Transformative Journeys

AACPDM 72nd Annual Meeting
October 9–13, 2018

Cincinnati, Ohio
Duke Energy Convention Center

2018 Final Program
When it comes to caring for children, we're on the same team.

Ranked among the best in the nation for pediatric orthopedics by U.S. News & World Report, Nemours/Alfred I. duPont Hospital for Children is home to one of the largest cerebral palsy programs in the country.

Our multidisciplinary team brings together experts in orthopedics, neurology, neurosurgery, rehabilitation and therapy services to help each child reach their full potential.

One of only 12 hospitals in the U.S. with a fully accredited gait lab.
Welcome to Cincinnati, Ohio!

Our theme for the 72nd American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) Annual Meeting is “Transformative Journeys”. Each year the annual meeting provides the Academy the opportunity to showcase its mission and to fulfill its vision to be a global leader in the multidisciplinary scientific education of health professionals and researchers dedicated to the well-being of people with and at risk for cerebral palsy and other childhood-onset disabilities. Our 2018 meeting promises to take you on a transformative journey with the Academy.

The Scientific Program Committee, chaired by Drs. Kristan Pierz and Lesley Wiart, assembled an excellent scientific program addressing the state-of-the-science in cerebral palsy and other childhood-onset disabilities. The committee was challenged to choose the 120 scientific papers and 69 scientific posters from a near record-breaking number (and quality!) of submissions received for this year’s meeting.

Our program offers you engaging keynote speakers, inspiring learning experiences, and invigorating networking opportunities. Our keynote speakers are dynamic leaders in their fields who will share their wide-ranging experiences. We know you will relish learning about the role of genetics in cerebral palsy diagnosis, impacts of the built environment on healthcare, knowledge translation, recent developments at the NIH, genetics of preterm birth, the EDACS, and digital voice technology. And check out the fascinating 46 Instructional Courses and 41 Breakfast Seminars where Academy members and guests can share their expertise and foster discussion. Show up early for our pre-course programming including a full orthopaedics day, an all-day hands-on ultrasound symposium, or half-day courses in comparative effectiveness research, chronic pain, and the Hammersmith Infant Neurological Evaluation. Take advantage of the interdisciplinary nature of our Academy and meet friends new and old to think creatively about clinical and research challenges, strategize, and collaborate.

Don’t stop with our educational sessions, however – join the fun and network during the Welcome Reception, the Wine & Cheese Poster and Exhibit Review, numerous breaks in the program, and our Networking Dinner. During the meeting, please use our mobile app to navigate the program, access electronic abstracts, gather information about the meeting and Cincinnati, ask questions of our speakers, and share your insights throughout the meeting.

We are grateful to the generosity of our sponsors and exhibitors who contribute to the success of our annual meetings. I know you will enjoy the meeting and Cincinnati, my home for over 20 years. Please tap me on the shoulder and share your ideas with me. As always, the annual meeting provides a wonderful forum to learn, engage, network, and create new collaborations – a transformative journey!

With best wishes

Jilda Vargus-Adams, MD, MSc
First Vice-President
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<tr>
<th>Date</th>
<th>Time</th>
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<td><strong>Tuesday, October 9, 2018</strong></td>
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<td>Orthopedic Day</td>
<td>8:00 am - 5:00 pm</td>
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<td><strong>Wednesday, October 10, 2018</strong></td>
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<tr>
<td>AACPDM Board &amp; Committee Meetings / Breakfast</td>
<td>7:30 am - 12:00 pm</td>
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<td>Ultrasound Workshop</td>
<td>8:00 am - 5:00 pm</td>
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<td>AACPDM Board &amp; Committee Luncheon</td>
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<td>Pre-Conference Sessions</td>
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<td>PC1: Design and Conduct of Comparative Effectiveness Trials and Practice-Based Research in Cerebral Palsy</td>
<td>1:00 pm - 5:00 pm</td>
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<td>PC2: The Complex Genesis of Chronic Pain</td>
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<td>PC3: Hammersmith Infant Neurological Examination Clinical Workshop</td>
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<td>Board of Directors Meeting</td>
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<td>Welcome Reception at the Hall of Mirrors/Hilton Netherland Plaza</td>
<td>6:30 pm - 8:30 pm</td>
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<td><strong>Thursday, October 11, 2018</strong></td>
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<tr>
<td>Continental Breakfast</td>
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<td>Breakfast Seminars 1-14</td>
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<tr>
<td>Advisor Support Program Meet &amp; Greet Breakfast - Sponsored by Medtronic</td>
<td>7:00 am - 8:00 am</td>
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<tr>
<td>General Session - Session supported by the Cerebral Palsy Foundation</td>
<td>7:00 am - 8:00 am</td>
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<tr>
<td>Opening Address and Gavel Exchange: Sarah Winter, MD and Jilda Vargus-Adams, MD, MSc</td>
<td>8:15 am - 10:15 am</td>
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<td>Cerebral Palsy Foundation: Richard Ellenson, CEO</td>
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<tr>
<td>Gayle G. Arnold Lectureship: “The Eating and Drinking Ability Classification System (EDACS): Purpose and Potential” Diane Sellers, PhD, MA, BA, MRCSLT</td>
<td>10:50 am - 12:25 pm</td>
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<td>Free Paper Sessions A-D</td>
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<td>A: Orthopedics: Spine and Hip</td>
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<td>B: Epidemiology, Surveillance and International Health</td>
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<td>C: Neuroimaging</td>
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<td>D: Therapy</td>
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<tr>
<td>AACPDM Membership Business Meeting &amp; Boxed Lunch (members only)</td>
<td>12:30 pm - 2:00 pm</td>
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<td>General Session</td>
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<td>Corbett Ryan Pathways Pioneer Award Presentation: David W. Pruitt, MD</td>
<td>2:00 pm - 3:30 pm</td>
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<td>Presidential Guest Lectureship: “Transformative Action - by Design” Kelly Mrkles, MSc</td>
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<td>NIH Update: Ralph Nitkin, PhD</td>
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<td>Fred P Sage Award Presentation: Rachel Byrne, PT</td>
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<td>Instructional Courses 1-16</td>
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<td>Wine &amp; Cheese Poster and Exhibit Review in the Exhibit Hall</td>
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<td>Breakfast Seminars 15-28</td>
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<td>General Session</td>
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<tr>
<td>Mac Keith Press Basic Science Lectureship: “Genetics of Premature Birth” Louis Miglia, MD, PhD</td>
<td>8:15 am - 9:45 am</td>
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<td>Point, Counter-Point Session: “Is It Genetic, Or Is It CP? What’s the Debate?” Peter Rosenbaum, MD, FRCP(C) vs. Michael Krueger, MD</td>
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<td>Free Paper Sessions E-H</td>
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<td>E: Leisure, Physical Activity and Sports</td>
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<td>F: Spasticity Management, Muscles and Classification</td>
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<td>G: Gait</td>
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<td>H: Orthopedic Surgery and Complex Care</td>
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<td>Non CME Luncheon Options</td>
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<tr>
<td>International Networking Luncheon</td>
<td>12:15 pm - 1:15 pm</td>
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<td>Ipsen Presentation Theater</td>
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<td><strong>Saturday, October 13, 2018</strong></td>
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<td>Continental Breakfast</td>
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<td>Breakfast Seminars 29-41</td>
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<tr>
<td>Complex Care SIG Meeting</td>
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<td>Free Paper Sessions I-L</td>
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<tr>
<td>I: Early Identification and Intervention</td>
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<td>J: Orthopedics: Lower Limb</td>
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<td>K: Upper Limb Function</td>
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<td>L: Adult Care</td>
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<tr>
<td>AACPDM Community Forum</td>
<td>10:00 am - 5:00 pm</td>
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<td>General Session</td>
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<tr>
<td>Chambers Family Lifespan Lectureship: Sibling Panel Presentation: Reid Chambers, DO, Eliana Danner, Nadjah Bray, Ervin Owen, Hillary Fratzer, Kathleen Lyle Murray Award: Pete Zeidner, Pedal-with-Pete Foundation</td>
<td>10:30 am - 12:00 pm</td>
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<tr>
<td>Research Grant Awards: Research Committee Chair, Sharon Ramey, PhD</td>
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<td>Best Poster Awards: TBA</td>
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<td>Mac Keith Press Promising Career Award: TBA</td>
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<td>Closing Remarks 2019 Annual Meeting Introduction</td>
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<td>Board &amp; Committee Lunch Meetings</td>
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<td>Board of Directors Meeting</td>
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<td>Instructional Courses 32-46</td>
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<td>Ticket Required</td>
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</tr>
</tbody>
</table>
Table of Contents

Welcome Letter ........................................ 3
Meeting at a Glance ..................................... 4
Board of Directors ....................................... 6
Scientific Program Committee ......................... 6
Past and Future Presidents ............................. 7
Maps .......................................................... 8/9
Mobile App Information ................................ 10
General Meeting Information
  Purpose, Objectives, Mission, Vision ............... 11
  Continuing Medical Education
    CME / CEU / CE Credits ............................ 11
  Membership Benefits of the AACPDM ............... 12
  AACPDM Member Event Schedule .................. 13
  Hours at a Glance: Registration Desk, Exhibit
    Hall, Poster Viewing, Speaker Ready Room ....... 14
  Evaluations, Disclaimers, Disclosures ............... 15
Keynote Speakers ........................................ 20
Awards ..................................................... 22
Scholarship Recipients ................................ 24
Program & Events
  Tuesday .................................................... 25
  Wednesday ............................................... 25
  Thursday ................................................ 26
  Friday ...................................................... 34
  Saturday .................................................. 41
Scientific Posters ......................................... 49
Demonstration Posters ................................ 53
Supporters ................................................ 54
Exhibitors ................................................ 56-58
Exhibit Floor Plan ..................................... 59
Disclosure Index ........................................ 60-65
Author Index ............................................. 66-74

American Academy for Cerebral Palsy and Developmental Medicine

72nd Annual Meeting
October 9-13, 2018
Cincinnati, Ohio

Future Annual Meetings
September 17-21, 2019
Anaheim, California

September 22-26, 2020
New Orleans, Louisiana

October 6-9, 2021
Quebec, QC, Canada

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Milwaukee, WI 53202
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Fax: 1.414.276.2146
Email: info@aacpdm.org
Website: www.aacpdm.org
2017-2018 AACPDM Board of Directors
Sarah Winter, MD – President
Jilda Vargas-Adams, MD, MSc – First Vice President
Mauricio Delgado, MD – Second Vice President
Sylvia Ünpuu, MSc – Treasurer
Uri Givon, MD – Secretary
Unni Narayanan, MBBS, MSc, FRCS(C) – Past President
Eileen Fowler, PhD, PT – Past President
Joline Brandenburg, MD – Director
Stephanie DeLuca, MD – Director
Laurie Glader, MD – Director
Desiree B. Maltais, PhD, PT – Director
Eugenio Monasterio, MD – Director
Tom F. Novacheck, MD – Director
M. Wade Shrader, MD – Director
Kathy Zebracki, PhD – Director

Ex-Officio Board Members
Alfred Scherzer, MD, EdD - Historian
Bernard Dan, MD, PhD – Editor, DMCN
Tracy Burr, CAE – Executive Director

Office Staff
Tracy Burr, CAE – Executive Director
Erin Trimmer – Senior Meetings Manager
Heather Schrader – Membership and Administrative Manager
Elizabeth Mueller – Meetings Coordinator

2018 Scientific Program Committee
Kristan Pierz, MD – Co-Chair
Lesley Pritchard-Wiart, PhD, PT – Co-Chair
Diane Damiano PhD, PT
Francisco Valencia, MD
Veronica Schiariti, MD, MHS,PhD
Julieanne Sees, DO, FAOAO
Micah Baird, MD
Michael Healy, MD
Sharon Ramey, PhD
Lynnette Rasmussen, BS, OTR/L
Edward Dabrowski, MD
Laura Vogtle, PhD, OTR/L
Debbie Thorpe, PT, PhD
Kristie Bjornson, PT, PhD, MS
Rachel DiFazio, PhD, RN, PNP
Ann Tilton, MD
Holly Beth Roach, OTR, ATP
Hiroko Matsumoto, PhD (statistical review)

2018 Local Hosts
Kelly Greve, PT, DPT, PhD
Michelle Menner, PT, DPT
### AACPDM Past and Future Presidents

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<thead>
<tr>
<th>Name</th>
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<tr>
<td>Winthrop Phelps, MD</td>
<td>1948</td>
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<td>George G. Deaver, MD</td>
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<td>Earl R. Carlson, MD</td>
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<td>Bronson Crothers, MD</td>
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<td>Leslie B. Hohman, MD</td>
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<td>Arnold Gesell, MD</td>
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<td>Meyer A. Perlstein, MD</td>
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<td>Lenox D. Baker, MD</td>
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<td>Margaret H. Jones Kanaar, MD</td>
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<td>Nicholson J. Eastman, MD</td>
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<td>William T. Green, MD</td>
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<td>Alvin J. Ingram, MD</td>
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<td>Raymond R. Rembolt, MD</td>
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<td>G.W.R. Eggers, MD</td>
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<td>Jessie Wright, MD</td>
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<td>Eric Denhoff, MD</td>
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<td>Chester A. Swinyard, MD</td>
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<td>Samuel B. Thompson, MD</td>
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<td>Sedgwick Mead, MD</td>
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<td>William J. Hillman, MD</td>
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<td>Harriet E. Gillette, MD</td>
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<td>Henry H. Banks, MD</td>
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<td>Lawrence T. Taft, MD</td>
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<td>Robert L. Samilson, MD</td>
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<td>Elliott D. O'Reilly, MD</td>
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<td>Hans U. Zellweger, MD</td>
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<td>Eugene E. Bleck, MD</td>
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<td>Leon Greenspan, MD</td>
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<td>Gerald Solomons, MD</td>
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<td>Leonard F. Bender, MD</td>
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<td>Gayle G. Arnold, MD</td>
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<td>James R. Gage, MD</td>
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<td>Michael A. Alexander, MD</td>
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<td>Helen M. Horstmann, MD</td>
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<td>Charlene Butler, EdD</td>
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<td>Peter L. Rosenbaum, MD</td>
<td>1997/1998</td>
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<td>Dennis C. Harper, PhD</td>
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<td>John F. Mantovani, MD</td>
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<td>Michael D. Sussman, MD</td>
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<td>Luciano S. Dias, MD</td>
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<td>Barry S. Russman, MD</td>
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<td>William L. Oppenheim, MD</td>
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<td>Diane L. Damiano, PhD PT</td>
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<td>Hank G. Chambers, MD</td>
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<td>Deborah J. Gaebler-Spira, MD</td>
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<td>Scott A. Hoffinger, MD</td>
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<td>Joseph P. Dutkowsky, MD</td>
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<td>Maureen E. O'Donnell, MD, MSc, FRCP(C)</td>
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<td>Richard D. Stevenson, MD</td>
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<td>Darcy Fehlings, MD, MSc, FRCP(C)</td>
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<td>Eileen Fowler, PhD, PT</td>
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<td>Unni Narayanan, MBBS, MSc, FRCP(C)</td>
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<td>Sarah Winter, MD</td>
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<td>Jilda Vargus-Adams, MD, MSc</td>
<td>2019</td>
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<td>Mauricio Delgado, MD</td>
<td>2020</td>
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Download the AACPDM 2018 Mobile App!

This mobile app allows you to:
• View schedules, explore sessions and posters, and find networking events.
• Curate your own personal schedule for easy conference attendance.
• Access location and speaker information at your fingertips.
• Post updates to sessions, keynotes, and exhibitor booths.
• Interact with a real-time feed of all event activity that showcases which sessions are trending, most popular photos, and popular discussion topics.
• Earn points and badges for being active on the app and at the event.
• Expand your professional network and have fun!

Features of the App:
• Agenda - view the full agenda and related information (session time, room number, speaker info, etc)
• Update - a quick way to share photos, comments, and which session you’re attending
• Activity Feed - the real-time pulse of the event. See what people are saying, view photos from the event, and find trending sessions and topics.
• Users - see who’s at the event, and connect with them on the app
• Exhibitors - find exhibitors and supporters, and leave comments or ratings

Find members of the AACPDM Communications Committee identified with an “App Helper” ribbon onsite or visit the Registration Desk with questions!
There will also be a Mobile App table at the Welcome Reception.
Purpose
The educational program of the American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) is designed to provide targeted opportunities for dissemination of information in the basic sciences, prevention, diagnosis, treatment, and technical advances as applied to persons with childhood-onset disabilities. The program provides a forum for discussion of scientific developments and clinical advances in the care of people with these conditions. By presenting forums which foster interdisciplinary communication and interchange among all allied health care professionals concerned with individuals with cerebral palsy and neurodevelopmental disorders, this program’s purpose is to ensure that the qualified personnel have the skills and knowledge derived from practices that have been determined through research and experience to be successful in serving children with disabilities. The purpose is also to encourage teambuilding within organizations and institutions, encourage multicenter studies, develop information for parents, and find a consensus on the optimal care of various conditions.

Objectives
To disseminate information on new developments in applied and translational sciences, prevention, diagnosis, treatment, and technology for individuals with cerebral palsy and other childhood-onset disabilities. Specifically:

- Participants will increase awareness of new and emerging treatments for individuals with cerebral palsy and other developmental disabilities.
- Participants will be able to identify new modalities for the diagnosis of cerebral palsy and developmental disabilities.
- Participants will increase interprofessional collaboration to help coordinate and improve services across the continuum of care for individuals with cerebral palsy and developmental disabilities across the lifespan.

Target Audience
All health care professionals, clinicians, researchers and health administrators who are concerned with the care of patients with cerebral palsy and other childhood-onset disabilities, including: developmental and other pediatricians, neurologists, physiatrists, orthopedic and neuro-surgeons, physical and occupational therapists, speech and language pathologists, orthotists, dieticians, rehabilitation engineers, kinesthiologists, nurses, psychologists, special education teachers and educators.

Note: All levels of skill will be addressed.

AACPDM Vision
AACPDM is a global leader in the multidisciplinary scientific education of health professionals and researchers dedicated to the well being of people with and at risk for cerebral palsy and other childhood-onset disabilities.

AACPDM Mission
To provide multidisciplinary scientific education for health professionals and promote excellence in research and services for the benefit of people with and at risk for cerebral palsy and other childhood-onset disabilities.

Online Self-Reporting System for CME / CEU / CE Credits
After the AACPDM 72nd Annual Meeting, all registrants will receive an instructional email about reporting and printing out their own continuing education certificates. The online self-reporting will be open no later than November 2018. To verify your correct email address, please visit the Registration Desk before you leave the meeting.

Please note: In self-reporting, if you miss more than 15 minutes of a session/course, it is not considered full attendance, and cannot be claimed.

Certificate of Attendance
All attendees may claim a Certificate of Attendance. Access this form at the Registration Desk.

ACCM Accreditation Statement
The American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA Credit Designation Statement
The American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) designates this live activity for a maximum of 35 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physical Therapists / Physical Therapy Assistants
The American Academy for Cerebral Palsy and Developmental Medicine is recognized as an Approval Agency by the Physical Therapy Board of California.

http://ptbc.ca.gov/licensees/cc_agency.shtml

ProCert certification is currently pending. CCUs are a unit of relative value of an activity based on its evaluation against a rigorous and comprehensive set of standards representing the quality of an activity. The CCU determination is a valuation applying many factors including, but not limited to, duration of the activity. No conclusion should be drawn that CCUs correlate to time (e.g. hours).

Occupational Therapists / Occupational Therapy Assistants
The American Academy for Cerebral Palsy and Developmental Medicine is an Approved Provider of Continuing Education by the American Occupational Therapy Association (AOTA) #6379. Occupational Therapists and Occupational Therapy Assistants will be able to claim a maximum of 3.5 AOTA CEU’s. All sessions during the 72nd Annual Meeting are available for credit.

Note: The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

Nursing Credits
The American Academy for Cerebral Palsy and Developmental Medicine is an Approved Provider of Continuing Education by the American Nurses Credentialing Center (ANCC) #107965. To obtain CEU credits for this meeting, please complete the CEU form at the Registration Desk.

All attendees may claim a Certificate of Attendance. Access this form at the Registration Desk.

Certificate of Attendance
All attendees may claim a Certificate of Attendance. Access this form at the Registration Desk.

Orthotist Credits
This program has been approved for up to 28.75 credits through the American Board for Certification (ABC). Full participation in this program is required for the full amount of credits. Must sign-in daily at the registration desk.
How can you benefit from membership in the American Academy for Cerebral Palsy and Developmental Medicine?

Annual Meeting
The AACPDM Annual Meeting is an international forum for the dissemination and exchange of new knowledge, ideas and educational information between participants from all disciplines. Each year, the Academy offers International Scholarships and Student Scholarships to members to assist with the cost of attending the Annual Meeting. Financial support for the creation of new international meetings that are related to cerebral palsy and developmental medicine is also available through the Development Grant.

Advisor Support Program
The AACPDM Membership Committee launched an Advisor Support Program to match veteran AACPDM members with new members to ensure they get everything they can out of their membership. Advisor areas include networking, committee involvement, research and grants, international experience and more!

eCourses
The AACPDM Education Committee launched AACPDM eCourses which are 3-4 weeks online, self-paced educational opportunities to earn continuing education credits (CEUs).

Networking
Membership in AACPDM facilitates making contacts with medical professionals and researchers with similar interests. This diverse group of professionals is bound together by a unified interest in improving the lives of people with cerebral palsy and developmental disabilities.

Publications
Developmental Medicine and Child Neurology (DMCN) is the official journal of the AACPDM. This peer-reviewed journal is recognized internationally as the leader in the field. Fellow Members receive a FREE subscription to DMCN, or they may choose to select from a list of Clinics in Developmental Medicine series e-books in place of the DMCN Journal.

AACPDM creates a quarterly newsletter and periodic broadcast emails about various events and activities in the industry. Members assist in developing informational materials to keep the public informed about advances in treating cerebral palsy and other developmental disabilities.

Research
AACPDM offers the opportunity for members to apply for a Research Planning Grant. The purpose of this grant is to provide financial support to bring together investigators from geographically disparate locations, obtain statistical consultation and develop a multi-center research study plan. The goal is to provide the forum and initial planning to develop a successful grant submission for full funding through some larger agency (e.g., NIH, NIDRR, CDC, CIHR etc). The grant should focus on an important clinical question relevant to the membership of AACPDM and the involvement of a multidisciplinary team is expected.

Website
Members can visit the Members Only section of the AACPDM website for a wide variety of information not available to non-members including Sage Award Videos, membership contact information and other educational opportunities.

Committees
The heart of the Academy is our committees. These committees offer networking and opportunities to explore areas of deep interest with a wide range of professionals from the membership.
- Adapted Sports and Recreation
- Advocacy
- Awards
- Care Pathways
- Communications
- Complex Care
- Education
- International Affairs
- LifeSpan Care
- Membership
- Nominating
- Research
- Scientific Program
Member Events at the Meeting

AACPDM Board of Directors Meetings
Wednesday, October 10, 2018
7:30 am – 8:00 am 200/201/204/205 (Breakfast)
8:30 am – 11:30 am 232 (Executive Committee Meeting)
11:30 am – 12:45 pm 200/201/204/205 (Lunch)
1:00 pm – 5:00 pm 232 (Board of Directors Meeting)
Saturday, October 13, 2018
12:00 pm – 5:00 pm 235 (Lunch Meeting)

AACPDM Committee Meetings
Wednesday, October 10, 2018
7:30 am – 8:15 am 200/201/204/205 (Breakfast)
8:30 am – 11:30 am See itinerary (Committee Meetings)
11:30 am – 12:45 pm 200/201/204/205 (Lunch)
Saturday, October 13, 2018
12:00 pm – 1:00 pm 200/201/204/205 (Working Lunch)

AACPDM Annual Membership Business Meeting and Lunch
Current members only. Pre-registration is required.
Thursday, October 11, 2018
12:30 pm – 2:00 pm 200/201/204/205

2018 Membership Business Meeting Agenda
12:45 pm – 12:55 pm Welcome/Farewell departing Board Members
Jilda Vargus-Adams, MD, MSc – President
12:55 pm – 1:05 pm Treasurer’s Report
Sylvia Ounpuu, MSc – Treasurer
1:05 pm – 2:00pm 2018 Strategic Plan
Jilda Vargus-Adams, MD, MSc – President
Sarah Winter, MD – Past President
1:10 pm – 2:00pm Committee Reports
Jilda Vargus-Adams, MD, MSc – President

COMMITTEE CHAIRS
Adapted Sports & Recreation Chair: Talia R. Collier, MD
Advocacy Chair: Terry Such-Neibar, DO
Awards Chair: Juliane Sees, DO
Care Pathways Chair: Darcy Fehlings, MD, MSc, FRCP(C)
Communications Chair: Micah Baird, MD
Complex Care Chair: John Pelgano, MD
Education Chair: Michael Healy, MD
International Affairs Chair: Rochelle T. Dy, MD
Lifespan Care Chair: Lynnette Rasmussen, OTRL
Membership Chair: Golda Milo-Manson, MD, MHSc
Publications Chair: Deborah Gaebler-Spira, MD
Research Chair: Sharon Ramey, PhD
**Hours at a Glance**

**Registration – Grand Ballroom Foyer**
*Monday, October 8*
6:00 pm – 8:00 pm

*Tuesday, October 9*
7:30 am – 8:00 pm

*Wednesday, October 10*
7:00 am – 7:00 pm

*Thursday, October 11*
6:30 am - 6:00 pm

*Friday, October 12*
6:30 am – 6:00 pm

*Saturday, October 13*
6:45 am – 1:00 pm

**Exhibit Hall Hours – Grand Ballroom A**

*Thursday, October 11*
10:15 am – 10:50 am  Attendee Break in Exhibit Hall
3:30 pm – 4:00 pm  Attendee Break in Exhibit Hall
6:00 pm - 7:30 pm  Wine & Cheese Poster and Exhibit Review

*Friday, October 12*
7:00 am - 8:00 am  Attendee Break in Exhibit Hall
9:45 am – 10:30 am  Attendee Break in Exhibit Hall
3:30 pm – 4:00 pm  Attendee Break in Exhibit Hall

**Visit & Win Returns!** Have a minimum of 20 exhibitors place a sticker on our card next to their company name. Turn in your completed card to the Registration Desk by 3:00 pm Friday, October 12. The winner of the drawing will receive free registration for the 2019 Annual Meeting!

**Speaker Ready Room – Junior Ballroom Foyer**

*Wednesday, October 10*
10:00 am - 5:30 pm

*Thursday, October 11*
7:00 am – 6:00 pm

*Friday, October 12*
7:00 am – 4:00 pm

*Saturday, October 13*
6:45 am – 10:00 am

**Poster Viewing – Grand Ballroom A**

*Thursday, October 11*
10:15 am – 10:50 am  Attendee Break in Exhibit Hall
3:30 pm – 4:00 pm  Attendee Break in Exhibit Hall
6:00 pm - 7:30 pm  Wine & Cheese Poster and Exhibit Review

*Friday, October 12*
7:00 am - 8:00 am  Attendee Break in Exhibit Hall
9:45 am – 10:30 am  Attendee Break in Exhibit Hall
3:30 pm – 4:00 pm  Attendee Break in Exhibit Hall

*Saturday, October 13*
7:00 am – 8:00 am  Poster Viewing
9:55 am – 10:30 am  Poster Viewing

12:00 pm – 1:00 pm  Poster Viewing

**Ticketed Sessions**

Various sessions and events at the Annual Meeting require a ticket for admission to control room capacity. This aids in controlling room capacity. Pre-registered attendees will find event tickets in their registration envelopes. Additional tickets for courses and events may be obtained at the Registration Desk. For some events or sessions, an additional fee may apply. All tickets are distributed pending availability. Door monitors will be present for ticketed sessions.

**Guest Attendance**

AACPDM asks registered attendees to refrain from taking children, spouses, or guests to any educational sessions or functions offered at the Annual Meeting that are not included in the guest attendance registration. Please urge your guests to wear their name badges at all times.

**E-Poster**

An E-Poster is an electronic version of the traditional paper poster in PowerPoint format, and is displayed on a monitor. In addition to traditional paper posters on bulletin boards, Scientific and Demonstration Poster presenters were also required to submit their poster as an E-Poster. There will be computer kiosks throughout the Duke Energy Center dedicated to E-Posters. They will also be posted on the AACPDM website during and two months after the meeting. E-Posters increase exposure to the work and allow people to view the poster in the comfort of their hotel room or even at home after the meeting. Thank you to all the Poster Presenters who took on the extra work to participate in the Poster Preview and/or to submit an E-Poster!

**No Smoking**

Smoking is prohibited at all Annual Meeting sessions and events.

**Attire**

Attire for the educational sessions of the meeting is business casual. Please bring a jacket or sweater, as room temperatures may vary.

**Camera/Recording Policy**

It is the policy of AACPDM that no cameras are permitted in the meeting sessions, exhibit hall, or poster sessions. Please refrain...
from taking any photos in those locations. Audio or videotaping is strictly prohibited.

**FDA Disclaimer**
Some medical devices or pharmaceuticals not cleared by the FDA or cleared by the FDA for a specific use only may be used “off-label” (i.e., a use not described on the product’s label) if, in the judgment of the treating physician, such use is medically indicated to treat a patient’s condition. “Off label” uses of a device or pharmaceutical may be described in AACPDM educational programs or publications so long as the lack of FDA clearance for such uses is also disclosed. Results from scientific studies known to the author or presenter relating to the described intended use should be discussed, if so doing will not adversely affect the study or violate some other regulatory requirement. Some drugs or medical devices described or demonstrated in Academy educational materials or programs have not been cleared by the FDA or have been cleared by the FDA for specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in practice.

**Americans with Disabilities Act**
The AACPDM wishes to ensure that no individual with a disability is excluded, denied services, or otherwise treated differently than other individuals because of the absence of auxiliary aides and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act please notify AACPDM at least 14 working days prior to the program to allow time to acquire the support needed.

**Session Evaluations**
We need your feedback! As a dedicated learner during the 72nd Annual Meeting we truly value your feedback on the individual sessions, general sessions as well as the overall meeting experience. The future leadership of the AACPDM uses this information to improve on the future educational offerings and to make your experience the most productive and realistic in bringing back practical information to your practice.

Please take a moment to provide your feedback on 72nd Annual Meeting in the in the following ways:
- The Annual Meeting website will include access to the online survey tool to complete various session evaluations. You will be able to access the internet on various internet café kiosks OR take time in your hotel room – all attendees receive complimentary internet in your hotel room. VISIT: http://www.aacpdm.org/meetings/2018/
- Participants will be asked to provide input on the educational program of the 72nd Annual Meeting through the online CME / CEU Claim System when claiming credit for participation

**Insurance/Liabilities and Disclaimer**
The AACPDM will not be held responsible for injuries or for loss or damage to property incurred by participants or guests at the Annual Meeting, including those participating in social and fitness events. Participants and guests are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses, or damage to or loss of personal effects when traveling outside of their own country. The AACPDM cannot be held liable for any hindrance or disruption of Annual Meeting proceedings arising from natural, political, social or economic events, or other unforeseen incidents beyond its control. Registration of a participant implies acceptance of this condition. The material presented at this continuing medical education activity is made available for education purposes only. The material is not intended to represent the only, nor necessarily the best, methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty that may be helpful to others who face similar situations.

**Disclosure**
The presenting authors on the Free Papers and Posters are underlined. All corresponding authors were responsible for querying the co-authors regarding the disclosure of their work. The AACPDM does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author’s participation in the course. To follow ACCME guidelines the Academy has identified the options to disclose as follows: a. Research or institutional support has been received b. Miscellaneous, non-income support (e.g., equipment or services), commercially derived honoraria, or other nonresearch related funding (e.g., paid travel) has been received c. Royalties have been received d. Stock or stock options held e. Consultant or employee f. Received nothing of value g. Did not respond or unable to contact

One or more of these letters appears by each author’s name indicating their disclosure. Please see the Disclosure Index at the back of the program.
Dysport® provided significant results vs placebo across co-primary efficacy endpoints\textsuperscript{1b}

- Significant improvement in ankle plantar flexor muscle tone as determined by mean change in MAS score at Week 4 (primary endpoint) and Week 12 (P<0.05)
- Significant improvement in ankle plantar flexor muscle tone as determined by mean change in MAS score at Week 4 (primary endpoint) and Week 12 (P<0.05)

Safety assessed in 160 Dysport® treated pediatric patients\textsuperscript{1}

- In a clinical study, the most commonly observed adverse reactions (>10%) were upper respiratory tract infection, nasopharyngitis, influenza, pharyngitis, cough, and pyrexia.

Important Safety Information

Warning: Distant Spread of Toxin Effect
Postmarketing reports indicate that the effects of Dysport® and all botulinum toxin products may spread from the area of injection to produce symptoms consistent with botulinum toxin effects. These may include asthenia, generalized muscle weakness, diplopia, blurred vision, ptosis, dysphagia, dysphonia, dysarthria, urinary incontinence, and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life threatening and there have been reports of death. The risk of symptoms is probably greatest in children treated for spasticity, but symptoms can also occur in adults treated for spasticity and other conditions, particularly in those patients who have underlying conditions that would predispose them to these symptoms. In unapproved uses, including upper limb spasticity in children, and in approved indications, cases of spread of effect have been reported at doses comparable to or lower than the maximum recommended total dose.

BoNT, botulinum neurotoxin

\textsuperscript{a}Coverage data are provided by Zitter Health Insights. Information presented here is not a guarantee of coverage. Coverage data believed to be accurate at time of update but cannot be guaranteed. Individual cost and benefits design may vary. Please consult with individual plans. Ipsen Biopharmaceuticals, Inc. does not endorse any individual, commercial, Medicare Part D, or Medicaid plan.

\textsuperscript{b}Study Design: Dysport® was evaluated in a multicenter, prospective, double-blind, randomized, placebo-controlled study in patients 2-17 years of age treated for lower limb spasticity. A total of 256 (156 Dysport® and 177 placebo) toxin-naïve or non-naïve patients with a Modified Ashworth Score (MAS) of grade 2 or greater at the ankle plantar flexor were enrolled to receive Dysport® 10 Units/kg/leg (n=79), Dysport® 15 Units/kg/leg (n=79) or placebo (n=77) injected into the gastrocnemius and soleus muscles. Forty-one percent of patients (n=66) were treated bilaterally and received a total lower limb Dysport® dose of either 20 Units/kg (n=37) or 30 Units/kg (n=29). The primary efficacy endpoint was the mean change from baseline in MAS in ankle plantar flexor at Week 4; a co-primary endpoint was the mean Physician’s Global Assessment (PGA) score at Week 4.\textsuperscript{10}

Please see additional Important Safety Information and Brief Summary of Full Prescribing Information including Boxed Warning, on following pages.
**Indication**
Dysport® (abobotulinumtoxinA) for injection is indicated for the treatment of:
- Spasticity in adult patients
- Adults with cervical dystonia
- Lower limb spasticity in pediatric patients 2 years of age or older

**Important Safety Information (continued)**

**Contraindications**
Dysport® is contraindicated in patients with known hypersensitivity to any botulinum toxin preparation or to any of the components; or in the presence of infection at the proposed injection site(s); or in patients known to be allergic to cow's milk protein. Hypersensitivity reactions including anaphylaxis have been reported.

**Warnings and Precautions**

**Lack of Interchangeability Between Botulinum Toxin Products**
The potency Units of Dysport are specific to the preparation and assay method utilized. They are not interchangeable with other preparations of botulinum toxin products, and, therefore, units of biological activity of Dysport cannot be compared to or converted into units of any other botulinum toxin products assessed with any other specific assay method.

**Dysphagia and Breathing Difficulties**
Treatment with Dysport and other botulinum toxin products can result in swallowing or breathing difficulties. Patients with pre-existing swallowing or breathing difficulties may be more susceptible to these complications. In most cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or swallowing. When distant side effects occur, additional respiratory muscles may be involved. Death as a complication of severe dysphagia have been reported after treatment with botulinum toxin. Dysphagia may persist for several weeks, and require use of a feeding tube to maintain adequate nutrition and hydration. Aspiration may result from severe dysphagia and is a particular risk when treating patients in whom swallowing or respiratory function is already compromised. Patients treated with botulinum toxin may require immediate medical attention should they develop problems with swallowing, speech, or respiratory disorders. These reactions can occur within hours to weeks after injection with botulinum toxin.

**Pre-existing Neuromuscular Disorders**
Individuals with peripheral motor neuropathic diseases, amyotrophic lateral sclerosis, or neuromuscular junction disorders (e.g., myasthenia gravis or Lambert-Eaton syndrome) should be monitored particularly closely when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including severe dysphagia and respiratory compromise from typical doses of Dysport.

