30TH INTERNATIONAL SYMPOSIUM ON THE AUTONOMIC NERVOUS SYSTEM

NOVEMBER 6-9, 2019: WYNDHAM GRAND CLEARWATER BEACH, FLORIDA
MEETING#  YEAR            VENUE
1      1990                Nashville, Tennessee
2      1991                Nashville, Tennessee
3      1992                Nashville, Tennessee
4      1993                Nashville, Tennessee
5      1994                Rochester, Minnesota
6      1995                Phoenix, Arizona
7      1996                Montreal, Quebec, Canada
8      1997                Honolulu, Hawaii
9      1998                Ft. Myers, Florida
10     1999                Kohala Coast, the Big Island, Hawaii
11     2000                Rio Grande, Puerto Rico
12     2001                Palm Springs, California
13     2002                Hilton Head Island, South Carolina
14     2003                St. Thomas, U.S. Virgin Islands
15     2004                Amsterdam, The Netherlands
16     2005                Los Cabos, Mexico
17     2006                Rio Grande, Puerto Rico
18     2007                Vienna, Austria
19     2008                Kauai, Hawaii
20     2009                St. Thomas, U.S. Virgin Islands
21     2010                Marco Island, Florida
22     2011                Buzios, Brazil
23     2012                Paradise Island, Bahamas
24     2013                Kohala Coast, the Big Island, Hawaii
25     2014                Rio Grande, Puerto Rico
26     2015                Stresa, Italy
27     2016                San Diego, California
28     2017                Clearwater Beach, Florida
29     2018                Newport Beach, California
30     2019                Clearwater Beach, Florida

SPEAKERS

2019 STREETEN LECTURER
Eduardo E. Benarroch, M.D.

2019 ROBERTSON LECTURER
Gregory D. Fink, Ph.D.

2019 MSA LECTURER
Ronald Postuma, M.D., M.Sc.

2019 HOT TOPIC LECTURER
Amir Zarrinpar, M.D., Ph.D.
This Society began informally in 1990 at Vanderbilt University, Tennessee. Important motive forces for the initial meeting were Dr. David Robertson and Ms. Dorothy Trainor-Kingsbury (Shy-Drager Support Group). The Society was formally established in 1992, and Dr. Robertson became its first president. The broad aim of this Society is to provide a vehicle for investigators and clinicians interested in the autonomic nervous system to interact. It aims to promote research, education, and academic practice in the autonomic disorders. The Society has escalated in its membership, successfully obtained tax-exempt status, adopted a formal charter, and has its own journal (Clinical Autonomic Research). The Society has an American infrastructure but a strongly international character. Its membership is open to persons of all countries who share the same interests.

Continuing Medical Education:

THANK YOU FOR ATTENDING THE 30TH INTERNATIONAL SYMPOSIUM ON THE AUTONOMIC NERVOUS SYSTEM.

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the Medical College of Wisconsin and the American Autonomic Society. The Medical College of Wisconsin is accredited by the ACCME to provide continuing medical education for physicians.

AMA CREDIT DESIGNATION STATEMENT:
The Medical College of Wisconsin designates this Live Activity for a maximum of 20.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
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1992, 1993  David Robertson, M.D.
1994, 1995  Phillip A. Low, M.D.
1997, 1998  Irwin J. Schatz, M.D.
1999, 2000  Roy Freeman, M.D.
2001, 2002  Felicia Axelrod, M.D.
2005, 2006  Horacio Kaufmann, M.D.
2007, 2008  Italo Biaggioni, M.D.
2009, 2010  Mark Chapleau, Ph.D.
2011, 2012  Michael Joyner, M.D.
2013, 2014  Thomas Cheilmsky, M.D.
2015, 2016  Christopher Gibbons, M.D.
2017, 2018  William P. Cheshire, M.D.
2019, 2020  Satish R. Raj, M.D., M.S.C.I.

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Howard Snapper, M.D.
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The American Autonomic Society would like to thank the following AAS committee members for their outstanding contributions:

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Dr. Aditi Varma

WEDNESDAY, NOVEMBER 6, 2019

7:00-8:30 AM • Registration • Dunes Foyer
7:00-8:30 AM • Continental Breakfast • Dunes Foyer
8:30-8:45 AM • President’s Welcome • Satish R. Raj, M.D., President, American Autonomic Society • Dunes III-V
8:45-9:45 AM • Plenary Lecture 1: Robertson Plenary Lecture • Impact of obesogenic diet on autonomic regulation in a rat model of chronic spinal cord injury • Gregory D. Fink, Ph.D. • East Lansing, MI, USA • Chair: Satish Raj • Dunes III-V
9:45-10:00 AM • Coffee Break • Dunes Foyer
10:00 AM-1:00 PM • Course on Autonomic Medicine • Organizers: David Goldstein and Howard Snapper • The Dysautonomia Project is sponsoring the creation of a video education program for autonomic disorders in collaboration with AAS • Parallel session • Dunes III
10:00-10:05 AM • Introduction to The Dysautonomia Project
10:05-1:00 PM
Why are dysautonomies hard?
- What is the ANS?
- The ANS has parts
- Organization of the ANS
- Chemical messengers of the ANS
- Homeostasis and the ANS
- Stress and the ANS
- Introduction to dysautonomies
- The syndromic nature of dysautonomies
- Autonomic function tests
- Pediatric dysautonomies
- Adult dysautonomias
- Geriatric dysautonomies
- Miscellaneous dysautonomies
- Treatment of dysautonomies
10:00 AM-12:30 PM • Research Testing of Autonomic Function Workshop • Organizers: Amy Arnold and Matthew Lloyd • Parallel session • Dunes IV-V

10:00-12:30 PM
Assessment of blood pressure and heart rate in preclinical models • Amy Arnold, Ph.D. • Hershey, PA, USA
Measurement of sympathetic activity in preclinical models • Sean Stocker, Ph.D. • Pittsburgh, PA, USA
Cross-correlation analysis in the quantification of sympathetic outflow to muscle and skin in humans • Vaughan Macefield, Ph.D. • Melbourne, Australia
How to measure cardio-vagal and sympathetic baroreflex sensitivity in humans • Andre Diedrich, M.D., Ph.D. • Nashville, TN, USA
Catecholamines and cardiovascular autonomic neuropathies in humans • Giris Jacob, M.D., Ph.D. • Tel Aviv, Israel
Quantitative assessment of sympathetic structure and function in humans • Christopher Gibbons, M.D. • Boston, MA, USA

12:30-1:30 PM • Lunch Break (on own)

1:30-4:00 PM • Clinical Autonomic Testing Workshop • Organizers: Wolfgang Singer and David Sletten • Dunes IV-V
• Clinical autonomic testing Physiology and approach
• Testing demonstration
• Illustrative cases, pitfalls, and discussion

