



## 35<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON THE AUTONOMIC NERVOUS SYSTEM

**Hilton Santa Barbara  
Santa Barbara, California  
November 6-9, 2024**

### Preliminary Meeting Program

<b>TUESDAY, NOVEMBER 5, 2024</b>	
<b>Trainee Meet and Greet</b> 6:00-7:30 PM	
<b>Autonomic Medicine for Advance Practice Providers</b> Course Director: Glen Cook 6:00-9:00 PM	
6:00-6:30 PM	Intro to the autonomic nervous system: anatomy and physiology
6:30-7:00 PM	Clinical and laboratory investigation of autonomic disorders
7:00-7:30 PM	Postural tachycardia syndrome
7:30-8:00 PM	Syncope
8:00-8:30 PM	Autonomic failure states
8:30-9:00 PM	Interesting cases and panel discussion
<b>WEDNESDAY, NOVEMBER 6, 2024</b>	
6:30-8:00 AM	<b>Registration</b> <b>Breakfast</b>
7:50-8:00 AM	<b>President's Welcome</b> <u>Wolfgang Singer, M.D.</u> President, American Autonomic Society
8:00-9:00 AM	<b>Plenary Lecture 1: Robertson Plenary Lecture</b> David Robertson Memorial Event Multiple Speakers: <u>Cyndya Shibao, M.D.</u> , <u>Jens Jordan, M.D.</u>
9:00-10:00 AM	<b>Plenary Lecture 2: Historical Perspectives Lecture</b> History of microneurography: the work of Gunnar Wallin <u>Vaughan Macefield, Ph.D.</u> Melbourne, Australia
10:00-10:30 AM	<b>Exhibit Hall Coffee Break</b>
<b>Symposium 1: Novel Device-Based Therapies in Hypertension, Hypotension, and Heart Failure</b> Chairs: Mark Chapleau and Robert Larson 10:30-11:45 AM <i>Parallel session</i>	

10:30-11:45 AM	<p>Targeting sympathoexcitation and inflammation in hypertension with electroacupuncture <u>Stephanie Tjen-A-Looi, Ph.D., M.S.</u> Irvine, CA, USA</p> <p>The neuroprosthetic baroreflex coming of age: new applications, population-scale translation, and fortifying against time <u>Aaron Phillips, Ph.D.</u> Calgary, AB, Canada</p> <p>Vagus nerve stimulation for POTS: the new frontier <u>Stavros Stavrakis, M.D., Ph.D.</u> Oklahoma City, OK, USA</p> <p>Restoration of respiratory sinus arrhythmia improves outcomes in heart failure <u>Rohit Ramchandra, Ph.D.</u> Auckland, New Zealand</p>
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**Symposium 2: Hot Topics in Pediatric POTS**

Chairs: Debra Weese-Mayer and Philip Fischer

10:30-11:45 AM

*Parallel session*

10:30-11:45 AM	<p>Base hits and the long ball: putative genetic markers for POTS and the long-term outcomes POTS study <u>Jeffrey Boris, M.D.</u> Philadelphia, PA, USA</p> <p>Targeting disorders with autonomic dysregulation as an etiological component: measurable biomarkers and biofeedback in pediatric POTS <u>Richard Gevirtz, Ph.D., BCB</u> San Diego, CA, USA</p> <p>Yoga, pilates, cardio, strength training—they're all impossible in my patients with POTS: how to create a sustainable exercise program for pediatric patients with POTS <u>Cynthia Harbeck-Weber, Ph.D., LP, ABPP</u> Rochester, MN, USA</p>
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11:45-12:45 PM **Lunch on your own**