**Human Albumin and Transmission of Viral Diseases**
This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries an extremely remote risk for transmission of viral diseases and variant Creutzfeldt-Jakob disease (vCJD). There is a theoretical risk for transmission of Creutzfeldt-Jakob disease (CJD), but if that risk actually exists, the risk of transmission would also be considered extremely remote. No cases of transmission of viral diseases, CJD, or vCJD have ever been identified for licensed albumin or albumin contained in other licensed products.

**Intradermal Immune Reaction**
The possibility of an immune reaction when injected intradermally is unknown. The safety of Dysport for the treatment of hyperhidrosis has not been established. Dysport is approved only for intramuscular injection.

**Most Common Adverse Reactions**

**Adults with upper limb spasticity** (≥2% and greater than placebo): nasopharyngitis, urinary tract infection, muscular weakness, musculoskeletal pain, dizziness, fall, and depression.

**Adults with lower limb spasticity** (≥5% and greater than placebo): falls, muscular weakness, and pain in extremity.

**Adults with cervical dystonia** (≥5% and greater than placebo): muscular weakness, dysphagia, dry mouth, injection site discomfort, fatigue, headache, musculoskeletal pain, dysphonia, injection site pain, and eye disorders.

**Pediatric patients with lower limb spasticity** (≥10% and greater than placebo): upper respiratory tract infection, nasopharyngitis, influenza, pharyngitis, cough, and pyrexia.

**Drug Interactions**
Co-administration of Dysport and aminoglycosides or other agents interfering with neuromuscular transmission (e.g., curare-like agents), or muscle relaxants, should be observed closely because the effect of botulinum toxin may be potentiated. Use of anticholinergic drugs after administration of Dysport may potentiate systemic anticholinergic effects, such as blurred vision. The effect of administering different botulinum neurotoxins at the same time or within several months of each other is unknown. Excessive weakness may be exacerbated by another administration of botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin. Excessive weakness may also be exaggerated by administration of a muscle relaxant before or after administration of Dysport.

**Use in Pregnancy**
Based on animal data, Dysport may cause fetal harm. There are no adequate and well-controlled studies in pregnant women. Dysport should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

**Pediatric Use**
Based on animal data Dysport may cause atrophy of injected and adjacent muscles, decreased bone growth, length, and mineral content; delayed sexual maturation; and decreased fertility.

**Geriatric Use**
In general, elderly patients should be observed to evaluate their tolerance of Dysport, due to the greater frequency of concomitant disease and other drug therapy. Subjects aged 65 years and over who were treated with Dysport for lower limb spasticity reported a greater percentage of fall and asthenia as compared to those younger (10% vs. 6% and 4% vs. 2%, respectively).

To report SUSPECTED ADVERSE REACTIONS or product complaints, contact Ipsen at 1-855-463-5127. You may also report SUSPECTED ADVERSE REACTIONS to the FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.
DYSPORT® (abobotulinumtoxinA) for injection, for intramuscular use

**Brief Summary of Key Prescribing Information**

- **INDICATIONS AND USAGE:**
  - Spasticity in adult patients.
  - Adults with cervical dystonia.
  - Lower limb spasticity in pediatric patients 2 years of age and older.

- **CONTRAINDICATIONS:**
  - DYSPORT® is contraindicated in patients with known hypersensitivity to any botulinum toxin preparation or to any component in the formulation; or infection at the proposed injection site(s). Hypersensitivity reactions have been reported, including anaphylaxis. This product may contain trace amounts of cow's milk protein. Patients known to be allergic to cow's milk protein should not be treated with DYSPORT.

- **WARNINGS AND PRECAUTIONS:**
  - Lack of Interchangeability between Botulinum Toxin Products: The potency units of DYSPORT® are specific to the preparation and assay method used. They are not interchangeable with other preparations of botulinum toxin products and, therefore, units of biological activity of DYSPORT® cannot be compared to or converted into units of any other botulinum toxin products assessed with any other specific assay method.

- **Spread of Toxin Effect:**
  - Post-marketing safety data from DYSPORT® and other approved botulinum toxins suggest that botulinum toxin effects may, in some cases, be observed beyond the site of local injection. The symptoms are consistent with the mechanism of action of botulinum toxin and may include anhidrosis, generalized muscle weakness, diplopia, blurred vision, paresis, dysphagia, dysphonia, dysarthria, urinary incontinence and breathing difficulties. These symptoms have been reported hours to weeks after injection. Swallowing and breathing difficulties can be life-threatening and there have been reports of death related to spread of toxin effects. The risk of symptoms is greatest in children treated for spasticity but symptoms can also occur in adults treated for spasticity and other conditions, particularly in those patients who have underlying conditions that would predispose them to these symptoms. In unapproved uses, including upper limb spasticity in children and, in approved indications, cases of spread of effect have been reported at doses comparable to or lower than the recommended doses of botulinum toxin.

- **Dysphagia and Breathing Difficulties:**
  - Treatment with DYSPORT® and other botulinum toxin products can result in swallowing or breathing difficulties. Patients with pre-existing swallowing or breathing difficulties may be more susceptible to these complications. In most cases, this is a consequence of weakening of muscles in the area of injection that are involved in breathing or swallowing. When distant effects occur, additional respiratory muscles may be affected. It is advisable to avoid injection of botulinum toxin into the neck and to use the lowest effective dose of botulinum toxin for the treatment of cervical dystonia.

- **Hypersensitivity Reactions:**
  - Localized reactions such as redness or pain at the injection site have been reported. More rarely, anaphylactic reactions have been reported with bovine botulinum toxin products.

- **Laboratory Test Results:**
  - The results of some laboratory tests have been altered by the administration of botulinum toxin. These tests may include: urinalysis, electrocardiogram, and hepatic, renal, and thyroid function tests.

- **Neurotoxic Reactions:**
  - Neurotoxic reactions including dysphagia, dysarthria, and respiratory muscle weakness may occur if botulinum toxin spreads beyond the intended area of injection.

- **Serious Side Effects:**
  - Patients treated with botulinum toxin for muscle spasticity may experience difficulty with swallowing or breathing. If these symptoms occur, the patient should be monitored until they resolve.

- **Pre-existing Neurovascular Disorders:**
  - Individuals with peripheral motor neurorgraphic diseases, myasthenia gravis or Lambert-Eaton syndrome should be monitored particularly closely when given botulinum toxin. Patients with neuromuscular disorders may be at increased risk of clinically significant effects including severe dysphagia and respiratory compromise from typical doses of DYSPORT.

- **Human Albumin and Transmission of Viral Diseases:**
  - This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing procedures, it is extremely unlikely that transmission of viral diseases and variant Creutzfeldt-Jakob disease (vCJD) could occur. However, if a patient were treated with DYSPORT, the risk of transmission would also be considered extremely remote. No cases of transmission of viral diseases, CJD or vCJD have ever been identified for licensed albumin or albumin contained in other licensed products.

**ADVERSE REACTIONS:**

- **Cervical Dystonia (CD):**
  - DYSPORT® exposure data in 146 CD patients in 7 studies; two were randomized, double-blinded, single treatment, placebo-controlled studies with subsequent optional open-label treatment in which dose optimization (250 to 1000 Units per treatment) over the course of 6 treatment cycles was allowed. Population: Caucasian (91%), female: age 18-62 (range 17-83 years): 58% < 60 years of age, 49% > 60 years. In placebo-controlled trials the most common adverse reactions (>5%) reported in patients receiving DYSPORT 500 Units were muscular weakness, dysphagia, dry mouth, injection site discomfort, fatigue, headache, muscularkeletal pain, dysphagia, injection site pain and eye disorders (constricting of blood vessels, diplopia, and reduced visual acuity and accommodation). Other than injection site reactions, most adverse reactions became noticeable about one week after treatment and lasted several weeks. The rates of adverse reactions were higher in the combined controlled and open-label experience than in the placebo-controlled trials. Two patients (≤1%) experienced adverse reactions leading to withdrawal and one experienced disturbance in attention, eyebrow, feeling abnormal and headache, and one patient experienced dysphagia. Most commonly reported adverse reactions ≥5% and greater than placebo in patients who received DYSPORT 500 Units (N=173) vs. placebo (N=182), respectively were: Any Adverse Reaction (61%), General disorders and administration site conditions (58%), Injection site discomfort (12%), Injection site pain (5%), Muscular skeletal and connective tissue disorders (5%), Neurological disorders (3%), Systemic disorders (1%). In general, the most commonly reported adverse reactions were of mild to moderate intensity and were mostly transient.

- **Injection Site Reactions:**
  - Injection site reactions were most commonly reported adverse reactions following DYSPORT administration.

**Less Common (<5%):**

- **Adverse Reactions During Double-Blind Phase of Clinical Trials:**
  - Breathing Difficulty reported by 3% of DYSPORT patients in ≥1% of placebo patients, most commonly during dyspnea, median time to onset from last dose of DYSPORT was approximately 3 weeks; median duration was approximately 3 weeks. Other adverse reactions (4%) in the DYSPORT 500 Units group vs. placebo, respectively included dizziness (5%, 11%), nausea (5%, 4%), and muscle spasm (1%, 1%).

- **Laboratory Findings:**
  - Patients treated with DYSPORT exhibited a small increase from baseline (0.23 mEq/L) in mean blood glucose relative to placebo-treated patients. This was not clinically significant among patients in the development program but could be a factor in patients whose diabetes is difficult to control.

- **Electrocardiographic Findings:**
  - ECG measurements were only recorded for a limited number of patients in a placebo-controlled study with no active control. This study showed a statistically significant reduction in heart rate compared to baseline, averaging about 3 beats per minute, observed thirty minutes after injection.

**Spasticity in Adults:**

- **Injection Site Reactions:**
  - Injection site reactions are most commonly reported adverse reactions following DYSPORT administration.

**Upper Limb Spasticity in Adults:**

- **Injection Site Reactions:**
  - Injection site reactions are most commonly reported adverse reactions following DYSPORT administration.

**Lower Limb Spasticity in Adults:**

- **Injection Site Reactions:**
  - Injection site reactions are most commonly reported adverse reactions following DYSPORT administration.

- **Common Adverse Reactions:**
  - The most common adverse reactions (≥5%) in any DYSPORT dose group were falls, muscular weakness, and pain in extremity. Muscular weakness was reported more frequently in women (16%) treated with 1500 Units of DYSPORT vs. men (5%). Falls were reported more frequently in pediatric (≤6 years of age). In a double-blind study, the most common adverse reactions were:

**Intradermal Immune Reaction:**

The possibility of an immune reaction when injected intradermally is unknown. The safety of DYSPORT for the treatment of hyperhidrosis has not been established. DYSPORT is approved only for intramuscular injection.
DYSPORT® (abobotulinumtoxinA) for injection, for intramuscular use

Brief Summary of Key Prescribing Information (cont.)

observed (2%) in any DYSPORT dose group: 1000 units (N=127), 1500 units (N=128) and more frequently than Placebo (N=136), respectively: Musculoskeletal and connective tissue: Muscular weakness (2%, 7%, 3%), Pain is extremely (6%, 6%, 2%) Ataxia (4%, 2%, 2%), Back pain (2%, 1%, 2%), Tyramine, pancreas, hemodialysis diabetic complications 2% (9%, 6%, 6%, 6%), Contraindications (2%, 0%, 0%), Wrist fracture (2%, 0%, 0%), Nervous system disorders: Headache (6%, 3%, 1%), Epilepsy/Convulsions/Partial or complete seizures/Epilepsy (4%, 1%, 2%), Infections and infestations: Upper respiratory tract infection (2%, 1%, 1%), General disorders and administration site conditions: Fatigue (1%, 4%, 0%), Asthenia (2%, 1%, 1%), Nausea (2%, 0%, 0%), Constipation (2%, 0%, 0%), Abdominal pain (2%, 0%, 0%), Nausea (2%, 0%, 0%), Vascular disorders: Hypertension (2%, 1%, 1%).

Lower Limb (unilateral or bilateral) Spasticity in Pediatric Patients (2 to 17 years of age)

In a double-blind study, the most common adverse reactions observed (≥4%) and expected more frequently than placebo, in patients who received placebo (N=79), Unilateral DYSPORT 10 units/kg (N=43), Unilateral DYSPORT 15 units/kg (N=53), Bilateral DYSPORT 20 units/kg (N=31), or Bilateral DYSPORT 30 units/kg (N=29), respectively: Infections and infestations: Neopharyngeal (6%, 3%, 12%, 10%, 0%), Upper respiratory tract infection (13%, 9%, 2%, 0%, 1%, 16%), Influenza (0%, 0%, 0%, 10%, 0%, 3%), Rhinovirus (8%, 0%, 0%, 0%, 3%, 3%), Varicella (1%, 5%, 0%, 0%, 5%, 0%), Ear infection (3%, 2%, 4%, 0%, 0%), Respiratory tract infection (0%, 0%, 0%, 1%, 2%, 0%), Gastrointestinal disorders: Vomiting (1%, 5%, 0%, 3%, 2%, 0%), Nausea (1%, 0%, 0%, 3%, 2%, 0%), Respiratory, thoracic and mediastinal disorders: Cough (6%, 7%, 6%, 14%, 1%), Orthopnea (1%, 0%, 0%, 2%, 0%, 4%), General disorders and administration site conditions: Pyrexia (5%, 7%, 2%, 12%, 8%, 7%), Musculoskeletal and connective tissue: Pain in extremity (3%, 5%, 2%, 5%, 2%, 7%), Muscular weakness (1%, 3%, 0%, 0%, 1%), Nervous system disorders: Convulsion/Epilepsy (3%, 1%, 0%, 7%, 4%, 1%).

Postmarketing Experience: Because adverse reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure. The following adverse reactions have been identified during post-approval use of DYSPORT vertigo, photophobia, influenza-like illness, anaphylaxis, burning sensation, facial palsy, paresthesias, tinnitus, and excessive granulation tissue. Hypersensitivity reactions including anaphylactic reactions have been reported.

Immunogenicity: As with all therapeutic proteins, there is a potential for immunogenicity. The incidence of antibody formation is highly dependent on the sensitivity and specificity of the assay. In addition, the observed incidence of antibody positivity in an assay may be influenced by several factors including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies across products in this class may be misleading.

Cerebral Dysxia: About 3% of subjects developed antibodies (binding or neutralizing) over time with DYSPORT treatment.

Spasticity in Adults

Upper Limb Spasticity: From 239 subjects treated with DYSPORT and tested for the presence of binding antibodies, 5 subjects were positive at baseline and 17 developed antibodies after treatment. In 17 subjects, 10 subjects developed neutralizing antibodies. An additional 51 subjects from a separate repeat-dose study were tested for the presence of neutralizing antibodies only. None of the subjects tested positive. In total, from the 281 subjects treated in the long-term studies and tested for the presence of neutralizing antibodies, 3.6% developed neutralizing antibodies after treatment. In the presence of binding and neutralizing antibodies, the incidence of adverse events was 3.6% in subjects with binding antibodies and 6% in subjects with both binding and neutralizing antibodies.

Lower Limb Spasticity: From 367 subjects treated with DYSPORT and tested for the presence of binding antibodies, 4 subjects were positive at baseline and 2 developed binding antibodies after treatment. No subjects developed neutralizing antibodies. An additional 85 subjects from two separate studies were tested for the presence of neutralizing antibodies only. One subject tested positive for the presence of neutralizing antibodies. In total, from the 452 subjects treated with DYSPORT and tested for the presence of neutralizing antibodies, 0.2% developed neutralizing antibodies after treatment.

Lower Limb Spasticity: in Pediatric Patients: From 229 subjects treated with DYSPORT and tested for the presence of binding antibodies, 5 subjects previously receiving botulinum toxin were positive at baseline and 8 patients developed binding antibodies after injection. Among those 5 subjects, 3 subjects developed neutralizing antibodies, while one subject developed neutralizing antibodies from the 3 subjects testing positive for binding antibodies at baseline who previously received botulinum toxin injections. From a separate repeat-dose study, 206 subjects were tested for the presence of neutralizing antibodies. Two subjects were positive for neutralizing antibodies at baseline and 5 subjects developed neutralizing antibodies after treatment. In total, from the 426 patients tested for the presence of neutralizing antibodies, 0.6% developed neutralizing antibodies. 2.1% developed neutralizing antibodies after treatment. In the presence of binding and neutralizing antibodies, DYSPORT is only available in the pediatric indication for use in botulinum toxin-induced effects already apparent at the time of administration.

Drug Interactions

No formal drug interaction studies have been conducted DYSPORT. Patients treated concomitantly with botulinum toxin and anticoagulants or other agents interfering with hemostatic mechanisms (e.g., estrogen-progesterone) should be observed closely because the effects of the botulinum toxin may be potentiated. Use of antithrombin therapy following administration of DYSPORT may potentiate systemic anticoagulant effects such as increased bleeding.

The effect of administering different botulinum neurotoxin products at the same time or within several months of each other is unknown. Excessive weakness may be exacerbated by another administration of botulinum toxin prior to the resolution of the effects of a previously administered botulinum toxin. Excessive weakness may also be exacerbated by administration of a muscle relaxant before or after administration of DYSPORT.

Use in Specific Populations

Pregnancy: There are no adequate and well-controlled clinical studies with DYSPORT in pregnant women. DYSPORT should only be used during pregnancy if the potential benefit justifies the potential risk to the fetus. DYSPORT produced errinose-fetal toxicity in relation to maternal toxicity when given to pregnant rats and rabbits at doses lower than or similar to the maximum recommended human dose (MRHD) of 1000 units on a body weight (Units/kg) basis.

Lactation: There are no data on the presence of DYSPORT in human or animal milk. The effects on the nursing infant, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for DYSPORT and any potential adverse effects on the breastfed infant from DYSPORT or from the underlying maternal condition.

Females and Males of Reproductive Potential: Infertility (Female) In rats, DYSPORT produced adverse effects on mating behavior and fertility.

Pediatric Use
Cervical Dystonia: Safety and effectiveness of DYSPORT in patients under 18 years of age have not been established.

Lower Limb Spasticity in Pediatric Patients: The safety and effectiveness of DYSPORT in patients under 18 years of age have not been established.

Geriatric Use
Cervical Dystonia: There were insufficient numbers of patients aged 65 years and over in the clinical studies to determine whether they respond differently than younger patients. In general, elderly patients should be observed to evaluate their tolerability of DYSPORT, due to the greater frequency of concomitant disease and other drug therapy.

Adult Spasticity
Upper Limb Spasticity: Of the total number of subjects in placebo-controlled clinical studies of DYSPORT, 30% were ≥65 years of age, while 8% were ≥75 years of age. No overall differences in safety or effectiveness were observed between those age groups and younger age groups. Other reported clinical experience has not identified differences in responses between the elderly and younger age groups.

Lower Limb Spasticity: Of the total number of subjects in placebo controlled clinical studies of DYSPORT, 16% (n = 115) were ≥65, while 3% (n = 25) were ≥75. Subjects aged ≥65 who were treated with DYSPORT reported a greater percentage of adverse reactions as compared to younger subjects (40% vs. 39%). Fall and asthenic were observed with greater frequency in older subjects, as compared to those younger (10% vs. 6% and 4% vs. 2%, respectively).

OVERDOSAGE: Excessive doses of DYSPORT may be expected to produce neuromuscular weakness with a variety of symptoms. Respiratory support may be required when excessive doses cause paralysis of respiratory muscles. In the event of overdose, the physician should be notified immediately. Four to six times the dose of normal botulinum toxin may be required for botulinum toxin-induced effects already apparent at the time of administration. In the event of suspected or actual cases of botulinum toxin poisoning, please contact your local or state Health Department to process a request for antidote through the CDC. If you do not receive a response within 30 minutes, please contact the CDC directly at 770-488-7100. More information can be obtained at http://www.cdc.gov/nidod/strp/drug-service.html.


Distributed by: Ipsen Biopharmaceuticals Inc., Besseker Ridge, NJ 07620 and Gademira Laboratories, L.P., Fort Worth, TX 76177 USA.


DYSPORT® (abobotulinumtoxinA) for injection, for intramuscular use 300- and 500-unit kits. DYSPORT is a registered trademark of Ipsen Biopharmaceuticals Inc.

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PRESIDENTIAL GUEST LECTURESHIP
Amie Shao, MA

Ms. Shao directs MASS Design Group's research work, with a particular focus on health infrastructure planning and evaluation. She coordinated the production of National Health Infrastructure Standards for the Liberian Ministry of Health; has been involved in the planning and assessment of healthcare facilities in Africa, Haiti, and the United States.

Amie has worked on projects in collaboration with Cincinnati Children’s Hospital, studying the specific needs of mobility and sensory-impaired children with Cerebral Palsy; Northern Westchester Hospital in New York, focusing on how to rethink and update an aging health facility for improved care delivery and safety; and more recently with Ariadne Labs on the Impact of Design on Clinical Care in Childbirth.

In addition to guiding community engagement and impact assessment for MASS's built projects, she has also directed a range of research initiatives funded by the Robert Wood Johnson Foundation, the Academy of Architecture for Health Foundation, The Atlantic Philanthropies, and the S. D. Bechtel Jr. Foundation, aimed at understanding the impact of the built environment on individual and community health, and creating tools to inform and guide designers, administrators, and policymakers.

GAYLE G. ARNOLD LECTURESHIP
The Eating and Drinking Ability Classification System (EDACS): Purpose and Potential
Diane Sellers, PhD, MA, BA, MRCSLT

Dr. Sellers has worked as a speech and language therapist for more than thirty years in a variety of settings, with a particular interest in working with children and young people with neurodisability. She has worked at Chailey Clinical for the last 17 years, with specialist responsibility for the assessment, treatment and management of eating and drinking difficulties. Dr. Sellers was the chief investigator for the research project to develop the Eating and Drinking Ability Classification System (EDACS) for people with cerebral palsy. The study received funding for three years from the National Institute for Health Research. She completed her PhD in March 2014 based on the research linked to EDACS. Dr. Sellers is a member of the British Academy of Childhood Disability Strategic Research Group and the UK Paediatric Dysphagia Clinical Excellence Network. She continues to lead research activity associated with EDACS alongside her clinical work.

PRESIDENTIAL GUEST LECTURESHIP
Transformative Action - by Design
Kelly Mrklas, MSc, PhD Candidate

Kelly Mrklas is a KT Implementation Scientist, Strategic Clinical Networks™ with the System Innovation and Programs portfolio at Alberta Health Services. Ms. Mrklas supports the design, execution, evaluation, and sustainment of evidence-based practice change in research and clinical initiatives across Alberta. She provides design advice to clinicians, researchers, decision-and policy makers and health care leaders and staff on implementation, knowledge synthesis, integrated KT and dissemination. Ms. Mrklas is sought nationally for her expertise in developing academic KT strategies for clinical programs, research grants, and clinical research and implementation initiatives as a co-investigator, collaborator and knowledge user.

Since recruitment to AHS in 2014, Ms. Mrklas has conducted more than 230 consults, given over 75 presentations, and has collaborated on more than 55 grant submissions. She is currently a named investigator/collaborator/knowledge user on 23 major research initiatives totaling $21.5M. She has been involved in knowledge translation science and practice since 2005, holding previous roles as the National KT Coordinator for the Canadian Child Health Clinician Scientist Program (CCHCSP) (2014-2017), the Calgary Site Manager for Knowledge Translation Canada: A National Research Network and Strategic Training Initiative in Health Research, and KT Project Manager at the University of Calgary (2008-2014), and KT Unit Implementation Manager and Health Research Planning Consultant (Calgary Health Region) (2005-2008).

NIH UPDATE
Ralph Nitkin, PhD

Dr. Ralph Nitkin is the Deputy Director for the National Center for Medical Rehabilitation Research (NCMRR), which is located within the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) at the NIH. He received his undergraduate and Master’s degrees from the Massachusetts Institute of Technology in the area of biological sciences, and his PhD from the University of California, San Diego in cellular neurobiology. His postdoctoral studies at Stanford University and later work as an assistant professor at Rutgers University focused on the cellular and molecular basis of nerve-muscle synapse formation. For the past 28 years, he has worked as a science administrator at the NICHD, first in the area of mental retardation and developmental disabilities and for the last 18 years in the area of medical rehabilitation.

Dr. Nitkin has been heavily involved in the formation of the rehabilitation research infrastructure networks (www.NCMRR.ORG), the annual rehabilitation grant-writing workshop (formerly ERRIS, currently called TGRIR), and special career-development networks for physiatrists, for physical/occupational therapists, and more recently for rehabilitation engineers. He has helped promote NIH research initiatives in such diverse areas as genomic factors that affect rehabilitation outcomes, promotion of exercise and diet in children with disabilities, clinical trial design in rehabilitation, technologies for...
healthy independent living, and research workforce diversity. He looks forward to continuing to work with rehabilitation researchers as well as those from allied fields.

MAC KEITH PRESS BASIC SCIENCE LECTURESHIP
Genetics of Premature Birth
Louis J. Muglia, MD, PhD
Dr. Muglia is Vice Chair for Research at Cincinnati Children’s Research Foundation, Director of the Division of Human Genetics, Co-Director of the Perinatal Institute and Director of the Center for Prevention of Preterm Birth at Cincinnati Children’s Hospital Medical Center, and Professor of Pediatrics at the University of Cincinnati College of Medicine. In addition, he serves as Principal Coordinating Investigator of the March of Dimes Prematurity Research Center Ohio Collaborative. The goal of the Muglia laboratory is to understand the molecular timing machinery comprising the biological clock that determines the timing for birth to prevent or better treat human preterm labor and delivery utilizing genetic and comparative genomic approaches.

Among Dr. Muglia’s achievements are more than 240 publications and many awards, including the Society of Pediatric Research Young Investigator Award, and election to the American Society for Clinical Investigation and Association of American Physicians. In 2010, Dr. Muglia was elected to Fellow in the American Association for the Advancement of Science. In 2013, Dr. Muglia was elected to membership in the National Academy of Medicine.

Dr. Muglia earned his Doctor of Medicine (1988) and Doctor of Philosophy (1986) degrees from the University of Chicago. He received a Bachelor of Science degree in biophysics from the University of Michigan in 1981.

POINT, COUNTER-POINT LECTURESHIP
Is It Genetic, Or Is It CP? What’s the Debate?
Peter L. Rosenbaum MD, FRCP(C) vs Michael Kruer, MD
Dr. Rosenbaum joined the faculty of McMaster University in July 1973 and has been a Professor of Pediatrics since 1984. He held an inaugural Tier 1 Canada Research Chairs (2001- 2014). In 1989, Peter co-founded the award-winning CanChild Centre for Childhood Disability Research, a health system-linked research unit now recognized world-wide for its research and dissemination activities.

Peter has held more than 80 peer-reviewed research grants and is a contributing author to over 350 peer-reviewed journal articles and book chapters. He has been an invited lecturer and keynote speaker in 30 countries. He co-authored Cerebral Palsy: From Diagnosis to Adult Life (2012), and co-edited Life Quality Outcomes of Children and Young Adults with Neurological and Developmental Conditions (2013) with Dr. Gabriel Ronen. In 2016, he and colleagues published a book on ethical dilemmas in developmental medicine, and as of 2018, they have a book in press on the WHO’s International Classification of Functioning, Disability and Health.

Dr. Rosenbaum has worked with almost 80 graduate students, and has been a graduate supervisor or committee member at the Universities of Oxford, Utrecht, Witwatersrand, and Toronto in addition to McMaster. From 2012-14, he was a consultant to UNICEF’s Expert Consultation on the Collection of Data on Children with Disabilities. His awards include the Ross Award from the Canadian Pediatric Society (2000); an Honorary Doctor of Science degree, Université Laval (2005); the AACPDM’s first Mentorship Award (2007) and its Lifetime Achievement Award (2014). In 2015, he received the inaugural Holland Bioview Medal of Excellence for “outstanding achievement and leadership in making positive global advancements in the field of childhood disabilities.” In October 2017, he was honoured by the University of Haifa with the university’s Carmel Award of Merit in recognition of his lifetime achievements in childhood disabilities research. In May 2018, he received the Fondation Paralysie Cérébral/Fondation Motrice Prize at the 30th annual meeting of the European Academy of Childhood Disability.

Michael Kruer, MD
Michael Kruer, MD, currently works as a physician scientist at Phoenix Children’s Hospital. Kruer became passionate about movement disorders and rare disease while trying to help families find answers and hope. Those experiences led Kruer to combine his clinical interests with a translational laboratory research program. He is currently the director of the Pediatric Movement Disorders Center and the Program in Neurogenetics & Undiagnosed Neurological Diseases at Phoenix Children’s Hospital. He is also the principal investigator for the Cerebral Palsy Genetic Research Network (CPGRN), a nonprofit worldwide collaborative seeking to understand the genetic basis of CP in order to help develop better diagnostics and treatments.

PRESEIDENTIAL GUEST LECTURESHIP
Making Digital Voice Personal to Foster Meaningful Social Connection
Rupal Patel, PhD, CCC-SLP
Dr. Patel is founder and chief executive officer of VocaliD, a speech technology company that creates custom voices for text-to-speech applications, leveraging its crowd sourced Human Voicebank. VocaliD’s award-winning technology has been featured on TED and NPR and in leading news and technology outlets such as The Wall Street Journal, Wired, Bloomberg, and Buzzfeed. Dr. Patel is currently on leave from Northeastern University where she is a tenured professor in the College of Computer and Information Science and the Department of Communication Sciences and Disorders.

Her research focuses on speech motor control in healthy talkers and those with neuromotor speech impairment; she applies this empirical evidence to the design of technologies that enable, enrich, and enhance communication. To address these interdisciplinary topics, she founded and directs the Communication Analysis and Design Laboratory, the Center of Speech Science and Technology, and the doctoral program in Personal Health Informatics. She has 60 peer-reviewed journal articles, has presented at several hundred national and international conferences, and has garnered over $5M in research funding from the National Institutes of Health.
the National Science Foundation and private foundations. Dr. Patel also holds appointments in the Harvard/MIT Speech and Hearing Biosciences and Technology program, the Department of Psychiatry at University of Massachusetts, and Haskins Laboratory at Yale University. She earned her bachelor’s degree from the University of Calgary, her master’s and PhD from the University of Toronto, and she completed her post-doctoral training at MIT. Dr. Patel is a Fellow of the second class of the Health Innovators Fellowship and a member of the Aspen Global Leadership Network.

CHAMBERS FAMILY LIFESPAN LECTURESHIP-SIBLING PANEL
Reid Chambers, DO, Eliana Danner, Nadjah Bray, Ervin Owen, Hillary Prather

LIFETIME ACHIEVEMENT AWARD RECIPIENT
2018 Winner: Deborah Gaebler-Spira, MD

The AACPDM Lifetime Achievement Award is specifically selected by the First Vice President. The recipient of this award has, during their lifetime, made creative contributions of outstanding significance to the field of medicine and for the benefit of patients with cerebral palsy and other childhood-onset disabilities.

Dr. Deborah Gaebler-Spira completed a Pediatric residency at the University of Chicago, then pursued a residency in Physical Medicine and Rehabilitation at the Shirley Ryan Ability Lab (formerly Rehabilitation Institute of Chicago). She is board certified in Pediatrics, Physical Medicine and Rehabilitation and Pediatric Rehabilitation Medicine. She has been with the Shirley Ryan Ability Lab for more than 25 years and affiliated with Northwestern Memorial Hospital and Ann and Robert H. Lurie Children’s Hospital. She is a Professor of Physical Medicine and Rehabilitation and Pediatrics at Northwestern Memorial Feinberg School of Medicine. Her primary clinical work is with children with cerebral palsy and spasticity management. She is past president of the American Academy of Cerebral Palsy and Developmental Medicine. Her research interests have been in management of spasticity and have obtained United Cerebral Palsy grants to evaluate the impact of Botulinum Toxins on the child as well as dance for motor learning and the child with cerebral palsy. She has collaborated with the Shirley Ryan Ability Lab Bioengineers on measurement of Hypertonia and worked with the National Institute on Disability and Rehabilitation Research, Rehabilitation Engineering Research Centers grant “Technologies for Children with Orthopedic Disabilities.” She is also the PI for Shirley Ryan Ability Lab in the Advanced Robotics Therapy Integrated Centers (ARTIC) network and as well as working with Toronto and Vancouver sites on a RCT and the use of the Lokomat.

CATHLEEN LYLE MURRAY AWARD RECIPIENT
2018 Winner: Pete Zeidner

The Cathleen Lyle Murray Foundation Award recipient is selected on the basis of their impact on society through their humanitarian efforts to enhance the lives of persons with severe multiple disabilities. The recipient demonstrates an effective and unique humanitarian approach through advocacy, legislation, clinical services, life experiences, etc., that can be shared with the AACPDM to help promote better understanding of and advancement in society of persons with disabilities.

Determined to show that handicaps are not always limiting, Pete Zeidner, significantly impacted by cerebral palsy, rode a recumbent bicycle with joy and purpose. Mr. Zeidner started the Pedal-with-Pete Foundation (PwP) in 1993 with the goal to raise $1,000,000 for cerebral palsy (CP) research. Under his leadership, the goal was reached in 2015. Pedal-with-Pete is now at $1.2 million and counting for funding CP research. Mr. Zeidner’s perseverance and that of many others with CP inspire PwP’s efforts!

Background and History: In the early 1980s a young man came to Kent State University to study marketing. He came in a wheelchair with cerebral palsy. He came because by that time, KSU had established itself as an accessible campus. The young man’s name was and is Peter Zeidner, known to family and friends as Pete. Friends and family worked together to get Pete into a three wheeled recumbent bike. It was a godsend. He told his pastor that for the first time, he could keep up with his peers! It provided the impetus for an idea: Pete would ride to collect money for cerebral palsy research. The Elks Clubs of Ohio were of great help for his initial attempt. He rode 1,001 miles around the edges of Ohio and was able to collect $10,000 which was contributed to Northeast Ohio Universities College of Medicine for research there. Pete developed a grander notion: he would ride across the USA and collect $1,000,000! With that in mind, he founded Pedal-with-Pete in 1993. From 1993 to 1995, Pete worked to get the logistics in order. But, the logistics turned out to be overwhelming. It could not be made to happen. Not to be thwarted, Pete and the Pedal-with-Pete Foundation changed gears. Funds would be raised for CP research through cycling and walking events! In 1995, the first of the fundraising event was held in Kent, Ohio. It was a start and success grew with each year. Pete would ride at least part of the way with the riders each spring. Best of all, Pete found a researcher who cared about people who have CP, and was doing research to help them. Dr. Leland Albright was one of the first cerebral palsy researchers, and his work to develop the Baclofen Pump was funded partially by some of the first dollars raised by Pedal-with-Pete! In 1998, a small group in Emmetsburg, Iowa began an annual bike ride to raise funds for Pedal-with-Pete. In 1999, while participating in the Great Ohio Bicycle Adventure (GOBA) ride, tragedy struck. Pete was coming down a hill, swerved to avoid a vehicle, turned over the bike and broke vertebra C1 and C2 in his neck. It effectively grounded him. But Pete’s determination was not diminished. In 2001, Pedal-with-Pete began a highly successful ride in Columbus, Ohio. Since 2010, PwP has funded 23 research CP projects nationally and internationally! Grants are typically about $25,000 each and serve as SEED funding for a researcher exploring a new idea.

To inspire others impacted by CP, Pete completed his autobiography in 2015: It Sucks to be a Gimp: Pedaling to Freedom, and turned over the subsequent publishing and profits to Pedal-with-Pete.

DUNCAN WYETH AWARD RECIPIENT
2018 Winner: Deborah McFadden

FRED P. SAGE AWARD RECIPIENT
2018 Winner: Rachel Byrne, PT
MENTORSHIP AWARD RECIPIENT
2018 Winner: Roslyn N. Boyd, PhD, PT

CORBETT RYAN PATHWAYS PIONEER AWARD RECIPIENT
2018 Winner: David Pruitt, MD

MAC KEITH PRESS PROMISING CAREER AWARD RECIPIENT
2018 Winner: To Be Announced
Mac Keith Press sponsors this award for the best Free Paper or Scientific Poster by an author who is within four years of completion of training and commencement of current career. The award recipient must be a member of the AACPDM or have an application pending. The recipient is selected by the Awards Committee on site and awarded after the Annual Meeting.

BEST SCIENTIFIC POSTER AWARD RECIPIENT
2018 Winner: To Be Announced
Each year, AACPDM awards the Best Scientific Poster Award. The award recipient is selected as the highest rated poster from all committee member ratings.

BEST DEMONSTRATION POSTER AWARD RECIPIENTS
2018 Winner: To Be Announced
The AACPDM awards the Best Demonstration Poster Award. The award recipient is selected by popular vote during the Annual Meeting.

