# 77<sup>TH</sup> ANNUAL MEETING **Chicago Marriott Magnificent Mile**

September 10-13, 2023



AACPD

R

FINAL PROGRAM



#### **RECRUITING INFANTS AND TODDLERS WHO HAVE HAD A STROKE**



Who is eligible? Your infant or toddler may be eligible if he or she:

• Had a stroke very early in life

• Shows motor weakness or poor movement control on one side (hemiparesis)

• Will be between 8 and 36 months old when treatment is received Program staff can speak with you to review all eligibility requirements in detail.

### What therapy is being offered?





I-ACQUIRE, a form of constraint-induced movement therapy (CIMT), is being evaluatedin two dosages-compared to typical treatments for children with hemiparesis; such as one hour weekly each of occupational therapy and physical therapy. Both dosages involve therapy five days a week for four consecutive weeks, provided by a therapist trained in I-ACQUIRE.

I-ACQUIRE therapy involves: • A cast for your child's 'unaffected' arm and hand • Your child wearing the cast for 3'/2 weeks (for the last three days of therapy, the cast is removed and the therapy is bimanual) • Parents participating in one session a week and completing about 45 minutes home practice each day

The cast is judged to be clinically safe, and is removed once a week to check that everything is okay.

#### **Therapy Groups**

Participants will be in one of three groups:

Group 1: I-ACQUIRE 6 hrs daily, 5 days a week, for 4 weeks Group 2: I-ACQUIRE 3 hrs daily, 5 days a week, for 4 weeks

Group 3: Continue current therapy

6 months later participants in Group 3 will be able to receive I-ACQUIRE therapy (dosage randomly assigned by the study).

Families will sign an agreement when they enroll to accept the therapy group assigned and attend all three required assessments.

Where is therapy provided, and is there a cost?



Therapy is provided at 12 different sites across the United States. Therapy is provided in your home, a homelike setting such as an Air BnB (for families who will relocate to a site), or a child-care center or early intervention program that your child attends.

Therapy is provided at no cost. However, if traveling for therapy, you will need to pay for housing and travel to all three assessments.

More information regarding housing options and scheduling assessments will be made available upon request.

We hope you will consider participating in the study. The findings will be helpful to doctors, therapists, and families. The treatment may benefit your child, but it is possible some children will benefit more than others and some may not show benefits.

#### To learn more about the I-ACQUIRE study, please contact us.

**Phone:** 540-526-2202

Email:

I-ACQUIRE@vtc.vt.edu

#### www.nihstrokenet.org/i-acquire







# **AACPDM Member Benefits**

How can you benefit from membership in the American Academy for Cerebral Palsy and Developmental Medicine?

# Annual Meeting

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 week 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 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, UCP, 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 nonmembers 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
- Communications
- Complex Care
- Education
- International Affairs
- Lifespan Care
- Membership
- Nominating
- Publications
- Research
- Scientific Program

### Councils

The AACPDM offers an opportunity to participate in a Committee or a Council. Councils are similar to Committees, but the terms of service, objectives, and reporting structures can differ based on the unique nature of the Council Charge.

- Community Council
- Care Pathways Council



# WHAT OPPORTUNITIES COULD BE CREATED THROUGH CEREBRAL PALSY RESEARCH?

Neurocrine Biosciences is looking for patients 6 to 70 years old with dyskinesia due to cerebral palsy (DCP) for the Kinect-DCP Study. The purpose of the study is to determine if a study drug, called valbenazine, is safe to use and if it helps to improve dyskinesia due to cerebral palsy. To learn more or refer a patient, visit the study website at **KinectDCPResearchStudy.com**.



# AACPDN

Dear Industry and Institution Professionals:

Our planning team is thrilled to welcome you to Chicago's Magnificent Mile for the American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) 77th Annual Meeting. After a record-breaking abstract submissions year, we are excited about the options available at this meeting, including 120 free paper presentations, 190 scientific posters, 45 demonstration posters, 23 clinical observation/single case study posters, 37 morning sessions, and 39 mini-symposia. We were impressed by the quality of the submissions and inspired by the diversity of the content. The theme of the 77th Annual Meeting is "Winds of Hope", and we are confident that visions of hope will be apparent in the showcase of the amazing work done in our scientific community.

The pre-conference courses encompass a broad range of topics designed to enhance clinical care and research. We are excited to partner with POSNA and SRS on a preconference program focused on neuromuscular spine; for the support from Northwestern to highlight offerings in the Technology-focused preconference; and the Shirley Ryan Ability Lab for their hosting of the annual Community Forum. The meeting program offers engaging keynote speakers; leaders in their fields who will share their cutting-edge research on a variety of

topics, including focuses on mental health and well-being. We invite you to attend the Welcome Reception in the main exhibit hall from 6:00-8:00 pm on Sunday September 10. Please be prepared to participate in the exhibit hall treasure hunt to be entered for daily prizes! We hope you will join us for dinner with the largest dinosaur that ever lived at the Tuesday evening networking dinner and celebration at Chicago's historic Field Museum. We know this will be a fun evening and a wonderful opportunity to celebrate being togeth-

Winds of Hope carry our Academy. We see the promise and hope in the information we learn and exchange during every Annual Meeting, and the Hope that is inspired when we return home and continue the work we do on behalf of our patients. Our hope is that this meeting will provide many opportunities for both

existing and new collaborations to develop and thrive.