**Session 1: Postural Orthostatic Tachycardia Syndrome (POTS) (not for CME credit)**

12:45-2:00 PM

*Parallel session*

12:45-1:00 PM	<p>The effects of chronic transcutaneous vagus nerve stimulation on cardiovascular autonomic control and symptoms in hyperadrenergic POTS <u>D. Shiffer, S. Rigo, M. Minonzio, E. Tobaldini, L. Furlan, N. Montano, A. Porta, A.R. Zamuner, V. Ulrechie, I. Biaggioni, A. Diedrich, R. Furlan</u> Milan, Italy (Poster #123)</p>
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1:00-1:15 PM	Long-term outcomes in patients with postural orthostatic tachycardia syndrome an average of over 20 years post symptom onset <u>K.M. Bourne</u> , A. Gamboa, B. Black, J. Hall, I. Biaggioni, C. Shibao, A. Diedrich, A. Peltier, G. Jacob, L.E. Okamoto, R.S. Sheldon, S.R. Raj Calgary, AB, Canada (Poster #106)
1:15-1:30 PM	A 5-minute orthostatic challenge is NOT enough to assess postural orthostatic tachycardia syndrome (POTS) <u>J. Uppal</u> , R. Hira, K. Karalasingham, S. Ranada, M. Alsaleh, R.S. Sheldon, S.R. Raj Calgary, AB, Canada (Poster #126)
1:30-1:45 PM	A novel in-ear wearable device correlates to autonomic symptoms better than heart rate does <u>A.J. Miller</u> , E. Wilson, S. Blitshteyn, S.R. Raj, D. Lee, M. Fudim Hershey, PA, USA (Poster #114)
1:45-2:00 PM	Full lower body compression during head-up tilt test improves, but does not normalize, the hemodynamic responsiveness in postural orthostatic tachycardia syndrome <u>M.A. Miranda Hurtado</u> , K.M. Bourne, L.Y. Lei, A. Talati, R.S. Sheldon, S.R. Raj Calgary, AB, Canada (Poster #116)
<b>Session 2: Basic Science and Animal Studies</b>	
12:45-2:00 PM <i>Parallel session</i>	
12:45-1:00 PM	Acid-sensing ion channel 3 modulates cardiac sympathetic tone in a mouse model of hypertrophic cardiomyopathy H.M. Marchese, J.R. Disser, <u>R.A. Larson</u> Houghton, MI, USA (Poster #21)
1:00-1:15 PM	Characterizing cardiac sympathetic neuronal density after chronic spinal cord injury <u>J.B. Lee</u> , J.E. Soriano, D. Elliott, A.A. Phillips Calgary, AB, Canada (Poster #22)
1:15-1:30 PM	A gateway to cardiac activation after cardiovascular paralysis <u>D.B. Smith</u> , A.V. Incognito, J.B. Lee, T.W. Dorey, D.D. Belke, J.R. Baker, A.A. Phillips Calgary, AB, Canada (Poster #27)
1:30-1:45 PM	Understanding the ganglionic pathways to improve heart health with epidural electrical stimulation after spinal cord injury <u>A.S.Y. Wang</u> , A.V. Incognito, D.B. Smith, R.R. Miller, A.A. Phillips Calgary, AB, Canada (Poster #38)
1:45-2:00 PM	Piezo 1 mediates vagal afferent control of cardiovascular reactivity, insulin sensitivity, and interoceptive accuracy <u>J. Summers</u> , W. Taha, R. Woodman, W. Lockette Detroit, MI, USA (Poster #28)
2:00-2:30 PM	<b>Exhibit Hall Transitional Break</b>

2:30-3:30 PM	<b>Case-Based Discussion: Ultimate Autonomic Challenge</b> Organizer: Juan Guzman
3:30-5:30 PM	<b>Free Time</b>
4:30-5:30 PM	<b>Trainee Poster Meet and Greet/Networking</b> (open to all registrants)
5:30-7:00 PM	<b>Poster Session I and Trainee Poster Competition (wine &amp; cheese)</b> (not for CME credit)  Poster #s: 1, 3, 6, 23, 31, 34, 39, 45, 47, 53, 56, 57, 59, 60, 63, 64, 70, 77, 78, 83, 84, 85, 89, 91, 95, 103, 107, 108, 111, 112, 117, 118, 120, 127, 128, 129, 130
7:00 PM	<b>Adjourn for the Evening</b>

## **THURSDAY, NOVEMBER 7, 2024**

6:30-8:00 AM	<b>Registration &amp; Breakfast</b>
8:00-9:00 AM	<b>Plenary Lecture 3: MSA Plenary Lecture</b> Tribute to Gregor Wenning <u>Alessandra Fanciulli, M.D., Ph.D.</u> Innsbruck, Austria
9:00-10:00 AM	<b>Plenary Lecture 4: Phillip Low Plenary Lecture</b> POTS: from orthostasis to intolerance <u>Ronald Schondorf, M.D., Ph.D.</u> Montreal, QC, Canada
10:00-10:30 AM	<b>Exhibit Hall Coffee Break</b>