4:00-5:00 PM • Free Time

5:00-5:30 PM • Registration: Industry Dinner Symposium • Dunes III-V

5:30-7:15 PM • Industry Dinner Symposium: Alnylam Pharmaceuticals • Dunes III-V

7:15-7:30 PM • Break • Dunes Foyer

7:30-9:30 PM • Poster Session I and Trainee Poster Competition (wine & cheese) • Dunes I-II

THURSDAY, NOVEMBER 7, 2019

7:00-8:30 AM • Continental Breakfast • Dunes Foyer

8:30-10:00 AM • Symposium 1: Role of Autoimmunity in POTS • Sponsored by Dysautonomia International • Chairs: Steven Vernino and Xichun Yu • Parallel session • Dunes III

8:30-8:35 AM • Introduction to Dysautonomia International

8:35-10:00 AM
• Autoimmunity in POTS: overview • Steven Vernino, M.D., Ph.D. • Dallas, TX, USA
• Overview of G protein coupled receptor antibodies in POTS • David C. Kern, M.D. and Xichun Yu, M.D. • Oklahoma City, OK, USA
• Sjögren syndrome and POTS • Brent P. Goodman, M.D. • Scottsdale, AZ, USA

8:30-10:00 AM • Session 1: Autonomic Regulation of the Heart and Vasculature • Chairs: Kaushik Patel and Jacqueline Limberg • Parallel session • Dunes IV-V

8:30-8:45 AM • Evidence of adaptations in the neural control of body temperature following heat acclimation in humans • H. Barry, G. Chaseling, S. Moreault, C. Sauvageau, P. Behzadi, H. Gravel, N. Ravanelli, D. Gagnon • Montréal, Canada

8:45-9:00 AM • Low-frequency sinusoidal electrical stimulation of the dorsolateral prefrontal cortex modulates muscle sympathetic nerve activity in humans • T. Dawood, L.A. Henderson, V.G. Macefield • Melbourne, Australia

9:00-9:15 AM • Sympathetic vasodilation improves insulin-mediated microvascular recruitment in the forearm of obese human subjects • J. Celedonio, J.N. Patel, A. Ruiz, E.C. Smith, S. Lonce, S. Paranjape, L. Okamoto, I. Biaggioni, A. Gamboa • Nashville, TN, USA

9:15-9:30 AM • Differences in regional grey matter volume of the brain are related to mean blood pressure and muscle sympathetic nerve activity in humans • S. Kobuch, R.H. Fatouleh, J.M. Macefield, L.A. Henderson, V.G. Macefield • Melbourne, Australia

9:30-9:45 AM • Impact of age and sex on neural cardiovascular responsiveness to cold pressor test in humans • M.L. Keller-Ross, H.A. Cunningham, J.R. Carter • Minneapolis, MN, USA

9:45-10:00 AM • Neuroplasticity in nucleus tractus solitarii after cardiovascular deconditioning induced by hindlimb unloading in rats • L. Lima-Silveira, E.M. Hasser, D.D. Kline • Columbia, MO, USA

10:00-10:30 AM • Coffee Break • Dunes Foyer
10:30 AM-12:00 PM • Symposium 2: Sex Differences in Autonomic Control of Blood Pressure and Metabolism • Chairs: Cyndya Shibao and Amanda Miller • Parallel session • Dunes III

10:30-12:00 PM
Angiotensin-(1-7) and metabolic function in obesity: sex matters • Amy Arnold, Ph.D. • Hershey, PA, USA

Neural control of blood pressure during pregnancy in humans • Qi Fu, M.D., Ph.D. • Dallas, TX, USA

Racial difference in cholinergic modulation of oxidative stress and its clinical application in obese women • Cyndya Shibao, M.D. • Nashville, TN, USA

Compensatory interaction between sympathetic baroreflex sensitivity and vascular transduction in males but not females • C.E. Taylor, S.L. Hissen, R. Brown, V.G. • Macefield • Sydney, Australia

Sympathetic and cardiovascular responses to acute mental stress in post-traumatic stress disorder (PTSD): sex differences • I.T. Fonkoue, T.N. Jones, M. Vemulapalli, D. DaCosta, J. Park • Atlanta, GA, USA

10:30 AM-12:00 PM • Session 2: Autonomic Neuropathy and POTS • Chairs: Howard Snapper and Meredith Bryarly • Parallel session • Dunes IV-V

10:30-10:45 AM • Low frequency variability of systolic arterial pressure accurately predicts autonomic injury during the acute phase of spinal cord injury • V.E.M. Lucci, J.A. Inskip, M.S. McGrath, B.K. Kwon, V.E. Claydon • Burnaby, Canada

10:45-11:00 AM • Clinical phenotyping of postural orthostatic tachycardia syndrome • B. Roschach, V. Galvis, A.I. Penzlin, I. Bonyhay, J. Celli, S. Rajan, R. Freeman, C.H. Gibbons • Boston, MA, USA

11:00-11:15 AM • Orthostatic intolerance in the young and the benefits of oral rehydration • M.S. Medow, K. Guber, S. Chokshi, C. Terilli, P. Visintainer, J.M. Stewart • Valhalla, NY, USA

11:15-11:30 AM • Hereditary transthyretin (hATTR) amyloidosis: symptoms and signs in early disease • C.H. Gibbons, A. Gonzalez-Duarte, F. Barroso, M. Campagnono, J. Garcia, S. Rajan, R. Freeman • Boston, MA, USA

11:30-11:45 AM • Putative genetic markers for postural tachycardia syndrome • J.R. Boris, H. Hakonarson • Philadelphia, PA, USA


12:00-1:30 PM • Poster Session II (box lunch) • Dunes I-II

1:30-4:00 PM • Free Time

4:00-5:30 PM • Mentor-Mentee Round Table • Sponsored by Lundbeck LLC • Organizers: Amanda Miller and Elisabeth Golden • Pelican

5:30-6:00 PM • Free Time

6:00-7:00 PM • Plenary Lecture 2: Streten Plenary Lecture • Multiple system atrophy and brainstem control of survival • Eduardo E. Benarroch, M.D. • Rochester, MN, USA • Chair: Steven Vernino • Dunes III-V

7:00-8:30 PM • Session 3: Awards Presentations • Chairs: Satish Raj and Marvin Medow • Dunes III-V

7:00-7:15 PM • FMS/Penaz-Wesseling Travel Fellowship Award: Towards improved hemodynamic criteria to distinguish between classic orthostatic hypotension and reflex syncope during tilt-table testing • M. Gharig, F.I. Kerkhof, R.H.A.M. Reijnjtes, R.D. Thijs, J.G. van Dijk • Leiden, The Netherlands