Scholarships
The American Academy for Cerebral Palsy and Developmental Medicine Scholarship Program supports the mission of the AACPDM to improve the health and general status of children and adults with cerebral palsy, developmental disorders and childhood acquired disabilities. The Academy seeks international members who are highly motivated, currently in clinical practice, and who are in a position which will enable them to disseminate knowledge acquired at the meeting to others in their home country once they return. Particular emphasis is placed on assisting those from areas with under supported medical systems and limited financial resources. The AACPDM also awards scholarships to students each year so that they may attend the Annual Meeting.

2018 International Scholarship Recipients
Angela I. Frank-Briggs, MD
Silvana A. Pereira, PhD
Tarek El Omar, MD
Oyebukola O. Oyinloye, BMR
Oluwasola Julius Oke, MBBS, FMCPaed
Shambhu Dutta Joshi, MBBS, MD
Shady Mahmoud, MBCCH, MSc, MRCS
Ahmet Hamdi Akgülle, MD
Gayane Gavril Zakaryan, MD
Laura Movsisyan, MD
Elida Dos Santos, PT
Sian A. Williams, PhD
Andrea Baraldi Cunha, PhD
Geovanny F. Oleas Santillan, MD, MSc
Shirley Ackerman-Lauf, BPT, MSc
Mohamed Gamal Saleh, MSc

2018 Student Scholarship Recipients
Andrea N. Burgess, B Occ Thy
Patrick G. McPhee, PhD (c)
Alicia J. Hilderley, PhD
Marloes Van Gorp, MSc
Sarah E. Reedley, BPhty (Hons)
Joanne Zhou, BS
Ishaan Swarup, MD
Shabbi O’Brien, BESS(CEP)(hons1)
Tanya Tripathi, PT
Michael Trevorrow, BS
Reem A. Albesher, MPhysio
Rashelle Hoffman, PT, DPT
Chuy Zhang
Silvia L. Pavão, PhD
Zachary Boychuck, OT, PhD(c)
Emma Lynch
Christina Sooklall, BSc
Megan Campbell
Kamaldeep Gill, MScOT
Guro Søpstad Lunde, Medical student
Rosemary Claire Roden, MD
Marisa Flavin, MD
Jacy VerMaas-Hannan, MA, OTR/L, BCP
Shona Goldsmith, BPhty(Hons1)
James E. Gehringer
Shirley Ackerman-Laufer, BPT, MSc
Mohamed Gamal Saleh, MSC

2018 OrthoPediatrics Travel Scholarship Recipients
Erika Cloodt, 1 year Master Degree
Carlee Holmes, Masters
Oluwatosin Eunice Olorunmoteni, MBBS, FWACP
Leticia Janzen, BKin
Edwin L. Portalatin, MD
Leena Zhou, MBBS, BMedSc

72nd Annual Meeting • October 9-13, 2018 • Duke Energy Convention Center • Cincinnati, Ohio
2018 Scientific Program Overview

This year’s program was developed from a submission total of 460 abstracts. All electronically submitted abstracts were independently rated by the multidisciplinary scientific program committee of 18 members (see page 6 of the program). The committee met in March 2018 to review the abstracts and finalize the program (e.g., Scientific paper or poster, instructional course/breakfast seminars). Scientific papers and posters were rated (masked to authors) on research question/objectives, design, methodology, conclusions and relative impact, relevance and importance to the care and treatment of children with childhood onset disabilities. Instructional Courses and Breakfast Seminars were rated (unmasked) on course objectives, content, presenters and level of impact, relevance and importance to conference attendees and the AACPDM membership at large. The feedback from the previous year’s evaluations are utilized in the process of creating the program with the aim of better meeting the needs of meeting attendees.

The 2018 program includes:
- 120 Scientific Papers
- 68 Scientific Posters
- 28 Demonstration Posters
- 3 Pre-Conference Sessions
- 1 All-Day Ultrasound Symposium
- 1 All-Day Orthopedic Symposium
- 46 Instructional Courses
- 41 Breakfast Seminars

Scientific Review Process

- Blinded abstracts submitted electronically
- Abstracts are scored independently by the program committee with scores submitted electronically and then tallied/averaged
- Highest scored abstracts are selected
- Program Committee meets in March to make final decisions re: scientific program planning and to ensure that the program is balanced in content.

Free Papers and Posters are rated on:
- Research Question/Objectives
- Research Design, Methodology
- Impact, Relevance & Importance

Instructional Courses and Breakfast Seminars are rated on:
- Course Objective
- Content/Presenters
- Impact, Relevance & Importance
Wednesday, October 10, 2018
8:00 am - 5:00 pm  Ultrasound Workshop
NEUROMUSCULAR ULTRASOUND: HANDS ON ULTRASOUND TRAINING COURSE FOR CHEMODENERVATION PROCEDURES
Katharine Alter, MD; Florian Heinen, MD; Sebastian Schroeder, MD; Steffen Berweck, MD; Steven Nichols, MD; Rita Ayyanger, MD; Robert Cooper, MD; Kevin Murphy, MD; Mauricio Delgado, MD; Mark Gormley, MD; Heakyung Kim, MD; Joline Brandeburg, MD
Location: Junior Ballroom D
Learning Objectives:
1. Be proficient in the basic physics and scanning techniques of ultrasound
2. Be proficient with the basics of US imaging
3. Identify clinical applications of US for procedural guidance and in Neuromuscular medicine
4. Identify key muscles in the neck, upper/lower limbs, parotid/submandibular glands. Identify sonoacoustic properties of relevant tissues and the benefits and limitations of incorporating US into clinical practice

1:00 pm - 5:00 pm  PRE-CONFERENCE SESSIONS
PC1: DESIGN AND CONDUCT OF COMPARATIVE EFFECTIVENESS TRIALS AND PRACTICE-BASED RESEARCH IN CEREBRAL PALSY
Stephanie DeLuca, PhD; Sharon Ramey, PhD; Amy Darragh, OTR, PhD; Mark Conaway, PhD; Ralph Nitkin, PhD
Location: Junior Ballroom A
Learning Objectives:
Participants will have a working understanding and vocabulary of key terms and concepts for the following:
1. The NIH Strategic Plan for CP research;
2. Comparative Effectiveness Trials and Practice-based Research Studies;
3. Some of the key statistical issues that must be addressed;
4. CDEs in CP research;
5. And potential “next steps” for follow-up among individuals and/or teams participating in the Institute.

PC2: THE COMPLEX GENESIS OF CHRONIC PAIN: THE SUMMATION OF MANY
Alexander Hoon, Jr., MD, MPH; Shenandoah Robinson, MD; Eric Levey, MD
Location: Junior Ballroom B
Learning Objectives:
1. The peripheral and central components of pain perception
2. The utility of biomarkers/advanced brain imaging in understanding the etiologic antecedents of pain
3. The possibility that early intervention may prevent/minimize the development of chronic pain
4. Approaches to pain management
PC3: Hammersmith Infant Neurological Examination Clinical Workshop
Rachel Byrne, PT; Joanna Burton; Nathalie Maitre, MD, PhD; Mary Ann Nelin, MD; Betsy Ostrander
Location: Junior Ballroom C

Learning Objectives:
At the end of the Pre-Conference Session, participants will be able to:
1. Discuss the uses and limitations of the HINE
2. Utilize optimality scores and cut-off to aid in clinical practice
3. Perform the elements of the HINE at a basic level of proficiency
4. Score HINE elements with 90% reliability

6:30 pm - 8:30 pm  Welcome Reception at the Hall of Mirrors/Hilton Netherland Plaza

Thursday, October 11, 2018
7:00 am - 8:00 am  Continental Breakfast
Location: Grand Ballroom A

7:00 am - 8:00 am  Advisor Support Program Meet & Greet Breakfast
Sponsored by Medtronic
Location: Room 206

7:00 am - 8:00 am  BREAKFAST SEMINARS 1-14

BRK01: “SEEING” POSITIONING FROM A DIFFERENT ANGLE: VISUAL CONSIDERATIONS FOR POSITIONING AND MOBILITY FOR THE PEDIATRIC PATIENT WITH CEREBRAL PALSY AND CORTICAL VISUAL IMPAIRMENT
Katherine L. Clark, MOT, OTR/L, ATP; Erin Pope, PT, MPT, ATP
Location: Room 262

Learning Objectives:
1. Demonstrate understanding of evidence supporting the role of vision in posture and mobility, and use of dynamic positioning principles to address these needs for improved function and participation.
2. Identify 10 characteristics and behaviors assessed for individuals with a diagnosis of cortical visual impairment (CVI).
3. Identify 5 barriers within the environment, or in the setup of a positioning or mobility system, which have negative implications for use of functional vision by a patient with CVI.
4. List 5 adaptations for a patient with CVI to support functional vision during mobility and daily tasks, for improved tolerance and successful use of a positioning or mobility system.

BRK02: AACPDM SPINAL FUSION CARE PATHWAY: EVOLUTION, DIRECTION, AND USE
Jay G. Berry, MD, MPH; Gina Rempel, MD, FRCPC, FAAP; Laurie Glader, MD; Mohan Belthur, MD, FRCSC, FRCS (Tr & Orth)
Location: Room 236

Learning Objectives:
1. Describe key processes in the spinal fusion care pathway
2. State the evidence behind those processes
3. Identify gaps in existing vs. ideal perioperative care
4. Identify opportunities for care pathway optimization and use

BRK03: ADAPTIVE TRIATHLONS FOR ATHLETES WITH CEREBRAL PALSY
Jennifer E. Miros, MPT
Location: Room 230

Learning Objectives:
1. Upon completion, participants will be able to demonstrate an understanding of how to adapt a triathlon for individuals with CP or other COD.
2. Upon completion, participants will be able to describe resources and equipment needed to assist with making a triathlon course accessible to individuals with CP or other COD.
3. Upon completion, participants will be able to demonstrate an understanding of how to identify community stakeholders to participate in planning and funding of an adaptive triathlon.
4. Upon completion, participants will be able to list ways to objectively measure physical activity in participants of an adaptive triathlon.

**BRK04: AN EVIDENCE-BASED REVIEW OF PHYSICAL THERAPY INTERVENTION FOR INDIVIDUALS WHO HAVE UNDERGONE A SELECTIVE DORSAL RHIZOTOMY**

Caroline T. Colvin, DPT; Molly K. Thomas, DPT

**Location:** Room 232

**Learning Objectives:**
1. Upon completion, participant will be able to describe current practice in physical therapy management of patients following SDR
2. Upon completion, participant will be able to identify evidence-based recommendations for clinical assessments before and after SDR.
3. Upon completion, participant will be able to select evidence-based therapeutic interventions and dosing related to PT before and after SDR.
4. Upon completion, participant will be able to discuss future research needs related to physical therapy following SDR.

**BRK05: CLINICAL- AND PARENT-BASED REHABILITATION OPTIONS FOR UPPER EXTREMITY FUNCTION IN INFANTS WITH CEREBRAL PALSY**

Jill Heathcock, PT, PhD; Nathalie Maitre, MD, PhD; Sharon Ramey, PhD

**Location:** Room 233

**Learning Objectives:**
1. Discuss state of the science for effective intervention programs that target upper extremity motor development
2. Understand rehabilitation management for infants with asymmetric CP that involve parent training
3. Describe daily and high-intensity rehabilitation for infants with CP
4. Explain how different types of upper extremity assessment (clinical, behavioral, brain-based and kinematic) are used in clinical practice and research

**BRK06: GOAL ATTAINMENT SCALING: CLINICAL UTILITY AND TRAINING METHODS**

Amber Sheehan, OTR/L; Karen Harpster, PhD, OTR/L; Jennifer Angel, DPT, PhD

**Location:** Room 212

**Learning Objectives:**
1. To understand a synthesis of literature on GAS training and clinical utility to improve validity of the tool
2. To understand one facility’s attempt at training therapists to administer GAS based on best evidence
3. To understand best practice going forward in order to standardize GAS implementation
4. To discuss feasibility of best practice implementation, including strategies for aspects of training methodology that are challenging to achieve

**BRK07: ENSURING STAKEHOLDER ENGAGEMENT IN THE CREATION OF NEW DIGITAL PLATFORMS: KNOWING WHAT TOMORROW’S NEEDS ARE TODAY**

Tracy Pickar, MSW; Richard Ellenson, MBA; Peter L. Rosenbaum, MD; Rachel Byrne, PT

**Location:** Room 210

**Learning Objectives:**
1. To define the role of stakeholders in the creation of new projects.
2. To understand how to present scientific information in layman’s terms.
3. To understand how to communicate your research and make it accessible to a wide stakeholder audience.
4. To understand today’s digital landscape to ensure that accessibility needs for a broad range of stakeholders are met.

**BRK08: HEALTHY RELATIONSHIPS, SEXUALITY, AND TRANSITION: IMPORTANT ISSUES TO ADDRESS IN HELPING YOUTH WITH CHILDHOOD-ONSET CONDITIONS IMPROVE THEIR QUALITY OF LIFE IN THE JOURNEY TO ADULTHOOD**

Susan C. Labhard, MSN, RN

**Location:** Room 203

**Learning Objectives:**
1. Elevate understanding of the importance of friends, healthy relationships, and sexuality for young adults with childhood-onset conditions for quality of life.
2. Learn how to apply best practice guidelines for teaching youth and emerging adults with developmental and physical disabilities about the importance of social success in developing healthy relationships.
3. Participants to learn that dealing with the sexual consequences of disabilities can offer unique challenges, but need not be an obstacle to all, for sexual fulfillment.
4. Explore options to traditional sexual expression, obtain resources for future reference, and encourage the inclusion and attention to sexuality as a topic in health care and transition planning.

**BRK09: IMPROVEMENTS IN GAIT AND POSTURE: NOVEL CLINICAL RESULTS AND ROBOTIC TECHNOLOGIES**

Sunil K. Agrawal, PhD; Joseph Dutkowsky, MD; Andrew Gordon, PhD; Heakyung Kim, MD

**Location:** Room 263

**Learning Objectives:**
1. To learn how children with cerebral palsy having crouch can improve walking by training with downwards forces applied on the pelvis.
2. To learn how children with poor posture during seating can strengthen and improve their posture through training.
3. To learn how force and displacement characteristics can be evaluated using a robotic spine exoskeleton in the treatment of scoliosis.
4. To learn how to characterize and strengthen the neck muscles of children with poor head control.
BRK10: PERIOPERATIVE ANESTHESIA/SURGICAL COLLABORATION: WORKING TOGETHER TO MAXIMIZE OUTCOMES AND ENHANCE THE PATIENT/FAMILY SURGICAL EXPERIENCE
Peter Lichtenthal, MD; Paul Samuels, MD; Francisco Valencia, MD
Location: Room 209
Learning Objectives:
1. Plea for team approach for children with special needs
2. Have a better understanding of co-morbidities and their affect on anesthetic management
3. Identify the factors that can be used to diminish perioperative complications
4. Promote the use of regional blocks to diminish the post-operative need for narcotics and enhance the patient and family surgical experience

BRK11: RECENT PRACTICE CHANGING PUBLICATIONS FOR THE PEDIATRIC COMPLEX CARE PROVIDER
Kristina Malik, MD; Rishi Agrawal, MD, MPH; John Pelegano, MD
Location: Room 211
Learning Objectives:
1. Discuss current topics and advances in the care of children with medical complexity.
2. Understand the multidisciplinary implication for each recent development.
3. Integrate new findings into daily practice.
4. Develop methods to keep up to date with the complex care literature.

BRK12: RESEARCH CP: RESULTS FROM A COMMUNITY-BASED RESEARCH PRIORITIZATION PROJECT
Paul Gross, BA; Amy F. Bailes, PT, PhD, PCS; Michele Shusterman, BA; Ed Hurvitz, MD
Location: Room 202
Learning Objectives:
1. Describe the key reasons and benefits for creating a patient-centered research agenda for cerebral palsy.
2. Describe the key steps that were used to create the patient-centered research agenda for cerebral palsy.
3. List the top three patient-centered research priorities.
4. Understand how to tap into the research and community resources that were involved in this process to pursue patient-centered research questions.

BRK13: THE DCD ADVOCACY TOOLKIT: SUPPORTING DIAGNOSIS AND INTERVENTION FOR CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER
Jill Zwicker, OT, PhD
Location: Room 260/261
Learning Objectives:
1. Upon completion, participant will be able to understand the current evidence for assessment and treatment of children with DCD
2. Upon completion, participant will be able to access and use the contents of the DCD Advocacy Toolkit
3. Upon completion, participant will be able to reflect on how the toolkit can be applied in their practice
4. Upon completion, the participant will be able to identify potential challenges to implementation of the toolkit in their practice setting and brainstorm strategies and solutions to help mitigate these barriers

BRK14: THE NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE (NINDS) UPDATES TO THE CEREBRAL PALSY COMMON DATA ELEMENTS VERSION 1.0 RECOMMENDATIONS
Joline E. Brandenburg, MD; Robin Feldman, BS, MBA; Jay Esterlitz, MS
Location: Room 237/238
Learning Objectives:
1. Describe the process of revising 1.0 CP CDEs.
2. Define the role of the CP CDE Oversight Committee.
3. Demonstrate how to use CP CDEs and case report forms in a research study.
PROGRAM & EVENTS

THURSDAY, OCTOBER 11

A3: SCOLIOSIS SEVERITY IN CEREBRAL PALSY PATIENTS IS ASSOCIATED WITH INCREASED NEED FOR RESPIRATORY ASSISTIVE AIDS
Christopher DeAllie, BS; Megan Campbell, BA; Hiroko Matsumoto, MA, PhDc; Benjamin Roye, MD, MPH; Michael Vitale, MD, MPH; David Roye, MD
11:06 am – 11:13 am

A4: PECICLE SCREWS VERSUS SUBLAMINAR WIRES IN POSTERIOR SPINAL FUSION IN PATIENTS WITH CEREBRAL PALSY: A MATCHED COHORT ANALYSIS
M. Wade Shrader, MD; Miranda Falk, PA-C; Mohan Belthur, MD, FRCS (Tr & Orth); William Wood, MD
11:22 am – 11:29 am

A5: SINGLE VERSUS TWO INCISION TECHNIQUE FOR TREATMENT OF NEUROMUSCULAR HIP DYSPLASIA
Meghan Imrie, MD; Sara Van Nortwick, MD; Malcolm Debaun, MD; Lawrence Rinsky, MD; James Gamble, MD
11:46 am – 11:53 am

A6: INTER-RATER RELIABILITY OF THE IDENTIFICATION OF A ‘GOTHIC ARCH’ IN THE ACETABULUM OF CHILDREN WITH CEREBRAL PALSY
Stacey Miller, BSc(PT), MRSc; Eva Habib, BSc; Emily Schaeffer, PhD; Brian Yang, BA; Benjamin Shore, MD, MPH; FRCS; Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi)
11:54 am – 12:01 pm

A7: EFFECT OF INTRAVENOUS AMINOCAPROIC ACID ON BLOOD LOSS AND TRANSFUSION REQUIREMENTS AFTER BILATERAL VARUS ROTATIONAL OSTEOTOMY (VRO): A PROSPECTIVE, DOUBLE-BLIND, RANDOMIZED CONTROLLED TRIAL
Ishaan Swarup, MD; Joseph Nguyen, MPH; Chris Edmonds, MD; Emily Dodwell, MD, MPH; David Scher, MD
12:02 pm – 12:09 pm

A8: COMBINED UNILATERAL FEMORAL AND PELVIC OSTEOTOMIES EXHIBIT SIMILAR BLOOD LOSS TO UNILATERAL FEMORAL OSTEOTOMY ALONE IN CHILDREN WITH CEREBRAL PALSY
Peter Noback, BS; Hiroko Matsumoto, MA, PhDc; Katherine Rosenwasser, MD; Megan Campbell, BA; Fay Callejo, MPH; Benjamin Roye, MD, MPH; David Roye, MD; Joshua Hyman, MD
12:10 pm – 12:17 pm

A9: IMPACT OF TRANEXAMIC ACID USE ON BLOOD LOSS AND TRANSFUSION RATES FOLLOWING VDRO IN CHILDREN WITH CEREBRAL PALSY
Alexander Nazareth, MS; Stephen Shymon, MD; Rachel Goldstein, MD, MPH; Lydia András, MD; Robert Kay, MD
12:18 pm – 12:25 pm

A10: THE EFFECT OF SELECTIVE DORSAL RHIZOTOMY ON HIP DISPLACEMENT IN CHILDREN WITH CEREBRAL PALSY: A LONG TERM FOLLOW UP STUDY
Stacey Miller, BSc(PT), MRSc; Maria Juricic, MRSc; Emily Schaeffer, PhD; Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi)
12:26 pm – 12:33 pm

Free Papers B: Epidemiology, Surveillance and International Health
Location: Junior Ballroom B

10:50 am - 10:57 am
B1: MICROCEPHALY IN CHILDREN WITH CEREBRAL PALSY: A POPULATION CASE-CONTROL STUDY
Shona Goldsmith, BPhyl(Hons1); Sarah McIntyre, PhD, MPS, BAppSc(OT); Michele Hansen, PhD, MPH, Bsc; Nadia Badawi, PhD; Eve Blair, PhD
10:58 am – 11:05 am
Dana McGuire, PhD; Deborah Christensen, PhD; Marshalyyn Yeargin-Alsopp, MD; Lin Hui Tian, MD, MS; Nicole Dowling, PhD
11:06 am – 11:13 am

B3: A COMPARISON OF THE DEVELOPMENTAL PROFILES OF INDIVIDUALS WITH HEMIPLEGIC CEREBRAL PALSY ASSOCIATED WITH MIDDLE CEREBRAL ARTERY AND PERIVENTRICULAR VENOUS INFARCTIONS
Darcy Fehlings, MD; Pradeep Krishnan, MD; Renee-Marie Ragguett, HBSc; Craig Campbell, MD; Jan Willem Gorter, MD, PhD; Carolyn Hunt, BSc, MD, FRCP (C); Anne Kawamura, MD; Marie Kim, MD, MSC, FRCP; Anna McCormick, MD FRCP; Ronit Mesterman, MD; Dawa Samdup, FRCP; Ilana Walters, BA&Sc, MSc; Gabrielle deVeber, MD
11:14 am – 11:21 am

B4: REPORT FROM THE CEREBRAL PALSY RESEARCH NETWORK
Garey Noritz, MD; Jacob Kean, PhD; Kristie Bjornson, PhD, PT, MS; Paul Gross, BA
11:22 am – 11:29 am

B5: RELIABILITY AND EFFICIENCY OF THREE METHODS OF CALCULATING MIGRATION PERCENTAGE ON RADIOGRAPHS FOR HIP SURVEILLANCE IN CHILDREN WITH CEREBRAL PALSY
Vedant Kulkarni, MD; Jon Davids, MD; Aaron Boyles, DO; Nina Cung, BA, BS; Anita Bagley, PhD, MPH
11:46 am – 11:53 am

B6: MYELOMENINGOCELE IN SWEDEN: SURVIVAL AND CAUSES OF DEATH IN TWO COHORTS OVER TEN-YEARS
Lena Westbom, PhD; Maria Forsgren, MD; Ann Alriksson-Schmidt, PhD; Annika Lundkvist Josenby, PhD; Nils Ståhl, PhD
11:54 am – 12:01 pm

B7: COMMUNITY BASED KEY INFORMANTS METHOD (KIM) SURVEY OF CHILDREN WITH CEREBRAL PALSY IN RURAL SUMBA ISLAND OF INDONESIA
Gulam Khandaker, PhD; Tasneem Karim, MPH; Denny Hardianto, MPH; Johurul Islam, MPH; Nadia Badawi, PhD; Mohammad Muhi, PhD
12:02 pm – 12:09 pm

B8: MORTALITY AMONG CHILDREN WITH CEREBRAL PALSY (CP) IN RURAL BANGLADESH: RESULTS FROM THE BANGLADESH CP REGISTER (BCPR)
Gulam Khandaker, PhD; Israt Jahan, MPM; Manik Das, MBBS; Tasneem Karim, MPH; Hayley Smithers-Sheedy, PhD, MPH, BAppSc(SpPath); Nadia Badawi, PhD; Mohammad Muhi, PhD
12:10 pm – 12:17 pm

**B9: HEALTH-RELATED QUALITY OF LIFE OF ADOLESCENTS WITH CEREBRAL PALSY IN RURAL BANGLADESH**
Rosalie Power, MPH; Mohammad Muhit, PhD; Eamin Heanoy, MSc; Tasneem Karim, MPH; Nadia Badawi, PhD; Rahena Akhter, PhD; Gulam Khandaker, PhD

12:18 pm – 12:25 pm

**B10: DEPRESSION, ANXIETY, AND STRESS AMONG CAREGIVERS OF ADOLESCENTS WITH CEREBRAL PALSY IN RURAL BANGLADESH**
Rosalie Power, MPH; Mohammad Muhit, PhD; Eamin Heanoy, MSc; Tasneem Karim, MPH; Nadia Badawi, PhD; Rahena Akhter, PhD; Gulam Khandaker, PhD

**Free Papers C: Neuroimaging**
Location: Junior Ballroom C

10:50 am – 10:57 am

**C1: CHILDREN WITH CEREBRAL PALSY DISPLAY ABNORMAL SOMATOSENSORY CORTICAL ACTIVITY DURING A HAPTIC EXPLORATION TASK**
Max Kurz, PhD; Bowman Groff, BS; Nathan Coolidge; Alex Wiesman, MS; Tony Wilson, PhD

10:58 am – 11:05 am

**C2: MATURATION OF SENSORY AND MOTOR TRACTS IN CHILDREN WITH CONGENITAL HEMIPLEGIA USING DIFFUSION SENSORIMAGING**
Christos Papadelis, PhD; Harper Kaye, BA; Donna Nimec, MD; Kush Kapur, PhD; Henry A. Feldman, PhD; Brian Snyder, MD, PhD; P Ellen Grant, MD; Alexander Rotenberg, MD, PhD

11:06 am – 11:13 am

**C3: REORGANIZATION OF ACTION OBSERVATION NETWORK IN CHILDREN WITH UNILATERAL CEREBRAL PALSY: AN FMRI STUDY**
Giuseppina Sgandurra, MD, PhD; Laura Biagi; Andrea Guzzetta; Leonardo Fogassi; Adriano Ferrari; Giovanni Cioni, MD; Michela Tosetti

11:14 am – 11:21 am

**C4: VISUAL MOTION PERCEPTION IS ABERRANT IN CHILDREN WITH CEREBRAL PALSY**
Jacy VerMaas-Hannan, BA; Tony Wilson, PhD; Max Kurz, PhD

11:22 am – 11:29 am

**C5: RELATIONSHIP BETWEEN SENSORIMOTOR TRACTS AND SENSORIMOTOR FUNCTION IN CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY**
Claudio Ferre, PhD; Lindsey Soles, BS; Andrew Gordon, PhD; Kathleen Friel, PhD

11:46 am – 11:53 am

**C6: STRUCTURAL BRAIN DAMAGE AND VISUAL FUNCTION IN CHILDREN WITH PERIVENTRICULAR LEUKOMALACIA**
Francesca Tinelli, PhD; Simona Fiori, PhD, MD; Giulia Purpura, PhD; Rosa Pasquariello, MD; Andrea Guzzetta, MD, PhD; Giovanni Cioni, MD

11:54 am – 12:01 pm

**C7: COMPARING BRAIN ACTIVITY FOR HAND AND FOOT TASKS IN BILATERAL AND UNILATERAL CEREBRAL PALSY WITH TYPICAL DEVELOPMENT USING FUNCTIONAL NEAR INFRARED SPECTROSCOPY**
Theresa Sukai-Moulton, PhD, DPT; Ana Carolina de Campos, PT PhD; Katharine Alter, MD; Theodore Huppert, PhD; Diane Damiano, PhD

12:02 pm – 12:09 pm

**C8: MULTIMODAL NEUROPHYSIOLOGIC AND NEUROANATOMIC ASSESSMENT OF BRAIN CONNECTIVITY IN PEDIATRIC STROKE**
Samuel Nemanich, PhD; Tonya Rich, PhD; Bryon Mueller, PhD; Alex Opitz, PhD; Bernadette Gillick, PhD

12:10 pm – 12:17 pm

**C9: BRAIN METABOLITE BIOMARKERS AT TERM-EQUIVALENT AGE FOR EARLY PREDICTION OF MOTOR DEVELOPMENT AT 2 YEARS CORRECTED AGE IN VERY PRETERM INFANTS.**
Venkata Sita Priyanka Illapani, MS; Karen Harpster, PhD, OTR/L; Nehal Parikh, DO, MS

12:18 pm – 12:25 pm

**C10: MAGNETIC RESONANCE IMAGING OF THE SPINE IN IDIOPATHIC TOE WALKING- IS THERE A ROLE?**
Colliin May, MD, MPH; Clarissa Cheng, BS; Brian Yang, BA; Susan Mahan, MD, MPH; Samantha Spencer, MD; James Kasser, MD; Benjamin Shore, MD, MPH, FRCSC

**Free Papers D: Therapy**
Location: Junior Ballroom D

10:50 am – 10:57 am

**D1: CHILD AND FAMILY CHARACTERISTICS AND RECEIPT OF CORE EARLY INTERVENTION SERVICES**
Beth McManus, PT, MPH, ScD; Zachary Richardson, MA; Beth Scully; Jodi Dooling-Litfin; Natalie Murphy, MA; Mary Khetani, OT, ScD

10:58 am – 11:05 am

**D2: DISPARITIES IN EARLY INTERVENTION REFERRAL AND ACCESS AMONG A LOW-INCOME SAFETY NET POPULATION: A COHORT STUDY USING 2013-2015 LINKED ADMINISTRATIVE DATA**
Beth McManus, PT, MPH, ScD; Zachary Richardson, MA; Margaret Schenkenman, PhD; Elaine Morrato, DrPH

11:06 am – 11:13 am

**D3: MOTOR CORtical PLASTICITY FOLLOWING GROSS motor TRAINING FOR CHILDREN WITH CEREBRAL PALSY**
Alicia Hilderley, MSc, PhD; Darcy Fehlings, MD; Margot Taylor, PhD; Joyce L. Chen, PhD; F. Virginia Wright, PhD, PT

11:14 am – 11:21 am

**D4: CHILDREN WITH CEREBRAL PALSY THAT HAVE A BDNF VAL66MET POLYMORPHISM NEED A LONGER MOTOR PLANNING PERIOD TO IMPROVE THEIR MOTOR ACTIONS**
Michael Trevarrow, BS; Shelley Smith, PhD; Jennifer Sanmann, PhD; Max Kurz, PhD

11:22 am – 11:29 am

**D5: IMPROVEMENTS IN MOTOR AND COGNITIVE DEVELOPMENT FOLLOWING SITTING TOGETHER AND REACHING TO_PLAY (START_PLAY): SINGLE SUBJECT MULTIPLE BASELINE STUDY OF TWO CHILDREN**
Stacey Dusing, PhD; Regina Harbourne, PhD; Michele Lobo, PT, PhD; Sally McCoy, PhD; James Bovaird, PhD
11:46 am – 11:53 am
**D6: PEDIATRIC DEEP BRAIN STIMULATION: MICROELECTRODE VERSUS IMAGE GUIDED OPTIONS**
Warren Marks, MD; John Honeycutt, MD; Stephanie Acord, MD; Angela Pomykal, MSPT; MaryAnn Reed, RN, MSN, CNS; Laurie Bailey, PhD

11:54 am – 12:01 pm
**D7: EFFECTS OF INSPIRATORY MUSCLE TRAINING IN CHILDREN WITH CEREBRAL PALSY: A RANDOMIZED CONTROLLED STUDY**
Muserrefe Keles, PhD; Bulent Elbaskan, PhD; Umut Apaydin, MSc; Zeynep Aribas, PhD; Arzu Bakirtas, PhD; Nurdan Kokturk, PhD

12:02 pm – 12:09 pm
**D8: COMPARISON OF RESEARCH AND CLINICAL REHABILITATION ROBOTICS FOR INDIVIDUALS WITH CEREBRAL PALSY**
Crystal Massie, PhD, OTR; Ryan Cardinal, DPT; Peter Altenburger, PhD, PT

12:10 pm – 12:17 pm
**D9: EFFECTS OF A DUAL TASK ON POSTURAL CONTROL DURING SIT-TO-STAND MOVEMENT IN CHILDREN WITH DOWN SYNDROME**
Silvia Pavão, PT; Gisele Pena, MSc; Maria Fernanda Oliveira, MSc; Ana Carolina de Campos, PT, PhD; Neici Adriana Cicuto Ferreira Rocha, PT, PhD

12:18 pm – 12:25 pm
**D10: FEASIBILITY OF DELIVERING AN INTENSIVE BIMANUAL INTERVENTION TO CHILDREN WHO HAD UNDERGONE HEMISPHERECTOMY SURGERY**
Maxime Robert, PhD; Claudio Ferre, PhD; Karen Chin, BSc; Marina Brandao, PhD; Kathleen Friel, PhD; Andrew Gordon, PhD

12:30 pm – 2:00 pm
**AACPDM Membership Business Meeting & Boxed Lunch (members only)**
Location: Room 200 / 201 / 204 / 205
See page 13 for an agenda.

2:00 pm – 3:30 pm
**GENERAL SESSION**
Location: Grand Ballroom B
Corbett Ryan Pathways Pioneer Award – David Pruitt, MD
Presidential Guest Lecture – Kelly Mrkla, MSc, PhD Candidate
**Transformative Action – By Design**
NIH Update – Ralph Nitkin, PhD
Fred P Sage Award Presentation – Rachel Byrne, PT

4:00 pm – 6:00 pm
**INSTRUCTIONAL COURSES 1-16**

**IC01: ADDRESSING THE COMPLEX NEEDS OF INFANTS AND TODDLERS WITH CEREBRAL PALSY AND THEIR CAREGIVERS: A GROUP-BASED INTERDISCIPLINARY EARLY INTERVENTION MODEL**
Claire Morress, PhD, OTR/L, ATP; Amanda Wizinsky, PT, DPT, PCS; Elizabeth Willig-Kroner, MA, CCC, SLP; Hillary Prather, MSW, LISW-S
Location: Room 260/261

Learning Objectives:
1. Understand the evidence supporting the importance of early intervention for children with CP, and use the evidence to identify diagnosis specific effective interventions for infants and young children with CP.
2. Identify the key components of a group-based interdisciplinary EI model, and discuss the logistical and therapeutic advantages and challenges of this model.
3. Describe how to incorporate goal-oriented, intensive, task-specific interventions, parent coaching and environmental enrichment strategies into your clinical practice to enhance outcomes for young children with CP.
4. Describe assessment and intervention strategies that a clinic-based program can use to maximize understanding of the home environment, optimize parent carry-over, and maximize caregiver support.

**IC02: ADVANCED TECHNOLOGY IN EARLY INTERVENTION: ASSESSMENT AND INTEGRATION**
Bernadette Gillick, PhD; Cole Galloway, PhD, PT; Thubi H. A. Kolobe, PT, PhD; Barbara Sargent, PhD, PT, PCS
Location: Room 211

Learning Objectives:
1. Analyze the current evidence on the use of technology in early intervention.
2. Evaluate the merits and limitations of current technologies used with infants and toddlers with motor impairments.
3. Discuss challenges of developing, researching and implementing technology in early intervention and describe potential strategies to optimize success.
4. Develop a take-home list to further consider technological integration into research and clinical practice.

**IC03: ASSESSMENT AND TREATMENT OF ADULT PATIENTS WITH CEREBRAL PALSY AND COMORBID DEPRESSION**
Daniel Linhares, MD; Hiroko Matsumoto, MA, PhDc
Location: Room 203

Learning Objectives:
1. How to properly assess patients for depression and utilize validated screening tools.
2. Review the prevalence of depression in the adult population with CP and potential risk factors.
3. Review the prevalence of different psychotropic medications being used for adults with CP.
4. Understand the difference between multiple antidepressant medications and how to use their individual properties to more precisely target the depressive symptoms of each individual.

**IC04: EARLY DIAGNOSIS OF CEREBRAL PALSY IN THE US: TRANSLATING OF THE 2017 INTERNATIONAL GUIDELINES INTO CLINICAL PRACTICE**
Rachel Byrne, PT; Nathalie Maitre, MD, PhD; Andrea Duncan, MD, MS
Location: Room 232

Learning Objectives:
1. Identify the discrete components of the guidelines.
2. Describe the current processes for diagnosis and intervention for cerebral palsy in your setting.
3. Identify the strengths, weaknesses, opportunities, and threats (SWOT) to implementing the guidelines in your program.
4. Develop a process flow to adapt the guidelines to your own high-risk infant follow-up setting.