### **Symposium 3: Moving Towards a Biological Staging System in the Alpha-Synucleinopathies: Applications in Prodromal Disease States**

Chair: Mitchell Miglis

10:30-11:45 AM

*Parallel session*

10:30-11:45 AM	Introduction of a new biological staging system in Parkinson's disease and Lewy body dementia <u>Kathleen Poston, M.D., M.S.</u> Stanford, CA, USA  Implications of biological staging in pure autonomic failure <u>Elizabeth Coon, M.D.</u> Rochester, MN, USA  Implications of biological staging in isolated REM sleep behavior disorder <u>Mitchell Miglis, M.D.</u> Stanford, CA, USA  Applications of skin biopsy in the biological staging of synucleinopathies <u>Christopher Gibbons, M.D.</u> Boston, MA, USA  Applications of seed amplification assays in the biological staging of synucleinopathies <u>Wolfgang Singer, M.D.</u> Rochester, MN, USA
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**Symposium 4: POTS: Just Exercise!!?**

Chair: Ronald Schondorf and Sandra Reiter-Campeau

10:30-11:45 AM

*Parallel session*

10:30-11:45 AM	<p>Introduction <u>Ronald Schondorf, M.D., Ph.D.</u> Montreal, QC, Canada</p> <p>Patients with “POTS”: history and initial clinical evaluation <u>Nehama Schondorf, DPT</u> Atlanta, GA, USA</p> <p>Myofascial dysfunction: pathophysiology and clinical implications <u>Savas Koutsantonis, DPT</u> Atlanta, GA, USA</p> <p>Current therapy: are current exercise-based interventions effective in patients with “POTS”? <u>Karen Peebles, Dip Phty, M.Sc., Ph.D.</u> Sydney, Australia</p> <p>Therapeutic approach to postural tachycardia, hypermobility and myofascial dysfunction <u>Nehama Schondorf, DPT</u></p>
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11:45-12:00 PM **Exhibit Hall Transitional Break****Session 3: Autonomic Failure** (not for CME credit)

12:00-1:15 PM

*Parallel session*

12:00-12:15 PM	<p>A novel diagnostic method for detection and quantitation of cutaneous phosphorylated alpha-synuclein <u>C. Gibbons</u>, T. Levine, B. Bellaire, R. Freeman Boston, MA, USA (Poster #72)</p>
12:15-12:30 PM	<p>Transcranial magnetic stimulation of the medial prefrontal cortex improves orthostatic hypotension in Parkinson’s disease S. Antipenko, A. Frohlich, F. Frohlich, <u>M. Sklerov</u> Chapel Hill, NC, USA (Poster #19)</p>
12:30-12:45 PM	<p>Autonomic reflex testing as a biomarker of phenoconversion in isolated REM sleep behavior disorder <u>H.B. Taha</u>, J. Seliger, N.W. Larsen, S. Muppidi, D.I. Sinn, S. Jaradeh, M.G. Miglis Los Angeles, CA, USA (Poster #5)</p>
12:45-1:00 PM	<p>The phenotype of pure autonomic failure <u>E.A. Coon</u>, N. Badihian, D.M. Sletten, S.E. Berini, E.E. Benarroch, P. Sandroni, P.A. Low, W. Singer Rochester, MN, USA (Poster #9)</p>