7:15-7:30 PM • FMS/Penaz-Wesseling Travel Fellowship Award: Effect of dietary salt intake on morning blood pressure surge in healthy women • R. Takeda, A.S. Stickford, J.-K. Yoo, R.A. Parker, M.A. Roberts-Reeves, Q. Fu • Dallas, TX, USA

7:30-7:45 PM • Streeten Travel Fellowship Award: Increased gastrointestinal gut hormones secretion following a glucose challenge in postural orthostatic tachycardia syndrome • N.C. Breier, S.Y. Paranjape, S. Scudder, S. Lonce, S.E. Mehr, A. Diedrich, C.R. Flynn, C.A. Shibao • Nashville, TN, USA

7:45-8:15 PM • The Felicia Axelrod Award • Amy C. Arnold, Ph.D. • Hershey, PA, USA

8:15-8:30 PM • Recognition of Fellows of the American Autonomic Society
FRIDAY, NOVEMBER 8, 2019

6:15-6:45 AM • Registration: Industry Breakfast Symposium • Dunes III-V

6:45-8:00 AM • Industry Breakfast Symposium: Akcea Therapeutics • Dunes III-V

8:00-8:10 AM • Break

8:10-9:10 AM • Plenary Lecture 3: Hot Topic Plenary Lecture • The gut microbiome: all hype or true hope? • Amir Zarrinpar, M.D., Ph.D. • La Jolla, CA, USA • Chair: Rasna Sabharwal • Dunes III-V

8:10-9:10 AM • Plenary Lecture 3: Hot Topic Plenary Lecture • The gut microbiome: all hype or true hope? • Amir Zarrinpar, M.D., Ph.D. • La Jolla, CA, USA • Chair: Rasna Sabharwal • Dunes III-V

9:10-11:00 AM • Symposium 3: Vasovagal Syncope: The Present and the Future • Chairs: Satish R. Raj and Juan Guzman • Parallel session • Dunes III

9:25-9:40 AM • A phase 2 study of the efficacy, durability, and safety of amprenoxetine (TD-9855), a norepinephrine reuptake inhibitor, given once-daily to treat neurogenic orthostatic hypotension (nOH) in subjects with synucleinopathies • H. Kaufmann, I. Biaggioni, K. Chatamra, A. Panneerselvam, B. Haumann, R. Vickery • New York, NY, USA


9:55-10:10 AM • Changes in supine blood pressure with long-term droxidopa use • L.A. Hewitt, S. Gorny, A. Lindsten, M. Karnik-Henry, S. Kymes, A. Favit • Deerfield, IL, USA

10:10-10:25 AM • Best Basic Science Autonomic Research: Bezdol-Jarisch reflex and beyond: differential engagement of inhibitory and excitatory cardiopulmonary reflexes by capsaicin and phenylbiguanide • R.A. Larson, M.W. Chapleau • Iowa City, IA, USA

10:25-10:40 AM • Can urine sodium concentration be determined through chloride test strips? • N.D. Heeney, B.C.D. Hockin, S. Sanatani, K. Armstrong, V.E. Claydon • Burnaby, Canada

10:40-11:00 AM • Presentations from top 4 posters (4 @ 5 min each)

11:00-11:30 AM • Coffee Break • Dunes Foyer

11:30 AM-1:00 PM • Symposium 4: Heart Failure: Cutting Edge Autonomic Approach • Chairs: Mark W. Chapleau and Amanda Peltier • Parallel session • Dunes III

11:30-1:00 PM • Carotid body contribution to autonomic disorders • Rodrigo Iturriaga, Ph.D. • Santiago, Chile

11:30-1:00 PM • Molecular basis of cardiac mechanosensory and chemosensory signaling: implications in heart failure • Mark W. Chapleau, Ph.D. • Iowa City, IA, USA

11:30-1:00 PM • Splanchnic modulation in heart failure • Marat Fudim, M.D. • Durham, NC, USA

11:30 AM-1:00 PM • Symposium 5: Gastrointestinal System in Autonomic Disorders • Chairs: Gisela Chelimsky and Qi Fu • Parallel session • Dunes IV-V

11:30-1:00 PM • Enteric nervous system: the big brain! • Keith A. Sharkey, Ph.D. • Calgary, Canada

11:30-1:00 PM • Evaluation of GI problems in dysautonomia • Gisela Chelimsky, M.D. • Milwaukee, WI, USA

11:30-1:00 PM • Management pearls for GI problems in autonomic disorders • John E. Fortunato, Jr., M.D. • Evanston, IL, USA

1:00-7:00 PM • Free Time/Lunch On Your Own

1:30-3:30 PM • AAS Board Meeting • Egret

3:30-4:30 PM • CAR Editorial Board Meeting • Egret

4:30-5:30 PM • AAS Committee Meetings • Pelican/Heron

7:00-10:00 PM • Presidential Dinner • Pool Deck
SATURDAY, NOVEMBER 9, 2019

6:30-8:00 AM • Continental Breakfast • Dunes Foyer

8:00-8:45 AM • Plenary Lecture 4: MSA Plenary Lecture • The early stages of synucleinopathies: is prodromal MSA detectible? • Ronald Postuma, M.D. • Montreal, Canada • Chair: Wolfgang Singer • Dunes III-V

8:45-10:05 AM • Session 5: Multiple System Atrophy and Other Degenerative Diseases • Sponsored by MSA Coalition • Chairs: Janice Gilden and Jose-Alberto Palma • Dunes III-V

8:45-8:50 AM • Introduction to MSA Coalition


9:05-9:20 AM • Predicting evolution in pure autonomic failure • E.A. Coon, S.E. Berini, J.N. Mandrekar, E.E. Benarroch, P. Sandroni, P.A. Low, W. Singer • Rochester, MN, USA

9:20-9:35 AM • Cutaneous biomarkers in multiple system atrophy • N. Wang, S. Rajan, D. Kern, J.A. Palma, H. Kaufmann, R. Freeman, C.H. Gibbons • Boston, MA, USA


9:50-10:05 AM • Autonomic changes in Parkinson’s disease patients treated with L-threo-3,4-dihydroxyphenylserine and high dose Carbidopa therapy • K.R. Hay, K.E. McDonell, P. Trujillo, C. Shibao, S. Paranjape, O. Roman, D.O. Claassen • Nashville, TN, USA

10:05-10:30 AM • Coffee Break • Dunes Foyer

10:30 AM–12:30 PM • Case-Based Discussion: Ultimate Autonomic Challenge • Organizer: Juan Guzman • Dunes III-V

12:30-1:00 PM • AAS Business Meeting and Closing Remarks • Dunes III-V

2:00-3:00 PM • Registration: Patient Seminar: Updates from the 2019 AAS Meeting

3:00-8:00 PM • Patient Seminar: Updates from the 2019 AAS Meeting • Organized by Dysautonomia International • Dunes I-II • (separate registration required)
AUTONOMIC FAILURE