**IC05: FIXING THE FEMURS, FIBRES AND FEET: IMPACT ON FITNESS, FUNCTION, FRIENDSHIPS AND THE FUTURE**
Pamela Thomason, BPhysio, MPhysio; Kate Willoughby, BPhysio, DPhysio; Tandy Hastings-Ison, PhD, BAppSci(Physio); Abhay Khot, FRACS; Kerr Graham, MD, FRCS (Ed), FRACS

Location: Room 262

**Learning Objectives:**
1. Understand musculoskeletal outcomes in children and adolescents within the ICF framework and how this may impact future management.
2. Understand the importance of the “f-words” to inform our practice and influence our management decisions.
3. Recognize positive and negative predictors of musculoskeletal health at skeletal maturity and its impact on the “f-words”
4. Understand the orthopaedic management of lower limb deformities in order to achieve stability of gait correction post SEMLS.

**IC06: INCORPORATING RESISTANCE TRAINING INTO EPISODIC CARE IMPROVES FUNCTION AND PARTICIPATION IN YOUTH WITH CEREBRAL PALSY**
James B. Hedgecock, PT, DPT, PCS; Nicole Harris, PT, PCS, BOCO

Location: Room 231

**Learning Objectives:**
1. Upon completion, participants will be able to demonstrate understanding of the role of muscular strength in determining functional independence in youth with cerebral palsy.
2. Upon completion, participants will be able to complete a clinical assessment to select the most ideal training parameters to achieve a patient’s specific functional goals.
3. Upon completion, participants will be able to design a resistance and functional skill training program using appropriate dosing and outcomes assessment to address individualized goals for youth with cerebral palsy.
4. Upon completion, participants will be able to develop a plan to initiate a resistance training program for youth with cerebral palsy at their institution.

**IC07: 7 EFFECTIVE HABITS FOR HIP HEALTH**
Ginny Paleg, PT, DScPT – PT; Elisabet Rodby-Bousquet, PhD; M. Wade Shrader; MD; Carol M. Shrader, BA

Location: Room 237/238

**Learning Objectives:**
1. List three assessments to identify which neonate/infant is at risk for poor hip health
2. Be able to state hip surveillance schedules for children age 0-6 at GMFCS levels III to V
3. Identify 4 strategies to support hip health
4. Starting next week, apply two new strategies for children at highest risk for hip displacement

**IC08: DEVELOPING CARE COORDINATION PROGRAM—CEREBRAL PALSY**
Margaret L. Salzbrenner Hoopes, MSN, CPNP-AC; Kirk Dabney, MD; Laura Owens, MD; Nancy Lennon, DPT

Location: Room 212

**Learning Objectives:**
1. Upon completion, participants will articulate the definitions of care coordination according to the newest national healthcare research and quality agencies.
2. Participants will understand the rationale for care coordination in reference to quality care, family experience, costs, and patient outcomes.
3. Participants will take home specific care coordination strategies that can be tailored to their own clinical setting.
4. Participants will apply appropriate program evaluation tools to examine care coordination practices in their own clinical settings.

**IC09: LONG-TERM DEVELOPMENT AND EARLY PREDICTORS OF PARTICIPATION OF ADULTS WITH CP IN DOMESTIC LIFE AND INTERPERSONAL RELATIONSHIPS: IMPLEMENTATION USING CO-CREATION**
Marloes van Gorp, MSc; Jeanine Voorman, MD, PhD; Johannes Verheijden; Marij Roebroeck, PhD

Location: Room 230

**Learning Objectives:**
1. Understand the development of participation in domestic life and interpersonal relationships of young adults with CP
2. Describe the predictors of participation in domestic life and interpersonal relationships of young adults with CP
3. Relate development and early predictors of participation to personal experience and clinical practice
4. Implement development and early predictors of participation in clinical practice and future research

**IC10: NEURO-ORTHOPAEDIC JOURNAL CLUB: TOP 10 ARTICLES IN THE LAST YEAR RELATING TO THE ORTHOPAEDIC MANAGEMENT OF CHILDREN WITH NEUROMUSCULAR DISORDERS**
Amanda T. Whitaker, MD; Jon R. Davids, MD; Benjamin J. Shore, MD, MPH, FRCSC

Location: Room 263

**Learning Objectives:**
1. Introduction to a standardized format for the critical analysis of scientific articles from the medical literature.
2. Be familiar with the most significant recent advances in the orthopaedic management of children with neuromuscular disorders.
3. Incorporate new techniques and technologies into clinical practice.
4. Appreciate current research trends in this area and be inspired to make a contribution to the body of knowledge!
IC11: PERSISTENT TOE WALKING: CURRENT APPROACH TO EVALUATION AND TREATMENT
Katherine Haynes, PA; Mauricio R. Delgado, MD; Lane Wimberly, MD

**Location:** Room 233

**Learning Objectives:**
1. To introduce the definition and potential underlying etiologies of PTW.
2. To review how to perform a thorough clinical examination of patients with PTW and review the risk factors indicating a non-idiopathic cause.
3. To better understand when referral to a pediatric neurologist is warranted.
4. To review the current surgical and nonsurgical treatment options for persistent toe walking.

IC12: START-PLAY: JOINTLY ADVANCING MOTOR AND COGNITIVE DEVELOPMENT IN INFANTS WITH MOTOR DELAYS
Regina Harbourne, PhD; Stacey Dusing, PhD; Michele Lobo, PT, PhD; Sally McCoy, PhD

**Location:** Room 236

**Learning Objectives:**
1. Describe the continuum of changes in four cognitive constructs during infancy to eventual skills in later childhood.
2. List how early movement (sitting, early mobility, reaching) in infancy directly depends on advancing cognitive and perceptual areas.
3. Understand and give examples of how changing cognition evolves from early movement skill development.
4. Apply the understanding of interaction between motor and cognitive changes to creating new approaches to intervention for specific types of children.

IC13: THE RIGHT TO EAT: CAN TRAINING CAREGIVERS IMPROVE PARTICIPATION IN FEEDING FOR CHILDREN WITH CEREBRAL PALSY?
Gina Rempel, MD, FRCPC; Cynthia Brown Dodds, PT, PhD; Marianne E. Gellert-Jones, MA, CCC-SLP; Barb Borton, BMR (OT), MSc

**Location:** Room 234

**Learning Objectives:**
1. To articulate the ethics and quality of life implications for feeding in the face of risk
2. To elucidate the risks of oral feeding and how to mitigate them
3. To discuss why caregiver training fosters feeding safety
4. To integrate important elements of feeding training in different community settings

IC14: TRANSFORMING THE RESEARCH JOURNEY THROUGH STAKEHOLDER ENGAGEMENT
Keiko Shikako-Thomas, PhD; Annette Majnemer, OT, PhD

**Location:** Room 210

**Learning Objectives:**
1. To explore the different levels of stakeholder engagement, and the strategies employed to support engagement in the research process.
2. To understand the organizational structures necessary to support a patient-oriented research network.
3. To consider various solutions to overcome challenges in authentic patient/family engagement in research to include challenges in measurement of successful engagement.
4. To understand the added value of a patient-oriented research approach.

IC15: ULTRASOUND GUIDED INJECTIONS USING ALCOHOL AND PHENOL IN SPASTICITY MANAGEMENT
David Cancel, MD; Monika Desai, MD; Dara Jones, MD

**Location:** Room 209

**Learning Objectives:**
1. Provide an evidence based background on Ultrasound guided imagery in spasticity management.
2. Discuss the evidence based benefits of Alcohol/Phenol in spasticity management.
3. Participants will learn Ultrasound guided injection localization techniques for selected muscles and nerves.
4. Participants will use these techniques in their spasticity management practice with improved patient care, function and quality of life.

IC16: WHEN LESS IS MORE: A NOVEL INTERVENTION TO PROMOTE SELF-GENERATED POSTURAL CONTROL IN INFANTS AND TODDLERS WITH MOVEMENT DISORDERS
Mary Rahlin, PT, DHS, PCS; Cuyler Romeo, MOT, OTR/L, SCFES, CLC

**Location:** Room 202

**Learning Objectives:**
1. Describe at least 3 strategies for promoting spontaneous exploratory behaviors and problem solving required for the development of self-generated postural control.
2. Verbalize how principles of neuroplasticity should impact the design of intervention for infants and toddlers with movement disorders.
3. Summarize the major principles of the P-A Approach intervention.
4. Through guided observation, identify the initial deficits and intervention-induced changes in postural control in children featured in video cases.

6:00 pm - 7:30 pm **Wine & Cheese Poster and Exhibit Review**
**Location:** Grand Ballroom A
FRIDAY, OCTOBER 12, 2018

7:00 am - 8:00 am  Continental Breakfast
Location: Grand Ballroom A

7:00 am - 8:00 am  Poster Crawl
Sponsored by Medtronic
Location: Grand Ballroom A

Poster Crawls are an opportunity to participate in a small group, mobile discussion of interesting posters. Led by engaging and distinguished Academy members, poster crawls last about an hour and will visit several posters selected by the leaders. To join, just show up in the poster hall by 7 am, grab a cup of coffee (if you want), and join one of the groups. Leaders will hold signs so you can find them.

7:00 am - 8:00 am  BREAKFAST SEMINARS 15-28

BRK15: AGING TRAJECTORY OF PAIN, CHRONIC DISEASE AND PSYCHOLOGICAL MORBIDITY IN CEREBRAL PALSY
Mark Peterson, PhD, MS; Ed Hurvitz, MD

Location: Room 262

Learning Objectives:
1. Develop a set of common data elements useful for clinical screening of the adult with CP that includes greater attention to aging-related chronic disease risk.
2. Describe the longitudinal trends of chronic cardiometabolic, psychological, and musculoskeletal morbidity in adults with CP, and risk factors that contribute to increased risk.
3. Understand the need for surveillance of health risks in adults with cerebral palsy, with a priority focus on metabolic and musculoskeletal systems.
4. Discuss relevant risk factors for chronic conditions in CP, and offer guidance for lifestyle interventions to prevent losses of function and disease, and to improve quality of life.

BRK16: CARING FOR THE CAREGIVER: IDENTIFICATION AND MANAGEMENT OF STRESS IN CAREGIVERS OF YOUNG CHILDREN WITH CEREBRAL PALSY AND OTHER COMPLEX NEUROMOTOR DISORDERS
Hillary Prather, MSW, LISW-S; Claire Morress, PhD, OTR/L, ATP

Location: Room 202

Learning Objectives:
1. Review the evidence that identifies the sources and impact of stress on the health and well-being of caregivers of children with CP and other complex health conditions.
2. Describe the use of the PSI-4-SF to augment the psychosocial assessment to identify stress in parents of children with CP, recognize items that trigger additional action from the interdisciplinary team.
3. Understand how outcome data can guide clinical-decision making and care planning to support parents in interdisciplinary EI and early childhood programs for children with CP.
4. Incorporate practical strategies for supporting parents in your clinical practice setting.

BRK17: CLEAR-CP: A TRANSDISCIPLINARY APPROACH TO DIAGNOSIS AND MANAGEMENT OF CORTICAL VISUAL IMPAIRMENT (CVI) IN CHILDREN WITH CP AND OTHER MOTOR IMPAIRMENTS
Kihmberly A. Hymore, MS; Terry Schwartz, MD

Location: Room 232

Learning Objectives:
1. Participants will identify the key components of the Ophthalmology and occupational therapy evaluation required to support a diagnosis of CVI.
2. Participants will describe the structure, format, and framework required to implement a low vision rehabilitation clinic for children with CVI and CP in their practice setting.
3. Participants will articulate strategies and need for transdisciplinary collaboration prior to providing recommendations to children and families.
4. Identify 5 strategies for effective clinic follow-up and management.

BRK18: DESTINATION MACS IV AND V: OPTIMIZING ASSESSMENT TOOLS AND TREATMENT GOALS FOR CHILDREN WITH CP AND SEVERE UPPER EXTREMITY DYSFUNCTION
Renat Sukhov, MD; Alice Chu, MD; Melissa Schaeffer, OTD/OTR/L, BCP; Lori Belfiori, OTR

Location: Room 211

Learning Objectives:
1. Upon completion, participants will be able to understand current state of evidence regarding tools for upper limb rehabilitation for children with CP, and their applicability to those with MACS IV-V.
2. Upon completion, participants will be able to formulate interdisciplinary goal setting and expectations for MACS IV-V patients and their families based on evidence based data.
3. Upon completion, participants will be able to apply evaluation tools for MACS IV-V population and critically assess outcome measures for these population.
4. Upon completion, participants will be able to share with interdisciplinary group of the rehabilitation professionals application of current and future clinical techniques, and explore research and technology advancements.

BRK19: IMPLEMENTING CONSTRAINT INDUCED MOVEMENT THERAPY/BIMANUAL THERAPY WITH TODDLERS WITH CORTICAL VISUAL IMPAIRMENT
Karen Harpster, PhD, OTR/L; Jenny Dorich, BS, MBA; Carrie Shotwell, OTR/L

Location: Room 203

Learning Objectives:
1. Upon completion, participants will be able to understand the theoretical foundations of CIMT /BIT and describe current evidence related to CIMT/BIT
2. Upon completion, participants will be able to describe evidence-based CIMT/BIT protocols currently being used in clinical practice
3. Upon completion, participants will be able to explain how to implement CIMT/BIT with children diagnosed with CVI including adaptations needed.
4. Upon completion, participants will be able to develop a plan to engage parents in the CIMT/BIT process to promote occupation-based functional skills during and after CIMT/BIT intervention.

**BRK20: INTEGRATION OF PHYSICAL ACTIVITY MEASURES INTO CLINICAL PRACTICE FOR CHILDREN AND YOUTH WITH CEREBRAL PALSY**

Nancy Lennon, DPT; Kristie F. Bjornson, PhD, PT, MS; Julieanne Sees, DO, FAOA

**Location:** Room 212

**Learning Objectives:**
1. Gain an understanding of typical walking activity (WA) levels in children and youth with cerebral palsy as compared to typically developing youth (TDY).
2. Describe differences in WA for youth with CP by age groups and disability levels.
3. Develop knowledge-based skills in methods to measure and interpret (WA) for children and youth with cerebral palsy.
4. Understand the resources necessary to utilize activity monitoring in clinical practice.

**BRK21: INTERPRETING HIP SURVEILLANCE X-RAYS WITH THE HIPSCREEN APP: A PRIMER FOR THE RADIOLOGY NOVICE**

Vedant Kulkarni, MD; Jon R. Davids, MD; Pamela Thomason, B Physio, M Physio; Suzanne Bratkovich, MSPT

**Location:** Room 263

**Learning Objectives:**
1. Upon completion, participants will be able to use the HipScreen App to measure a hip’s migration percentage.
2. Upon completion, participants will be able to identify important landmarks on a hip surveillance radiograph used for quantifying hip displacement.
3. Upon completion, participants will be able to recognize features of poor patient positioning for radiographs that could cause inaccuracy of the migration percentage measurement.
4. Upon completion, participants will be able to understand protocols for proper positioning of children to obtain accurate hip surveillance radiographs.

**BRK22: PARTICIPATION RELATED CONSTRUCTS IN PRACTICE AND RESEARCH**

Christine Imms, PhD; Peter L. Rosenbaum, MD; Andrew Gordon, PhD

**Location:** Room 209

**Learning Objectives:**
1. To consider where ‘participation’ fits within attendee’s own practice/research frameworks as either a means or ends (or both).
2. To describe the family of Participation Related Constructs (fPRC) and identify evidence supporting the framework.
3. To use the fPRC to explore how their own activities can influence participation outcomes.
4. To apply the fPRC when selecting interventions and measures designed to influence participation outcomes.

**BRK23: QUANTITATIVE TECHNIQUES FOR ASSESSMENT OF UPPER EXTREMITY MOVEMENT AND FUNCTION**

Aviva Wolff, EdD; Susan Duff, EdD, OT, PT

**Location:** Room 210

**Learning Objectives:**
1. Discuss the various methods used to collect upper extremity motion data and how it can be used to describe and assess UE motion and function.
2. Identify indications for motion analysis of hand and arm function in clinical practice.
3. Read and interpret basic graphs representing kinematic and muscle function data.
4. Identify indications for use of real world activity trackers and inertial sensors in clinical practice and for scientific application.

**BRK24: THE PATH TO NOVEL REHAB DEVICES: CLINICIAN/ENGINEER COLLABORATION**

Catherine L. Coley, PT, DPT, PCS; Tyler Salvador, BS; Olga Morozova, MD

**Location:** Room 230

**Learning Objectives:**
1. Understand the process of identifying a need for a device/robot for pediatric rehabilitation
2. Translate a novel idea into a blueprint for clinicians and engineers to design from
3. Describe the steps required to develop a rehabilitation device/robot
4. Develop an appropriate clinical trial to evaluate a rehabilitation device/robot prototype

**BRK25: TIME TO EAT: RISK MANAGEMENT TO IMPROVE PARTICIPATING IN EATING FOR CHILDREN WITH CEREBRAL PALSY**

Gina Rempel, MD, FRCPC; Cynthia Brown. Dodds, PT, PhD; Marianne E. Gellert-Jones, MA, CCC–SLP; Barb Borton, BMR (OT), MSc

**Location:** Room 260/261

**Learning Objectives:**
1. To articulate the importance of participation in feeding for children with a variety of feeding competencies
2. To discuss a strategy to assess aspiration risk
3. To identify important elements of a feeding safety plan
4. To elucidate strategies to open discussions on swallowing risk management

**BRK26: UNDERSTANDING AND PREVENTING MULTI-MORBIDITY IN ADOLESCENTS AND ADULTS WITH CEREBRAL PALSY: AN EMPHASIS ON HEALTH-PROMOTING BEHAVIOURS**

Jan Willem Gorter, MD, PhD; Rita Van den Berg, PhD; Joyce Benner, MSc; Patrick G. McPhee, MSc

**Location:** Room 236

**Learning Objectives:**
1. Understand the importance of multi-morbidity risk assessment and prevention in adolescents and adults with CP.
2. Understand the development of a COS for multi-morbidity risk assessment, and the value of involvement of persons with CP, researchers and clinicians.
3. Know relevant outcomes for multi-morbidity risk, and the quality and feasibility of measurement instruments for persons with CP.
4. Relate relevant modifiable health-promoting behaviours and/or lifestyle interventions to their personal or clinical experience.

BRK27: WHAT’S IN YOUR TOOLBOX? PARTICIPATION-FOCUSED THERAPY FOR CHILDREN WITH CEREBRAL PALSY
Sarah E. Reedman, BPhty; Roslyn N. Boyd, PhD, MSc, BAppSc, BSc, Pgrad

Location: Room 233

Learning Objectives:
1. Understand and list barriers and facilitators to participation in physical activity as viewed from a human behaviour and motivation perspective
2. Measure barriers and facilitators to participation in physical activities in children with CP in a clinical setting
3. Apply a clinical reasoning framework for participation-focused therapy in children with CP
4. Understand service-delivery challenges and adapt the participation-focused approach to different models of therapy service

BRK28: DEVELOPING A CAREER IN ACADEMIC RESEARCH
Ralph Nitkin, PhD

Location: Room 237/238

Learning Objectives:
1. Discuss career development, research funding strategies, grantsmanship, and clinical trial design
2. Focus on research opportunities relevant to CP and other developmental disorders

8:15 am – 9:45 am  GENERAL SESSION
Location: Grand Ballroom B

Mac Keith Press Basic Science Lectureship
Genetics of Premature Birth
Louis Muglia, MD PhD

Point, Counter-Point Session
Is It Genetic, Or Is It CP? What’s the Debate?
Peter Rosenbaum, MD vs. Michael Kruer, MD

9:45 am – 10:00 am  Get Up and Move: Yoga
Location: Grand Ballroom Foyer

9:45 am – 10:35 am  Coffee and Exhibit Break
Location: Grand Ballroom A

10:35 am - 12:10 pm  FREE PAPER SESSIONS

Free Papers E: Leisure, Physical Activity and Sports
Location: Junior Ballroom A

10:35 am – 10:42 am  E1: RUNNING TOWARD ENHANCED SELF-CONCEPT: WELLNESS PROGRAMMING IN CHILDREN AND YOUNG ADULTS WITH DEVELOPMENTAL DISABILITY
Madison Peck; Jennifer Angeli, DPT, PhD; Sarah Schwab, BS

10:43 am – 10:50 am  E2: TRANSFORMING LEISURE JOURNEYS BY SUPPORTING PARENTS OF CHILDREN WITH DISABILITIES
Christina Sookklall, BS; Annette Majnemer, OT, PhD; Keiko Shikako-Thomas, PhD

10:51 am – 10:58 am  E3: THE Efficacy OF CYCLING Interventions TO IMPROVE BODY FUNCTIONS AND Activities IN CHILDREN WITH CEREBRAL PALSY: A SYSTEMATIC REVIEW AND META-ANALYSIS
Ellen Armstrong, BExSc, MSc (Adapted Physical Activity), MPhty; Sian Spencer; Megan Kentish; Sean Haran, PhD; Christopher Carty; Roslyn Boyd, PhD, MSc (PT), BAppSc (PT), BSc (Anatomy), Pgrad (Biomech)

10:59 am – 11:06 am  E4: UPDATE ON EVIDENCE FOR Interventions TO IMPROVE PARTICIPATION IN PHYSICAL ACTIVITIES AND HABITUAL PHYSICAL ACTIVITY LEVEL IN CHILDREN WITH CEREBRAL PALSY
Sarah Reedman, BPhty (Hons); Roslyn Boyd, PhD, MSc (PT), BAppSc (PT), BSc (Anatomy), Pgrad (Biomech); Leanne Sakzewski, PhD, BOccThy

11:07 am – 11:14 am  E5: BEFAST OR BESTRONG: A RANDOMIZED CONTROL TRIAL COMPARING SPORTS SKILL TRAINING TO LOWER EXTREMITY STRENGTH TRAINING FOR CHILDREN WHO HAVE CEREBRAL PALSY
Alicia Hilderley, MSc; Darcy Fehlings, MD; Margot Taylor, PhD; Joyce L. Chen, PhD; F. Virginia Wright, PhD, PT

11:31 am – 11:38 am  E6: THE EFFECTS OF AN ADAPTED COMMUNITY SPORTS CAMP (“GAME ON”) ON FUNCTIONAL MOBILITY, AND FITNESS IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY
Katherine Dimitropoulou, PhD; Adam Blanchard, MS; Paul Weiland, BA; Kelly Boscarino, BS; Amber Newell, NP & OTR/L; Heakyung Kim, MD

11:47 am – 11:54 am  E8: TRANSFORMING INFORMATION SHARING AND BEHAVIOUR CHANGES IN CHILDHOOD DISABILITIES: A SOCIAL NETWORK ANALYSIS SCOPING REVIEW
Keiko Shikako-Thomas, PhD; Stephanie Glegg, MSc, BSc OT, BSc Kin; Valerie Grand’Maison, MSc Public Health

11:55 am – 12:02 pm  E9: EFFECTS OF YOGA EXERCISE PROGRAM ON PHYSICAL FUNCTION IN YOUNG CHILDREN WITH DOWN SYNDROME
Yasser Salem, PT, PhD, NCS, PCS; Howe Liu, PT, MD, PhD; Amanda Young, MS, CAPE, EdD; Marilyn Tolbert, EdD; Ahmed Elokda, PT, PhD; Clayton Holmes, PT, EdD

12:03 pm – 12:10 pm  E10: PARTNERING TO EXPLORE THE NEEDS AND PRIORITIES OF STAKEHOLDERS INVOLVED IN A COMMUNITY-BASED DANCE PROGRAM FOR CHILDREN WITH DISABILITIES
Michelle McGuire, MPT; Amy Bailes, PT, PhD PCS; Lisa Vaughan, PhD; Julie Sunderland
10:35 am – 10:42 am F1: Efficacy and Safety of OnabotulinumtoxinA for the Treatment of Pediatric Lower Limb Spasticity: Primary Results
Heakyung Kim, MD; Jill Meilahn, DO; Chengcheng Liu, PhD; Henry Chambers, MD; Rozalina Dimitrova, MD, MPH

10:43 am – 10:50 am F2: Efficacy and Safety of OnabotulinumtoxinA for the Treatment of Pediatric Upper Limb Spasticity: Primary Results
Darcy Fehlings, MD; Mark Gormley, MD; Heakyung Kim, MD; Katharine Alter, MD; Chengcheng Liu, PhD; Emily McCusker, PhD; Rozalina Dimitrova, MD, MPH

10:51 am – 10:58 am F3: Switching from OnabotulinumtoxinA to AbobotulinumtoxinA in Children with Cerebral Palsy Treated for Spasticity: A Retrospective Safety Evaluation
Nigar Dursun, MD; Melike Akarsu, BA; Merve Akyüz, MD; Tugba Gökbel, MD; Çağla Karakan, PhD Student; Erbil Dursun, MD

10:59 am – 11:06 am F4: Age Related Changes in Muscle Size and Strength Across the Lifespan in Individuals with Cerebral Palsy
Mattie Pontiff, DPT; Taylor Rabalais, sDPT; Bridget Connick, sDPT; Robertson Morgan, sDPT; Noelle Moreau, PT, PhD

Chuan Zhang, MA; Freeman Miller, MD; Ye Shen, PhD; Christopher Modlesky, PhD

11:31 am – 11:38 am F6: Children with Cerebral Palsy Have Greater Variability in Muscle Synergies During Gait Than Typically Developing Children But Are They Necessarily Less Complex?
Diane Damiano, PhD; Yushin Kim, PhD; Thomas Bulea, PhD

11:39 am – 11:46 am F7: The Relationship Between Strength, Voluntary Activation and Gross Motor Function in Young Adults with Spastic Type Cerebral Palsy
Shari O’Brien, BExSS (ClinExPhys) (Hons1); Lee Barber, PhD, MPT, BAppSct; Timothy Carroll, BSc (Hons 1), PhD (Neuroscience) (Qld); Glen Lichtwark, BSc(Hons) Qld., PhD(Orth) UCL

11:47 am – 11:54 am F8: Caregiver Knowledge and Preferences for Gross Motor Function Information in Cerebral Palsy
Amy Bailes, PT, PhD PCS; Mary Gannotti, PT, PhD; Danielle Bellows, PT, MHS, PCS; Michele Shusterman, BA; Jen Lyman, MS; Susan Horn, PhD

12:03 pm – 12:10 pm F10: Assignment of Gross Motor Function Classification Level Using an Algorithm Based on GMFCS Descriptors and Functional Skills
Jean Stout, PT, MS; Tom Novacheck, MD

10:35 am – 10:42 am G1: Is Parent Perception of Walking Ability in Children with Cerebral Palsy Appropriately Identified on the Gillette Functional Assessment Questionnaire?
Ashley Erdman, BS, MBA; Kelly Jeans, MS; Lori Karol, MD

10:43 am – 10:50 am G2: Long-Term Evolution of Walking in Cerebral Palsy: Associated Factors and Influence of Surgery
Alice Bonnefoy-Mazure, PhD; Geraldo Decoulon, MD; Pierre Lascombes, Prof; Stéphane Armand, PhD

10:51 am – 10:58 am G3: Influence of Impaired Selective Motor Control on Stance Phase Knee Kinematics and Stride Characteristics in Cerebral Palsy
Guro Søpstad Lunde, MD; Guro L. Andersen, MD, PhD; Torstein Vik, MD, PhD

11:07 am - 11:14 am G5: Gait Pathology Is Not Associated With Fall Frequency in Children with Cerebral Palsy
Elizabeth Boyer, PhD; Aleksys Patterson, NA

11:31 am – 11:38 am G6: Static Limb Length as Measured by Physical Exam or Three-Dimensional Kinematic Analysis Is Not Interchangeable with Radiographic Based Measures of Limb Length
Abigail Eustice, BA; Alex Tagawa, BS; Patrick Carry, MS; Frank Chang, MD; James Carollo, PhD, PE; Jason Rhodes, MD

11:39 am – 11:46 am G7: Dynamic Limb Length Discrepancy at Heel Strike Is a Better Indicator of Walking Performance Than Static Limb Length Discrepancy Among Patients with Hemiplegic Cerebral Palsy
James Carollo, PhD, PE; Patrick Carry, MS; Abigail Eustice, BA; Frank Chang, MD; Alex Tagawa, BS; Jason Rhodes, MD
PROGRAM & EVENTS

FRIDAY, OCTOBER 12

72nd Annual Meeting • October 9-13, 2018 • Duke Energy Convention Center • Cincinnati, Ohio

11:47 am – 11:54 am
G8: CONSISTENCY OF PROBLEM IDENTIFICATION AND TREATMENT RECOMMENDATIONS AMONG INTERPRETERS WITHIN A CLINICAL MOTION LABORATORY
Tom Novacheck, MD; Jean Stout, PT, MS

11:55 am – 12:02 pm
G9: THE ETIOLOGY OF KNEE HYPEREXTENSION IN GAIT IN CHILDREN WITH CEREBRAL PALSY
Chris Church, PT; Allison Brown, BS; Nancy Lennon, DPT; John Henley, PhD; Oussama Abousamra, MD; Julieanne Sees, DO; FAOAO; Freeman Miller, MD

12:03 pm – 12:10 pm
G10: A COMPARISON OF TYPE 1 VERSUS 2 CHARCOT-MARIE-TOOTH IN TERMS OF GAIT ANALYSIS AND CLINICAL EXAMINATION MEASURES
Sylvia Ounpuu, MSc; Kelly Pogemiller, DPT; Gyula Acsadi, MD, PhD; Kristan Pierz, MD

Free Papers H: Orthopedic Surgery and Complex Care
Location: Junior Ballroom D

10:35 am – 10:42 am
H1: CHILDREN WITH MEDICAL TECHNOLOGY DEPENDENCY LIVING AT HOME: PERCEPTIONS OF CARE COORDINATION AND FAMILY IMPACT
Sarah Sobotka, MD, MSCP; Emma Lynch, BS; Michael Quinn, PhD; Michael Msall, MD; Monica Peek, MD, MPH

10:43 am – 10:50 am
H2: WHAT IS THE ASSOCIATION BETWEEN FEEDING DIFFICULTIES IN EARLY INFANCY AND SPEECH PROBLEMS AND SEVERE FEEDING DIFFICULTIES AT AGE FIVE YEARS IN CHILDREN WITH CP
Guro Lunde, MD; Guro Andersen, MD, PhD; Torstein Vik, MD, PhD

10:51 am – 10:58 am
H3: NEURODEVELOPMENTAL OUTCOMES AFTER EXTREME PREMATURITY COMPARING BEVACIZUMAB TO LASER SURGERY FOR TYPE 1 RETONOPATHY OF PREMATURITY
Colleen Peyton, DPT; Sarah Rodriguez, MD-MPH; Bree Andrews, MD/MPh; Michael Schreiber, MD; Kristen Wroblewski, MS; Michael Msall, MD

10:59 am – 11:06 am
H4: PATIENTS WITH CEREBRAL PALSY HIGH DEGREES OF SCOLIOSIS ARE AT GREATER RISK FOR NEEDING FOOD MODIFICATIONS
Megan Campbell, BA; Christopher DeAllie, BS; Hiroko Matsumoto, MA, PhD; Lucas Dziesinski, BSBA; Benjamin Roye, MD, MPH; Michael Vitale, MD, MPH; David Roye, MD

11:07 am – 11:14 am
H5: DUCHENNE MUSCULAR DYSTROPHY: EARLY MOTOR SIGNS, SYMPTOMS, AND STEPS FOR EARLY DIAGNOSIS AND TREATMENT
Natalie Miller, DPT; Lindsay Alfano, PT, DPT; Megan Iammarino, DPT; Kevin Flanigan, MD; Samiah Al-Zaidy, MD; Jerry Mendell, MD; Linda Lowes, PT, PhD

11:31 am – 11:38 am
H6: LAST-MINUTE CARE FOR PRE-ANESTHETIC CLEARANCE IN CHILDREN WITH NEUROMUSCULAR SCOLIOSIS UNDERGOING SPINAL FUSION
Jay Berry, MD, MPH; Tyler Glaspy, BS; Brian Eagan, BS; Izabela Leahy, RN, BSN, MS; Sara Singer, MBA, PhD; Erin Ward, MSed; Laurie Glader, MD; Charis Crofton, BA; Joanne Cox, BS; Michael Troy, BS; Connor Johnson, BS; Michael Glotzbecker, MD; Lynne Ferrari, MD

11:39 am – 11:46 am
H7: PARENTS OF CHILDREN WITH CEREBRAL PALSY: EXPERIENCES THROUGH ORTHOPAEDIC SURGERY
Maria Juricic, MRSc; Lesley Bainbridge, BSR(PT), MEd, PhD; Emily Schaeffer, PhD; Kishore Mulpu, MBBS, M5(Ortho), MHS(Epi)

11:47 am – 11:54 am
H8: A COHORT COMPARISON STUDY OF NEUROSURGICAL PROCEDURES AFTER CLOSURE OF MYELOMENINGOCELE BY FETAL SURGERY VERSUS BY NEONATAL SURGERY IN PATIENTS IN THE NATIONAL SPINA BIFIDA PATIENT REGISTRY
Gordon Worley, MD; Rachel Greenberg, MD; Brad Dicianno, MD; Joan Jasien, MD; Richard Adams, MD; John Wiener, MD

11:55 am – 12:02 pm
H9: COMMUNITY-BASED EARLY DETECTION OF INFANTS AT HIGH RISK OF CEREBRAL PALSY IN A LOW-MIDDLE INCOME COUNTRY
Katherine Bentler, PhD, MPH, BSpPath; Iona Novak, PhD; Catherine Morgan, PhD; Asis Ghosh, MPT, BPT; Robert Ware, PhD; Roslyn Boyd, PhD, MSc (PT), BAAppSc (PT), BSc (Anatomy), Pgrad (Biomech)

12:03 pm – 12:10 pm
H10: INCIDENCE OF PEDIATRIC VENOUS THROMBOEMBOLISM AFTER ELECTIVE SPINE AND LOWER EXTREMITY SURGERY IN CHILDREN WITH NEUROMUSCULAR COMPLEX CHRONIC CONDITIONS: DO WE NEED PROPHYLAXIS?
Benjamin Shore, MD, MPH, FRCSC; Matt Hall, PhD; Travis Matheney, MD; Brian Snyder, MD, PhD; Cameron Trenor, MD, MMSc; Jay Berry, MD, MPH

12:30 pm - 1:30 pm  Non CME Luncheon Options
International Networking Luncheon
Location: Room 232
Ipsen Presentation Theater
Location: Room 200/201/204/205

1:30 pm - 3:30 pm  GENERAL SESSION
Location: Grand Ballroom B
LifeTime Achievement Award Presentation
Deborah Gaebler-Spira, MD
Presidental Guest Lecture - Rupal Patel, PhD, CCC-SLP
Making Digital Voice Personal to Foster Meaningful Social Connection
Duncan Wyeth Award Presentation - Deborah McFadden
Gayle G Arnold Award for Best Free Paper Presentation - Brian J. Hoare, OT, PhD
Mentorship Award - Roslyn N. Boyd, PhD, PT
EACD Update - Giovanni Cioni, MD, PhD
AusACPDM Update - Christine Imms, PhD
IC17: “LOOKING” FOR COMMUNICATION SUCCESS: VISUAL CONSIDERATIONS FOR AUGMENTATIVE AND ALTERNATIVE COMMUNICATIONS FOR THE PEDIATRIC PATIENT WITH CEREBRAL PALSY AND CORTICAL VISUAL IMPAIRMENT
Katherine L. Clark, MOT, OTR/L, ATP; Lindsay Stutz, MA, CCC-SLP
Location: Room 203
Learning Objectives:
1. Identify 10 characteristic visual behaviors assessed for individuals with a diagnosis of Cortical Visual Impairment (CVI).
2. Identify key challenges and strategies for evaluating children for AAC who have complex neurodevelopmental disorders and CVI.
3. Demonstrate knowledge of barriers to successful implementation of AAC for the pediatric patient with complex neurodevelopmental disorders and CVI.
4. Implement strategies for treating the pediatric patient with complex neurodevelopmental disorders and CVI, as needed for successful implementation of AAC.

IC18: HYPOTONIA CARE PATHWAY UPDATE
Ginny Paleg, PT, DScPT; Maureen Story, BSR PT/OT; Garey Noritz, MD
Location: Room 233
Learning Objectives:
1. Name three AACPDM Care Pathways
2. Understand the challenges to defining, measuring and diagnosing hypotonia
3. List three “green” light therapeutic interventions for hypotonia
4. List four “yellow or red” light therapeutic interventions for hypotonia

IC19: TRANSFORMATIVE JOURNEYS INTO ADULTHOOD: BEST PRACTICES TO PROMOTE LIFE SKILLS AND TO RECEIVE EMERGING ADULTS WITH CHILDHOOD ONSET DISABILITIES INTO ADULT CARE
Marij Roebroeck, PhD; Susan C. Labhard, MSN, RN; Jan Willem Gorter, MD, PhD; Donna Thomson- Parent Advisor; Elisabet Rodby-Bousquet, PhD
Location: Room 211
Learning Objectives:
1. Demonstrate knowledge of methods to support health and autonomy of emerging adults with child-onset conditions and their families.
2. Describe the application of transition interventions in a variety of settings.
3. Identify tools to improve transition services for youth with child-onset conditions.
4. Know evidence-based practices to advise transition program planning.