1:00-1:15 PM	<b>FMS/Penaz Wesseling Travel Fellowship Award:</b> Autonomic failure as an outcome predictor in patients with hereditary transthyretin amyloidosis and asymptomatic carriers <u>L. Sander</u> , G. Chiaro, D. Abelardo, A. Torrente, G.T. Ingle, C.J. Whelan, J.D. Gillmore, M.M. Reilly, C.J. Mathias, V. Iodice London, UK (Poster #71)
<b>Session 4: Long COVID</b>	
12:00-1:15 PM	<i>Parallel session</i>
12:00-12:15 PM	Long COVID POTS have different autonomic and hemodynamic profiles than non-COVID POTS <u>R. Hira</u> , A. Patel, K. Karalasingham, S. Ranada, K. Bourne, J. Uppal, F.G.A. Valani, C.A. Morillo, R.S. Sheldon, J.R. Baker, S.R. Raj; on behalf of the Canadian Long Covid Autonomic Network (CanLoCAN) Calgary, AB, Canada (Poster #55)
12:15-12:30 PM	Elevated circulating T cell-monocyte complexes associated with autonomic dysfunction in long COVID-19 tachycardia syndrome: implications of immune dysregulation and inflammation <u>M.A. Abd-Eldayem</u> , M. Vinayagam, Y. Vance, T. Ding, N. Mwesigwa, W. Chen, D.G. Harrison, C.A. Shibao (Poster #51)
12:30-12:45 PM	Pathophysiological significance of increased $\alpha$ -synuclein deposition in sympathetic nerves in post-acute SARS-CoV-2 with neurological symptoms (Neuro-PASC) <u>R. Isonaka</u> , P. Sullivan, <u>D.S. Goldstein</u> Bethesda, MD, USA (Poster #54)
12:45-1:00 PM	Autonomic control of blood pressure in long COVID <u>C.E. Taylor</u> , M. Foster, E. Howden, D. Boulton, A. Burton, C.X. Sandler, A. Lloyd, V.G. Macefield Sydney, Australia (Poster #61)
1:00-1:15 PM	Quantitative serum proteomic analysis for biomarker discovery in post-COVID-19 postural orthostatic tachycardia syndrome (PC-POTS) patients T. Ryu, B. L. Adler, S.J. Jeong, D.C. Lee, A. Hoke, C.H. Na, <u>T.H. Chung</u> Baltimore, MD, USA (Poster #52)
1:15-1:45 PM	<b>Exhibit Hall Transitional Break</b>
1:15-7:00 PM	<b>Free Time and/or Optional Sessions</b>
1:45-2:45 PM	<b>Industry-Sponsored Lunch and Symposium</b> (not for CME credit) (sign up to attend)
3:30-4:30 PM	<b>AAS Committee Meetings</b> (not for CME credit) (open to all members)
4:30-5:30 PM	<b>AAS Special Interest Group Meetings</b> (not for CME credit) (open to all members)
7:00-8:30 PM	<b>Poster Session II (wine &amp; cheese)</b> (not for CME credit)  Poster #s: 2, 4, 8, 10, 11, 13, 14, 15, 16, 20, 25, 26, 29, 30, 32, 35, 36, 42, 46, 48, 49, 50, 58, 62, 65, 66, 68, 69, 73, 74, 79, 82, 87, 88, 90, 94, 97, 98, 100, 101, 102, 104, 105, 109, 110, 113, 115, 119, 121, 122, 124, 125
8:30 PM	<b>Adjourn for the Evening</b>