Poster #1** • Addressing orthostatic hypotension in Parkinson disease patients in a neurology resident continuity clinic: one year follow-up • E.P. Golden, T. Le, B. Bleiberg, L.S. Brown, S. Khan, S. Vernino, P. Khemani • Dallas, TX, USA


Poster #3** • Symptoms of orthostatic hypotension • S. Rajan, J. Ceili, I. Bonyhay, C.H. Gibbons, R. Freeman • Boston, MA, USA

Poster #4 • Conjugal multiple system atrophy: chance, shared risk factors, or evidence of infectivity? • E.A. Coon, W. Rocca, J.E. Ahlskog, J.Y. Matsumoto, P.A. Low, W. Singer • Rochester, MN, USA

Poster #5** • Long-term trends in myocardial sympathetic innervation and function in synucleinopathies • G. Lamotte, C. Holmes, T. Wu, D.S. Goldstein • Bethesda, MD, USA

Poster #6** • Reliable indicators of autonomic function test in Parkinson’s disease • B.A. Yoon, J.K. Kim, J.W. Kim, S.M. Cheon • Busan, South Korea

Poster #7 • Post-mortem and in vivo evidence for “sick but not dead” central dopaminergic neurons in multiple system atrophy: implications for neurotrophic factor gene enhancement therapy • D.S. Goldstein, P. Sullivan, C. Holmes, K. Bankiewicz • Bethesda, MD, USA

Poster #8** • Longitudinal changes in autonomic symptom burden predict decline in activities of daily living in Parkinson’s disease • M. Sklerov, C. Shih, N. Browner, E. Dayan • Chapel Hill, NC, USA

Poster #9** • Submandibular gland alpha-synuclein deposition occurs without local sympathetic denervation or dysfunction in Parkinson disease • R. Isonaka, P. Sullivan, D.S. Goldstein • Bethesda, MD, USA

GENETIC AUTONOMIC DISORDERS

Poster #10** • Colocalization of alpha-synuclein with tyrosine hydroxylase in skin biopsies from individuals at genetic risk of Parkinson disease: a genotype-phenotype study • R. Isonaka, D. Narendra, D.S. Goldstein • Bethesda, MD, USA

Poster #11** • A case of indifference to pain and central anhidrosis • K. Shouman, K.V. Minota Pacheco, A.M. Schmeichel, T.L. Gehrking, J.A. Gehrking, A.D. Zeller, P.A. Low, W. Singer • Rochester, MN, USA

Poster #12* • Neurogenic bladder dysfunction in patients with familial dysautonomia: a cross-sectional study • B.J. Balgobin, J.-A. Palma, B. Peyronnet, B. Brucker, H. Kaufmann • New York, NY, USA

Poster #13* • Frequency of seizures and epilepsy in familial dysautonomia • B.J. Balgobin, M.A. Perez, J.-A. Palma, L. Norcliffe-Kaufmann, H. Kaufmann • New York, NY, USA

AUTONOMIC REGULATION

Poster #14 • Does renal denervation restore GABAergic tone in the paraventricular nucleus and thus attenuate the enhanced activation of the PVN in heart failure? • K.P. Patel, K. Katsurada, X. Liu, H. Zheng • Omaha, NE, USA

Poster #15 • Role of arterial baroreflex in respiratory sinus arrhythmia: a study using oscillatory lower body negative pressure in human subjects • A. Sood, S. Srivastav, D.S. Chandran, A.K. Jaryal, K.K. Deepak • New Delhi, India

Poster #16* • The effect of dietary sodium intake on central blood pressure variability in young adults • K.U. Migdal, J.C. Watso, M.C. Babcock, A.T. Robinson, M.M. Wenner, S.D. Stocker, W.B. Farquhar • Newark, DE, USA

CARdiovascular disease, obesity & aging

Poster #17 • Relationships between cardiovascular disease, autonomic function, neuropathic pain, and depression following spinal cord injury • M.C. Dorton, S. de Groot, M. Post, J.J. Cragg, J.K. Kramer, V.E. Claydon • Burnaby, BC, Canada

Poster #18 • Slow breathing training reduces blood pressure even in healthy normotensive subjects • E.C. Smith, S. Paranjape, K. Nelson, A. Diedrich, G. Birdee, A. Gamboa • Nashville, TN, USA

Diabetic, autoimmune & other autonomic neuropathies

Poster #19 • Granulomatosis with polyangiitis presenting as autonomic failure • B. Blech, M. Grill, B. Goodman • Scottsdale, AZ, USA

Poster #21 • Clinical features of autoimmune gastrointestinal dysmotility in Japan • A. Mukaino, S. Nakane, H. Minami, H. Isomoto, O. Higuchi, E. Ibara, A. Ido, H. Matsuo, K. Nakao, T. Yamashita, Y. Ando • Kumamoto, Japan

**EXERCISE, TEMPERATURE REGULATION & HYPOXIA**

Poster #22 • Quantification of vasodilation and sweating responses during heat stress in a person with and without spinal cord injury: a case report • M.T. Trbovich, R.C. Camacho • San Antonio, TX, USA


**MICROEUROGRAPHY & CARDIOVASCULAR REFLEXES IN HUMANS**

Poster #25 • Early-onset blood pressure and muscle sympathetic nerve activity responsiveness to cold pressor test in young, healthy adults • H.A. Cunningham, J.R. Carter • Houghton, MI, USA

Poster #26 • Cardiorespiratory response to the exercise pressor reflex in women through the menstrual cycle with or without oral contraceptive use • I. Ivy, E. Assadpour, S. Wasef, B. Adeyinka, H. Edgell • Toronto, ON, Canada

Poster #27 • Effects of obstructive sleep apnea on baroreflex gain in patients with hypertrophic cardiomyopathy • S. Venkataraman, A. Rajendran, J. Bukartyk, N. Covassin, J.B. Geske, M. Mansukhani, A.C. Chahal, V.K. Somers • Rochester, MN, USA

**NEUROIMAGING IN BRAIN & HEART**

Poster #28 • HIV-related deficits in volume of the central autonomic network and resting cardio-autonomic tone • R. McIntosh, J. Paparozzi, D. Qadir, D. Dukenik, G. French, J. Lobo • Miami, FL, USA

Poster #29 • Specific cerebral multiple sclerosis lesions alter cardiovascular autonomic modulation • K. Winder, R.A. Linker, R. Wang, T. Engelhorn, A. Dörfler, K. Fröhlich, M.J. Hilz • Erlangen, Germany