Best Regards,



M. Wade Shrader, MD First Vice President



Bhooma Aravamuthan, MD, DPhil Scientific Program Committee Co-Chairs



Theresa Sukal Moulton, PT, DPT, PhD

PRESIDENT Lesley Pritchard PT, PhD University of Alberta Edmonton, AB

1ST VICE PRESIDENT Nemours A.I. duPont Hospital for Children Wilmington, DE

2ND VICE PRESIDENT Laurie Glader, MD Nationwide Children's Hospital Columbus, OH

TREASURER Joline Brandenburg, MD Mayo Clinic Rochester, MN

Golda Milo-Manson, MHSc, MD, FRCPC Holland Bloorview Children's Rehabilitation Hospital University of Toronto Toronto, ON

PAST PRESIDENT (2021-22) Tom F. Novacheck, MD Gillette Children's St. Paul, MN

PAST PRESIDENT (2020-21) Susan Sienko, PhD Shriners Children's Portland, OR

DIRECTORS AT LARGE Paige Church, MD Harvard Medical School Beth Israel Deaconess Medical Center/Boston Children's Hospital

Boston, MA Mary Jo Cooley Hidecker, PhD, CCC-A/SLP University of Kentucky

Lexington KY Bernadette T. Gillick, PhD, MSPT, PT University of Wisconsin-Madison Madison, WI

Anna McCormick, MD, FRCP(C) Children's Hospital of Eastern Ontario (CHEO) University of Ottawa Ottawa, Ontario

University of Utah Health Sciences Center Nancy Murphy, MD Salt Lake City, UT

Verónica Schiariti, MD MHSc PhD Division of Medical Sciences, University of Victoria Victoria, BC

Benjamin J. Shore MD MPH FRCSC Harvard Medical School Boston Children's Hospital Boston, MA

Sruthi P. Thomas, MD, PhD Baylor College of Medicine Texas Children's Hospital Houston, TX

555 East Wells Street, Suite 1100, Milwaukee, WI 53202 info@aacpdm.org | +1 (414) 918-3014 | www.aacpdm.org

### **Table of Contents**

Meeting at a Glance	6
2022-2023 AACPDM Board of Directors	
	,
2023 Scientific Program Committee	6
AACPDM Presidential History	7
The Chicago Marriott Magnificent Mile Floor Plans	8
General Meeting Information	11
2023 Scientific Program Overview	16
General Session Speakers	17
AACPDM Awards	20
Program and Events	
Sunday, September 10, 2023	
Monday, September 11, 2023	23
Tuesday, September 12, 2023	31
Wednesday, September 13, 2023	
Posters	49
Exhibitor Listing	63
Exhibit Hall	68
Additional Displays	69
Sponsor Listing	71
Disclosure Index	75
Presentation Author Index	80
Poster Author Index	86



# American Academy for Cerebral Palsy and Developmental Medicine

### AACPDM Office

555 E Wells Street, Suite 1100 Milwaukee, WI 53202 Tel: 1.414.918.3014 Fax: 1.414.276.2146 Email: info@aacpdm.org Website: www.aacpdm.org

#### 2023 Local Host

Deborah Gaebler-Spira, MD Vineeta Swaroop, MD

### **Office Staff**

Tamara Wagester – Executive Director Sarah Shier – Senior Meetings Manager Mckenzie Morgan – Meetings Manager Amanda Prendergast – Communications Manager Claire Lofald – Membership & Administrative Coordinator