<b>FRIDAY, NOVEMBER 8, 2024</b>	
6:30-8:00 AM	<b>Breakfast</b>
7:30-8:00 AM	<b>AAS Business Meeting</b> <b>Recognition of Fellows of the American Autonomic Society</b>
8:00-9:00 AM	<b>Plenary Lecture 5: Streeten Plenary Lecture</b> Exploring the autonomic nervous system through an endocrine lens <u>Janice Gildea, M.D.</u> North Chicago, IL, USA
9:00-10:00 AM	<b>Autonomic Debate</b> What is dysautonomia? Speakers: <u>Glen Cook, M.D.</u> and <u>Steven Vernino, M.D., Ph.D.</u>
10:00-10:30 AM	<b>Exhibit Hall Coffee Break</b>
<b>Session 5: Spinal Cord Injury</b>	
10:30-11:45 AM <i>Parallel session</i>	
10:30-10:45 AM	Plasma catecholamine responses to acute orthostatic stress after long-term spinal cord epidural stimulation in individuals with chronic spinal cord injury <u>S. Wang</u> , J. Wecht, G. Forrest, O. Bloom, J. Guest, C. Angeli, E. Rejc, P. Sullivan, B. Ugiliweneza, S. Harkema, D.S. Goldstein Louisville, KY, USA (Poster #96)
10:45-11:00 AM	Reversing cardiac chaos: cardiac benefits of epidural electrical stimulation (EES) in acute spinal cord injury mice <u>J.R. Baker</u> , D.B. Smith, T.W. Dorey, J.B. Lee, A. Incognito, M.L. Tso, D.D. Belke, S.R. Raj, K.A. Larkin-Kaiser, A.A. Phillips Calgary, AB, Canada (Poster #81)
11:00-11:15 AM	<b>FMS/Penaz Wesseling Travel Fellowship Award:</b> Epidural electrical stimulation eliminates postprandial hypotension in people with spinal cord injury <u>M.N. Smith</u> , J.B. Lee, A.V. Incognito, K.A. Larkin-Kaiser, A.A. Phillips Calgary, AB, Canada (Poster #86)
11:15-11:30 AM	The effects of orthostatic hypotension on heart structure and function in spinal cord injury <u>R. Miller</u> , M. Lee, D. Smith, A. Wang, J. Lee, D. Belke, A. Incognito, A.A. Phillips Calgary, AB, Canada (Poster #93)
11:30-11:45 AM	Validation of a novel method for identifying sleep-disordered breathing in spinal cord injury <u>S. Vukovic</u> , R.H.Y. Lee, V.E. Claydon Burnaby, BC, Canada (Poster #3)
<b>Session 6: Basic Human Studies (Anatomy/Neurophysiology/Imaging)</b>	
10:30-11:45 AM <i>Parallel session</i>	

10:30-10:45 AM	<p><b>Best Basic Science Autonomic Research Travel Fellowship Award:</b> Human vagal anatomy in 25 cadavers: from brainstem to abdomen, from branches to microstructure</p> <p><u>N. Pelot</u>, N. Nuzov, J. Zhang, E. Cintron, J. Coleman, A. Upadhye, L. Lunasco, B. Brunsman, K. Workman, C. Kolluru, J. Secker, N. Joseph, J. Chin, A. Shunmugavel, Y. Kim, A. Santos, M. Settell, K. Turk, K. Ludwig, W. Grill, D. Herzka, C. Flask, A. Blitz, D. Wilson, M. Jenkins, A. Crofton, A. Shoffstall Durham, NC, USA (Poster #76)</p>
10:45-11:00 AM	<p><b>Streeten Travel Fellowship Award:</b> Functional connectivity changes after 28 days of head-down tilt bedrest</p> <p><u>J. Manuel</u>, A. Hoff, A. Bach, E. Mulder, J. Jordan, J. Tank, D.A. Gerlach Cologne, Germany (Poster #75)</p>
11:00-11:15 AM	<p>Sympathetic transduction to arterial pressure is not modulated by acute improvements in endothelium-dependent dilation in obese adults</p> <p>J.C. Kovarik, J.A. Veach, I. Morris, M.E. Gangwish, D.A. Clonch, J.P. Thyfault, J.M. Miles, <u>S.W. Holwerda</u> (Poster #44)</p>
11:15-11:30 AM	<p>Chronic vagus nerve stimulation reduces muscle sympathetic nerve activity in drug-resistant epilepsy</p> <p><u>M. Patros</u>, H.D. Simpson, S. Sivathamboo, T.J. O'Brien, V.G. Macefield Melbourne, Australia (Poster #24)</p>
11:30-11:45 AM	<p>Effects of hypertension and chlorthalidone treatment on autonomic-cardiovascular responses to static handgrip exercise in older women</p> <p><u>J.D. Akins</u>, R. Takeda, T. Washio, S.L. Hissen, A.W. D'Souza, A.K. Geib, M.A. Roberts-Reeves, R.E. Richey, S.A. Romero, Q. Fu Dallas, TX, USA (Poster #40)</p>
11:45 AM-12:00 PM	<b>Exhibit Hall Transitional Break</b>
<p><b>Symposium 5: The Bezold-Jarisch Reflex</b> Chair: Howard Snapper 12:00-1:15 PM <i>Parallel session</i></p>	
12:00-1:15 PM	<p>The Bezold-Jarisch reflex is relevant to the pathophysiology of vasovagal syncope – basic science</p> <p><u>Vineet Augustine, Ph.D.</u> La Jolla, CA, USA</p> <p>The Bezold-Jarisch reflex is relevant to the pathophysiology of vasovagal syncope – clinical research</p> <p><u>Robert Sheldon, M.D., Ph.D.</u> Calgary, AB, Canada</p>
<p><b>Symposium 6: Wearable Technologies for Autonomic Research and Medicine</b> (not for CME credit) Chairs: Aaron Phillips, Kelly Kaiser and Arjun Shyam 12:00-1:15 PM <i>Parallel session</i></p>	