**ORTHOSTATIC HYPOTENSION & SYCNOPE**

Poster #30 • Artificial intelligence algorithms and natural language processing for the recognition of syncope patients in emergency department medical records • F. Dipaola, M. Gatti, D. Shiffer, V. Pacetti, A.G. Bottaccioli, M. Minonzio, R. Menê, M. Solbiati, G. Costantino, M. Anastasio, E. Sini, F. Barbic, E. Brunetta, R. Furlan • Milan, Italy

Poster #31 • Forearm vascular resistance responses to the Valsalva maneuver • B.C.D. Hockin, E.Z. Tang, M.G. Lloyd, V.E. Claydon • Burnaby, BC, Canada

Poster #32 • Patient-reported “good” days during a prospective study of the treatment of neurogenic orthostatic hypotension with droxidopa • S. Kymes, L.A. Hewitt, C. François • Deerfield, IL, USA

Poster #33 • Midodrine for the prevention of tilt-induced and clinical vasovagal syncope: A systematic review and meta-analysis • L. Lei, S.R. Raj, R.S. Sheldon • Calgary, AB, Canada

Poster #34 • Elective EEG monitoring combined with head-up tilt in the diagnosis of syncope and non-syncope fainting • J.A.S. Muldowney 3rd, P. Sharma, L.E. Okamoto, H.H. Sonmezeturk, A. Peltier, C.A. Shibao, I. Biaggioni • Nashville, Tennessee, USA

Poster #35 • In their own words: a qualitative analysis of patients’ experience of living with syncope and POTS • M. Runte, T. Runte, S. Jarvie, D. Basil, S. Bedard, D. Porter, K. Williams-Whitt • Lethbridge, AB, Canada

Poster #36 • Initial orthostatic hypotension causes (transient) postural tachycardia • J.M. Stewart, T. Fialkoff, B. Tuma-Marcella, P. Visintainer, C. Terilli, M.S. Medow • Valhalla, NY, USA

**PEDIATRIC AUTONOMIC DISORDERS**

Poster #37 • IVIG for treatment of acquired pseudo-obstruction of unknown etiology • N. Rademacher, T. Chelimsky, M. Sood, R. Kliegman, D. Basel, G. Chelimsky • Milwaukee, WI, USA

Poster #38 • Concurrent encephalopathy and autonomic failure in a child with positive ganglionic nicotinic acetylcholine receptor antibodies • G.A. Cook, J.L. Jaskiewicz • Bethesda, MD, USA

Poster #39 • Gastrointestinal (GI) symptoms and GI biomarkers in postural orthostatic tachycardia syndrome (POTS) and cardiogenic syncope (NCS) in adolescents and young adults • M.T. Numan, D. Halawa, I.J. Butler, H. Zamil • Houston, TX, USA

Poster #40 • Breathing disturbances in a child with Rett syndrome • H.W. Choi, P. Pianosi • Minneapolis, MN, USA

**POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME (POTS)**

Poster #41 • Postural orthostatic tachycardia syndrome in a family with pseudoxanthoma elasticum • A. Arvantaj, C. Geiger, J. Robinson, B. Katirji • Cleveland, OH, USA

Poster #42 • Synergistic but separable sensory changes in migraines and postural tachycardia syndrome • M.M. Cortez, L. Millsap, K.C. Brennan • Salt Lake City, UT, USA
**Poster #43** • Body compression in postural tachycardia syndrome improves orthostatic tolerance in a dose-dependent pattern • K.M. Bourne, R.S. Sheldon, D.V. Exner, J. Tyberg, K. Kogut, J. Ng, N. Sheikh, M. Lloyd, E. Scott, S.R. Raj • Calgary, AB, Canada

**Poster #44** • Diagnosis of postural orthostatic tachycardia syndrome: a comparison between the tilt and active stand tests • V. Galvis, A.I. Penzlin, B. Roschach, S. Rajan, J. Celli, I. Bonyhay, R. Freeman, C.H. Gibbons • Boston, MA, USA

**Poster #45** • Cognitive function is impaired during active standing in postural orthostatic tachycardia syndrome • A.J. Miller, T. Sheehan, M. Feeley, K. Bourne, A.C. Arnold • Hershey, PA, USA

**Poster #46** • Prevalence of hypermobile Ehlers-Danlos syndrome in postural orthostatic tachycardia syndrome • A.I. Penzlin, B. Roschach, A. Benson, V. Galvis, I. Bonyhay, C.H. Gibbons, R. Freeman • Boston, MA, USA

**Poster #47** • Immunotherapy as an effective treatment of POTS with functionally active adrenergic and muscarinic antibodies after human papillomavirus vaccination: a case report • A.T. Del Pozzi, G. Wallukat, I. Schimke, S. Blitshteyn • Muncie, IN, USA

**Poster #48** • Natural history of postural orthostatic tachycardia syndrome • A.I. Penzlin, B. Roschach, A. Benson, V. Galvis, I. Bonyhay, C.H. Gibbons, R. Freeman • Boston, MA, USA

**Poster #49** • Effects of transcutaneous vagal nerve stimulation on orthostatic tolerance in patients with postural orthostatic tachycardia syndrome (POTS) • D. Shiffer, R. Furlan, F. Barbic, M. Minonzio, B. Cairo, A. Porta, N. Montano, E. Tobaldini, L. Furlan, V. Urechie, I. Biaggioni, A. Diedrich • Milan, Italy

Poster #50 • A double-blind, placebo-controlled, crossover pilot trial of gabapentin for treatment of postural tachycardia symptoms • R.K. Khurana • Baltimore, MD, USA

**Poster #51** • Cerebral blood flow, autoregulation, and symptoms during orthostasis with lower body compression in postural tachycardia syndrome • M.G. Lloyd, K.M. Bourne, R.S. Sheldon, D.V. Exner, J. Tyberg, K. Kogut, J. Ng, N. Sheikh, E. Scott, S.R. Raj • Calgary, AB, Canada

**SYMPATHOVAGAL BALANCE & SPECTRAL ANALYSIS**

**Poster #52** • Norepinephrine transporter inhibition with atomoxetine: autonomic effects during orthostasis in patients with vasovagal syncope • M.G. Lloyd, L.Lei, J.C. Guzman, T. Kus, F.A. Ayala-Paredes, R.S. Sheldon, S.R. Raj • Calgary, AB, Canada

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**POSTER SESSION II - THURSDAY, NOVEMBER 7, 2019**

**NEUROIMAGING IN BRAIN & HEART**

**Poster #53** • Cannabis induces changes in functional brain connectivity that correlate with increased vagal tone and clinical analgesia in chronic neuropathic pain • H. Sharon, L. Weizman, J. Espanioli, L. Dayan, G. Jacob • Tel Aviv, Israel

**Poster #54** • Peripheral chemoreflex drives sympathetic activation in the human brainstem and hypothalamus • D.A. Gerlach, J. Manuel, A. Hoff, H. Kronsbein, F. Hoffmann, K. Heusser, A. Diedrich, H. Ehmke, J. Jordan, F. Beissner, J. Tank • Cologne, Germany