IC20: A MULTIDISCIPLINARY APPROACH TO IMPROVING GAIT IN CHILDREN WITH CEREBRAL PALSY WITH RHIZOTOMY: PATIENT SELECTION, SHORT TERM OUTCOMES AND LONG TERM OUTCOMES.
Marcie Ward, MD; Tom Novacheck, MD; Peter Kim, MD, PhD
Location: Room 232
Learning Objectives:
1. Describe patient selection for selective dorsal rhizotomy that uses a multidisciplinary approach which predicts a favorable outcome.
2. Examine the various approaches to performing a rhizotomy and consider the benefits to utilizing a selective approach.
3. Summarize the benefits of a coordinated rehabilitation program following SDR.
4. Explain the short and long term outcome data available following selective dorsal rhizotomy.

IC21: LET’S DO A SPINE FUSION! A HANDS-ON LABORATORY INTRODUCTION TO SPINE SURGERY FOR SCOLIOSIS IN CHILDREN WITH CEREBRAL PALSY
M. Wade Shrader, MD; Joshua Hyman, MD; Kirk Dabney, MD; Mohan Belthur, MD, FRCSC, FRCS (Tr & Orth)
Location: Room 209
Learning Objectives:
1. Discuss the prevalence of progressive neuromuscular scoliosis and its impact on the quality of life of patients with cerebral palsy (CP).
2. Understand the surgical indications for scoliosis surgery in the context of progressive neuromuscular scoliosis in patients with CP
3. List the technical steps involved in the surgical technique of a posterior spinal fusion (PSF) and instrumentation from T2 to pelvis.
4. Perform a simplified PSF surgical procedure on a sawbones simulation model.

IC22: BLAZING A TRAIL FOR NEW JOURNEYS THROUGH ADAPTIVE SPORT
Gavin Colquitt, EdD; Cynthia Frisina, MA, MBA, CARSS; Jennifer E. Miro, MPT
Location: Room 230
Learning Objectives:
1. Demonstrate an understanding of how to adapt sports for individuals with CP or other COD.
2. Describe resources and equipment needed to assist with making sports accessible to individuals with CP or other COD.
3. Differentiate between the role individual one on one physical therapy, group exercise classes and adaptive sports play as well as identify the role of the therapist, patient, and parent.
4. Demonstrate an understanding of methods to ‘train like an athlete’ to promote optimal health and performance.

IC23: DEFINING MALNUTRITION IN CHILDREN WITH CEREBRAL PALSY
Richard D. Stevenson, MD; Jodi Wolff, MS, RDN
Location: Room 212
Learning Objectives:
1. Upon completion, participants will be able to explain why the current nutrition assessment indicators used for typically developing children may not be applicable to children with cerebral palsy.
2. Upon completion, participants will be able to describe the appropriate nutrition assessment indicators used to identify malnutrition in children with cerebral palsy.
3. Upon completion, participant will be able to list the available tools to assess growth in children with cerebral palsy.
4. Upon completion, participant will be able to apply the proposed CP specific definition of malnutrition to various clinical scenarios to identify malnutrition.

IC24: ENHANCING THE QUALITY OF LIFE FOR INDIVIDUALS WITH UPPER EXTREMITY NEUROMOTOR IMPAIRMENT: AN INTERDISCIPLINARY APPROACH

Jenny Dorich, BS, MBA; Jason T. Long, PhD; Kevin Little, MD; Jilda Vargus-Adams, MD, MSc

Location: Room 202

Learning Objectives:
1. Describe common assessments of upper extremity function and goal-setting for individuals with upper extremity impairment related to cerebral palsy or other neuromotor disability.
2. Discuss the primary surgical options for the upper extremity and how clinical presentation and motion analysis findings will inform candidacy for surgery or other interventions.
3. Design an approach for team assessment to determine conservative therapeutic interventions and their timing in relation to medical and surgical interventions.
4. Explain pre- and post-operative treatment protocols for common surgical procedures used to enhance the quality of life for individuals with upper extremity neuromotor impairment.

IC25: HIP HEALTH IN CEREBRAL PALSY: MANAGEMENT OF HIP DISPLACEMENT FROM SURVEILLANCE TO SURGERY AND BEYOND

Pamela Thomason, B Physio, M Physio; Kate Willoughby, BPhysio, DPhysio; Abhay Khot, FRACS; Kerr Graham, MD, FRCS (Ed), FRACS

Location: Room 263

Learning Objectives:
1. Describe the epidemiology of hip displacement and its relation to gross motor function.
2. Be familiar with the evidence for hip surveillance and clinical guidelines to support its implementation, including the newly developed AACPDM Care Pathway.
3. Evaluate evidence for non-surgical and surgical management of hip displacement and understand rationale for and timing of surgical intervention in the context of the child/family and in relation to GMFCS.
4. Evaluate hip morphology at skeletal maturity in youth with CP using the MCPHCS and the relationship between morphology, pain and HRQoL.

IC26: IMPLEMENTING THE NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE COMMON DATA ELEMENTS PHYSICAL THERAPY SESSION FORM INTO THE ELECTRONIC RECORD USING IMPROVEMENT SCIENCE METHODOLOGY

Amy F. Bailes, PT, PhD PCS; Mary Anne Lenk, BS

Location: Room 231

Learning Objectives:
1. Understand quality improvement methods.
2. Describe how quality improvement methods can be used to improve healthcare processes and outcomes.
3. Recognize and understand the benefits for standardizing the way we document details of a physical therapy session.
4. Apply this information by participating in several photo/video case studies.

IC27: NAVIGATING THE GRAY: CLINICAL DECISION-MAKING WITH FAMILIES AND THEIR CHILDREN WITH MEDICAL COMPLEXITY IN THE FACE OF UNCERTAINTY

Emily J. Goodwin, MD; Kathleen Huth, MD, MMSc; Nancy A. Murphy, MD

Location: Room 260/261

Learning Objectives:
1. Describe the importance and limitations of evidence-based practice in the care of CMC and neurodevelopmental disabilities.
2. Demonstrate an approach to grayscale thinking applied to common clinical issues through case-based discussions.
3. Apply the 4 basic principles of healthcare ethics to challenging diagnostic and treatment decisions in partnership with families.
4. Use the ICF framework to guide clinical decision-making for CMC and their families, understanding the importance of goal-directed care.

IC28: PRACTICAL FOUNDATIONS FOR THE CARE OF A CHILD WITH A TRACHEOSTOMY AND/OR GASTROSTOMY

Lisa Letzkus, PhD, CPNP-AC; James (Jim) Plews-ogan, MD; Susan Almarode, MSN, NNP-BC; Kristen Bray, RRT-NPS

Location: Room 234

Learning Objectives:
1. To describe indications for tracheostomy and gastrostomy placement taking into account developmental considerations.
2. To demonstrate tracheostomy and gastrostomy care (cleaning, suctioning, tie change).
3. To identify indication for tracheostomy tube and gastrostomy tube changes and the steps to perform a safe change.
4. To discuss emergency preparedness, emergency scenarios and prevention strategies for clinicians and caregivers.

IC29: SPINAL MUSCULAR ATROPHY: A NEW ERA OF EVALUATION AND TREATMENT

Linda P. Lowes, PT, PhD; Lindsay N. Alfano, PT, DPT; Natalie F. Miller, DPT; Megan A. Iammarino, DPT

Location: 262

Learning Objectives:
1. Understand the evolution of the SMA phenotype and compare and contrast the differences between historical presentation and the “new natural history”.
2. Discuss the results of recent clinical trials and the current drug development pipeline of other compounds.
3. Understand the clinical and functional relevance of proposed modifications to traditionally utilized clinical outcome measures and treatment standards for SMA.
4. Incorporate best practice guidelines into their current practice.
IC30: SUPPORTING INDIVIDUALS WITH NEURODEVELOPMENTAL DISABILITIES TO BE RESEARCH COLLABORATORS
Ariel Schwartz, MSOT; Jessica M. Kramer, PhD

Location: Room 210

Learning Objectives:
1. Define PAR and explain how involvement of individuals with NDD enhances the validity and relevance of research.
2. Describe theory- and evidence-based strategies that facilitate involvement of individuals with NDD as co-researchers.
3. Identify how to involve individuals with NDD in attendee’s research.
4. Describe potential challenges and solutions to collaborating with individuals with NDD in rehabilitation research.

IC31: THE CHALLENGE OF COMMUNICATING RESEARCH FINDINGS IN WRITING: CAN A MASTER CLASS EDUCATIONAL APPROACH HELP?
Peter L. Rosenbaum, MD; Bernard Dan, MD, PhD

Location: Room 236

Learning Objectives:
1. To identify opportunities for people to ‘write a good story’ in the abstracts of their work.
2. To reflect on the challenges we all experience as writers when faced with these issues.
3. To model approaches to a process of crafting the written messages we wish to convey with our abstracts.
4. To offer frameworks by which writing can be developed and critiqued by trusted colleagues.

Saturday, October 13, 2018
7:00 am - 8:00 am  Continental Breakfast
Location: Grand Ballroom A

7:00 am - 8:00 am  Poster Crawl - sponsored by Medtronic
Location: Grand Ballroom A

7:00 am - 8:00 am  BREAKFAST SEMINARS 29-41
BRK29: ADULTS WITH CEREBRAL PALSY: HOW CAN EXISTING SOURCES OF LARGE DATA INFORM REHABILITATION PROFESSIONALS ABOUT DISPARITIES IN OUTCOMES AND SERVICE UTILIZATION?
Mary E. Gannotti, PT, PhD; Deborah E. Thorpe, PT, PhD

Location: Room 260/261

Learning Objectives:
1. Identify potential sources of large data that have information about outcomes and rehabilitation service utilization.
2. Synthesize information about the strengths and weaknesses of existing sources of data to make recommendations for more useful items for people with cerebral palsy.
3. Understand how medical claims data can help to describe the demographic and clinical characteristics of a population.
4. Understand how to utilize medical claims data to identify health care disparity.

BRK30: AUTONOMIC INSTABILITY IN CHILDREN WITH MEDICAL COMPLEXITY
Emily J. Goodwin, MD; Lisa Letzkus, PhD, RN, CPNP-AC; Holly Beth Roach, OTR, ATP

Location: Room 232

Learning Objectives:
1. Recognize signs and symptoms of autonomic dysregulation and develop a comprehensive differential diagnosis.
2. To understand the diagnostic criteria for paroxysmal sympathetic hyperactivity.
3. Describe available evidence for treatments and non-pharmacologic interventions for paroxysmal sympathetic hyperactivity and other autonomic instability syndromes.
4. Appreciate the impact of autonomic instability on quality of life and participation for individuals and their families.

BRK31: BREAKING DOWN BARRIERS: MEDICAL-LEGAL PARTNERSHIPS TO ENHANCE ACCESS TO CARE FOR YOUTH WITH CEREBRAL PALSY
Rita Ayyangar, MBBS; Virginia Simson. Nelson, MD, MPH; L. Kate Mitchell, JD; Brittany Shupe-Sawyer, MSW

Location: Room 202

Learning Objectives:
1. Explore specific legal issues and access to care concerns for youth with CP.
2. Demonstrate a basic understanding of EPSDT and how it relates to care for vulnerable, low income populations with Medicaid.
3. Highlight the steps involved in developing an active medical legal partnership in overcoming barriers to providing clinical care for vulnerable youth with CP.
4. Evaluate the benefits of establishing medical-legal partnerships to enhance clinical advocacy efforts.

Photo courtesy of Cincinnati USA Convention & Visitors Bureau and photographer AJ Waltz.
**BRK32: CONSIDERATIONS FOR IMPLEMENTING A CONSTRAINT INDUCED MOVEMENT THERAPY (CIMT) PROGRAM**  
*Heather M. Roberts, PhD; Angela Shierk, PhD*

**Location:** Room 262  
**Learning Objectives:**
1. To understand the variability of CIMT protocols that are presented in literature.
2. To understand the key components needed to develop and implement an evidence based CIMT program.
3. To understand potential barriers to starting a CIMT program.
4. To identify solutions to overcoming barriers when initiating a new CIMT program.

**BRK33: CP AND THE AACPD IN HISTORICAL PERSPECTIVE – FROM A PRIVATE MEN’S CLUB TO INTERNATIONAL AFFILIATION**  
*Alfred L. Scherzer, MD*

**Location:** Room 203  
**Learning Objectives:**
1. Upon completion, participants will be better aware of the long history of CP recognition.
2. Upon completion, participants will better appreciate the limited medical awareness of CP and its definition prior to founding of the AACP.
3. Upon completion, participants will better understand the founders’ backgrounds and purpose in organizing the Academy.
4. Upon completion, participants will learn about evolution of the Academy from initially a private men’s club to an international leader in the field of childhood onset disabilities.

**BRK34: ENHANCING MUSCLE HEALTH AND FUNCTION IN CEREBRAL PALSY: WHAT WE NEED TO KNOW**  
*Lee Barber, PhD, MPT, BAppSci; Jane Valentine, MBBS, MRCP (Edin), FRACP, FAFRM; Sian A. Williams, PhD; Susan Stott, PhD, MBCHB, FRACS*

**Location:** Room 233  
**Learning Objectives:**
1. Upon completion, participants will be able to understand early musculoskeletal development in cerebral palsy.
2. Upon completion, participants will be able to understand muscle adaptations in cerebral palsy across the lifespan.
3. Upon completion, participants will be able to understand interventions in cerebral palsy across the lifespan.
4. Upon completion, participants will be able to understand early interventions to maintain musculoskeletal and cardiovascular health and reduce sedentary behaviour in children with cerebral palsy.

**BRK35: EVIDENCE FOR CLINICAL AND RESEARCH WALKING ACTIVITY MEASUREMENT IN CEREBRAL PALSY WITH THE STEPWATCH**  
*Kristie F. Bjornson, PhD, PT, MS*

**Location:** Room 209  
**Learning Objectives:**
1. Understand the validity and accuracy of the StepWatch (SW) to monitor strides taken in typically developing children/youth (TDCY) and with cerebral palsy (CP).
2. Understand the walking activity levels and intensity of TDCY and children/youth with CP.
3. Understand evidence for clinical/research SW monitoring duration by Gross Motor Function Level (GMFCS) in children/youth with CP.
4. Describe potential clinical and research-based SW evaluations of daily walking activity in children with CP.

**BRK36: FAMILY ENGAGEMENT IN A TERTIARY CEREBRAL PALSY CENTER**  
*Nancy Lennon, DPT; Carrie M. Sewell-Roberts, MA, MSS, LSW; M. Wade Shrader, MD; Maggie Salzbrenner, MSN, CPNP-AC*

**Location:** Room 210  
**Learning Objectives:**
1. To understand how important family engagement is the overall health and well-being of children with CP.
2. To appreciate the process of creating a family advisory council in a tertiary care CP program.
3. To review specific ways that improved family engagement can lead to better health care outcomes of children with CP.
4. To discuss variations in family engagement based on regional and cultural differences.

**BRK37: HEALTHY DEVELOPMENT OVER THE LIFECOURSE OF INDIVIDUALS WITH NEURODEVELOPMENTAL DISABILITY – HOW TO THINK AND PRACTICE**  
*Briano Di Rezze, PhD; Robert Palisano, ScD*

**Location:** Room 236  
**Learning Objectives:**
1. Describe the Lifecourse Health Development (LCHD) Model.
2. Describe how the LCHD model can be applied to pediatric rehabilitation.
3. Provide examples of how to apply LCHD in clinical practice.
4. Discuss considerations for different neurodevelopmental disabilities.

**BRK38: OVERVIEW OF DROOLING MANAGEMENT WITH BOTULINUM TOXIN INJECTIONS TO SALIVARY GLANDS FOR CHILDREN WITH NEUROMUSCULAR DISORDERS**  
*Heakyung Kim, MD; Amber Newell, NP & OTRL*

**Location:** Room 212  
**Learning Objectives:**
1. Understand physiology and anatomy of salivary glands.
2. Describe the indications, short and long term efficacy of botulinum toxin injections for salivary glands.
3. Delineate the techniques of ultrasound guided botulinum toxin injections to the salivary glands.
4. Describe associated adverse events of botulinum toxin injections to salivary glands.

**BRK39: TRANSFORMATION IN ACTION: TRANSLATING AN ALGORITHM INTO CLINICAL PRACTICE FOR INDIVIDUALS WITH CEREBRAL PALSY WHO UNDERGO SINGLE EVENT MULTI-LEVEL SURGERY**  
*Michelle Menner, DPT; Kelly R. Greve, DPT, PhD*

**Location:** Room 211  
**Learning Objectives:**
1. Upon completion, the learner will understand an evidence based algorithm for PT management of individuals with cerebral palsy undergoing SEMLS.
2. Upon completion, the learner will demonstrate comprehension of data presented on characteristics of individuals with cerebral palsy who underwent SEMLS over a 1 year period.
3. Upon completion, the learner will recognize successes and failures of applying the algorithm in clinical practice.
4. Upon completion, the learner will identify strategies to improve implementation of the algorithm into clinical practice.

**BRK40: TRANSFORMING THE DELIVERY OF THERAPY SERVICES TO IMPROVE ACCESS UTILIZING TELEMEDICINE-BASED APPROACH**
Karen Harpster, PhD, OTR/L; Terry Schwartz, MD; Patricia Gribben, OTR/L; Jason T. Long, PhD

**Location:** Room 263

**Learning Objectives:**
1. Upon completion, participants will be able to understand current evidence supporting delivering care via telemedicine
2. Upon completion, participants will be able to identify and explore different applications and tools that can be used with patients and families in telemedicine within the pediatric population
3. Upon completion, participants will be able to discuss potential benefits and barriers to delivering care via telemedicine and to develop potential solutions to support this approach
4. Upon completion, participants will be able to discuss applications of telemedicine within their own practice setting

**BRK41: USING VIRTUAL REALITY AS A NON-PHARMACOLOGICAL INTERVENTION FOR PAIN AND ANXIETY WITH A FOCUS ON DEVELOPMENTAL DISABILITY POPULATIONS**
Chantel C. Barney, PhD; Todd Dalberg, DO; Anne R. Keenan, MS, CCLS

**Location:** Room 237/238

**Learning Objectives:**
1. Describe what virtual reality is and how it can be used in healthcare
2. Summarize research evidence related to virtual reality for pain and anxiety management
3. List the organizational benefits to using virtual reality in healthcare
4. Demonstrate when and how to use VR in specific clinical settings with patients with and without developmental disabilities

**FREE PAPER SESSIONS**

**Free Papers I: Early Identification and Intervention**

**Location:** Junior Ballroom A

8:20 am – 8:27 am

**11: EPIGENETIC BIOMARKERS IDENTIFIED PATIENTS WITH SPASTIC CEREBRAL PALSY IN A CASE-CONTROL STUDY**
Erin Crowgey, PhD; Adam Marsh, PhD; Karyn Robinson, MS; Stephanie Yeager, MS; Robert Akins, PhD

8:28 am – 8:35 am

**12: DETAILED ANALYSIS OF GENERAL MOVEMENTS AND FUNCTIONAL BRAIN CONNECTIVITY IN PRETERM INFANTS**
Colleen Peyton, DPT; Michael Msall, MD; Christa Einspieler, PhD; Jeremy Marks, MD, PhD; Alexander Drobyshyvsky, PhD

8:36 am – 8:43 am

**13: PRESCHOOL PREDICTIVE VALUE OF ABNORMAL GENERAL MOVEMENTS AT 10-15 WEEKS CORRECTED AGE IN HIGH-RISK INFANTS**
Raye-Anne deRegnier, MD; Marie Weissbourd, PhD; Mary Weck, PT; Mary Kay Santella, PT; Annamarie Russow, MEd; Toril Fjartoft, PhD; Lars Adde, PhD; Lynn Boswell, MPT

8:44 am – 8:51 am

**14: COMBINATION OF EARLY NEONATAL MRI SCORES AND CLINICAL ASSESSMENT FINDINGS DETERMINE MOTOR OUTCOME AT 12 MONTHS CORRECTED AGE IN INFANTS BORN VERY PRETERM**
Joanne George, BSc (PT), PhD; Robert Ware, PhD; Simona Fiori, PhD, MD; Jurgen Fripp, PhD; Kerstin Pannek, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn Boyd, PhD, MSc (PT), BAppSc (PT), BSc (Anatomy). Pgrad (Biomech)

8:52 am – 8:59 am

**15: THE ONSET AND CHARACTERISTICS OF WALKING IN CHILDREN BORN PRETERM COMPARED WITH FULL TERM CHILDREN**
Reem Albesher, MSc; Alicia Spittle, PhD, MSc; Jennifer McGinley, PhD, BAppSci(PT); Fiona Dobson, PhD, PGDip

9:16 am – 9:23 am

**16: POSTURE CONTROL AND MOTOR LEARNING IN INFANTS AND CHILDREN WITH CEREBRAL PALSY DURING DEVELOPMENT OF SITTING**
Sandra Saavedra, PhD; Adam Goodworth, PhD; Yen-Hsun Wu, PhD

9:24 am – 9:31 am

**17: ASSESSMENT OF MOTOR DEVELOPMENT USING MOVEMENT ASSESSMENT BATTERY FOR CHILDREN 2ND EDITION IN PRESCHOOL CHILDREN WITH HIGH RISK MEDICAL AND SURGICAL CONDITIONS**
Lynn Boswell, MPT; Annamarie Russow, MEd; Mary Weck, PT; Mary Kay Santella, PT; Marie Weissbourd, PhD; Raye-Anne deRegnier, MD

9:32 am – 9:39 am

**18: CAREGIVER PERCEPTION AS AN OUTCOME MEASURE: PSYCHOMETRIC PROPERTIES OF THE INFANT MOTOR ACTIVITY LOG IN INFANTS WITH ASYMMETRIC CEREBRAL PALSY**
Helen Carey, DHScPT; Linda Lowes, PT, PhD; Nathalie Maitre, MD, PhD

9:40 am – 9:47 am

**19: DEVELOPMENT AND INTERNAL VALIDATION OF A PREDICTION MODEL TO ESTIMATE THE RISK TO DEVELOP UNILATERAL CEREBRAL PALSY AT 12-18 MONTHS IN INFANTS WITH PERINATAL UNILATERAL BRAIN INJURY DURING THEIR FIRST MONTHS OF LIFE**
Ulrike Ryll, MSc; Nienke Wagenaar, MD; Cornelia Verhage, OT; Mats Blennow, MD, PhD; Linda de Vries, PhD, MD; Ann-Christin Eliasson, PhD
PROGRAM & EVENTS

SATURDAY, OCTOBER 13
72nd Annual Meeting • October 9-13, 2018 • Duke Energy Convention Center • Cincinnati, Ohio

Free Papers J: Orthopedics: Lower Limb
Location: Junior Ballroom B

9:48 am – 9:55 am
J10: PREDICTIVE VALUE OF 18-24 MONTH NEURO-SENSORY MOTOR DEVELOPMENTAL ASSESSMENT FOR PRE-SCHOOL MOTOR DEVELOPMENT IN HIGH RISK, MEDICALLY COMPLEX CHILDREN
Raye-Ann deRegnier, MD; Mary Weck, PT; Mary Kay Santella, PT; Cheryl Patrick, PT, MBA; Annamarie Russow, MEd; Lynn Boswell, MPT

9:32 am – 9:39 am
J8: PRE-OPERATIVE HAMSTRING LENGTH AND VELOCITY DO NOT EXPLAIN THE REDUCED EFFECTIVENESS OF REPEAT HAMSTRING LENGTHENING TO CORRECT CROUCH GAIT IN CHILDREN WITH CEREBRAL PALSY
Melisa Osborne, BS; Nicole Mueske, MS; Susan Rathlefesen, DPT; Robert Kay, MD; Tishya Wren, PhD

9:40 am – 9:47 am
J9: SURGICAL TREATMENT OF PES PLANOVALGUS IN AMBULATORY CHILDREN WITH CEREBRAL PALSY: EFFECT ON GAIT AS CHARACTERIZED BY MULTI-SEGMENT FOOT MOTION ANALYSIS AND FOOT DEFORMITY
Sue Sohrweide, PT; Tom Novacheck, MD; Michael Schwartz, BS, MS, PhD; Roy Wervey, BS; Nickolas Nähm, MD

Free Papers K: Upper Limb Function
Location: Junior Ballroom C

8:20 am – 8:27 am
K1: ABDERRANT SENSORIMOTOR CORTICAL OSCILLATIONS ARE RELATED TO THE ABNORMAL HAND MOTOR ACTIONS OF CHILDREN WITH CEREBRAL PALSY
Rashelle Hoffman, DPT; Tony Wilson, PhD; Max Kurz, PhD

8:28 am – 8:35 am
J2: THE ODDS OF SURGICAL OUTCOMES PersistING OVER TIME
Mary Gannotti, PT, PhD; George Gorton, MS; Michael Negrut

8:36 am – 8:43 am
K2: NORM REFERENCE VALUES FOR THE HAND ASSESSMENT FOR INFANTS (HAI), AND THEIR USEFULNESS
Linda Ek, Reg OT; Ann-Christin Eliasson, PhD; Elisa Sicola, PT; Giuseppina Sgandurra, MD, PhD; Giovanni Cioni, MD, PhD; Lena Krumlinde-Sundholm, PHD

8:44 am – 8:51 am
J3: PREDICTION OF THE NEED FOR LOWER LIMB ORTHOPAEDIC SURGERY IN A POPULATION BASED COHORT OF CHILDREN WITH CEREBRAL PALSY
Noah Betar, MD, MBBS, Hon 1; Robert Ware, PhD; Simona Fiori, PhD, MD; Roslyn Boyd, PhD, MSc (PT), BAppSc (PT), BSc (Anatomy), Pgrad (Biomech)

Free Papers: Orthopedics: Lower Limb
Location: Junior Ballroom B

8:20 am – 8:27 am
J1: CLASSIFYING ADVERSE EVENTS FOLLOWING LOWER LIMB ORTHOPAEDIC SURGERY IN CHILDREN WITH CEREBRAL PALSY: RELIABILITY OF THE MODIFIED CLAVIEN-DINDO SYSTEM
Leena Zhou, MBBS; Charles Gallagher, MBBS; Pamela Thomason, B Physio, M Physio; Kate Willoughby, BPhysio, DPhysio; Mela Harambasic, RN, Grad Dip Paed Nurse; Susan Donath, BSc, MA; Abhay Khot, FRACS; Kerr Graham, MD, FRCS (Ed), FRACS

8:28 am – 8:35 am
J4: THE ODDS OF SURGICAL OUTCOMES Persisting OVER TIME
Mary Gannotti, PT, PhD; George Gorton, MS; Michael Negrut

8:36 am – 8:43 am
J5: KNEE CONTRACTURES IN CHILDREN WITH CEREBRAL PALSY
Erika Cloodt, PT; Elisabet Rodby-Bousquet, PhD; Andreas Rosenblad, PhD

8:44 am – 8:51 am
J6: ANTERIOR DISTAL FEMORAL HEMIEPIPHYSISODEISIS FOR FIXED KNEE FLEXION CONTRACTURES IN CHILDREN WITH MUSCULOSKELETAL DISORDERS
Alexander Nazareth, MS; Michael Gyorfi, BS; Susan Rathlefesen, DPT; Benjamin Wiseley, MD; Kenneth Noonan, MD; Robert Kay, MD

9:16 am – 9:23 am
J6: ANTERIOR DISTAL FEMORAL HEMIEPIPHYSISODEISIS FOR FIXED KNEE FLEXION CONTRACTURES IN CHILDREN WITH MUSCULOSKELETAL DISORDERS
Alexander Nazareth, MS; Michael Gyorfi, BS; Susan Rathlefesen, DPT; Benjamin Wiseley, MD; Kenneth Noonan, MD; Robert Kay, MD

8:52 am – 8:59 am
J7: PREDICTION OF PATELLA ALTA IN AMBULATORY CHILDREN WITH CEREBRAL PALSY
Jon Davids, MD; Vedant Kulkarni, MD; Anita Bagley, PhD, MPH; Nina Cung, BA, BS; Roy Davis, PhD; David Westberry, MD; Ashley Carpenter, BS

9:24 am – 9:31 am
J7: PREVALENCE OF PATELLA ALTA IN AMBULATORY CHILDREN WITH CEREBRAL PALSY
Jon Davids, MD; Vedant Kulkarni, MD; Anita Bagley, PhD, MPH; Nina Cung, BA, BS; Roy Davis, PhD; David Westberry, MD; Ashley Carpenter, BS

8:52 am – 8:59 am
J5: IMPROVEMENT IN UPPER EXTREMITY FUNCTION IN CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY AFTER INTENSIVE TRAINING CORRELATES WITH INTERHREMISPHERIC CONNECTIVITY
Maxime Robert, PhD; Jennifer Guterman, MSc; Claudio Ferre, PhD; Andrew Gordon, PhD; Kathleen Friel, PhD
9:16 am – 9:23 am  
**K6: CONSTRAINT-INDUCED MOVEMENT THERAPY IN CHILDREN WITH UNILATERAL CEREBRAL PALSY: A COCHRANE REVIEW UPDATE**  
Brian Hoare, PhD; Margaret Wallen, PhD; Christine Imms, PhD; Megan Thorley, BOT; MSc; Michelle Jackman, BOT; Leeanne Carey, PhD

9:24 am – 9:31 am  
**K7: VALIDITY OF THE ASSISTING HAND ASSESSMENT IN CHILDREN WITH ACQUIRED BRAIN INJURY**  
Lena Krumlinde-Sundholm, PHD; Melanie Hessenauer; Ellen Romein, MSc, OT; Katharina Badura, BSc, PT; Steffen Berweck, MD

9:32 am – 9:39 am  
**K8: COMBINED UNIMANUAL AND BIMANUAL INTENSIVE OCCUPATIONAL THERAPY IMPROVES UPPER LIMB FUNCTION IN CHILDREN WITH UNILATERAL BRAIN INJURY**  
Ka Lai Kelly Au, MS; Julie Knitter, OTR/L; Sue Morrow-McInty, Med; Lindsey Soles, BS; Talita Campos, BS; Jason Carmel, MD, PhD; Kathleen Friel, PhD

9:40 am – 9:47 am  
**K9: WEARABLE TECHNOLOGY TO MONITOR HAND MOVEMENT DURING CONSTRAINT-INDUCED MOVEMENT THERAPY FOR CHILDREN WITH CEREBRAL PALSY**  
Emily Sabelhaus, MS, OTR/L; Brianna Goodwin, BS; Kristie Bjornson, PhD, PT, MS; Kelly Pham, MD; William Walker, MD; Kathleen Steele, PhD

9:48 am – 9:55 am  
**K10: THE RELATIONSHIP BETWEEN BIMANUAL PERFORMANCE, MRI LESION TYPE AND COGNITION IN UNILATERAL CEREBRAL PALSY**  
Ali Crichton, BA (Hons), DPsych (Clin Neuropsych), MAPS; Brian Hoare, PhD; Michael Ditchfield, MBBS, MD; Megan Thorley, BOT; MSc; Margaret Wallen, PhD; Jenny Bracken, MBChBAO; Adrienne Harvey, PhD; Iona Novak, PhD; Catherine Elliott, PhD; Stella May Gwini, PhD, MSc, BSc

Free Papers L: Adult Care  
**Location:** Junior Ballroom D

8:20 am – 8:27 am  
**L1: CURRENT PERCEIVED PAIN INTERFERENCE PLAYS A SMALL ROLE IN DETERMINING PHYSICAL FUNCTION IN YOUNG ADULTS WITH CEREBRAL PALSY: THE CPAT COHORT**  
Sruthi Thomas, MD, PhD; Heather Baer, MD; Zhaoxing Pan, MD, PhD; Alex Tagawa, BS; James Carollo, PhD, PE; Patricia Heyn, PhD, FGSA, FACRM

8:28 am – 8:35 am  
**L2: EFFECTS OF ZOLEDRONIC ACID ON CHILDREN AND YOUNG ADULTS WITH LOW BONE MINERAL DENSITY**  
Kayla Durkin, PharmD; Kenna Shepherd, PharmD Candidate; Emily Alexy, MPH; Garey Noritz, MD

8:36 am – 8:43 am  
**L3: COMBINED TRANSCRANIAL DIRECT CURRENT STIMULATION AND ROBOTIC UPPER LIMB FUNCTION IN ADULTS WITH CEREBRAL PALSY**  
Kathleen Friel, PhD; K. Zoe Tsagaris, OTR/L; Peter Lee, MD; Talita Campos, BS; Lindsey Soles, BS; Dylan Edwards, PhD, PT

8:44 am – 8:51 am  
**L4: AGING TRAJECTORIES OF MUSCULOSKELETAL MORBIDITIES IN ADULTS WITH CEREBRAL PALSY**  
Daniel Whitney, PhD; Edward Hurvitz, MD; Maureen Devlin, PhD; Michelle Caird, MD; Zachary French, BS; Elie Ellenberg, BS; Mark Peterson, PhD, MS

8:52 am – 8:59 am  
**L5: WALKING SPEED AND PATIENT REPORTED OUTCOMES IN ADULTS WITH CEREBRAL PALSY: THE CPAT COHORT**  
Matthew MacCarthy, MD; Alex Tagawa, BS; Patricia Heyn, PhD, FGSA, FACRM; James Carollo, Phd, PE

9:16 am – 9:23 am  
**L6: WALKING SPEED AND GAIT PATTERN CONSISTENCY IN PEOPLE WITH CEREBRAL PALSY TRANSITIONING TO ADULTHOOD: RESULTS FROM THE CPAT LONGITUDINAL STUDY**  
James Carollo, PhD, PE; Alex Tagawa, BS; Zhaoxing Pan, MD, PhD; Amy Bodkin, PhD, PT; Patricia Heyn, PhD, FGSA, FACRM

9:24 am - 9:31 am  
**L7: PROMOTING CAPACITIES FOR FUTURE ADULT ROLES AND HEALTHY ADULT LIVING: A LIFECOURSE HEALTH DEVELOPMENT APPROACH**  
Robert Palisano, ScD; Briano Di Rezze, PhD; Deborah Stewart, MS; Mathew Freeman, MS; Peter Rosenbaum, MD; Oksana Hlyva, PhD; Lisa Wolfe, BS; Jan Wiliem Gorter, MD, PhD

9:32 am – 9:39 am  
**L8: A SCOPING REVIEW OF THE EFFECTIVENESS OF COMPREHENSIVE SEXUAL EDUCATION PROGRAMS FOR INDIVIDUALS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES**  
Elizabeth Koss, MOT; Amy Darragh, OTR, PhD; Chris Brown, BS

9:40 am – 9:47 am  
**L9: REPRODUCTIVE HEALTH CONCERNS OF PARENTS OF GIRLS WITH CEREBRAL PALSY AND INTELLECTUAL DISABILITY**  
Laurie Glader, MD; Sinead Christensen, MPH; Anga Khan, BA; David Williams, MA, PhD; Susan Gray, MD

9:48 am – 9:55 am  
**L10: PROVIDER ADHERENCE TO PREVENTATIVE REPRODUCTIVE HEALTHCARE GUIDELINES IN MEDICALLY COMPLEX AND DISABLED ADOLESCENTS AND YOUNG ADULTS: A CASE-CONTROL STUDY**  
Rosemary Claire Roden, MD; Kyle Oholendt, MD; Hannah Lange, MPH; Garey Noritz, MD; Andrea Bonny, MD

8:15 am – 10:15 am  
**CompleNet Care SIG**  
**Location:** Room 232

10:00 am - 10:15 am  
**Complex Care SIG**  
**Location:** Room 206/207/208

Please join the Complex Care SIG as we discuss development of a clinical pathway for perioperative care of children with medical complexity, development of educational curricula, and development of a publication in complex care.

10:00 am - 10:15 am  
**Get Up and Move: Yoga**  
**Location:** Grand Ballroom Foyer
IC34: BOTULINUM TOXIN AND SPASTIC EQUINUS. RE-TREAT OR RETREAT?
Tandy Hastings-Ison, PhD, BAppSci(Physio); Kerr Graham, MD, FRCS (Ed), FRACS; Abhay Khot, FRACS; Barry Rawicki, MB, BS, FAFRM(RACP)
Location: Room 263
Learning Objectives:
1. Review current evidence challenging the safety, effectiveness and reversibility of Botulinum toxin A (BoNT-A) protocols for spastic equinus.
2. Examine short, medium and longer-term clinical goals of BoNT-A intervention.
3. Debate the onset, frequency and duration of BoNT-A therapy from a lifespan perspective.

