardia syndrome and other forms of orthostatic intolerance. Its creation brought together in one site a cadre of physicians, scientists and nurses who could foster a balanced scientific approach to elucidation of the etiology and optimal therapy for these disorders. Many of the young scientists and physicians who have trained in the Vanderbilt Autonomic Dysfunction Center have established similar centers in other parts of the world.

Dr. Robertson and investigators in the Vanderbilt Autonomic Dysfunction Center discovered unrecognized diseases such as dopamine beta hydroxylase deficiency, norepinephrine transporter deficiency, and baroreflex failure as causes of severe hypertension. Dr. Robertson also has been the Principal Investigator of NIH’s Autonomic Rare Diseases Consortium that brought together major autonomic centers with the purpose of accelerating the discovery of new treatments for autonomic disorders.
DAY 1: Major Discoveries in Autonomic Research and Emergent Therapies

Thursday, May 3, 2018

9:30 a.m.

Opening Remarks: Jeffrey Balser, M.D., Ph.D.
Dean, Vanderbilt University School of Medicine
CEO & President, Vanderbilt University Medical Center

9:45 a.m.

Session Chair: David Harrison, M.D.
Betty and Jack Bailey Professor Pharmacology and Physiology
Director, Division of Clinical Pharmacology
Director, Center for Vascular Biology

Introduction to sessions:
David Robertson & Rose Marie created the Autonomic Dysfunction Center in 1978. In 1989, while serving as the Director of the CRC, he also co-created the Vanderbilt Center for Space Physiology & Medicine with Dr. F. Andre Gaffney. From 1995 to 1999, he served as a Principal Investigator for NASA’s Neurolab and studied the effects of space missions on astronauts’ sympathetic nervous system, and captured microneurography readings transmitted from space.

10:00 a.m.

Autonomic Physiology in Space: Experience from the Vanderbilt Space Neurolab
André Diedrich, M.D., Ph.D.,
Professor of Medicine & Biomedical Engineering
Vanderbilt Autonomic Dysfunction Center

Highlight the achievements of Neurolab team: André Diedrich, M.D., Ph.D. Italo Biaggioni, M.D., Rose Marie Robertson, M.D., Andrew Ertl, M.D., Jose Limardo, M.D., Rob Peterson, M.D., James Pawelczyk, Ph.D., Sachin Paranjape, B.S., and David Robertson, M.D.

10:45 a.m.

The Discovery of a New Genetic Disease: Dopamine-β-Hydroxylase Deficiency as a cause of neurogenic orthostatic hypotension
Italo Biaggioni, M.D.
Professor of Medicine
Director, Vanderbilt Autonomic Dysfunction Center
(Former trainee of Dr. David Robertson)
11:30 a.m.  The discovery of the pressor response to water drinking in humans. Non-pharmacological treatment for orthostatic hypotension  
Prof. Jens Jordan, M.D.  
Head of the Institute of Aerospace Medicine  
German Space Aerospace Center  
(Former trainee of Dr. David Robertson)

12:15 p.m.  Lunch and networking (Lunch Box)

1:15 p.m.  Emergent project: Smart abdominal binder for the treatment of orthostatic hypotension  
Luis Okamoto, M.D.  
Research Instructor  
Department of Medicine  
Vanderbilt Autonomic Dysfunction Center

2:00 p.m.  The Discovery of a New Genetic Disease: Orthostatic Intolerance and Tachycardia Associated with Norepinephrine-Transporter Deficiency  
Prof. Giris Jacob, M.D.  
Director  
Recanati Autonomic Dysfunction Center  
Tel-Aviv Sourasky Medical Center  
Professor of Medicine  
Randy Blakely, Ph.D.  
Executive Director  
Florida Atlantic University Brain Institute  
Professor of Biomedical Science

2:45 p.m.  Emergent project: New Therapy for Orthostatic Hypotension, Norepinephrine Transporter Inhibitors  
Cyndya A. Shibao, M.D.  
Associate Professor of Medicine  
Vanderbilt Autonomic Dysfunction Center

3:30 p.m.  Emergent Projects:

Pharmacology of Nucleus Tractus Solitari  
Ching-Jiunn (George) Tseng, M.D., Ph.D.  
Professor  
Department of Medical Education & Research  
Kaohsiung Veterans General Hospital  
Kaohsiung, Taiwan
Identification of the hunting reaction control mechanisms by power spectral analysis
Che-Se (Phoebus) Tung, MD., PhD.
Chairman, Division of Medical Research & Education
Cheng Hsin General Hospital

4:00 p.m.  
**Autonomic Rare Diseases Consortium: Overview and Introductions**  
Chair/PI: Italo Biaggioni, M.D.