**Poster #55** • Functional connectivity of the central autonomic network and regulation of parasympathetic tone in health and chronic disease • R. McIntosh, K. Reaves, G. French, J. Lobo, C. Chang • Miami, FL, USA

**AUTONOMIC FAILURE**

**Poster #56** • HIV-related decrement in respiratory arrhythmia during a deep breathing test • R. McIntosh, K. Reaves, D. Dukenik, J. Lobo, V. Sookdeo • Miami, FL, USA

**Poster #57** • Normal values of quantitative thermoregulatory sweat testing (Q-TST) • A. Arvantaj, J. Robinson, C. Geiger, B. Katirji • Cleveland, OH, USA

**Poster #58** • Experience from a multidisciplinary care clinic for multiple system atrophy • S. Vening, E. Golden, E. Kent, G. Huet, M. Bryanly • Dallas, TX, USA

**Poster #59** • Neurogenic orthostatic hypotension in patients referred for evaluation in a Chilean autonomic clinic • J. Idiaquez, O. Trujillo, J.F. Idiaquez, R. Iturriaga • Santiago, Chile

**Poster #60** • Cutaneous alpha-synuclein deposition in idiopathic REM sleep behavioral disorder • M.G. Miglis, J. Zitszer, S. Rajan, E. During, R. Freeman, C.H. Gibbons • Stanford, CA, USA

**Poster #61** • Sudomotor abnormalities in idiopathic REM sleep behavior disorder • J. Zitszer, S. Muppidi, D.I. Sinn, E. During, T. Prieto, S. Jaradeh, M.G. Miglis • San Francisco, CA, USA

**Poster #62** • Anti-cholinergic receptor antibodies, cardiovascular hemodynamics and dysautonomia symptoms relationship in pure autonomic failure: a two-year follow-up • F. Barbic, M. Minonzio, B. Cairo, D. Shiffer, E. Brunetta, F. Dipaola, M. Folci, R. Fornerone, F. Andreotta, C. Antozzi, R. Mantegazza, A. Porta, R. Furlan • Milan, Italy
Poster #63 • A phase-2 clinical trial of sirolimus in multiple system atrophy: protocol, recruitment and preliminary adverse event profile • J.-A. Palma, J. Martinez, S. Simon, L. Norcliffe-Kaufmann, H. Kaufmann • New York, NY, USA

Poster #64 • Impact of spinal cord injury on maximal cutaneous vasodilation, myogenic and venoarteriolar responses • M. Tzovch, Y. Wu, W. Koek, J. Zhao, A. McMahon, D. Kellogg • San Antonio, TX, USA

Poster #65 • Acute effects of mechanical somatosensory stimulation on cardiac autonomic control and its relationship with postural control in patients with Parkinson’s disease • B.M. Franco, N.R. Marques, V.C. Moreno, M.H. Kuroda, F.A. Barbieri, A.R. Zamunér • São Paulo, Brazil

CARDIAC AUTONOMIC INNERVATION

Poster #66 • Multiple functional abnormalities in cardiac sympathetic nerves revealed by a comprehensive computational model in Lewy body diseases • D.S. Goldstein, M. Pekker, G. Eisenhofer, Y. Sharabi • Bethesda, MD, USA

Poster #67 • The relationship between sympathetic modulation and central blood pressure in African American and Caucasian women • P. Latchman, G. Gates, L. Mangone, T. Yue, R. Axtell, Q. Yang, M. Latchman, H. Zhang, J. Pereira, R. De Meersman • New Haven, CT, USA

DIABETIC, AUTOIMMUNE & OTHER AUTONOMIC NEUROPATHIES

Poster #68 • Autonomic dysfunction and its association with painful and painless neuropathy • R. Lüddecke, R. Baron, J. Gierthmühlen • Kiel, Germany

Poster #69 • Cold vasoconstriction in upper and lower extremities measured by a contactless method of vasomotor reactivity assessment in patients with diabetic foot syndrome • O.V. Mamontov, V.V. Zaytsev, A.A. Kamshilin, T.A. Zelenina, M.A. Volynsky, E.V. Shlyakhto • St.-Petersburg, Russia

Poster #70 • Dysautonomia in Guillain-Barré syndrome: an under-recognized and potentially life-threatening phenomena • A.V. Varma-Doyle, H. Gould • New Orleans, LA, USA

GENETIC AUTONOMIC DISORDERS

Poster #71 • Hereditary sensory and autonomic neuropathy type IV: case-report and review of immune dysfunction in the disease • A.V. Varma-Doyle, M. Marble, L. McBride, A. Tilton • New Orleans, LA, USA

Poster #72 • Familial dysautonomia and congenital adrenal hyperplasia: one patient with two rare genetic disorders • B.J. Balgobin, J.-A. Palma, L. Norcliffe-Kaufmann, H. Kaufmann • New York, NY, USA

AUTONOMIC REGULATION

Poster #73 • Methionine sulfoxide reductase deficiency exacerbates metabolic dysfunction in mice fed a high-fat diet: implications in metabolic syndrome • R. Sabharwal, L. Yang, M.W. Chapleau • Iowa City, IA, USA

Poster #74 • Angiotensin II type 2 receptors restore autonomic function and delay onset of dilated cardiomyopathy in male mice with muscular dystrophy • L. Yang, K. Zimmerman, R.M. Weiss, R. Sabharwal • Iowa City, IA, USA

CARDIOVASCULAR DISEASE, OBESITY & AGING

Poster #75 • Effect of the menstrual cycle on resting, exercise and post-exercise heart rate in healthy women • C. Giovanna, G. Porto Luiz Guilherme, M. Daniel, S. Edgard, G. Giliard, C. Carlos Janssen, E. M. Guilherme • University of Brasilia, Brasilia, Brazil

Poster #76 • Symptomatic neural traffic in older patients with type 2 diabetes mellitus • K. Heusser, J. Tank, B. Johannes, J. Jordan • Cologne, Germany

Poster #77 • WITHDRAWN • Vasoactive autoantibodies in coronary microvascular dysfunction: a case report • X. Yu, H. Li, L.T. Cooper, P.K. Mehta, C.N.B. Merz, D.C. Kem • Oklahoma City, OK, USA

AUTONOMIC CLINICAL PRACTICE

Poster #78 • Autonomic medical practice as sampled by physician-rating websites • W.P. Cheshire • Jacksonville, FL, USA