12:00-1:15 PM	<p>Wearable ultrasound technology <u>Sheng Xu, Ph.D.</u> La Jolla, CA, USA</p> <p>The evaluation of short-term heart rate variability using personal ECG technology <u>David Albert, M.D.</u> Mountain View, CA, USA</p> <p>Time-synchronized wearables for the classification of haemodynamic states during autonomic testing <u>Daniel Franklin, Ph.D.</u> Toronto, ON, Canada</p>
1:15-7:00 PM	<b>Free Time</b>
1:15-2:00 PM	<b>Visit Exhibitors</b>
1:30-3:30 PM	<b>AAS Board Meeting</b>
3:30-4:30 PM	<b>CAR Editorial Board Meeting</b>
7:00-10:00 PM	<b>Presidential Dinner</b>
10:00 PM	<b>Adjourn for the Evening</b>
<b>SATURDAY, NOVEMBER 9, 2024</b>	
6:30-8:00 AM	<b>Breakfast</b>
<b>Session 7: Multiple System Atrophy (MSA) (not for CME credit)</b>	
7:30-8:45 AM <i>Parallel session</i>	
7:30-7:45 AM	<p>Persistent symptomatic burden despite treatment of neurogenic orthostatic hypotension in multiple system atrophy <u>P. Millar Verneti, J.A. Palma, W. Singer, P.A. Low, M.T. Pellecchia, F. Krismer, A. Fanciulli, I. Biaggioni, H.J. Kim, M. Merello, R. Freeman, C. Gibbons, S. Vernino, H. Kaufmann</u> New York, NY, USA (Poster #92)</p>
7:45-8:00 AM	<p>The MSA atrophy index: a marker of clinical progression in multiple system atrophy <u>P. Trujillo, K. Hett, A. Brown, A. Wynn, B. Yan, H. Kang, M. Bradbury, C. Wong, D. Stamler, D. Claassen</u> Nashville, TN, USA (Poster #80)</p>
8:00-8:15 AM	<p>Different abnormalities of urinary catechol excretion in multiple system atrophy and Lewy body diseases <u>D.S. Goldstein, P. Sullivan, C. Holmes</u> Bethesda, MD, USA (Poster #12)</p>
8:15-8:30 AM	<p>Quantitative MRI measures predict phenoconversion of pure autonomic failure <u>W. Singer, S. Raghavan, A.M. Castillo, D.M. Sletten, A.J. Fought, T.L. Gehrking, J.A. Gehrking, J.K. Anderson, P.A. Low, P. Vemuri</u> Rochester, MN, USA (Poster #18)</p>

8:30-8:45 AM	Nuclear imaging and autonomic biomarkers distinguish pure autonomic failure and predict phenoconversion to widespread alpha-synucleinopathies G. Chiaro, R.A. Alsukhni, G.T. Ingle, K.P. Bhatia, C.J. Mathias, A. Rogeau, J. Bomanji, V. Iodice London, UK (Poster #7)
<b>Session 8: Others</b>	
7:30-8:45 AM <i>Parallel session</i>	
7:30-7:45 AM	Fontan at altitude: stable orthostatic responses in patients with univentricular hearts after 24 hours of normobaric hypoxia J. von Stritzky, N. Müller, J. Härtel, P. Gauger, A. Diedrich, J. Breuer, J. Jordan, H. Ehmke, J. Tank Hamburg, Germany (Poster #37)
7:45-8:00 AM	Early menopause and baroreflex sensitivity during the Valsalva maneuver M.F. Anselmo, E.J. Lee, W. Stokes, S.C. Nathe, C.T. Tahsin, E. Koebernick, J. Bigalke, S. Teshome, M.L. Vanden Noven, J.R. Carter, M.L. Keller-Ross Minneapolis, MN, USA (Poster #41)
8:00-8:15 AM	Pharmacogenomic profile of pediatric patients with dysautonomia A. Gurfinkel, O. Olson Rochester, MN, USA (Poster #99)
8:15-8:30 AM	Longitudinal changes in cardiovascular and sympathetic neural responses to static handgrip exercise throughout pregnancy T. Washio, S.L. Hissen, J.D. Akins, R. Takeda, S. Robles, S. Khan, A.R. Tomlinson, D.B. Nelson, T.G. Babb, Q. Fu Dallas, TX, USA (Poster #67)
8:30-8:45 AM	Left ventricular cardiac stroke volume variability during respiration: a cardiac real-time MRI study D.A. Gerlach, A. Bach, P. Rosauer, A. Hoff, C. Tordeur, T. Konings, L. de Boni, E. Mulder, N. Müller, J.A. Härtel, J. Breuer, D. Voit, J. Frahm, J. Jordan, C. Hart, J. Tank Cologne, Germany (Poster #43)
8:45-9:15 AM	<b>Exhibit Hall Coffee Break</b>
<b>Symposium 7: Autonomic Science Year in Review</b> Chair: Guillaume Lamotte 9:15-10:15 AM	