*In 2007, Dr. David Robertson led the first Consortium for the Study of Autonomic Rare Disorders funded by NIH. The consortium allowed the effective collaboration of major clinical and research centers in the U.S. to advance the discovery of new therapies for patients with autonomic disorders.*

4:15 p.m.  
**The Major Contributions of the Autonomic Rare Diseases Consortium**  
Phillip Low, M.D.  
Professor of Neurology  
Mayo Clinic  

5:00 p.m.  
**Q&A**

5:30 p.m.  
**End of Symposium day 1**
DAY 2: Translating Clinical Research to Bedside Practice. Diagnosis and Treatment of Autonomic Disorders

May 4, 2018

Friday, May 4, 2018  Location: Langford Auditorium
8:00 a.m. Welcome Remarks: Introduction to Autonomic Disorders
Italo Biaggioni, M.D.
Professor of Medicine
Director, Vanderbilt Autonomic Dysfunction Center

8:15 a.m. Autonomic Function Test: Practical Considerations
André Diedrich, M.D., Ph.D.,
Professor of Medicine & Biomedical Engineering
Vanderbilt Autonomic Dysfunction Center

Morning Session I: Autonomic Failure, Diagnosis and Treatment.

9:00 a.m. Epidemiology, Diagnosis and Treatment of Neurogenic Orthostatic Hypotension
Horacio Kaufmann, M.D.
Professor of Neurology
New York University School of Medicine
Dysautonomia Center

9:45 a.m. Supine Hypertension and Orthostatic Hypotension: Why, when and how to treat
Italo Biaggioni, M.D.
Professor of Medicine
Director, Vanderbilt Autonomic Dysfunction Center

10:30 a.m. Postprandial Hypotension: Assessment & Treatment
Cyndya A. Shibao, M.D.
Associate Professor of Medicine
Vanderbilt Autonomic Dysfunction Center

11:15 a.m. Baroreflex Failure: An Unrecognized Form of Hypertension and Orthostatic Hypotension
Prof. Jens Jordan, M.D.
Head of the Institute of Aerospace Medicine
German Space Aerospace Center

12:00 p.m. Break
Session II: Syncope Panel Discussion
2017 ACC/AHA/HRS guideline for the evaluation and management of patients with syncope

12:30 p.m.  Syncope: Epidemiology, Evaluation, Diagnosis
Raffaelo Furlan, M.D.
Head of Medical Clinical Operations Unit
Department of Internal Medicine
Humanitas Research Hospital
Rozzano, Milan, Italy

1:00 p.m.  Management of Vasovagal Syncope: Clinical Trials
Satish Raj, M.D., M.S.C.I., F.H.R.S., F.R.C.P.C.
Professor of Cardiac Sciences
Calgary Syncope & Autonomic Dysfunction Clinic
Libin Cardiovascular Institute
University of Calgary;
Adjunct Associate Professor of Medicine
Vanderbilt Autonomic Dysfunction Center

1:40 p.m.  Q&A (5 minutes)

Afternoon Session III

1:45 p.m.  Autoimmune autonomic neuropathy and small fiber autonomic neuropathy: Diagnosis and Treatment
Amanda Peltier, M.D.
Associate Professor of Neurology
Vanderbilt Autonomic Dysfunction Center

2:30 p.m.  Postural Tachycardia Syndrome (POTS): Diagnosis and Treatment
Satish Raj, M.D., M.S.C.I., F.H.R.S., F.R.C.P.C.
Professor of Cardiac Sciences
Calgary Syncope & Autonomic Dysfunction Clinic
Libin Cardiovascular Institute
University of Calgary;
Adjunct Associate Professor of Medicine
Vanderbilt Autonomic Dysfunction Center

3:15 p.m.  Case Discussions
Panel Experts: Italo Biaggioni, M.D., Satish Raj, M.D.,
Cyndya Shibao, M.D., James Muldowney III, M.D.,
Amanda Peltier, M.D., Ralf Habermann, M.D.
Postural Tachycardia Syndrome
Satish Raj, M.D., M.S.C.I., F.H.R.S., F.R.C.P.C.

Orthostatic Hypotension in a Cardiac Patient
James Muldowney III, M.D.

4:00 p.m. Q&A

4:15 p.m. End of CME Event