EXERCISE, TEMPERATURE REGULATION & HYPOXIA


GASTROINTESTINAL & UROGENITAL SYSTEMS, IBS, CYSTITIS

Poster #83 • Neurotensin-induced relaxation of the guinea pig ileal circular muscle layer is indirect and mediated by release of vasoactive intestinal peptide • H. Wang, D.M. Kendig, K.S. Murthy, J.R. Grider • Baltimore, MD, USA
MICRONEUROGRAPHY & CARDIOVASCULAR REFLEXES IN HUMANS

Poster #84 • Consistent first trimester elevations in muscle sympathetic nerve activity and sympathetic baroreflex sensitivity between first and second pregnancy: a case study • C.E. Taylor, S. Kobuch, S.L. Hissen, D. Boulton, A. Burton, N. Kramadhari, S. Dayarate, V.G. Macfeld • Sydney, Australia
Poster #85 • Reproducibility of valsava maneuver derived baroreflex parameters • C. Ustine, L. Conant, P. Simpson, G. Chelimsky, C. O’Hara, T. Chelimsky • Milwaukee, WI, USA

ORTHOSTATIC HYPOTENSION & SYCONE

Poster #86 • A case of dysautonomia in post-craniectomy syndrome of the trephined • M. Beeler, T. Malone, J. Boulter, R. Bell, M. Rosner, G. Cook • Bethesda, MD, USA
Poster #87 • Assessment of practice patterns among neurologists and cardiologists for the care of patients with neurogenic orthostatic hypotension • T. Finnegan, J. Maeglin • New York, NY, USA
Poster #88 • Prevention of vasovagal syncope using hyoscyamine • H. Snapper, M. Jawaid • Marietta, GA, USA
Poster #89 • Norepinephrine transporter inhibition for the prevention of tilt-induced vasovagal syncope: a systematic review and meta-analysis • L. Lei, A. Qaddoura, S.R. Raj, R.S. Sheldon MD • Calgary, AB, Canada
Poster #90 • Does recent weight loss predispose to vasovagal syncope? a case-control series • B. Cumming, D. Jardine • Christchurch, New Zealand
Poster #91 • Factors influencing patients’ decision making around accessing emergency medical services for syncope • T. Runte, T. Williamson, R. Sheldon, T. Campbell, K. King-Shier, S.R. Raj, M. Runte • Lethbridge, AB, Canada

POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME (POTS)

Poster #92 • Effect of a neck compression collar on cardiorespiratory function in postural orthostatic tachycardia syndrome (POTS) • M. Nardone, J. Guzman, P. Harvey, J. Floras, H. Edgell • Toronto, ON, Canada
Poster #93 • T cell surface marker, CRTH2 expression in POTS • H.A. Abdallah, H.M. Abdallah, C. Kim, O. Alpan • McLean, VA, USA
Poster #94 • Sleep disturbances in postural orthostatic tachycardia syndrome • T. Fayyaz, A. Sheikh, S.B. Alam, M.Y. Bilal, H. Nazeer, M. Farooq, S. Shaheen, H. Mistry, S. Usmani, N. Chaudhary, W. Almardini, A. Sulman • Dallas, TX, USA
Poster #95 • Acute modafinil and cognition in postural tachycardia syndrome • A.C. Arnold, K. Haman, E.M. Garland, A.J. Miller, M. Wang, B. Shen, S.Y. Paranjape, B.K. Black, A. Diedrich, D. Robertson, C.A. Shibao, I. Biaggioni, S.R. Raj • Hershey, PA, USA
Poster #96 • A new disease cluster: postural orthostatic tachycardia syndrome, hypermobile Ehlers-Danlos syndrome/hypermobility spectrum disorder and mast cell activation syndrome • I. Cheung, J. Holoff, J. Guzman, R.M. Londono, S. Walsh, P. Vadas • Toronto, ON, Canada
Poster #97 • Prevalence of anxiety and depression in children with POTS: a retrospective study • B. Kakavand, A. Centner, S. Centner, S. Hasan • Orlando, FL, USA
Poster #98 • Why do patients wear a compression garment for their POTS symptoms (or not)? • K.M. Bourne, R.S. Sheldon, S.R. Raj, M. Runte • Calgary, AB, Canada
Poster #99 • Autoimmunity and immunotherapy in postural orthostatic tachycardia syndrome • K. Sato, A. Yamaga, Y. Nishimura, K. Shibata, T. Nakaoka, Y. Sunami, T. Hirai, T. Nakane, H. Sakura • Tokyo, Japan
Poster #100 • Is chronic orthostatic intolerance related to functional CSF hypovolemia? A case series • L. Kinsella • St. Louis, MO, USA
Poster #102 • Somatic and autonomic findings in cancer related base of the skull syndromes • A. Barbol, S. Pocica, S. Moffat, I. Kafkas, V. Patel • Evanston, IL, USA
Poster #103 • Efficacy and safety of droxidopa for the treatment of patients with symptomatic neurogenic orthostatic hypotension during 12 weeks of open-label treatment in a phase 4 study • S. Gorny, L.A. Hewitt, A. Lindsten, S. Kymes, A. Favit • Deerfield, IL, USA
Poster #104 • A phase 2 dose-escalation study of ampreloxetine (TD-9855), a norepinephrine reuptake inhibitor, given once-daily to treat neurogenic orthostatic hypotension (nOH) in subjects with synucleinopathies • H. Kaufmann, I. Biaggioni, K. Chatamra, A. Panneerselvam, B. Haumann, R. Vickery • New York, NY, USA
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I'M AFRAID TO FAINT AGAIN

Look carefully. This may be the face of neurogenic orthostatic hypotension (nOH).

If your patients are feeling dizzy, like they may faint, or have other symptoms that may improve upon sitting, they could have nOH. 1-3

nOH and its associated symptoms may lead to serious consequences. 3-5

Visit nOHmattersHCP.com and sign up for emails to continue learning about nOH.

References:
THE FELICIA AXELROD INVESTIGATOR AWARD

The American Autonomic Society’s Felicia Axelrod Investigator Award recognizes an outstanding scientist with a track record of significant contributions to the field of autonomic science at the Assistant Professor level. This award acknowledges excellence in autonomic research for an individual poised to be the next leader in this field. The awardee receives complimentary registration and a $2,000 honorarium at the AAS meeting. Application details and requirements are available on the American Autonomic Society website.

Dr. Felicia B. Axelrod was a founding member of the AAS and former President of the Society. She was a pioneer of international collaborative rare disease research in autonomic medicine. She founded the Dysautonomia Center at New York University School of Medicine in 1969. She devoted her medical career to the care of patients with familial dysautonomia, a rare genetic disease that affects the development of the autonomic nervous system. As a member of the American Autonomic Society, she co-founded the pediatric specialist group, which is dedicated to supporting clinical care and research in pediatric conditions that affect the autonomic nervous system. She was an active member of the Society, until her retirement in 2015.