IC35: AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC) EVALUATION AND TREATMENT: AN INTERDISCIPLINARY MODEL
Sherry L. Lanyi, MA; Jessica McCoy, MOT
Location: Room 202
Learning Objectives:
1. Upon completion, participant will be able to understand the many aspects involved in completing a comprehensive AAC evaluation that results in successful funding and implementation of an SGD.
2. Upon completion, participant will be able to understand the roles of those evaluating patients who need AAC/SGD.
3. Upon completion, participant will be able to understand how an interdisciplinary approach can provide a better outcome for the patient and family.
4. Upon completion, participant will be able to understand how to apply this AAC evaluation and training format into your own clinic or center.

IC36: CONDUCT MULTI-CENTER CLINICAL RESEARCH WITH THE CEREBRAL PALSY RESEARCH NETWORK
Paul Gross, BA; Jacob Kean, PhD; Michael C. Krue, MD
Location: Room 212
Learning Objectives:
1. To understand the resources available to investigators by partnering with CPRN
2. To understand the types of studies supported by the Cerebral Palsy Research Network
3. To understand the joint study development process from concept to execution
4. To understand how the NINDS CDEs can be used with CPRN based studies

IC37: CYCLING FOR PEOPLE WITH CEREBRAL PALSY OR OTHER CHILDHOOD ONSET DISABILITIES
Jennifer E. Miro, MPT; Jennifer Angeli, DPT, PhD
Location: Room 209
Learning Objectives:
1. Upon completion, participants will be able to describe evidence (or lack thereof) associated with cycling as an intervention for people with CP or other COD.
2. Upon completion, participants will be able to compare and contrast successful adapted and non-adapted cycling program operational structures.
3. Upon completion, participants will be able to recognize...
IC38: HYERTONIA MANAGEMENT IN CEREBRAL PALSY: PAST IDEAS AND LESSONS, CURRENT PRACTICE AND OUTCOMES, FUTURE INNOVATIONS AND POSSIBILITIES
Marcie Ward, MD; Timothy Feyma, MD; Mark Gormley, MD

Location: Room 232
Learning Objectives:
1. Summarize the available tools for tone management, their potential limitations and benefits.
2. Examine the current literature regarding the use of tone management modalities.
3. Explore less common uses of surgical techniques for symptom relief in cerebral palsy.
4. Review current efforts with deep brain stimulation therapy in cerebral palsy and learn early patient results.

IC39: NEW AND EMERGING RESEARCH DIRECTIONS FOR THE MANAGEMENT OF FEEDING AND SWALLOWING DISORDERS IN CP
Georgia Malandraki, PhD; Wendelin Burdo-Hartman, MD

Location: Room 203
Learning Objectives:
1. Upon completion, participant will be able to describe the new findings on the peripheral physiological mechanisms that underlie dysphagia in CP.
2. Upon completion, participant will be able to describe the new findings on the central physiological mechanisms that underlie dysphagia in CP.
3. Upon completion, participant will be able to develop skills in how to incorporate the new findings into practice/management.
4. Upon completion, participant will be able to describe future directions and areas of need for further research for dysphagia in CP.

IC40: ON THE JOURNEY TOGETHER TRANSLATING THE GMFCS INTO PRACTICE: CLINICIAN AND CAREGIVER PERSPECTIVES
Amy F. Bailes, PT, PhD, PCS; Mary E. Gannotti, PT, PhD; Danielle Bellows, PT, MHS, PCS; Michele Shusterman, BA; Jen Lyman, MS

Location: Room 236
Learning Objectives:
1. Discuss the use of the GMFCS and motor curves since its development in 1997.
2. Reflect on reports of parent knowledge and preferences for learning about their child’s gross motor function classification in CP.
3. Recognize and better understand the perspective of parents when classifying their child with cerebral palsy through role-playing and case examples.
4. Integrate the GMFCS in a family centered approach to developing a plan of care and goal setting with families.

IC41: OPTIMIZING FEEDING AND SWALLOWING IN CHILDREN WITH PHYSICAL AND DEVELOPMENTAL DISABILITIES: A PRACTICAL GUIDE FOR CLINICIANS
Andrea S. Hoffman, MD; Shauna Kingsnorth, PhD; Rebecca Perlin, MClSc; Christie Raffaele, BASc, MSc, (OT); Carolyn Li, Bachelor of Science

Location: Room 210
Learning Objectives:
2. Describe how to use the handbook to access current evidence-based feeding guidelines, resources and recommendations.
3. Apply the Feeding and Swallowing Framework when prioritizing feeding and swallowing issues in clinical practice.
4. Use the electronic handbook to take a multi-disciplinary perspective when approaching evaluation and management of feeding and swallowing issues.

IC42: ORTHOPAEDIC SURGERY FOR THE SPINE AND LOWER LIMB IN CHILDREN WITH CEREBRAL PALSY
Robert M. Kay, MD; Ken Illingworth, MD

Location: Room 260/261
Learning Objectives:
1. Accurately identify the most common spine and lower extremity problems in children with CP.
2. Identify common pitfalls in surgical and non-surgical care of these children.
3. Define one or more ways to avoid common treatment errors.
4. Gain perspective on the complexity of surgical planning for children with CP.

IC43: PROJECT TEAM: A GROUP INTERVENTION TO TEACH TRANSITION AGE YOUTH WITH DEVELOPMENTAL DISABILITIES TO PROBLEM SOLVE PHYSICAL AND SOCIAL ENVIRONMENTAL BARRIERS TO PARTICIPATION
Jessica M. Kramer, PhD; I-Ting Hwang, MS; Ariel Schwartz, MSOT

Location: Room 237/238
Learning Objectives:
1. Describe the theoretical tenets underlying Project TEAM.
2. Describe how the Game Plan problem solving approach can facilitate the participation of transition age youth with DD and cognitive impairments.
3. Identify strategies and resources to support the implementation of Project TEAM in attendee’s practice context.
4. Describe the preliminary evidence supporting the potential efficacy of Project TEAM to increase participation of transition age youth.
IC44: ROLES OF DISTAL FEMORAL EXTENSION OSTEOTOMY AND PATELLAR TENDON ADVANCEMENT IN THE TREATMENT OF SEVERE PERSISTANT CROUCH GAIT IN ADOLESCENTS AND YOUNG ADULTS WITH CEREBRAL PALSY.
Tom Novacheck, MD; Elizabeth R. Boyer, PhD; Jean Stout, PT, MS; Katie Walt, PT, DPT; Libby Weber, MD
Location: Room 211
Learning Objectives:
1. Discuss the etiologic factors of severe crouch gait in adolescents & young adults with cerebral palsy.
2. Describe the current biomechanical models of the DFEO+PTA surgeries and their contribution to the understanding of surgical indications.
3. Identify one or more operative- or post-operative care insights and the common pitfalls they are designed to avoid and discuss the components of post-surgical rehabilitation.
4. Compare long-term case vs. control functional outcomes of DFEO+PTA surgery across the entire spectrum of the ICF domains.

IC45: THE YEAR’S TOP 10 ARTICLES ON DEVELOPMENTAL DISABILITIES
Nancy A. Murphy, MD; Richard C. Adams, MD
Location: Room 233
Learning Objectives:
1. Summarize the major conclusions of each of the ten articles presented.
2. Identify areas in which additional research is needed.
3. Evaluate the utility of each of the articles for their own clinical practice.
4. Be inspired by the presentations to seek articles on their own.

IC46: PUTTING KNOWLEDGE INTO ACTION: PATHWAYS FOR MAKING CHANGE AND IMPACT
Kelly J Mrklas, MSc, PhD Candidate
Location: Room 230
Learning Objectives:
1. Different models and frameworks available to structure implementation strategies.
2. The core components of an effective implementation strategy.
3. How to develop an implementation strategy that activates high quality evidence.
4. Where to find guidance for developing, executing and evaluating an implementation strategy.
**SP 1:** FEASIBILITY OF A CLINICAL TRIAL TO COMPARE HIGH AND LOW TECHNOLOGY INTERVENTIONS TO ENHANCE PRONE MOTOR CONTROL AND PRONE TOLERANCE IN 3–6 MONTHS OLD INFANTS.
Tanya Tripathy, PT; Stacey Dusing, PhD; Peter Pidcoe, PT, DPT, PhD

**SP 2:** CADAVERIC STUDY ON THE VARIATIONS IN THE NORMAL COURSE OF MOTOR BRANCHES OF SCIATIC AND TIBIAL NERVES (SUPPLYING HIP, KNEE AND ANKLE JOINT MUSCLES)
Juijuvarapu Deeraei, MS

**SP 3:** ASSESSMENT OF AN INTERVENTION USING AN EXOSKELETON TO IMPROVE REACHING AND OBJECT EXPLORATION IN INFANTS BORN WITH A BRAIN INJURY
Iryna Babik, PhD; Andrea Cunha, PhD; Michele Lobo, PT, PhD

**SP 4:** THE ROLE OF WEARABLE WRIST INERTIAL SENSORS TO QUANTIFY ARM ASYMMETRY DURING GAIT IN UNILATERAL SPASTIC CEREBRAL PALSY (USCP)
Aviva Wolff, EdD; Aaron Daluiski, MD; Mark Lenhoff, BSc

**SP 5:** CAN THE SHRINERS HOSPITAL UPPER EXTREMITY EVALUATION (SHUEE) DETECT CHANGE IN DYNAMIC POSITION AND SPONTANEOUS FUNCTION OF THE UPPER LIMB IN YOUTH WITH UNILATERAL CEREBRAL PALSY?
Nancy Lennon, DPT; John Kee; Tim Niiler, PhD; Jennifer Ty, MD

**SP 6:** CHANGES IN ROTATIONAL KINEMATICS DURING GAIT IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY FOLLOWING BONY REALIGNMENT OR SOFT TISSUE LEANGETHENING
Kaitlyn Bigner; Micah Garcia, MS; James McCarthy, MD, MHCM; Jason Long, PhD

**SP 7:** A BIOMECHANICAL ANALYSIS OF LOADING PATTERNS IN CHILDREN WITH CEREBRAL PALSY USING THE UPSEE
Daniel Meyer, DPT; Jennifer Angeli, DPT, PhD; Michael Kiefer, Doctor of Physical Therapy; Micah Garcia, MS; Jason Long, PhD

**SP 8:** HOW IS DAILY PERFORMANCE ASSOCIATED WITH MOTOR CAPACITY IN CHILDREN WITH CEREBRAL PALSY?
Corinna Gerber, PhD; Lena Carcreff, Master of science; Anisoara Paraschiv-Ionescu, PhD; Stéphane Armand, PhD; Christopher Newman, MD

**SP 9:** PROFILE OF FUNCTIONING AND DISABILITY OF CHILDREN WITH MICROCEPHALY ASSOCIATED WITH CONGENITAL ZIKA VIRUS IN BRAZIL
Egamar Longo, PhD; Haryelle Ferreira, BSc ; Klayton Galante Sousa, PhD; Isabelly Rodrigues Regalado, MSc; Silvana Pereira, PhD; Carla Patricia Fechine, MSc; Veronica Schiariti, MD, MHSc, PhD

**SP 10:** TETHERED CORD RELEASE: WHAT ARE THE ORTHOPAEDIC INDICATORS AND WHEN IS ORTHOPAEDIC SURGERY NEEDED?
Cameron Arkin, Bachelor of Arts ; Theresa Meyer, RN, MS, CPN; Jill Larson, MD; Vineeta Swaroop, MD

**SP 11:** NOVEL DATA ON CEREBRAL PALSY IN VIETNAM WILL INFORM CLINICAL PRACTICE AND POLICY
Gulam Khandaker, PhD; Rachael Dossetor, BSc; Nguyen Van Bang, PhD; Trinh Dung, PhD; Nguyen Van Anh, MD; Nguyen Giang, PhD; Cao Chau, PhD; Nguyen Van Thuong, PhD; Nadia Badawi, PhD; Elizabeth Elliott, PhD

**SP 12:** A RETROSPECTIVE ANALYSIS OF RISK FACTORS FOR SURGICAL SITE INFECTIONS FOLLOWING SPINAL FUSION SURGERY
Chantel Barney, PhD; Elena Abelson, BS; William Lew, MS; Steven Koop, MD

**SP 13:** CONGENITAL ANOMALIES IN CHILDREN WITH CEREBRAL PALSY: A SYSTEMATIC REVIEW AND META-ANALYSIS
Shona Goldsmith, BPhvHons1; Sarah McIntyre, PhD, MPS, BAppSc(OT); Michele Hansen, PhD, MPH, Bsc; Nadia Badawi, PhD

**SP 14:** EMERGING PRENATAL TREATMENT OF MYELOMENINGOCELE: A MODEL FOR REAL-WORLD NEURODEVELOPMENTAL FOLLOW-UP ACROSS THE CONTINUUM OF CARE
Heidi Castillo, MD; Jonathan Castillo, MD, MPH; Talia Collier, MD; Duong Tu, MD; Huirong Zhu, PhD; Jimmy Espinoza, MD; Magdalena Sanz Cortes, MD, PhD; Oluyinka Olutoye, MD, PhD; Michael Belfort, MD, PhD; William Whitehead, MD, MPH

**SP 15:** PRE-OPERATIVE MRSA SWAB RESULTS DO NOT PREDICT SURGICAL SITE INFECTIONS IN CHILDREN UNDERGOING A VARUS DEROTATIONAL OSTEOTOMY
Alexander Nazareth, MS; Rachel Goldstein, MD, MPH; Lindsay Andras, MD; Robert Kay, MD

**SP 16:** EARLY CHILD DEVELOPMENT STRATEGY INVOLVING DIDACTIC MATERIALS
Jorge Vasquez Rios, MD; Antonio Rizzoli Cordoba, PhD; Christian Delafior Wagner, MD; Magdalena Ferrusquia Figueroa, PT

**SP 17:** DEVELOPMENT CURVES OF MOTOR AND DAILY ACTIVITY PERFORMANCE OF INDIVIDUALS WITH CEREBRAL PALSY FROM CHILDHOOD INTO ADULTHOOD
Marloes van Gorp, MSc; Marij Roebroeck, PhD; Leontien van Wely, PhD; Vincent De Groot, MD, PhD; Jan Willem Gorter, MD, PhD; Dirk-Wouter Smits, PhD; Ann Katrin Schmidt, MSc; Annet Dalmeijer, PhD

**SP 18:** COMPASSION AND CONNECTEDNESS AS MOTIVATIONAL DRIVERS IN THE CARE OF CHILDREN WITH MEDICAL COMPLEXITY
Jim Plewes-Dgan, MD

**SP 19:** PHYSICAL LITERACY PROGRAMS FOR CHILDREN WITH DISABILITIES: A REALIST REVIEW
Shikha Saxena, PhD; Keiko Shikako-Thomas, PhD

**SP 20:** A COMPARISON OF OBJECT PERMANENCE PROGRESSION DURING SITTING DEVELOPMENT INFANTS WITH TYPICAL DEVELOPMENT AND INFANTS WITH MOTOR DELAY
Mhee An, PhD; Regina Harbourne, PhD; Jaclynn Stankus, BA, MScEd; Lin-Ya Hsu, PhD; Emily Marcinowski, PhD; Stacey Dusing, PhD

**SP 21:** ATTITUDES TOWARDS CHILDREN WITH DISABILITIES: COMPARING STUDENT PERSPECTIVES OVER THE PAST 30 YEARS.
Rachel Byrne, BA of Physical Therapy, BA Exercise Science; Tracy Pickar, MSW; Peter Rosenbaum, MD
SP 22: PARALLEL JOURNEYS: PERSPECTIVES OF CHILDREN WITH DISABILITIES AND THEIR SIBLINGS ON ACCESSING EDUCATION IN A LOW-RESOURCE CONTEXT
Shyamani Hettiarachchi, PhD; Gopi Kitnasamy, Western Province; Dilani Gopi, Western Province; Shamra Nizar, BSc Speech & Hearing Sciences

SP 23: A RETROSPECTIVE ANALYSIS OF POST-OPERATIVE PAIN FOLLOWING HIP RECONSTRUCTION SURGERY: A COMPARISON BETWEEN HIP-SPICA CASTING AND LESS RIGID IMMOBILIZATION
Susan Novotny, PhD; Walter Truong, MD; Uyen Truong, MS; Tonye Sylvanus, MD; Jennifer Carpenter, BS; Chantel Barney, PhD

SP 24: ONE YEAR EXPERIENCE WITH SPINRAZA IN SPINAL MUSCULAR ATROPHY
Emily Hazen, BS; Marcie Baldwin, MS, RN, CPNP; Stephanie Acord, MD; Angela Pomykal, MSPT; Warren Marks, MD

SP 25: SCOLIOSIS AND SPINAL PAIN AFTER MULTILEVEL SELECTIVE DORSAL RHIZOTOMY. A POPULATION-BASED CEREBRAL PALSY REGISTRY STUDY FROM BIRTH TO ADULTHOOD
Annika Lundkvist Josenby, PhD; Lena Westbom, PhD

SP 26: PAIN EXPERIENCE IN PATIENTS WITH CEREBRAL PALSY IN THE TWO DAYS FOLLOWING BOTULINUM TOXIN INJECTIONS
Stacy Stibb, DO; Kristin Frenn, MPH; Linda Krach, MD; Supreeta Deshpande, MD; Chantel Barney, PhD

SP 27: ELECTROENCEPHALOGRAPHY COHERENCE IN INFANTS AT RISK FOR DEVELOPMENTAL DELAY ACROSS THE FIRST HALF YEAR OF LIFE
Ran Xiao, PhD; Beth Smith, PhD

SP 28: NEUROMUSCULAR BLOCKING AGENT ROCURONIUM CORRELATES WITH INCREASING GMFCS SCORE AND GESTATIONAL AGE IN PATIENTS WITH CEREBRAL PALSY.
Stephanie Yeager, MS; Karyn Robinson, MS; Robert Akins, PhD

SP 29: ACCURACY ON BONT-A INJECTIONS INTO THE UPPER LIMB MUSCLES GUIDED BY ELECTRICAL STIMULATION IN CHILDREN WITH HYPERTONIA
Mauricio Delgado, MD; Yassine Kanaan, MD; David Wilkes, MD; Deborah Baldwin, BS

SP 30: WHOLE-BODY MUSCLE MAGNETIC RESONANCE IMAGING CHARACTERISTICS OF CHILDREN WITH MEROSESIN-DEFICIENT CONGENITAL MUSCULAR DYSTROPHY
Nagia Fahmy, MD; Tamer El-Sobky, MD; Nermine Elsayed, MD; Hossam Sakr, MD; Amr Saadawy, MD

SP 31: MOTOR CORTEX PHYSIOLOGY OF MOVEMENT PREPARATION IN ADHD CHILDREN
Madison Epperson, BA; Paul Horn, PhD; Steve Wu, MD; Ernest Pedapati, MD, MS; Michael Guthrie, BS; David Huddleston, BA; Donald Gilbert, MD, MS

SP 32: CURVEBALL: AN AUTOMATED SYSTEM FOR MEASURING VISUAL FUNCTION IN CHILDREN WITH BRAIN INJURY
Scott Mooney, PhD; Melis Suner, MD; N. Jeremy Hill, PhD; Jason Carmel, MD, PhD; Glen Prusky, PhD

SP 33: INTRARATER RELIABILITY OF MEASUREMENT OF SUBMANDIBULAR GLANDS UNDER ULTRASOUND: PROSPECTIVE STUDY
Heakyoung Kim, MD; Adam Blanchard, MS; Afzal Khan, RDMS; Amber Newell, NP & OTRL

SP 34: Uneven Learning Patterns in Preschool Children with High Risk Neonatal Medical and Surgical Conditions
Marie Weissbourd, PhD; Annamarie Russow, MEd; Lynn Boswell, MPT; Raye-Ann deRegnier, MD

SP 35: SELF-REPORTED PAIN LEVELS ARE RELATED WITH THE ABERRANT SOMATOSENSORY ACTIVITY IN CHILDREN WITH CEREBRAL PALSY
James Gehringer, BS; David Arpin, PhD; Tony Wilson, PhD; Max Kurz, PhD

SP 36: THE FORMULA FOR HEALTH AND WELL-BEING: CROSS-SECTIONAL DATA ON PHYSICAL ACTIVITY, SLEEP, AND NUTRITION IN INDIVIDUALS WITH CEREBRAL PALSY
Patrick McPhee, MSc; Olaf Verschuren, PhD; Mark Peterson, PhD, MS; Ada Tang, PT, PhD; Jan Willem Gorter, MD, PhD

SP 37: LONG-TERM FOLLOW UP ON QUALITY OF LIFE OF ADULTS WITH ARTHROGYROSIS
Haluk Altıok, MD; Ann Flanagan, PT, PCS; Sahar Hassani, MS; Joseph J Krzak, PT, PhD, PCS

SP 38: EVALUATION OF THERAPISTS ACCEPTANCE AND KNOWLEDGE OF A PROVINCIAL HIP SURVEILLANCE PROGRAM: PRE AND POST IMPLEMENTATION RESULTS
Stacey Miller, BSc(PT), MRSc; Maureen O’Donnell, MD, MSc, FRCPC; Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi)

SP 39: THE FIRST NORTH AMERICAN HIP SURVEILLANCE PROGRAM: STRATEGIES FOR SUCCESSFUL ENROLLMENT
Stacey Miller, BSc(PT), MRSc; Maureen O’Donnell, MD, MSc, FRCPC; Kishore Mulpuri, MBBS, MS(Ortho), MHSc(Epi)

SP 40: CEREBELLAR DIFFERENCES IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER
Kamaldeep Gill, OTR/L; Dan Goldowitz, PhD; Donna Lang, PhD; Jill Zwicker, OT, PhD

SP 41: OUTCOME OF COMMUNITY BASED PARENTS LED EARLY INTERVENTION FOR CHILDREN WITH CEREBRAL PALSY IN RURAL BANGLADESH
Tasneem Karim, MPH; Mohammad Muhit, PhD; Israt Jahan, MPH; Nadia Badawi, PhD; Gulam Khandaker, PhD

SP 42: ACCELEROMETRY FOR THE EARLY DETECTION OF MOTOR DEFICITS IN CHILDREN
Catherine Hoyt, OTR

SP 43: ADOLESCENTS WITH CEREBRAL PALSY ATTITUDES TOWARDS INTENSIVE MODELS OF PHYSICAL THERAPY
Theresa Sukal-Moulton, PhD, DPT; Taylor Cappitelli, SPT; Erin Geraghty, SPT; Katherine Knaapen, SPT; Megan Moore, SPT; Michelle Bolano, PT, DPT; Felicia Kurkowski, BA; Sarah Kerndt, MBA

SP 44: IDENTIFICATION OF POSTURAL ABNORMALITY IN YOUNG ADULTS WITH CEREBRAL PALSY
Carlee Holmes, PT; Prue Morgan, PhD, MAppSc (Research), BAppSc (Physio); Kim Brock, PhD, B Physio
SP 45: TRANSFORMING THEIR JOURNEY BY LISTENING TO THEIR VOICES: A PHOTOVOICE STUDY OF BARRIERS AND FACILITATORS TO PHYSICAL ACTIVITY AMONG RURAL YOUTH WITH CEREBRAL PALSY
Ashley Walker, PhD; Gavin Colquitt, EdD; Morgan Emter, BS in Sport and Exercise Psychology; Steven Elliott, PhD; Li Li, PhD

SP 46: MIRROR MOVEMENTS IN THE UPPER EXTREMITIES OF INDIVIDUALS WITH UNILATERAL AND BILATERAL CEREBRAL PALSY
Theresa Sukal-Moulton, PhD, DPT; Kristin Krosschell, PT, DPT, MA, PCS; Deborah Gaebler-Spira, MD

SP 47: HEALTH-RELATED QUALITY OF LIFE IN ADULTS WITH CEREBRAL PALSY
Ann Alriksson-Schmidt, PhD; Johan Jarl, PhD; Elisabet Rodby-Bousquet, PhD

SP 48: COMPARISON OF THE RESULTS OF PRIMARY VERSUS REPEAT HAMSTRING SURGICAL LENGTHENING IN CEREBRAL PALSY
Mauro DE Morais Filho, MD, MSc, PhD; Francesco Blumetti, MD, MSc, PhD; Catia Kawamura, PT; Marcelo Matias, MD; Josué Augusto Lopes, MSc; Marcelo Fujino, MD; Daniella Neves, MD

SP 49: FACTORS RELATED TO BETTER OUTCOMES AFTER SINGLE EVENT MULTILEVEL SURGERY (SEMLS) IN PATIENTS WITH CEREBRAL PALSY
Mauro DE Morais Filho, MD, MSc, PhD; Francesco Blumetti, MD, MSc, PhD; Catia Kawamura, PT; Kamila Freitas, MD; Josué Augusto Lopes, MSc; Marcelo Fujino, MD; Daniella Neves, MD

SP 50: RADIOGRAPHIC CHANGES OF THE MID-TARSAL JOINT AT A MINIMUM FOLLOW-UP OF 5 YEARS AFTER CALCANEAL LENGTHENING FOR PLANOVULGUS FOOT DEFORMITY
Byung Cho Min, MD; Ki Hyuk Sung, MD, PhD; Seung Yeol Lee, MD, PhD; Gyeong Hee Cho, MD; Moon Seok Park, MD, PhD. Clinical professor; Chin Youb Chung, MD, PhD

SP 51: USE OF ILIAC CREST ALLOGRAFT FOR DEGA PELVIC OSTEOTOMY IN PATIENTS WITH CEREBRAL PALSY
Byung Cho Min, MD; Ki Hyuk Sung, MD, PhD; Seung Yeol Lee, MD, PhD; Gyeong Hee Cho, MD; Moon Seok Park, MD, PhD. Clinical professor; Chin Youb Chung, MD, PhD

SP 52: SELECTIVE CONTROL ASSESSMENT OF THE LOWER EXTREMITY (SCALE) SCORE CORRELATES WITH JOINT-SPECIFIC GAIT DEVIATIONS IN CHILDREN WITH BILATERAL CEREBRAL PALSY
Vedant Kulkarni, MD; Jon Davids, MD; Nina Cung, BA; BS; Anita Bagley, PhD, MPH

SP 53: SIGNIFICANT VARIATION IN THE EFFICACY OF EPIDURALS IN TREATING POSTOPERATIVE PAIN AFTER HIP RECONSTRUCTION IN CEREBRAL PALSY: A MATCHED COHORT ANALYSIS
M. Wade Shrader, MD; Mohan Belthur, MD, FRCSC, FRCS (Tr & Orth); Miranda Falk, PA-C; William Wood, MD

SP 54: RISK FACTORS FOR INCREASED BLOOD LOSS DURING SPINAL FUSION FOR CHILDREN WITH NEUROMUSCULAR SCOLIOSIS
Jay Berry, MD, MPH; Molly Lewen, MD; Connor Johnson, BS; Charis Crofton, BA; Rachael Grace, MD, MMSc; Laurie Glader, MD; Michael Glotzbeker, MD; Michael Troy, BS; Joanne Cox, MD; Anna Litvinova, BFA; Izabela Leahy, RN, BSN, MS; Nikhil Pallikonda, BS; Lynne Ferrari, MD

SP 55: HOW SAFE IS THE TRANSVERS OSTEOOTMY AND NONANATOMIC REDUCTION WITH LOCKING PLATE FIXATION IN PROXIMAL FEMORAL OSTEOOTOMIES OF CEREBRAL PALSY CHILDREN?
Cemil Yildiz, MD; Hatis Atilla, MD; Yusuf Erdem, MD

SP 56: SATELLITE CELLS FROM SPASTIC CP DONORS EXHIBIT ALTERED GENE EXPRESSION PROFILES IN CULTURE
Karyn Robinson, MS; Stephanie Yeager, MD; Erin Crowgey, PhD; Jeffrey Myers, BS Information Sciences & Technology; Mokun Fatukasi, MS; Robert Akins, PhD

SP 57: DIFFERENCES IN CAREGIVER PERSPECTIVE ON QUALITY OF LIFE OF CHILDREN WITH CEREBRAL PALSY
Emily Schaeffer, PhD; Maria Juricic, MSc; Stacey Miller, BSc(PT), MSc; Judy Wu; Kishore Mulpuri, MBBS, MS(Orth), MHSc(Epi)

SP 58: DETERMINANTS OF WALKING ACTIVITY IN CHILDREN AND ADOLESCENTS WITH MYELOMENINGOCELE
Nicole Mueske, MS; Carmel Diamant, BS; Deirdre Ryan, MD; Alexander VanSpeybroeck, MD; Tishya Wren, PhD; Susan Rethlefsen, DPT

SP 59: SATELLITE CELLS ISOLATED FROM PATIENTS WITH CEREBRAL PALSY EXHIBIT ALTERED CELL CYCLE ACTIVITY WHEN CULTURED ON BIOMIMETIC HYDROGELS.
Stephanie Yeager, MD; Rebecca Scott, PhD; Robert Akins, PhD

SP 60: PROMOTING EVIDENCE-BASED PRACTICE IN THE PROVISION OF HEALTH-COACHING INTERVENTIONS FOR PARENTS OF CHILDREN WITH DEVELOPMENTAL DISABILITIES: SYSTEMATIC LITERATURE REVIEW
Tatiana Ogourtsova, OT, PhDScand, MSc, BSc; Annette Majnemer, OT, PhD; Maureen O’Donnell, MD, MSC, FRCP

SP 61: VALIDITY OF THE CHINESE VERSION OF ASQ IN HIGH RISK CHILDREN
Shiqi Liu, MD; Ming Li, MD; Yuan Wu, MD

SP 62: THE RELATIONSHIP BETWEEN PARENT-REPORTED PEDI-CAT MOBILITY AND GROSS MOTOR FUNCTION
Jessica Lewis, PT, DPT; Jill Heathcock, PT, PhD

SP 63: DEVELOPMENT OF MEANS-END PROBLEM-SOLVING IN INFANTS BORN PRETERM VS. FULL-TERM
Andrea Cunha, PhD; Iryna Babik, PhD; Michele Lobo, PT, PhD

SP 64: MOTIVATING SELECTIVE MOTOR CONTROL OF INFANTS AT HIGH RISK FOR CEREBRAL PALSY: A FEASIBILITY STUDY
Barbara Sargent, PhD, PT, PCS; Kathryn Havens, MD; Linda Fetters, PhD, PT, FAPTA

SP 65: SCOPING REVIEW OF DANCE UTILIZED IN REHABILITATION FOR PEOPLE WITH CEREBRAL PALSY
Deborah Gaebler-Spira, MD; Lopez-Ortiz Citiab, MA, PhD; Reika McNish, BFA; Sara McKeeman
SP 66: A PROSPECTIVE, MULTICENTER, OBSERVATIONAL STUDY TO EVALUATE THE EFFECTIVENESS AND SAFETY OF ABOBOTULINUMTOXINA IN PEDIATRIC LOWER LIMB SPASTICITY: INJECTION PRACTICES
Mark Gormley, MD; Didem Inanoglu, MD; Lewis Miller, MD; Jenny Wilson, MD; Mauricio Delgado, MD; Angela Castagna; Junhong Zhu, PhD; Romain Raymond; Gustavo Suarez, MD

SP 67: BARRIERS IN ACCESSING ADULT HEALTHCARE FOR TRANSITIONING YOUTH WITH SPINAL CORD INJURY
Alexander Porto, BA; Lara Anderson; Lawrence Vogel, MD; Kathy Zebracki, PhD

SP 68: EARLY INTERVENTION SERVICES PROVIDED BY PHYSICAL AND OCCUPATIONAL THERAPISTS FOR INFANTS WITH OR AT RISK FOR CEREBRAL PALSY
Afnan Gmmash, BSPT, MS; Susan Effgen, PT, PhD, FAPTA

SP 69: PHYSICAL ACTIVITY, ADIPOSITY, AND FUNCTION IN YOUTH WITH AND WITHOUT SPASTIC CEREBRAL PALSY: A PILOT COHORT STUDY
Leticia Janzen, BKin; Gregor Kuntze, PhD; Clodagh Toomey, PT, PhD; Elizabeth Condiffe, PhD, MD; Laura Brunton, PT, PhD; Shane Esau, M.Kin.; Adam Kirton, MD, MSc, FRCPC; Carolyn Emery, PT, PhD

SP 70: INTERNATIONAL VALIDATION OF ATTRIBUTES THAT SHOULD PROMPT REFERRAL FOR DIAGNOSIS OF CEREBRAL PALSY: A DELPHI STUDY
Zachary Boychuck, PhD Candidate
DP 1: POWERBOT: A PORTABLE POWER MOBILITY TRAINING DEVICE
T Salvador BS, A Hall PT, MPT, PCS, ATP, L Ryscavage PT, DPT, ATP, E Lawyer MS, OTR/L, ATP, A Toback MS, OTR/L, K Kennedy PT, DPT, K Cleary PhD, S Evans MD

DP 2: PROVIDING ACCESS TO INNOVATIVE, LIFE-SAVING TREATMENT FOR CHILDREN WITH SPINAL MUSCULAR ATROPHY: MULTIDISCIPLINARY COLLABORATION
A Sturgill MSN

DP 3: COMPARING MACHINE-LEARNED AND DIAGNOSIS-DRIVEN GROUPINGS OF CHILDREN IN THE 2011 NATIONAL SURVEY OF CHILDREN'S HEALTH
S Day PhD, R Reynolds MS, MPH, PhD, PStat

DP 4: CP-NORTH: LIVING LIFE WITH CEREBRAL PALSY IN THE NORDIC COUNTRIES?
A Alriksson-Schmidt PhD, R Jahnsen PT, PhD, G Andersen MD, PhD, J Jeglinsky-Kankainen PhD, PT, G Jonsdottir MSc, PGCCA, K Nordbye-Nielsen PT, MSc, PhD student, G Eggertsdottir MSc, MScPH, C Consortium

DP 6: “MY ABILITIES FIRST” APP: AN INNOVATIVE ABILITIES-ORIENTED APPROACH E-TOOL FOR CHILDREN AND YOUTH WITH CHILDHOOD-ONSET DISABILITIES
V Schiariti, MD, MHSc, PhD

DP 9: FEASIBILITY OF DISPLAYING BEDSIDE HOME VIDEOS TO FACILITATE PATIENT AND PROVIDER COMMUNICATION DURING INPATIENT CARE OF CHILDREN WITH MEDICAL COMPLEXITY
J Carlisle MD, T Dewan MD, MSc, E Lee MD, R Houweling BScN, H Beveridge PhD Candidate

DP 10: MULTI-MORBIDITY RISK ASSESSMENT AND PREVENTION IN CLINICAL PRACTICE: ESTABLISHING AND TESTING A CORE OUTCOME SET FOR ADOLESCENTS AND ADULTS WITH CEREBRAL PALSY
P McPhee MSc, J Benner MSc, S Darji BSc., Life Sciences, M Roebroeck PhD, J Gorter MD, PhD

DP 11: DEVELOPMENT OF THE HAND-OBJECT OBSERVATION TOOL (HOOT): AN OBSERVATION BASED ASSESSMENT OF UPPER EXTREMITY FUNCTION IN CHILDREN DIAGNOSED WITH BILATERAL CEREBRAL PALSY (BCP) GMFCS III, IV, AND V, DURING DAILY ACTIVITIES.
A Sarathan OTR/L, K Dimitropoulou PhD, MD, OTR/L, M Chatterji PhD

DP 12: INTEGRATION OF A PHARMACIST IN A PEDIATRIC MEDICAL HOME FOR CHILDREN WITH MEDICAL COMPLEXITY
A Yoder PharmD, R Ogden PharmD, MBA, J Larson DNP, MBA, CPNP, NEA-BC, E Goodwin MD

DP 13: I AM SMARTER THAN THEY ARE- KIDS WITH CP-QUALITATIVE RESPONSES TO BULLYING
B Tann BSN, D Deike MD, G Gaebler-Spira MD

DP 14: FORM FOLLOWS FUNCTION: A NOVEL CLINIC MODEL IN PEDIATRIC REHABILITATION
J Sheriko BSc, MD

DP 17: THE ASSOCIATION OF HEPATOBLASTOMA, CEREBRAL PALSY, AND PREMATURITY: CASE REPORTS
J Pruente MD, G Gaebler-Spira MD, D Deike MD

DP 21: AN ALTERNATIVE TO CATHETER REPLACEMENT FOR THE MANAGEMENT OF AN INTRADURAL CATHETER TIP
S Stricklin MD, R Farid MD

DP 22: CHILD RESTRAINT USE IN CHILDREN WITH SPECIAL NEEDS
K Fraser MEd, BSc(OT); BSc, R Campbell BA, Masters Candidate

DP 23: BISPHOSPHONATE TREATMENT IN PEDIATRIC CHARCOT NEUROARTHROPATHY
L Owens MD, F Miller MD

DP 24: DESIGN CONSIDERATIONS FOR INTRODUCING A BRAIN-COMPUTER INTERFACE TO PEOPLE WITHOUT EXISTING COMMUNICATION
J Huggins PhD, J Kaufman PhD, D Halkias PhD

DP 25: THE ‘NOW WHAT?’ PEER PROJECT: AN INTERGENERATIONAL, PEER-TO-PEER, SUPPORT NETWORK FOR YOUTH WITH CEREBRAL PALSY (CP) IN NORTHERN CALIFORNIA.
V Leddy DPT

DP 26: MEANINGFUL INVOLVEMENT OF PATIENT, FAMILY AND HEALTHCARE STAKEHOLDERS IN THE READYORNOT PROJECT
J Gorter MD, J Kaufman PhD, D Thomson, K Amaria PhD, R Rozenblum PhD, MPH, S Strohm MSc, L Nguyen BHS, MSc, B Galuppi BA, A Marelli MD, MPH

DP 27: SELECTIVE DORSAL RHIZOTOMY AS A TREATMENT FOR SPINAL CORD INJURY INDUCED SPASTICITY
M Flavin MD, S Wilson PT, C Wilkinson MD, J Oleszek MD

DP 28: SELECTIVE DORSAL RHIZOTOMY AS A TREATMENT FOR SPINAL CORD INJURY INDUCED SPASTICITY
M Flavin MD, A Wilson PT, C Wilkinson MD, J Oleszek MD

DP 29: PROXIMAL FOREARM FLEXOR-PRONATOR SLIDE AS AN ALTERNATIVE TO TENDON RELEASES FOR SURGICAL CORRECTION OF WRIST, FINGER, AND FOREARM CONTRACTURES IN CHILDREN WITH CP
A Chu MD, M Milone MD, R Hinds MD

DP 30: UNDERSTANDING LONGITUDINAL BRAIN REORGANIZATION IN INFANTS AFTER PERINATAL STROKE
J Kowalski JP, S Nemanich PhD, B Mueller PhD, R Rao MD, M Georgiell MD, J Menk MS, K Rudser PhD, B Gillick PhD

DP 31: AN ALTERNATIVE TO CATHETER REPLACEMENT FOR THE MANAGEMENT OF AN INTRADURAL CATHETER TIP
S Stricklin MD, R Farid MD

DP 34: CHILD RESTRAINT USE IN CHILDREN WITH SPECIAL NEEDS
K Fraser MEd; BSc(OT); BSc, R Campbell BA, Masters Candidate

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PREMIER LEVEL SUPPORTERS

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**OrthoPediatics**
At OrthoPediatics®, we have a cause to improve the lives of children with orthopedic conditions. As the only global medical device company focused exclusively on pediatric orthopedics, we have 16 surgical systems for Trauma, Limb Deformity, Spine, and Sports Medicine. OrthoPediatics is the true end-to-end provider for surgical solutions in pediatric orthopedics, and in collaboration with world-class pediatric orthopedic surgeons, we are dedicated to delivering the best products for children. We are committed to providing and supporting superior clinical education through partnerships with professional societies as well as training and educational initiatives globally to advance the field of pediatric orthopedics.