9:15-10:15 AM	Autonomic failure <u>Paul Beach</u> Atlanta, GA, USA  POTS/orthostatic intolerance <u>Kate Bourne</u> Calgary, AB, Canada  Pediatric autonomic disorders <u>Philip Fischer</u> Rochester, MN, USA  Cardiovascular diseases <u>Robert Larson</u> Houghton, MI, USA
<b>Session 9: Award Presentations</b>	
10:15-11:15 AM	
10:15-10:45 AM	<b>The Felicia Axelrod Award</b>
10:45-11:15 AM	<b>Presentations from top 4 posters (4 @ 5 min each)</b>
11:15-11:30 AM	<b>Closing Remarks and Board Transitions</b>
11:30 AM	<b>Meeting Adjourned</b>

### **Accreditation and Credit Designation Statements**

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint providership of The University of Texas Southwestern Medical Center and the American Autonomic Society. The University of Texas Southwestern Medical Center is accredited by the ACCME to provide continuing medical education for physicians.

The University of Texas Southwestern Medical Center designates this live activity for a maximum of **TBD AMA PRA Category 1 Credit(s)<sup>TM</sup>**. Physicians should only claim credit commensurate with the extent of their participation in the activity.

## AAS POSTERS BY CATEGORY

*Posters should be hung on numbered poster board before noon on assigned presentation days.*

### AUTONOMIC EFFECTS IN SLEEP AND RESPIRATION

Poster #1	Sleep disturbances and sleep outcomes after spinal cord injury: insights from a community survey <u>R.H.Y. Lee</u> , C.B. McBride, V.E. Claydon Burnaby, BC, Canada Trainee
Poster #2	Validation of NIH-PROMIS® instruments to characterize the prevalence and burden of dyspnea in dysautonomia A. Latham, S. Chavis, K. Roberts, J.A. O'Dell, A. Walker, D.J. Parisian, <u>S.E. Smith</u> Pembroke, NC, USA
Poster #3	Validation of a novel method for identifying sleep-disordered breathing in spinal cord injury <u>S. Vukovic</u> , R.H.Y. Lee, V.E. Claydon Burnaby, BC, Canada Trainee

### AUTONOMIC FAILURE

Poster #4	Cerebral blood flow velocity, systemic hemodynamics, and orthostatic symptoms in neurogenic orthostatic hypotension: a systematic review and meta-analysis <u>P.A. Beach</u> , J.R. Baker, S.I. Ranada, A. Patel, J. Gewandter, C.O. Tan, R. Freeman, S.R. Raj Atlanta, GA, USA
Poster #5	Autonomic reflex testing as a biomarker of phenoconversion in isolated REM sleep behavior disorder <u>H.B. Taha</u> , J. Seliger, N.W. Larsen, S. Muppidi, D.I. Sinn, S. Jaradeh, M.G. Miglis Los Angeles, CA, USA
Poster #6	A case of pure autonomic failure misdiagnosed as epilepsy <u>H. Chaudhary</u> , K. Arca Phoenix, AZ, USA Trainee
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