THE FELICIA AXELROD INVESTIGATOR AWARD

CONGRATULATIONS TO OUR 2019 FELICIA AXELROD INVESTIGATOR Awardee

Amy C. Arnold, Ph.D., is the 2019 recipient of the Felicia Axelrod Investigator Award. Dr. Arnold is Assistant Professor of Neural and Behavioral Sciences at the Pennsylvania State University College of Medicine, as well as Adjunct Assistant Professor in the Autonomic Dysfunction Center and Division of Clinical Pharmacology at the Vanderbilt University Medical Center. Dr. Arnold has been involved in autonomic research since 2005, when she was a graduate student in the Hypertension and Vascular Research Center at Wake Forest University. She then completed a postdoctoral fellowship in Clinical Pharmacology and a Master’s of Science degree in Clinical Investigation at Vanderbilt. Dr. Arnold’s translational research program examines the neural mechanisms of blood pressure regulation, with the ultimate goal of developing more targeted treatment approaches for cardiovascular-related diseases. Her research over the past decade has focused on the role of the renin-angiotensin system, and in particular the beneficial hormone angiotensin-(1-7), in cardiovascular autonomic regulation using both experimental animal models and human subjects. Dr. Arnold’s research has also examined underlying mechanisms and treatment approaches for supine hypertension in primary autonomic failure, as well as defined the nature of cognitive dysfunction or “brain fog” in postural tachycardia syndrome. Of particular importance, her research has shown that the renin-angiotensin system contributes to supine hypertension in autonomic failure, even in the absence of its rate-limiting enzyme renin, a finding that has altered treatment of these patients. The National Institutes of Health, American Heart Association, Dysautonomia International, and Central Society for Clinical and Translational Research have generously funded her research.
AAS-LUNDBECK RESEARCH FELLOWSHIPS

The AAS-Lundbeck Research Fellowship is a post-doctoral research fellowship offered by the American Autonomic Society through the generous support of Lundbeck Inc. This award was initiated to encourage and support research training of an individual evaluating clinical autonomic disorders or physiology. This 1-year funded position is open to MDs and PhDs (or equivalent doctoral degree) and provides support for salary and travel to the American Autonomic Society annual meeting.

Congratulations to our 2019 AAS-Lundbeck Research Fellowship Awardee 2019

TITLE: Mechanisms underlying excitatory synaptic plasticity in the nucleus tractus solitarii following cardiac deconditioning
AWARDEE: Dr. Ludmila Lima-Silveira
MENTOR: Dr. David Kline

SUMMARY: Ludmila Lima Silveira earned her doctorate at the School of Medicine of Ribeirão Preto, University of São Paulo, Brazil. Currently she is a postdoctoral fellow at the Dalton Cardiovascular Research Center, University of Missouri, USA. The goal of her research is to investigate the effects of Cardiovascular Deconditioning on glutamatergic synaptic transmission and intrinsic properties of NTS neurons.

Congratulations to our past AAS-Lundbeck Research Fellowship Awardees

2016
TITLE: Can oxytocin restore parasympathetic activity to the heart in heart failure
AWARDEE: Dr. Jhansi Dyavanapalli
MENTOR: Dr. David Mendelowitz

TITLE: Targeting cardiac sympathetic and renin angiotensin systems with ang-(1-7) in hypertrophic cardiomyopathy
AWARDEE: Dr. Robert Larson
MENTOR: Dr. Mark Chapleau

2017
TITLE: Sex-differences in sympathetic neural recruitment in elderly hypertension
AWARDEE: Dr. Mark Badrov
MENTOR: Dr. Qi Fu

TITLE: Optical methods for the characterization of facial autonomic function
AWARDEE: Dr. Melissa Cortez
MENTOR: Dr. K.C. Brennan

TRAVEL FELLOWSHIPS

The American Autonomic Society is committed to supporting trainees and junior members of the society seeking to pursue a career in clinical or basic autonomic research – one way in which this is achieved is through travel fellowships provided by the society and our sponsors to facilitate trainee attendance and presentation at American Autonomic Society meetings. Here is a list of 2019 awardees and the great work they are conducting:

STREETEN TRAVEL FELLOWSHIP AWARD
AWARDEE: Nicholas Breier
PRESENTATION: Increased gastrointestinal gut hormones secretion following a glucose challenge in postural orthostatic tachycardia syndrome

FMS/PEŇÁZ WESSELING TRAVEL FELLOWSHIP AWARDS
AWARDEE: Maryam Ghariq
PRESENTATION: Towards improved hemodynamic criteria to distinguish between classic orthostatic hypotension and reflex syncope during tilt-table testing
AWARDEE: Ryosuke Takeda
PRESENTATION: Effect of dietary salt intake on morning blood pressure surge in healthy women

THE DON SUMMERS MEMORIAL MULTIPLE SYSTEM ATROPHY TRAVEL AWARD
AWARDEE: Miguel Perez
PRESENTATION: Baseline characteristics of patients with multiple system atrophy enrolled in the Natural History Study of the Synucleinopathies

BEST BASIC SCIENCE FELLOWSHIP AWARD
AWARDEE: Robert Larson
PRESENTATION: Bezold-Jarisch reflex and beyond: differential engagement of inhibitory and excitatory cardiopulmonary reflexes by capsaicin and phenylbiguanide
To those who say “impossible, impractical, unrealistic,” we say: CHALLENGE ACCEPTED

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You Are Invited to Attend:

Amyloid Transthyretin Amyloidosis: Presentation, Burden, Diagnosis and Assessment

Presented by:

Amanda Peltier, MD, MS
Associate Professor, Department of Neurology
Vanderbilt University

Friday, November 8, 2019
6:45 AM, ET

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Dysautonomia International is a non-profit that funds research, physician education, public awareness, and patient empowerment programs to improve the lives of individuals living with autonomic disorders. Stop by our booth to learn about the resources we offer clinicians and patients.

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- Patient education brochures for your waiting room
- Over 100 free lectures on our Autonomic Disorders Video Library
- Positive, friendly support groups in all 50 US states, Canada & Australia

AAS members are invited to join us for a free course on POTS and related co-morbidities, November 9th, 2pm-8pm in the Dunes Ballroom I & II. Please stop by our exhibit booth to RSVP.

Quick links for your patients:
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We welcome the 2019 Fellows of the American Autonomic Society (FAAS). Fellowship is based on outstanding credentials, achievements and contributions to the society. Those elected to fellowship status will come from all specialties within the society, including (but not limited to) clinicians, allied health professionals and scientists. Fellowship is bestowed upon society members who manifest active participation in the AAS and have made exemplary contributions to the field of autonomic physiology and medicine as educators, researchers, or administrators.

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61

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The MSA Coalition is proud to partner with and support the American Autonomic Society.

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Akcea Therapeutics is a development and commercialization company focused on helping patients living with serious and rare diseases.

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