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**Children’s Hospital Foundation**
Children’s Hospital Foundation is dedicated to funding and advocating for pediatric initiatives that improve the status of health care and the quality of life for children in our region. The Foundation provides support for the programs and initiatives of Children’s Hospital of Richmond at VCU and the children it serves each year, as well as other pediatric health care programs in the community.

**Mac Keith Press**
Mac Keith Press provides information to advance treatment and care of children with disability. Primarily for a health-oriented audience of therapists, doctors, nurses and health workers, MKP’s publications are also of interest to psychologists, special teachers and others involved in the care of children with disabilities.

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**Cerebral Palsy Foundation**
The Cerebral Palsy Foundation (formerly Cerebral Palsy International Research Foundation) works to transform the lives of people with cerebral palsy today through research, innovation and collaboration. We achieve this by identifying key moments of impact and the defining appropriate areas of study and research which can have an effect on them. By collaborating with academic and industry researchers alike, we develop innovative strategies and protocols to accelerate the delivery of new diagnostics, treatments, interventions and practices to individuals, clinicians, and families. Founded in 1955, CPF has contributed more than $40 million in research grants.

**Gillette Children’s Specialty Healthcare**
Gillette Children’s Specialty Healthcare is an independent not-for-profit health system specializing in treating children who have complex conditions, rare disorders and traumatic injuries. Our experienced clinical staff collaborates to treat patients who have complex medical needs. This expertise makes us a resource and partner for health systems across Minnesota and the U.S. Gillette’s skilled team of health care professionals work proactively with families to help children achieve their goals and discover what they CAN do.

**Holland Bloorview Kids Rehabilitation Hospital**
Holland Bloorview Kids Rehabilitation Hospital is Canada’s largest children’s rehabilitation hospital. We pioneer treatments, technologies, therapies and programs that give children with disabilities the tools to participate fully in life.

Holland Bloorview is a global leader that serves about 7,000 children yearly. Holland Bloorview is a global world-class teaching hospital affiliated with the University of Toronto, training future health-care specialists in the field of childhood disability. We are also home to the Bloorview Research Institute, allowing us to integrate leading research and teaching with front-line care to improve quality of life.

We see children with cerebral palsy, acquired brain injury, muscular dystrophy, amputation, epilepsy, spina bifida, arthritis, cleft-lip and palate, autism, and other developmental disabilities. A small number of our clients have complex chronic diseases that require round-the-clock medical care.

**Shriners Hospitals for Children**
Shriners Hospitals for Children® is changing lives every day by providing innovative pediatric specialty care, conducting world-class research, and offering outstanding educational programs for medical professionals. At our 22 locations – 20 in the U.S., and one each in Canada and Mexico – children up to age 18 receive expert care for orthopaedic conditions, burns, spinal cord injuries, and cleft lip and palate, regardless of the families’ ability to pay. All services are provided in a compassionate, family-centered environment. Since the first Shriners Hospital opened in 1922, we have given hope and healing to more than 1.3 million children, and their families.
Weinberg Cerebral Palsy Center at Columbia University
The Weinberg Family Cerebral Palsy Center is the first program dedicated to transitional care for cerebral palsy (CP) on the East Coast. It provides integrated, coordinated, and multidisciplinary health care that includes pediatric, transitional, and adult care.

Through education, research, and advocacy, our growing network of cerebral palsy experts aim to expand knowledge of CP and access to care across the life span. We collaborate with our patients and their families to help people with CP of all ages to manage their symptoms and reach their full potential – building a bridge for lifetime care, together.

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Cathleen Lyle Murray Foundation
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Allard USA, Inc
Premiere viewing of Allard’s upgraded pediatric hip orthosis; SWASH® STEAD and GO! We offer a full range of the highest quality AFOs by continually researching the biomechanical needs of patients with lower extremity deficiencies, as well as investing in state-of-the-art materials and technology. Product range also includes contracture management, spinal orthoses, as well as splinting and bracing materials.
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Since 1987, Altimate Medical and its EastStand brand has lead the standing industry by creating unsurpassed standing technology for those with disabilities. Designed by a C6-7 quadraplegic, Eaststand’s line of standing frames have helped improve the quality of life for kids and adults who use wheelchairs worldwide. A durable medical equipment manufacturer based in Morton, Minnesota, we design and develop standing devices that support the body in a standing position. Simply designing a stander though, was not enough. We strive to perfect all of our standing equipment and products and have turned to our valuable customers in doing so. Standing is all we do - and we offer the widest array of standing equipment in a variety of sizes and options, including the unique “Active Standing” Glider and the only true multi-position stander, the EasyStand Zing MPS.
www.easystand.com

Booth 26
American Association for Pediatric Ophthalmology and Strabismus (AAPOS)
AAPOS is the American Association for Pediatric Ophthalmology and Strabismus. The organization’s goals are to advance the quality of children’s eye care, support the training of pediatric ophthalmologists, support research activities in pediatric ophthalmology, and advance the care of adults with strabismus.
www.aapos.org

Booth 27
AMTI
AMTI’s industry-leading force platforms are trusted by clinicians and researchers worldwide. Our innovative OPTIMA system revolutionizes multi-axis force measurement technology, producing the most accurate force platforms on the market. Our smart platform technology and simple digital integration ensure the most accurate output in a convenient package.

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Cascade Dafo, creator of the original DAFO® (Dynamic Ankle Foot Orthosis), is the industry’s leading manufacturer of pediatric lower-extremity braces. The patient-focused company creates innovative products unmatched in quality, fit, and function—backed with a full (90-Day) warranty and exceptional customer support. Visit www.cascadedafo.com or call 800.848.7332.
www.cascadedafo.com

Booth 34
Cerebral Palsy Foundation
The Cerebral Palsy Foundation is a catalyst for creating possibilities in the world of disabilities. We are transforming lives for people with disabilities by collaborating with many of the world’s most innovative thinkers to create novel insights and develop breakthrough interventions which can be implemented today.
www.yourcpf.org

Booth 40
Galileo Therapy
Galileo is a universal neuromuscular training tool improving muscle fitness, enhancing performance, and optimizing motor relearning under the principle of high-repetition in minutes. Unlike other muscle devices, Galileo provides intense muscle training by inducing reflexive muscle contractions. No other device provides this level of neuromuscular activity enhancing neuroplasticity.
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Booth 44
Cincinnati Children’s Hospital
The Cerebral Palsy Program at Cincinnati Children’s is nationally recognized for our patient-centered care and clinical quality in diagnosing and treating cerebral palsy. We see more than 1,400 children with cerebral palsy every year. Our goal is to provide care that is comprehensive, coordinated and family-centered, while keeping referring providers informed of our diagnoses and treatments.

Booth 22
Cook Children’s Health Care System
Cook Children’s Comprehensive Cerebral Palsy and Movement Disorders Program
www.amti.biz

Booth 23
Easy Walking Inc.
Easy Walking Inc. Makers of the Up’n’Go and Up’n’Free Plus. Partial weight body support. Dynamic rehab tools for gait development. Used in clinics and homes. Toddler-Adult
www.easy-walking.com

Booth 41
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Functional Formularies offers the world’s first 100% certified organic, Non-GMO, nutritionally complete, shelf-stable feeding tube formula and oral meal replacement products. Liquid Hope is formulated to be a sole-source nutrition formula for adults and Nourish, the enteral formula and oral meal replacement formula is optimized for pediatrics.
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Galileo is a universal neuromuscular training tool improving muscle fitness, enhancing performance, and optimizing motor relearning under the principle of high-repetition in minutes. Unlike other muscle devices, Galileo provides intense muscle training by inducing reflexive muscle contractions. No other device provides this level of neuromuscular activity enhancing neuroplasticity.
www.galileotherapy.com
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Gillette Children’s Specialty Healthcare  
Gillette Children’s Specialty Healthcare is an independent not-for-profit health system specializing in treating children who have complex conditions, rare disorders and traumatic injuries. Our experienced clinical staff collaborates to treat patients who have complex medical needs. This expertise makes us a resource and partner for health systems across Minnesota and the U.S. Gillette’s skilled team of health care professionals work proactively with families to help children achieve their goals and discover what they CAN do.  
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**Booth 42**  
HMS School for Children with Cerebral Palsy  
Private day and residential school for 5-21 year-old students with complex educational needs, specializing in AT, AAC and transition services.  
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Kennedy Krieger Institute  
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**Booth 14&15**  
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**Booth 5**  
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Myomo® develops MyoPro®, a powered upper limb orthosis designed to restore function to the weakened or paralyzed arms of patients suffering from stroke, brachial plexus injury, cerebral palsy, or other neuromuscular disease or injury. Sensing EMG signals through non-invasive sensors on the arm, it can restore the ability to perform activities of daily living.  
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Nemours.org/orthopediccenter

**Booth 3 and 4**  
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Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on providing a comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 25 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This offering spans trauma & deformity, scoliosis, and sports medicine/other procedures. OrthoPediatrics’ global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and 38 countries outside the United States.  
www.orthopediatrics.com

**Booth 2**  
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Since 1985, Pathways.org has used research and multimedia as tools to promote each child’s fullest inclusion. Pathways.org creates FREE materials under the direction of the Pathways.org Medical Round Table. We strive to empower health professionals and parents with the free educational resources on the benefit of early detection and early intervention for children’s motor, sensory, and communication development.  
www.pathways.org
We believe “Everyone deserves a voice.”

Booth 20
Pediatric Complex Care Association
The Pediatric Complex Care Association is a nation non-profit organization representing pediatric post-acute and long-term care providers. Our vision is to unite organizations to provide a combined voice and promote excellence of care for children with complex medical needs and their families.

pediatriccomplexcare.org

Booth 10
Pediatric Cortical Visual Impairment Society
The mission of the Pediatric Cortical Visual Impairment Society is to advocate for improvement in the quality of life of children with vision loss due to brain disorder, disease or injury.

www.pediatriccvisociety.org

Booth 39
Phoenix Children’s Hospital
Not for profit Children’s Hospital.

www.phoenixchildrens.org

Booth 17
Piramal Critical Care
Gablofen® is the only FDA-approved Intrathecal Baclofen in Prefilled syringes and factory-sealed vials. It offers a customized treatment for severe spasticity in patients 4 years of age and older that do not see relief or have side effects from oral baclofen. Do not suddenly stop using Gablofen®. See full PI

www.piramalcriticalcare.com

Booth 29
Prentke Romich Company/Saltillo Corporation
For over 50 years, PRC/Saltillo has led the industry in providing AAC solutions with advanced communication technology and language development systems. Visit us and learn more about our AAC solutions. We believe “Everyone deserves a voice.”

www.prentrom.com

Booth 31
Prime Engineering
Prime Engineering has been supplying innovation in standing and gait since 1984. Balance and symmetry are fundamental to all of our products. We provide proper and safe standing and gait solutions.

primeengineering.com

Booth 43
Pro-Tech Orthopedics
Custom orthotics manufacturer including Sensory Dynamic Orthosis, SDO, for Sensory, proprioception, compression, and directional force.

www.protech-intl.com

Booth 37
Rehabtek LLC
Rehabtek LLC is focused on the research and development of advanced robotic rehabilitation technologies.

rehabtek.com

Booth 7
Restorative Therapies
Restorative Therapies is the leader in Functional Electrical Stimulation systems for arms, legs and trunk muscles. FES manage tone and enables muscles to work even though muscles may be compromised from neurological impairment. Our cycling, stepping and elliptical systems are available for pediatrics and adults in the clinic or home.

www.restorative-therapies.com

Booth 18 and 19
Saal Therapeutics
Saal Therapeutics is focused on spasticity and rare disease and committed to providing and advancing therapeutic options for patients and the physicians treating these populations.

www.saolrx.com

Booth 40
Tekscan, Inc
Pressure measurement systems.

www.tekscan.com

Booth 36
Trexo Robotics

www.trexorobotics.com

Booth 11 & 12
Tyromotion GmbH
TYROTHERAPY – GET BETTER. EVERY DAY. Tyromotion GmbH is one of the world-wide leading manufacturers and distributors of robotic assisted and computer aided therapy units with the goal to sustainably improve patients’ independence and quality of life.

To accomplish this mission, we provide a complete solution that enables physicians and therapists to put their patients at the heart of rehabilitation and to work together on their goals. By using powerful novel technologies such as robotics, sensor technology, virtual reality and gamification, patients are guided through the rehabilitation process more intensively and motivationally.

Connected by our intelligent therapy software TyroS®, Tyromotion’s products AMADEO® (finger-hand rehabilitation), PABLO® (hand-arm rehabilitation), TYMO® (trunk control), DIEGO® (arm-shoulder rehabilitation) and MYRO (multisensory therapy system) build a comprehensive therapy concept for the complete upper extremity during all phases of rehabilitation. With our product OMEGO® (pre-gait), as well as extensions of our products TYMO® (balance training and postural control) and PABLO® (gait analysis), we also provide various therapeutic options for the lower extremity. Coupled with numerous assessments and bio feedback, Tyromotion products facilitate several forms of rehabilitation for children and adults with various indications.

The company with headquarters in Graz has additional branch establishments in Germany, Switzerland and the USA and a global network of distribution partners.

Booth 1
Wiley
Wiley, a global company, helps people and organizations develop the skills and knowledge they need to succeed. Our online scientific, technical, medical, and scholarly journals, combined with our digital learning, assessment and certification solutions help universities, societies, businesses, governments, and individuals increase the academic and professional impact of their work.
EXHIBIT HALL FLOOR PLAN

AACPDM
October 9-13, 2018
Please see page 4 for detailed hours.
DISCLOSURE INDEX

A = Consultant/Advisory Board
B = Employment
C = Other Research Support includes receipt of drugs, supplies, equipment or other in-kind support
D = Ownership Interest includes stock, stock options, patent or other intellectual property
E = Research Grant includes principal investigator, collaborator or consultant and pending grants as well as grants already received
F = Speaker/Honoraria includes speakers bureau, symposia, and expert witness
G = Other Financial or Material Support
H = Other Research Support
I = Royalties
J = Stock Shareholder (excluding mutual funds)
K = Stockholder/Ownership Interest (excluding diversified mutual funds)
L = Nothing to Disclose

Breakfast Seminar

BRK1 Clark, K (L), Pope, E (L)
BRK2 Berry, J (L), Rempel, G (L), Glader, L (L), Beltthor, M (L)
BRK3 Miro, J (L)
BRK4 Colvin, C (L), Thomas, M (L)
BRK5 Heathcock, J (L), Maitre, N (L), Ramey, S (L)
BRK6 Sheehan, A (L), Harpster, K (L), Angeli, J (L)
BRK7 Pickar, T (L), Ellenson, R (L), Rosenbaum, P (L), Byrne, R (L)
BRK8 Labhard, S (L)
BRK9 Agrawal, S (L), Dutkowski, J (L), Gordon, A (L), Kim, H (Allergan: A)
Allergan: A
Ipsen: C
LIH, China: A
DP 5 Berndt, A (L)
BRK10 Lichtenthal, P (L), Samuels, P (L), Valencia, F (L)
BRK11 Malik, K (L), Agrawal, R (L), Pelegano, J (L)
BRK12 Gross, P (L), Bailes, A (L), Shusterman, M (Merz pharmaceuticals: G), provides grant funds to my nonprofit, Hurvitz, E (L)
BRK13 Zwicker, J (BC Children’s Hospital Research Institute: E), Canadian Child Health Clinician Scientist Program: E, Canadian Institutes of Health Research: E, Medtronic: C
Michael Smith Foundation for Health Research: E, Sunny Hill Health Centre for Children: C, E
BRK15 Peterson, M (L), Hurvitz, E (L)
BRK16 Prather, H (L), Morress, C (L)
BRK17 Hymore, K (L), Schwartz, T (L)
BRK18 Sukhov, R (L), Chi, A (L), Schaeffer, M (L), Belfiori, L (L)
BRK19 Harpster, K (L), Dorich, J (L), Shotwell, C (L)
BRK20 Lennon, N (L), Bjornson, K (L), Sees, J (NO DATA)
BRK21 Kulkarni, V (L), Davids, J (OrthoPediatics: A), Thomason, P (L), Bratkovich, S (L)
BRK22 Imms, C (L), Rosenbaum, P (L), Gordon, A (L)
BRK23 Wolff, A (L), Duff, S (L)
BRK24 Coley, C (L), Salvador, T (L), Morozova, O (L)
BRK25 Rempel, G (L), Dodds, C (L), Gellert-Jones, M (L), Borton, B (L)
BRK26 Gorter, J (L), Van den Berg, R (L), Benner, J (L), McPhee, P (L)
BRK27 Reedman, S (L), Boyd, R (L)
BRK29 Gannotti, M (L), Thorpe, D (L)
BRK30 Goodwin, E (L), Letzkus, L (L), Roach, H (L)
BRK31 Ayyangar, R (L), Nelson, V (L), Mitchell, L (L), Shupe-Sawyer, B (L)
BRK32 Roberts, H (Ipsen: A), Shierk, A (NO DATA)
BRK33 Scherzer, A (L)
BRK34 Barber, L (L), Valentine, J (L), Williams, S (L), Stott, S (L)
BRK35 Bjornson, K (L)
BRK36 Lennon, N (L), Sewell-Roberts, C (L), Shrade, M (Orthopediatrics: A), Salzbrenner, M (L)
BRK37 Di Rezze, B (L), Palisano, R (Canadian Institutes of Health Research: E)
BRK38 Kim, H (Allergan: A), Allergan: E
Ipsen: C
LIH, China: A, Newell, A (L)
BRK39 Menner, M (L), Greve, K (L)
BRK40 Harpster, K (L), Schwartz, T (L), Grieben, P (L), Long, J (L)
BRK41 Barney, C (L), Dalberg, T (L), Keenan, A (L)

Demonstration Poster

DP 1 Salvador, T (L), Hall, A (L), Ryscavage, L (L), Lawyer, E (L), Toback, A (L), Kennedy, K (L), Cleary, K (L), Evans, S (L)
DP 2 Sturgill, A (L)
DP 3 Day, S (L), Reynolds, R (L)
DP 4 Aliksson-Schmidt, A (L), Jahnsen, R (L), Andersen, G (L), Jeglinsky-Kankainen, I (L), Jonsdottir, G (L), Nordbye-Nielsen, K (L), Eggertsdottir, G (L), Consortium, C (L)
DP 6 Schiariti, V (L)
DP 7 Amaria, K (L), Cullen-Dean, G (L), Henze, M (L), White, E (L)
DP 8 Roderick, E (L), Nichols, J (L), Larson, I (L), Williams, K (L)
DP 9 Carlisle, J (L), Dewan, T (L), Lee, E (L), Houweling, R (L), Beveridge, H (L)
DP 10 McPhee, P (L), Benner, J (L), Darji, S (L), Roebroek, M (L), Gorter, J (L)
DP 11 Sarafian, A (L), Dimitropoulou, K (L), Chatterji, M (L)
DP 12 Yoder, A (L), Ogden, R (L), Larson, I (L), Goodwin, E (L)
DP 13 Tann, B (L), Deike, D (L), Gaebler-Spira, D (L)
DP 14 Sheriko, J (L)
DP 15 DelRosario, E (L), Boddou, A (L), Chu, A (L), Godfried, D (L), Lam, C (L), Sala, D (L), Kim, L (L), Karamitopoulos, M (L)
DP 16 Mueller, G (L), Merhar, S (L)
DP 17 Pruente, J (L), Gaebler-Spira, D (L), Deike, D (L)
DP 18 Flavin, M (L), Wilson, A (L), Wilkinson, C (L), Oleszek, J (L)
DP 19 Chu, A (L), Milone, M (L), Hinds, R (L), Seo, L (NO DATA)
DP 20 Kowalski, J (L), Nemanich, S (L), Mueller, B (L), Rao, R (L), Georgieff, M (L), Menk, J (Medtronic: B, D), Rudser, K (L), Gillick, B (L)
DP 21 Stricklin, S (L), Farid, R (Medtronic: F)
DP 22 Fraser, K (L), Campbell, R (L)
DP 23 Owens, L (L), Miller, F (L)
<p>| A3 | DeAllie, C (L), Campbell, M (L), Matsumoto, H (L), Roye, B (L), Vitale, M (L), Roye, D (L) | C8 |
| A4 | Shrader, M (Orthopediatrics: A), Falk, M (L), Bethur, M (L), Wood, W (NO DATA) | C9 |
| A5 | Imrie, M (L), Van Nortwick, S (L), Debaun, M (L), Rinsky, L (L), Gamble, J (L) | D1 |
| A6 | Miller, S (L), Habib, E (L), Schaeffer, E (L), Yang, B (L), Shore, B (L), Mulpuri, K (Allergan Canada: E) | D2 |
| A7 | Depuy (Johnson &amp; Johnson): E | D3 |
| A8 | International Hip Dysplasia Institute: E | D4 |
| A9 | Pega Medical: E, I | D5 |
| A10 | POSNA: E | D6 |
| A11 | Noback, P (L), Matsumoto, H (L), Rosenwasser, K (L), Campbell, M (L), Callejo, F (L), Roye, B (L), Roye, D (L), Hyman, J (L) | D7 |
| A12 | Nazareth, A (L), Shymon, S (L), Goldstein, R (L), Andras, L (L), Kay, R (Johnson and Johnson: J) | D8 |
| A13 | Medtronic: J | D9 |
| B1 | Pfizer: J | D10 |
| B2 | Zimmer-Biomet: J | D11 |
| B3 | Goldsmith, S (L), McIntyre, S (L), Hansen, M (L), Badawi, N (L), Blair, E (L) | E1 |
| B4 | McGuire, D (L), Christensen, D (L), Yeargin-Allsopp, M (L), Tien, L (L), Dowling, N (L) | E2 |
| B5 | Fehlings, D (L), Krishnan, P (L), Ragguett, R (L), Campbell, C (AMO, acceleron, Pfizer, Roche, Wave) | E3 |
| B6 | Catabasis, cytokinetics: Site investigator for clinical trials. | E4 |
| B7 | Biogen: A, E, F | E5 |
| B8 | PTC: A, E, F, Goter, J (L), Hunt, C (NO DATA), Kawamura, A (L), Kim, M (L), McCormick, A (L), Meisterman, R (allergan: F), Samdup, D (L), Walters, I (L), deVeber, G (L) | E6 |
| B9 | Noritz, G (L), Kean, J (L), Bjornson, K (L), Gross, P (L) | E7 |
| B10 | Kulkarni, V (L), Davids, J (OrthoPediatrics: A), Boyles, A (L), Cung, N (L), Bagley, A (L) | E8 |
| B11 | Westbom, L (L), Forsgren, M (L), Ariksson-Schmidt, A (L), Lundkvist Josenby, A (L), Stähli, N (L) | E9 |
| B12 | Khandaker, G (L), Karim, T (L), Hardianto, D (L), Islam, J (L), Badawi, N (L), Muhit, M (L) | F1 |
| B13 | Khandaker, G (L), Jahan, I (L), Das, M (L), Karim, T (L), Smithers-Sheddy, H (L), Badawi, N (L), Muhit, M (L) | F2 |
| B14 | Power, R (L), Muhit, M (L), Heanoy, E (L), Karim, T (L), Badawi, N (L), Akhter, R (L), Khandaker, G (L) | F3 |
| B15 | Kurz, M (L), Groff, B (L), Coolidge, N (L), Wiesman, A (NO DATA), Wilson, T (L) | F4 |
| C1 | Khandaker, G (L), Karim, T (L), Hardianto, D (L), Islam, J (L), Badawi, N (L), Muhit, M (L) | F5 |
| C2 | Papadelis, C (L), Kaye, H (L), Nimic, D (L), Kapur, K (L), Feldman, H (L), Snyder, B (L), Grant, P (L), Rotenberg, A (L) | F6 |
| C3 | Sgandurra, G (L), Biagi, L (L), Guzzetta, A (L), Fogassi, L (L), Ferrari, A (L), Cioni, G (L), Tosetti, M (L) | F7 |
| C4 | VerMaas-Hannan, J (L), Wilson, T (L), Kurz, M (L) | F8 |
| C5 | Ferre, C (L), Soles, L (L), Gordon, A (L), Kriel, K (L) | F9 |
| C6 | Tinelli, F (L), Fiori, S (L), Purpura, G (L), Pasquariello, R (L), Guzzetta, A (L), Cioni, G (L), Boscarino, C (L), Al-Moulton, T (L), de Campos, A (L), Alter, K (ASiME: F) | F10 |
| C7 | Sukal-Mouton, T (L), de Campos, A (L), Alter, K (ASiME: F) | F11 |
| C8 | Nemanich, S (L), Rich, T (L), Mueller, B (L), Opitz, A (L), Gillick, B (L) | F12 |
| C9 | Illapani, V (L), Harpster, K (L), Parikh, N (L) | F13 |
| C10 | McManus, B (L), Richardson, Z (L), Scully, B (L), Dooling-Litfin, J (L), Murphy, N (L), Khetani, M (L) | F14 |
| C11 | McManus, B (L), Richardson, Z (L), Schenkmann, M (L), Morrato, E (L) | F15 |
| C12 | Hilderley, A (L), Fehlings, D (L), Taylor, M (L), Chen, J (L), Wright, F (L) | F16 |
| C13 | Trevorrow, M (L), Smith, S (L), Sanmann, J (L), Kurz, M (L) | F17 |
| C14 | Dusing, S (L), Harbourne, R (L), Lobo, M (L), McCoy, S (L), Bovaird, J (L) | F18 |
| C15 | Marks, W (Biogen: A, F) | F19 |
| C16 | Sarepta: A), Honeycutt, J (L), Acord, S (L), Pomykal, A (L), Reed, M (L), Bailey, L (L) | F20 |
| C17 | Keles, M (L), Elbasan, B (L), Apaydin, U (L), Aribas, Z (L), Bakirtas, A (L), Kokturk, N (L) | F21 |
| C18 | Massie, C (OVCR, Indiana University: E), Cardinal, R (L), Altenburger, P (L) | F22 |
| C19 | Pavão, S (L), Pena, G (L), Oliveira, M (L), de Campos, A (L), Cicuto Ferreira Rocha, N (L) | F23 |
| C20 | Peck, M (L), Angeli, J (L), Schwab, S (L) | F24 |
| C21 | Sookklai, C (L), Majnemer, A (L), Shikako-Thomas, K (L) | F25 |
| C22 | Armstrong, E (L), Spencer, S (L), Kentish, M (L), Horan, S (L), Carty, C (L), Boyd, R (L) | F26 |
| C23 | Reedman, S (L), Boyd, R (L), Sakzewski, L (L) | F27 |
| C24 | Hilderley, A (L), Fehlings, D (L), Taylor, M (L), Chen, J (L), Wright, F (L) | F28 |
| C25 | Dimitropoulou, K (L), Blanchard, A (L), Weiland, P (L), Boscarino, K (L), Newell, A (L), Kim, H (Allergan: A) | F29 |
| C26 | Allergan: E | F30 |
| C27 | Ipsen: C | F31 |
| C28 | LiH, China: A | F32 |
| C29 | Shikako-Thomas, K (L), Glegg, S (L), Grand’Maison, V (L) | F33 |
| C30 | Salem, Y (L), Liu, H (L), Young, A (L), Tolbert, M (L) | F34 |
| C31 | Eloka, A (L), Holmes, C (L) | F35 |
| C32 | Kim, H (Allergan: A) | F36 |
| C33 | Allergan: E | F37 |
| C34 | Ipsen: C | F38 |
| C35 | LiH, China: A, Alter, K (ASiME: F) | F39 |
| C36 | Demos Medical Publishing: F | F40 |
| C37 | John’s Hopkins University: F | F41 |
| C38 | Ohio State University: F | F42 |
| C40 | Fehlings, D (L), Gormley, M (L), Kim, H (Allergan: A) | F44 |
| C41 | Allergan: E | F45 |
| C42 | Ipsen: C | F46 |
| C43 | LiH, China: A, Alter, K (ASiME: F) | F47 |
| C44 | Demos Medical Publishing: I | F48 |
| C45 | Ohio State University: F | F49 |
| C47 | Dursun, N (Allergan: E) | F51 |
| C48 | Merz: E), Akarsu, M (L), Akyüz, M (L), Gökbel, T (L), Karacan, C (L), Dursun, E (L) | F52 |
| C49 | Pontiff, M (L), Rabalais, T (L), Connick, B (L), Morgan, R (L), Moreau, N (L) | F53 |
| C50 | Zhang, C (L), Miller, F (L), Shen, Y (L), Modlesky, C (L) | F54 |
| C51 | Damiano, D (L), Kim, Y (L), Bulea, T (L) | F55 |
| C52 | O’Brien, S (L), Barber, L (L), Carroll, T (L), Lichtwark, G (L) | F56 |</p>
<table>
<thead>
<tr>
<th>Disclosure Index</th>
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<tbody>
<tr>
<td>F8</td>
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<td>Adams, Richard C.</td>
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<td>Adee, Lars</td>
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<td>Agrawal, Sunil K.</td>
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<td>Akarsu, Melike</td>
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<td>Akhter, Rahena</td>
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<td>Akins, Robert E.</td>
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<td>Akyüz, Merve</td>
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<td>Alibesher, Reem A.</td>
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<td>Alexy, Emily</td>
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<td>Alfano, Lindsay N.</td>
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<td>Almarode, Susan</td>
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<td>Alriksson-Schmidt, Ann L.</td>
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<td>Altenburger, Peter</td>
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<td>Alter, Katharine E.</td>
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<td>Aliko, Haluk</td>
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<td>Al-Zaidy, Samiah</td>
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<td>Amaria, Khush</td>
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<td>Andersen, Guro L.</td>
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<td>Andersen, John C.</td>
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<td>Anderson, Lara</td>
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<td>Andras, Lindsay</td>
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<td>Andras, Lydia</td>
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<td>Andrews, Bree</td>
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<td>Angel, Jennifer</td>
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<tr>
<td>An, Mihee</td>
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<td>Aribas, Zeynep</td>
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<td>Arkin, Cameron</td>
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<td>Armand, Stéphane</td>
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<td>Campos, Talita</td>
</tr>
<tr>
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<td>Cappitelli, Taylor</td>
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<td>Carmel, Jason</td>
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<td>Carollo, James</td>
</tr>
<tr>
<td>Carpenter, Ashley M.</td>
</tr>
<tr>
<td>Carpenter, Jennifer R.</td>
</tr>
</tbody>
</table>

**Note:** The index includes specific sessions, tracks, or codes that correspond to each author's contribution.
AUTHOR INDEX

Carroll, Timothy ............................................ F7
Carry, Patrick ................................................. G6, G7
Carty, Christopher ........................................ E3
Castagna, Angela ........................................... SP 66
Castillo, Heidi ................................................. SP 14
Castillo, Jonathan ........................................... SP 14
Chambers, Henry G. ....................................... F1, ORTH0
Chang, Frank .................................................. G6, G7, ORTH0
Chatterji, Madhabi .......................................... DP 11
Chau, Cao ........................................................ SP 11
Cheng, Clarissa ............................................... C10
Chen, Joyce L. .................................................. D3, E5
Chin, Karen ..................................................... D10
Cho, Gyeong Hee ............................................. SP 50, SP 51
Christensen, Deborah ....................................... B2
Christensen, Sinead ......................................... L9
Chu, Alice ...................................................... BRK18, DP 15, DP 19
Chung, Chin Youb ........................................... SP 50, SP 51
Church, Chris .................................................. G9
Cicuta Ferreira Rocha, Neli Ci Adriana ................. D9
Cioni, Giovanni ................................................
Citali, Lopez-Ortiz ........................................... SP 65
Clark, Katherine L. .......................................... BRK1, IC17
Cleary, Kevin .................................................. DP 1
Cloyd, Erika ..................................................... J5
Colditz, Paul B. ................................................ I4
Coley, Catherine L. .......................................... BRK24
Collier, Talia .................................................... SP 14
Colquitt, Gavin ............................................... IC22, SP 45
Colvin, Caroline T. .......................................... BRK4
Compton, Edward ........................................... J10
Conaway, Mark .............................................. PC1
Condiffe, Elizabeth .......................................... SP 69
Connick, Bridget E. ......................................... F4
Consortium, CP-North ....................................... DP 4
Coolidge, Nathan ............................................. C1
Cooper, Robert ............................................... ULTRA
Cox, Joanne .................................................... H6, SP 54
Crichton, Ali .................................................... K10
Crofton, Charis .............................................. H6, SP 54
Crowe, Erin ..................................................... I1, SP 56
Cullen-Dean, Geraldine ..................................... DP 7
Cung, Nina ...................................................... B5, J7, SP 52
Cunha, Andrea ............................................... SP 3, SP 63
de Vries, Linda ............................................... I9, K3
DeAllie, Christopher ....................................... A3, H3
Debaun, Malcolm ........................................... A5
Decoulon, Geraldo ........................................... G2
Deike, Dawn .................................................. DP 13, DP 17
Delafior Wagner, Christian A. ......................... SP 16
Delgado, Mauricio R. ....................................... IC11, SP 29, SP 66
DelRosario, Eduardo ....................................... DP 15
DeLuca, Stephanie ........................................... PC1
deRegnier, Raye-Ann ...................................... J10, I3, I7, SP 34
Desai, Monika ................................................ IC15
Deshpande, Supreet ......................................... SP 26
deVeber, Gabrielle Aline ................................... B3
Devlin, Maureen J. .......................................... L4
Dewan, Tammie ............................................. DP 9
Dheeraj, Jujuvarapu ......................................... SP 2
Di Rezzo, Briano ............................................. BRK37, L7
Diamant, Carmel ............................................. SP 58
Dicianno, Brad ............................................... H8
Dimitropoulou, Katherine ................................ DP 11, E6, G4
Dimitrova, Rozalina ........................................ F1, F2
Ditchfield, Michael ......................................... K10
Dobson, Fiona ................................................... I5
Dodd, Cynthia Brown ..................................... BRK25, IC13
Dodwell, Emily ............................................... A7
Donath, Susan ............................................... J1
Dooling-Litfin, Jodi ......................................... D1
Dorich, Jenny ................................................ BRK19, IC24
Dossetor, Rachael ............................................ SP 11
Dowling, Nicole ............................................. B2
Drobyshhevsky, Alexander ............................... I2
Duff, Susan ...................................................... BRK23
Duncan, Andrea ............................................. IC4
Durkin, Kayla ................................................... L2
Dursun, Erbil ..................................................... F3
Dursun, Nigar ................................................... F3
Dusing, Stacey .................................................. D5, IC12, SP 1, SP 20
Dutkowsky, Joseph .......................................... BRK9
Dziesinski, Lucas ........................................... H4

E
Eagan, Brian ..................................................... H6
Edmonds, Chris ............................................. A7
Edwards, Dylan ............................................. L3
Effgen, Susan K. ............................................ SP 68
Eggersdottir, Guðbjorg ................................. DP 4
Einspieler, Christa ......................................... I2
Ek, Linda ......................................................... K2
Elbasan, Bulent .............................................. D7
Eliaison, Ann-Christin ..................................... I9, K2, K3, K4
Ellenberg, Elie ................................................ L4
Ellenson, Richard ............................................ L4
Elliott, Catherine ............................................ K10
Elliott, Elizabeth ............................................. SP 11
Elliott, Steven ............................................... SP 45
Elokda, Ahmed .............................................. E9
Elsayed, Nermine SalahElDine ......................... SP 30
EL-Sobky, Tamer Ahmed ................................. SP 30
Emery, Carolyn ............................................. SP 69
Emiter, Morgan .............................................. SP 45
Epperson, Madison V. ................................... SP 31
Erdem, Yusuf .................................................. SP 55
<table>
<thead>
<tr>
<th>Author</th>
<th>ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erdman, Ashley</td>
<td>G1</td>
</tr>
<tr>
<td>Esau, Shane P</td>
<td>SP 69</td>
</tr>
<tr>
<td>Espinoza, Jimmy</td>
<td>SP 14</td>
</tr>
<tr>
<td>Esterlitz, Joy</td>
<td>BRK14</td>
</tr>
<tr>
<td>Eustice, Abigail</td>
<td>G6, G7</td>
</tr>
<tr>
<td>Evans, Sally</td>
<td>DP 1</td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Fahmy, Nagia</td>
<td>SP 30</td>
</tr>
<tr>
<td>Falk, Miranda</td>
<td>A6, SP 53</td>
</tr>
<tr>
<td>Farid, Rez</td>
<td>DP 21</td>
</tr>
<tr>
<td>Fatukasi, Mokun</td>
<td>SP 56</td>
</tr>
<tr>
<td>Fechoine, Carla Patricia</td>
<td>SP 9</td>
</tr>
<tr>
<td>Fehlings, Darcy</td>
<td>B3, D3, E5, F2, SP 70</td>
</tr>
<tr>
<td>Feldman, Henry A</td>
<td>C2</td>
</tr>
<tr>
<td>Feldman, Robin</td>
<td>BRK14</td>
</tr>
<tr>
<td>Ferrari, Adriano</td>
<td>C3</td>
</tr>
<tr>
<td>Ferrari, Lynne</td>
<td>H6, SP 54</td>
</tr>
<tr>
<td>Ferre, Claudio</td>
<td>SP 54</td>
</tr>
<tr>
<td>Ferreira Junior, Cassio</td>
<td>J4</td>
</tr>
<tr>
<td>Luis</td>
<td></td>
</tr>
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<td>Ferreira, Maryelle</td>
<td>SP 9</td>
</tr>
<tr>
<td>Confessor</td>
<td></td>
</tr>
<tr>
<td>Ferrusquia Figueroa,</td>
<td>SP 16</td>
</tr>
<tr>
<td>Magdalena</td>
<td></td>
</tr>
<tr>
<td>Fetters, Linda</td>
<td>SP 64</td>
</tr>
<tr>
<td>Feyma, Timothy</td>
<td>IC38</td>
</tr>
<tr>
<td>Fioni, Simona</td>
<td>C6, I4, J3</td>
</tr>
<tr>
<td>Fjortoft, Toril</td>
<td>L3</td>
</tr>
<tr>
<td>Flanagan, Ann</td>
<td>SP 37</td>
</tr>
<tr>
<td>Flanagan, Kevin M</td>
<td>H5</td>
</tr>
<tr>
<td>Flavin, Marisa</td>
<td>DP 18</td>
</tr>
<tr>
<td>Fogassi, Leonardo</td>
<td>C3</td>
</tr>
<tr>
<td>Forsgren, Maria</td>
<td>B6</td>
</tr>
<tr>
<td>Fraser, Krista</td>
<td>DP 22</td>
</tr>
<tr>
<td>Freeman, Mathew</td>
<td>L7</td>
</tr>
<tr>
<td>Freitas, Kamila</td>
<td>SP 49</td>
</tr>
<tr>
<td>French, Zachary P</td>
<td>L4</td>
</tr>
<tr>
<td>Frenn, Kristin A</td>
<td>SP 26</td>
</tr>
<tr>
<td>Friel, Kathleen</td>
<td>C5, D10, K5, K8, L3</td>
</tr>
<tr>
<td>Fripp, Jurgen</td>
<td>I4</td>
</tr>
<tr>
<td>Frisina, Cynthia</td>
<td>IC22</td>
</tr>
<tr>
<td>Fujino, Marcelo Hideki</td>
<td>J4, SP 48, SP 49</td>
</tr>
<tr>
<td>Glaspv, Tyler</td>
<td>H6</td>
</tr>
<tr>
<td>Glegg, Stephanie M N</td>
<td>E8</td>
</tr>
<tr>
<td>Glotzbucher, Michael</td>
<td>H6, SP 54</td>
</tr>
<tr>
<td>GmHassan, Afnan S</td>
<td>SP 68</td>
</tr>
<tr>
<td>Godfried, David</td>
<td>DP 15</td>
</tr>
<tr>
<td>Gokbel, Tugba</td>
<td>F3</td>
</tr>
<tr>
<td>Goldowitz, Dan</td>
<td>SP 40</td>
</tr>
<tr>
<td>Goldsmith, Shona</td>
<td>B1, SP 13</td>
</tr>
<tr>
<td>Goldstein, Rachel Y</td>
<td>A9, SP 15</td>
</tr>
<tr>
<td>Goodwin, Brianna</td>
<td>K9</td>
</tr>
<tr>
<td>Goodwin, Emily J</td>
<td>BRK30, DP 12, IC27</td>
</tr>
<tr>
<td>Goodworth, Adam D</td>
<td>I6</td>
</tr>
<tr>
<td>Gopi, Dilani</td>
<td>SP 22</td>
</tr>
<tr>
<td>Gordon, Andrew</td>
<td>BRK22, BRK9, C5, D10, K5</td>
</tr>
<tr>
<td>Gormley, Mark</td>
<td>F2, IC38, SP 66, ULTRA</td>
</tr>
<tr>
<td>Gorter, Jan Willem</td>
<td>B3, BRK26, DP 10, DP 26</td>
</tr>
<tr>
<td>Gorton, George E</td>
<td>J2</td>
</tr>
<tr>
<td>Grace, Rachael</td>
<td>SP 54</td>
</tr>
<tr>
<td>Graham, H Kerr</td>
<td>ORTHO</td>
</tr>
<tr>
<td>Graham, Kerr</td>
<td>IC25, IC34, IC5, J1</td>
</tr>
<tr>
<td>GrandMaison, Valerie</td>
<td>E8</td>
</tr>
<tr>
<td>Grant, P Ellen</td>
<td>C2</td>
</tr>
<tr>
<td>Gray, Susan</td>
<td>L9</td>
</tr>
<tr>
<td>Greenberg, Rachel G</td>
<td>H8</td>
</tr>
<tr>
<td>Greve, Kelly R</td>
<td>BRK39</td>
</tr>
<tr>
<td>Gribben, Patricia</td>
<td>BRK40</td>
</tr>
<tr>
<td>Groff, Bowman</td>
<td>C1</td>
</tr>
<tr>
<td>Gross, Paul</td>
<td>B4, BRK12, IC36</td>
</tr>
<tr>
<td>Guthrie, Michael</td>
<td>SP 31</td>
</tr>
<tr>
<td>Gutterman, Jennifer</td>
<td>K5</td>
</tr>
<tr>
<td>Guzzetta, Andrea</td>
<td>C3, C6</td>
</tr>
<tr>
<td>Gwini, Stella May</td>
<td>K10</td>
</tr>
<tr>
<td>Gyorfi, Michael</td>
<td>J6</td>
</tr>
<tr>
<td>H</td>
<td></td>
</tr>
<tr>
<td>Habib, Eva</td>
<td>A6</td>
</tr>
<tr>
<td>Hall, Amanda</td>
<td>DP 1</td>
</tr>
<tr>
<td>Hall, Matt</td>
<td>H10</td>
</tr>
<tr>
<td>Hansen, Michele</td>
<td>B1, SP 13</td>
</tr>
<tr>
<td>Hararambica, Mela</td>
<td>J1</td>
</tr>
<tr>
<td>Harbourne, Regina</td>
<td>D5, IC12, SP 20</td>
</tr>
<tr>
<td>Hardianto, Dennis</td>
<td>B7</td>
</tr>
<tr>
<td>Harpster, Karen</td>
<td>BRK19, BRK40, BRK6, C9</td>
</tr>
<tr>
<td>Harris, Nicole</td>
<td>IC6</td>
</tr>
<tr>
<td>Harvey, Adrienne</td>
<td>K10</td>
</tr>
<tr>
<td>Hassani, Sahar</td>
<td>SP 37</td>
</tr>
<tr>
<td>Hastings-Ison, Tandy</td>
<td>IC34, IC5</td>
</tr>
<tr>
<td>Havens, Kathryn</td>
<td>SP 64</td>
</tr>
<tr>
<td>Haynes, Katherine</td>
<td>IC11</td>
</tr>
<tr>
<td>Hazen, Emily Lynn</td>
<td>SP 24</td>
</tr>
<tr>
<td>Healy, Michael</td>
<td>ORTHO</td>
</tr>
<tr>
<td>Heanoy, Eamin</td>
<td>B10, B9</td>
</tr>
<tr>
<td>Heathcock, Jill</td>
<td>BRK5, SP 62</td>
</tr>
<tr>
<td>Hedgecock, James B</td>
<td>IC6</td>
</tr>
<tr>
<td>Heinen, Florian</td>
<td>ULTRA</td>
</tr>
<tr>
<td>Henley, John</td>
<td>G9</td>
</tr>
<tr>
<td>Henze, Megan</td>
<td>DP 7</td>
</tr>
<tr>
<td>Hessenauer, Melanie</td>
<td>K7</td>
</tr>
<tr>
<td>Hettiarachchi, Shyamani</td>
<td>SP 22</td>
</tr>
<tr>
<td>Heyn, Patricia C</td>
<td>L1, L5, L6</td>
</tr>
<tr>
<td>Hildertley, Alicia</td>
<td>D3, E5</td>
</tr>
<tr>
<td>Author Name</td>
<td>Location/Section</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Hill, N. Jeremy</td>
<td>SP 32</td>
</tr>
<tr>
<td>Hinds, Richard</td>
<td>DP 19</td>
</tr>
<tr>
<td>Hlyva, Oksana</td>
<td>L7</td>
</tr>
<tr>
<td>Hoare, Brian</td>
<td></td>
</tr>
<tr>
<td>Hoffinger, Scott</td>
<td>ORTHO</td>
</tr>
<tr>
<td>Hoffman, Andrea S.</td>
<td>IC41</td>
</tr>
<tr>
<td>Hoffman, Rashelle</td>
<td>K1</td>
</tr>
<tr>
<td>Holmes, Cariee</td>
<td>SP 44</td>
</tr>
<tr>
<td>Holmes, Clayton</td>
<td>E9</td>
</tr>
<tr>
<td>Honeycutt, John</td>
<td>D6</td>
</tr>
<tr>
<td>Hoon, Alexander</td>
<td>PC2</td>
</tr>
<tr>
<td>Horan, Sean</td>
<td>E3</td>
</tr>
<tr>
<td>Horn, Paul</td>
<td>SP 31</td>
</tr>
<tr>
<td>Horn, Susan D.</td>
<td>F8</td>
</tr>
<tr>
<td>Houweling, Rebecca</td>
<td>DP 9</td>
</tr>
<tr>
<td>Hoyt, Catherine R.</td>
<td>SP 42</td>
</tr>
<tr>
<td>Hsu, Lin-Ya</td>
<td>SP 20</td>
</tr>
<tr>
<td>Huddleston, David A.</td>
<td>SP 31</td>
</tr>
<tr>
<td>Huggins, Jane E.</td>
<td>DP 24</td>
</tr>
<tr>
<td>Hunt, Carolyn</td>
<td>B3</td>
</tr>
<tr>
<td>Hupert, Theodore</td>
<td>C7</td>
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<td>SP 69, SP 70</td>
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<td>SP 50, SP 51</td>
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<td>Paper Reference</td>
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<td>SP 45</td>
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<td>SP 61</td>
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<td>IC3, IC33</td>
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<td>Meyer, Daniel J.</td>
<td>SP 7</td>
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<tr>
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<td>DP 12</td>
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</tr>
<tr>
<td>O'Brien, Shari</td>
<td>F7</td>
</tr>
<tr>
<td>O'Donnell, Maureen</td>
<td>SP 38, SP 39, SP 60</td>
</tr>
<tr>
<td>Ogurtsova, Tatiana</td>
<td>SP 60</td>
</tr>
<tr>
<td>Olszewski, Joyce</td>
<td>DP 18</td>
</tr>
<tr>
<td>Oliveira, Maria Fernanda Pauletti</td>
<td>SP 90</td>
</tr>
<tr>
<td>Olutoye, Oluypina</td>
<td>SP 14</td>
</tr>
<tr>
<td>Optiz, Alex</td>
<td>C8</td>
</tr>
<tr>
<td>Osborne, Melissa</td>
<td>J8</td>
</tr>
<tr>
<td>Oskou, Maryam</td>
<td>SP 70</td>
</tr>
<tr>
<td>Ounpuu, Sylvia</td>
<td>G10</td>
</tr>
<tr>
<td>Owens, Laura</td>
<td>DP 23, IC8</td>
</tr>
<tr>
<td>Ogurtsova, Tatiana</td>
<td>SP 60</td>
</tr>
<tr>
<td>Olszewski, Joyce</td>
<td>DP 18</td>
</tr>
<tr>
<td>Oliveira, Maria Fernanda Pauletti</td>
<td>SP 90</td>
</tr>
<tr>
<td>Olutoye, Oluypina</td>
<td>SP 14</td>
</tr>
<tr>
<td>Optiz, Alex</td>
<td>C8</td>
</tr>
<tr>
<td>Osborne, Melissa</td>
<td>J8</td>
</tr>
<tr>
<td>Oskou, Maryam</td>
<td>SP 70</td>
</tr>
<tr>
<td>Ounpuu, Sylvia</td>
<td>G10</td>
</tr>
<tr>
<td>Owens, Laura</td>
<td>DP 23, IC8</td>
</tr>
<tr>
<td>Paleg, Ginny</td>
<td>IC18, IC7</td>
</tr>
<tr>
<td>Palisano, Robert</td>
<td>BRK37, L7</td>
</tr>
<tr>
<td>Paltikonda, Nikhil</td>
<td>SP 54</td>
</tr>
<tr>
<td>Pannek, Kerstin</td>
<td>L1, L6</td>
</tr>
<tr>
<td>pan, Zhaoxing</td>
<td>C2</td>
</tr>
<tr>
<td>Papadonis, Chrisos</td>
<td>SP 8</td>
</tr>
<tr>
<td>Paraschiv-Ionescu, Anisoara</td>
<td>C9</td>
</tr>
<tr>
<td>Parikh, Nehal A.</td>
<td>C9</td>
</tr>
<tr>
<td>Park, Moon Seok</td>
<td>SP 50, SP 51</td>
</tr>
<tr>
<td>Pasquariello, Rosalberta</td>
<td>C6</td>
</tr>
<tr>
<td>Patel, Akash</td>
<td>J10</td>
</tr>
<tr>
<td>Patel, Rupal</td>
<td></td>
</tr>
<tr>
<td>Patrick, Cheryl</td>
<td>I10</td>
</tr>
<tr>
<td>Patterson, Aleksys</td>
<td>G5</td>
</tr>
<tr>
<td>Pavia, Silvia Leticia</td>
<td>D9</td>
</tr>
<tr>
<td>Peck, Madison</td>
<td>E1</td>
</tr>
<tr>
<td>Pedapati, Ernest</td>
<td>SP 31</td>
</tr>
<tr>
<td>Peck, Monica</td>
<td>H1</td>
</tr>
<tr>
<td>Pelegano, John</td>
<td>BRK11</td>
</tr>
<tr>
<td>Pena, Gisele Moreira</td>
<td>D9</td>
</tr>
<tr>
<td>Pereira, Silvana A.</td>
<td>SP 9</td>
</tr>
<tr>
<td>Perlne, Rebecca</td>
<td>IC41</td>
</tr>
<tr>
<td>Peterson, Mark</td>
<td>BRK15, L4, SP 36</td>
</tr>
<tr>
<td>Peyton, Colleen</td>
<td>H3, 12</td>
</tr>
<tr>
<td>Pham, Kelly L. D.</td>
<td>K9</td>
</tr>
<tr>
<td>Pickar, Tracy</td>
<td>BRK7, SP 21</td>
</tr>
<tr>
<td>Pidco, Peter</td>
<td>SP 1</td>
</tr>
<tr>
<td>Pierz, Kristan</td>
<td>G10, ORTHO</td>
</tr>
<tr>
<td>Plews-Oganan, James (Jim)</td>
<td>IC28</td>
</tr>
<tr>
<td>Plew, Jessica</td>
<td>G10</td>
</tr>
<tr>
<td>Pomykal, Angela</td>
<td>D6, SP 24</td>
</tr>
<tr>
<td>Pontiff, Mattie</td>
<td>F4</td>
</tr>
<tr>
<td>Pope, Erin</td>
<td>BRK1</td>
</tr>
<tr>
<td>Porto, Alexander J.</td>
<td>SP 67</td>
</tr>
<tr>
<td>Power, Rosalie</td>
<td>B10, B9</td>
</tr>
<tr>
<td>Prather, Hillary</td>
<td>BRK16, IC1</td>
</tr>
<tr>
<td>Pruente, Jessica</td>
<td>DP 17</td>
</tr>
<tr>
<td>Prusky, Glen T.</td>
<td>SP 32</td>
</tr>
<tr>
<td>Purpura, Giulia</td>
<td>C6</td>
</tr>
<tr>
<td>Quinn, Michael</td>
<td>H1</td>
</tr>
<tr>
<td>Rabalais, Taylor</td>
<td>F4</td>
</tr>
<tr>
<td>Raffaele, Christie</td>
<td>IC41</td>
</tr>
<tr>
<td>Raggult, Renee-Marie</td>
<td>B3</td>
</tr>
<tr>
<td>Rahmleh, Mary</td>
<td>IC16</td>
</tr>
<tr>
<td>Ramey, Sharon</td>
<td>BRK5, PC1</td>
</tr>
<tr>
<td>Rao, Raghavendra</td>
<td>DP 20</td>
</tr>
<tr>
<td>Rawicki, Barry</td>
<td>IC34</td>
</tr>
<tr>
<td>Raymond, Romain</td>
<td>SP 66</td>
</tr>
<tr>
<td>Reedman, Sarah E.</td>
<td>BRK27, E4</td>
</tr>
<tr>
<td>Reed, MaryAnn</td>
<td>D6</td>
</tr>
<tr>
<td>Rempel, Gina</td>
<td>BRK2</td>
</tr>
<tr>
<td>Rempel, Gina</td>
<td>BRK25, IC13</td>
</tr>
<tr>
<td>Rethiefen, Susan</td>
<td>J6, J8, SP 58</td>
</tr>
<tr>
<td>Reynolds, Robert J.</td>
<td>DP 3</td>
</tr>
<tr>
<td>Rhodes, Jason</td>
<td>G6, G7, ORTHO</td>
</tr>
<tr>
<td>Richardson, Zachary</td>
<td>D1, D2</td>
</tr>
<tr>
<td>Rich, Tonya</td>
<td>C8</td>
</tr>
<tr>
<td>Rinsky, Lawrence</td>
<td>A5</td>
</tr>
<tr>
<td>Rizzoli Cordoba, Antonio</td>
<td>SP 16</td>
</tr>
<tr>
<td>Roach, Holly Beth</td>
<td>BRK30</td>
</tr>
<tr>
<td>Robert, Maxime</td>
<td>D10, K5</td>
</tr>
<tr>
<td>Roberts, Heather M.</td>
<td>BRK32</td>
</tr>
<tr>
<td>Robinson, Karyn</td>
<td>I1, SP 28, SP 56</td>
</tr>
<tr>
<td>Robinson, Shenandoah</td>
<td>PC2</td>
</tr>
<tr>
<td>Rodby-Bousquet, Elisabet</td>
<td>IC19, IC7, J5, SP 47</td>
</tr>
<tr>
<td>Roden, Rosemary Claire</td>
<td>L10</td>
</tr>
<tr>
<td>Roderick, Edith</td>
<td>DP 8</td>
</tr>
<tr>
<td>Rodrigues Regalado, Isabella Cristina</td>
<td>SP 9</td>
</tr>
<tr>
<td>Rodriguez, Charo</td>
<td>SP 70</td>
</tr>
<tr>
<td>Rodriguez, Sarah Hilker</td>
<td>H3</td>
</tr>
<tr>
<td>Roebroek, Marij</td>
<td>DP 10, IC19, IC9, SP 17</td>
</tr>
<tr>
<td>Romein, Ellen</td>
<td>K7</td>
</tr>
<tr>
<td>Romeo, Cuylner</td>
<td>IC16</td>
</tr>
<tr>
<td>Rose, Jessica</td>
<td>G3</td>
</tr>
<tr>
<td>Rosenbaum, Peter L.</td>
<td></td>
</tr>
<tr>
<td>Rosenblad, Andreas</td>
<td>J5</td>
</tr>
<tr>
<td>Rosenwasser, Katherine</td>
<td>A8</td>
</tr>
<tr>
<td>Rose, Stephen</td>
<td>I4</td>
</tr>
<tr>
<td>Rotenberg, Alexander</td>
<td>C2</td>
</tr>
<tr>
<td>Roye, Benjamin</td>
<td>A2, A3, A8, H4</td>
</tr>
<tr>
<td>Roys, David</td>
<td>A2, A3, A8, H4, IC33</td>
</tr>
<tr>
<td>Rozenblum, Ronen</td>
<td>DP 26</td>
</tr>
<tr>
<td>Rudser, Kyle</td>
<td>DP 20</td>
</tr>
<tr>
<td>Russow, Annamare</td>
<td>I10, I3, I7, SP 34</td>
</tr>
<tr>
<td>Ryan, Corbett</td>
<td></td>
</tr>
<tr>
<td>Ryan, Deidre</td>
<td>SP 58</td>
</tr>
<tr>
<td>Rylyl, Ulrike C.</td>
<td>I9, K3</td>
</tr>
<tr>
<td>Ryscavage, Lindsay</td>
<td>DP 1</td>
</tr>
<tr>
<td>Saadawy, Amr Mohammed</td>
<td>SP 30</td>
</tr>
<tr>
<td>Saavedra, Sandra</td>
<td>I6</td>
</tr>
<tr>
<td>Sabelhaus, Emily</td>
<td>K9</td>
</tr>
<tr>
<td>Sakr, Hossam Moussa</td>
<td>SP 30</td>
</tr>
<tr>
<td>Sakzewski, Leanne</td>
<td>E4, F9, K4</td>
</tr>
<tr>
<td>Sala, Debra</td>
<td>DP 15</td>
</tr>
<tr>
<td>Salmen, Yasser</td>
<td>E9</td>
</tr>
<tr>
<td>Salvador, Tyler</td>
<td>BRK24, DP 1</td>
</tr>
</tbody>
</table>
AUTHOR INDEX

Salzbrenner Hoopes, Margaret L. ............................................. IC8
Salzbrenner, Maggie ............................................................. BRK36
Samdup, Dawa ........................................................................... B3
Samuels, Paul ............................................................................. D4
Sanmann, Jennifer ...................................................................... D10, I3, I7
Santella, Mary Kay ...................................................................... SP 14
Sanz Cortes, Magdalena .............................................................. IC2, SP 64
Sargent, Barbara ........................................................................... SP 19
Saxena, Shikha ............................................................................ A10, A6, H7, SP 57
Scheaffer, Emily ........................................................................... BRK18
Scheaffer, Melissa ........................................................................ BRK36
Schenkman, Margaret ................................................................. D12, A7
Sch, David M. .............................................................................. A7
Scherzer, Alfred L. ....................................................................... BRK33
Schiariti, Veronica ....................................................................... SP 5
Schmidt, Ann Katrin ................................................................. DP 6, SP 9
Schreiber, Michael D. ................................................................. H3
Schroeder, Sebastian .................................................................... ULTRA
Schwab, Sarah M. ......................................................................... E1
Schwartz, Ariel ............................................................................. IC30, IC43
Schwartz, Michael H. ................................................................. J9
Schwartz, Terry ............................................................................ BRK17, BRK40
Scott, Rebecca .............................................................................. SP 59
Scully, Beth .................................................................................. A1
Sees, Julieanne ............................................................................ BRK20, G9, ORTH0
Sellers, Diane .............................................................................. DP 19
See, Lauren .................................................................................. SP 14
Sewell-Roberts, Carrie M. .......................................................... BRK36
Sgandurra, Giuseppina ............................................................... C3, K2
Shao, Amie .................................................................................. E8
Sheehan, Amber .......................................................................... BRK6
Shen, Ye ..................................................................................... F5
Shepherd, Kenna ......................................................................... L2
Sheriko, Jordan ............................................................................ DP 14
Shevell, Michael ......................................................................... SP 70
Siberk, Angela ............................................................................ BRK32
Shikako-Thomas, Keiko .............................................................. E2, E8, IC14, SP 19
Shore, Benjamin J. ...................................................................... A6, C10, H10, IC10, ORTH0
Shotwell, Carrie ........................................................................... BRK19
Shrader, Carol M. ........................................................................ IC7
Shrader, M. Wade ......................................................................... A4, BRK36, IC21, IC33, IC7, SP 53
Shrader, Wade ............................................................................ ORTHO
Shupe-Sawyer, Brittany ............................................................. BRK31
Shusterman, Michele .................................................................. BRK12, F8, IC40
Shymon, Stephen ........................................................................ A9
Sicola, Elisa .................................................................................. K2, K4
Singer, Sara ................................................................................ H6
Smith, Beth A. ............................................................................. SP 27
Smithers-Sheedy, Hayley .......................................................... B8
Smith, Shelley .............................................................................. D4
Smits, Dirk-Wouter ..................................................................... SP 17
Snider, Laurie ............................................................................... SP 70
Snyder, Brian .............................................................................. C2, H10
Sobotka, Sarah A. ....................................................................... H1
Sohrweide, Sue ............................................................................ J9
Soles, Lindsey V. ......................................................................... C5, K8, L3
Sooklall, Christina ....................................................................... E2
Spencer, Samantha ...................................................................... C10
Spencer, Sian .............................................................................. E3
Spittle, Alicia ................................................................................ I5
Sponseller, Paul ............................................................................ A2
Ståhl, Nils ................................................................................... B6
Stankus, Jaclynn .......................................................................... SP 20
Steele, Katherine M. .................................................................... K9
Stevenson, Richard D. .................................................................. IC23
Stewart, Deborah ......................................................................... L7
Stibb, Stacy M. ............................................................................ SP 26
Story, Maureen ............................................................................ IC18
Stott, Susan ............................................................................... BRK34
Stout, Jean ................................................................................ F10, G8, IC44
Stricklin, Sherea .......................................................................... DP 21
Strohm, Sonya J. ......................................................................... DP 26
Study Group, Harms .................................................................... A2
Sturgill, Alison W. ....................................................................... DP 2
Stutz, Lindsay .............................................................................. IC17
Suarez, Gustavo ........................................................................... SP 66
Sukal-Moulton, Theresa ............................................................. C7, SP 43, SP 46
Sukhov, Renat ............................................................................. BRK18
Sullivan, Wendy ........................................................................... E10
Sunderland, Julie ......................................................................... SP 3
Sumer, Melis ............................................................................... SP 50, SP 51
Sung, Ki Hyuk .............................................................................. SP 10
Swaroop, Vineeta T. .................................................................... SP 70
Swarup, Ishaan ............................................................................ A7
Sylvanus, Tonye S. ..................................................................... SP 23

T

Tagawa, Alex ................................................................................ G6, G7, L1, L5, L6
Tally, Melissa K. .......................................................................... IC32
Tang, Ada ................................................................................... SP 36
Tann, Beverley ........................................................................... DP 13
Taylor, Margot J. ......................................................................... D3, E5
Thomas, Molly K. ......................................................................... BRK4
Thomason, Pamela ....................................................................... BRK21, IC25, IC5, J1
Thomas, Sruhti P. ......................................................................... L1
Thomson, Donna ......................................................................... SP 26, IC19
Thorley, Megan ............................................................................ K10, K6
Thorpe, Deborah E. ..................................................................... BRK29
Tian, Lin Hui ............................................................................... SP 70
Tinelli, Francesca ......................................................................... C6
Toback, Ariel ................................................................................ DP 1
Tolbert, Marilyn ........................................................................... E9
Toomey, Clodagh ......................................................................... SP 69
Tosetti, Michela ........................................................................... C3
Trenor, Cameron .......................................................................... H10
Trevorrow, Michael ..................................................................... D4
Trimmer, Erin .............................................................................. ORTHO
Tripathi, Tanya ............................................................................ SP 1
Troy, Michael .............................................................................. H6, SP 54
Truong, Uyen .............................................................................. SP 23
Truong, Walter H. ......................................................................... SP 23
Tsaagaris, K. Zoe ......................................................................... L3
Tu, Duong .................................................................................... SP 14
Ty, Jennifer .................................................................................. SP 5

V

Valencia, Francisco ..................................................................... BRK10
Valentine, Jane ............................................................................. BRK34
Van Anh, Nguyen ....................................................................... SP 11
Van Bang, Nguyen ....................................................................... SP 11
Van den Berg, Rita ...................................................................... BRK26
van Gorp, Marloes ...................................................................... IC9, SP 17
Van Nortwick, Sara ..................................................................... A5
<table>
<thead>
<tr>
<th>Author Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Van Thuong, Nguyen</td>
<td>SP 11</td>
</tr>
<tr>
<td>van Wely, Leontien</td>
<td>SP 17</td>
</tr>
<tr>
<td>VanSpeybroeck, Alexander</td>
<td>SP 58</td>
</tr>
<tr>
<td>Vargas-Adams, Jilda noel</td>
<td>SP 7</td>
</tr>
<tr>
<td>Vasquez Rios, Jorge R.</td>
<td>SP 16</td>
</tr>
<tr>
<td>Vaughn, Lisa M.</td>
<td>E10</td>
</tr>
<tr>
<td>Verhage, Cornelia</td>
<td>J9, K3, K4</td>
</tr>
<tr>
<td>Verheijden, Johannes</td>
<td>IC9</td>
</tr>
<tr>
<td>VerMaas-Hannan, Jacy.</td>
<td>C4</td>
</tr>
<tr>
<td>Verschuren, Olaf</td>
<td>SP 36</td>
</tr>
<tr>
<td>Vik, Torstein</td>
<td>H2</td>
</tr>
<tr>
<td>Vitale, Michael</td>
<td>A2, A3, H4</td>
</tr>
<tr>
<td>Vogel, Lawrence</td>
<td>SP 67</td>
</tr>
<tr>
<td>Voorman, Jeanine</td>
<td>IC9</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Wagenaar, Nienke</td>
<td>I9, K3</td>
</tr>
<tr>
<td>Walker, Ashley</td>
<td>SP 45</td>
</tr>
<tr>
<td>Walker, William Otis.</td>
<td>K9</td>
</tr>
<tr>
<td>Wallen, Margaret</td>
<td>K10, K6</td>
</tr>
<tr>
<td>Walters, Ilana C.</td>
<td>B3</td>
</tr>
<tr>
<td>Walt, Katie</td>
<td>IC44</td>
</tr>
<tr>
<td>Ward, Erin</td>
<td>H6</td>
</tr>
<tr>
<td>Ward, Marcie.</td>
<td>IC20, IC38</td>
</tr>
<tr>
<td>Ware, Robert S.</td>
<td>F9, H9, I4, J3</td>
</tr>
<tr>
<td>Warschausky, Seth</td>
<td>DP 24</td>
</tr>
<tr>
<td>Weber, Libby</td>
<td>IC44</td>
</tr>
<tr>
<td>Weck, Mary</td>
<td>I10, I3, I7</td>
</tr>
<tr>
<td>Weiland, Paul</td>
<td>E6</td>
</tr>
<tr>
<td>Weisbourd, Marie.</td>
<td>I3, I7, SP 34</td>
</tr>
<tr>
<td>Wervey, Roy.</td>
<td>J9</td>
</tr>
<tr>
<td>Westberry, David</td>
<td>J7</td>
</tr>
<tr>
<td>Westbom, Lena</td>
<td>B6, SP 25</td>
</tr>
<tr>
<td>Whitaker, Amanda T.</td>
<td>IC10</td>
</tr>
<tr>
<td>White, Elisabeth</td>
<td>DP 7</td>
</tr>
<tr>
<td>Whitehead, William</td>
<td>SP 14</td>
</tr>
<tr>
<td>Whitney, Daniel G.</td>
<td>L4</td>
</tr>
<tr>
<td>Wiener, John</td>
<td>H8</td>
</tr>
<tr>
<td>Wiesman, Alex I.</td>
<td>C1</td>
</tr>
<tr>
<td>Wilkes, David</td>
<td>SP 29</td>
</tr>
<tr>
<td>Wilkinson, Corbett</td>
<td>DP 18</td>
</tr>
<tr>
<td>Williams, David.</td>
<td>L9</td>
</tr>
<tr>
<td>Williams, Kristi.</td>
<td>DP 8</td>
</tr>
<tr>
<td>Williams, Sian A.</td>
<td>BRK34</td>
</tr>
<tr>
<td>Willig-Kroner, Elizabeth</td>
<td>IC1</td>
</tr>
<tr>
<td>Willoughby, Kate.</td>
<td>IC25, IC5, J1</td>
</tr>
<tr>
<td>Wilson, Anne-Marie</td>
<td>DP 18</td>
</tr>
<tr>
<td>Wilson, Jenny</td>
<td>SP 66</td>
</tr>
<tr>
<td>Wilson, Tony W.</td>
<td>C1, C4, K1, SP 35</td>
</tr>
<tr>
<td>Wimberly, Lane</td>
<td>IC11</td>
</tr>
<tr>
<td>Winters, Sarah</td>
<td></td>
</tr>
<tr>
<td>Wiseley, Benjamin</td>
<td>J6</td>
</tr>
<tr>
<td>Wizinsky, Amanda</td>
<td>IC1</td>
</tr>
<tr>
<td>Wolfe, Lisa</td>
<td>L7</td>
</tr>
<tr>
<td>Wolff, Aviva</td>
<td>BRK23, SP 4</td>
</tr>
<tr>
<td>Wolff, Jodi</td>
<td>IC23</td>
</tr>
<tr>
<td>Wood, William</td>
<td>A4, SP 53</td>
</tr>
<tr>
<td>Worley, Gordon</td>
<td>H8</td>
</tr>
<tr>
<td>Wren, Tishya</td>
<td>J8, SP 58</td>
</tr>
<tr>
<td>Wright, F. Virginia</td>
<td>D3, E5</td>
</tr>
<tr>
<td>Wroblewski, Kristen</td>
<td>H3</td>
</tr>
<tr>
<td>Wu, Judy</td>
<td>SP 57</td>
</tr>
<tr>
<td>Wu, Steve W.</td>
<td>SP 31</td>
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<td>BRK13, SP 40</td>
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</table>
To the Moon & Back...

Congratulations, Dr. Gaebler-Spira!

Our hearts are bursting with pride and gratitude. We marvel at your body of work, your fierce advocacy and your devotion to the most vulnerable among us. Your brilliance and tenderness have changed the world for children with cerebral palsy.

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