### **Future Annual Meetings**

#### **78TH ANNUAL MEETING**

October 23-26, 2024 Quebec City Convention Centre Quebec City, Canada

#### **79TH ANNUAL MEETING**

October 15-18, 2025 New Orleans Marriott New Orleans, Louisiana

# Meeting at a Glance

-

	SUNDAY, SEPTEMBER 10, 2023		
8:30 AM - 12:00 PM CT	AACPDM Board & Committee Meetings		
8:00 AM - 12:00 PM CT	Pre-Conference Sessions PC1: Transforming Your Early-Stage Research Program into an Established One		
8:00 AM - 12:00 PM CT	PC2: Learning to Read and Interpret Gait Lab Kinematics and Kinetics: Testing Your Skills [[[[[[[		
8:00 AM - 5:15 PM CT	PC3: A Global Perspective on Technology Use in Rehabilitation (TERET)		
1:00 PM - 5:00 PM CT	PC4: The Value of Lived Experience: Partnering with Patients & Families in Research, QI, Education, & Health Imme		
1:00 PM - 5:00 PM CT	PC5: Early Orthotic Management for Standing and Mobility in Children with Movement Limitations: Empowering Families (TTMT)		
1:00 PM - 5:30 PM CT	PC6: Spine Deformity in Cerebral Palsy: A Comprehensive Approach		
1:00 PM - 5:00 PM CT	PC7: Initiating a Research Program Focused on Cerebral Palsy or Other Child-Onset Developmental Disabilities (TOCET)		
1:00 PM - 5:00 PM CT	Board of Directors Meeting		
6:00 PM - 8:00 PM CT	Welcome Reception (TICKET)		
MONDAY, SEPTEME	SER 11, 2023		
7:00 AM - 7:45 AM CT	Let's Move		
7:00 AM - 8:00 AM CT	Continental Breakfast in Exhibit Hall		
8:00 AM - 9:30 AM CT	<ul><li>General Session</li><li>Opening Address</li><li>Gayle G. Arnold Lecture</li><li>Presidential Guest Lecture</li></ul>		
9:30 AM - 9:45 AM CT	Coffee Break in Exhibit Hall		
9:45 AM - 10:45 AM CT	Morning Seminars 1-12		
11:00 AM - 12:30 PM CT	Free Paper Sessions A-D A: Gait B: Lifespan C: Neuropathology/Pathophysiology D: Basic Science/Genetics		
12:45 PM - 2:00 PM CT	Poster & Exhibit Review		
2:00 PM - 3:30 PM CT	<ul> <li>General Session</li> <li>Early Detection of Cerebral Palsy: The Importance and Feasibility of Implementation in Clinical Practice</li> </ul>		
3:30 PM - 4:00 PM CT	Coffee Break in Exhibit Hall		
4:00 PM - 6:00 PM CT	Mini Symposia 1-13		
6:15 PM - 7:45 PM CT	Adults and Aging SIG		
6:15 PM - 9:30 PM CT	Complex Care SIG		

TUESDAY, SEPTEMI	RED 12 2022	
7:00 AM - 7:45 AM CT	Let's Move	
7:00 AM - 8:00 AM CT	Continental Breakfast in Exhibit Hall	
8:00 AM - 9:00 AM CT	Morning Seminars 13-25	
9:00 AM - 9:30 AM CT	Coffee Break in Exhibit Hall	
9:30 AM – 11:30 AM CT	<ul> <li>General Session</li> <li>Duncan Wyeth Award</li> <li>Gayle G. Arnold Award</li> <li>Mac Keith Press Basic Science Lecture</li> <li>Mentorship Award</li> <li>Lifetime Achievement Award</li> <li>Corbett Ryan Award</li> </ul>	
12:00 PM - 1:00 PM CT	Product Theater (sponsored by Jazz Pharamceutical)	
1:00 PM - 1:30 PM	International Scholar Highlight	
1:30 PM – 3:15 PM CT	Free Paper Sessions E-H E: Early Detection and Diagnosis F: Rehab/Participation G: Tone Management/Epidemiology H: Medical Complexity/Pain/Nutrition	
3:30 PM - 4:00 PM CT	Coffee Break in Exhibit Hall	
4:00 PM - 6:00 PM CT	Mini Symposia 14-26	
7:00 PM - 11:59 PM CT	Networking Dinner	
WEDNESDAY, SEPTEMBER 13, 2023		
7:00 AM - 8:00 AM CT	Continental Breakfast in Exhibit Hall	
8:00 AM - 9:00 AM CT	Morning Seminars 26-37	
9:00 AM - 9:30 AM CT	Coffee Break in Exhibit Hall	
9:00 AM - 9:30 AM CT	International Affairs Committee Meet and Greet	
9:30 AM – 11:15 AM CT	Free Paper Sessions I-L I: Early Detection and Intervention J: Orthopedics K: Health Service L: Upper Extremity/Hand	
12:45 PM – 1:45 PM CT	<ul> <li>General Session</li> <li>Chambers Family Lifespan Lecture</li> <li>Closing Remarks</li> <li>2024 Committee Introduction</li> </ul>	
	Mini Symposia 27-39	
2:00 PM - 4:00 PM CT		

### 2022-2023 AACPDM Board of Directors

Lesley Pritchard, PT, PhD – President M. Wade Shrader, MD – First Vice President Laurie Glader, MD – Second Vice President Joline Brandenburg, MD – Treasurer Golda Milo-Manson, MHSc, MD, FRCPC – Secretary Tom F. Novacheck, MD – Past President Susan Sienko, PhD – Past President Paige Church, MD – Director Mary Jo Cooley Hidecker, PhD, CCC-A/SLP – Director Nancy Murphy, MD – Director Benjamin J. Shore, MD, MPH, FRCSC – Director Bernadette T. Gillick, PhD, MSPT, PT – Director Anna McCormick, MD, FRCP(C) – Director Verónica Schiariti, MD, MHSc, PhD – Director

### **Ex-Officio Board Members**

William L. Oppenheim, MD – Historian Bernard Dan, MD, PhD – Editor, DMCN Tamara Wagester – Executive Director

### 2023 Scientific Program Committee

M. Wade Shrader, MD Theresa Moulton, PT, DPT, PhD Bhooma Aravamuthan, MD Laurie Glader, MD Sruthi Thomas, MD, PhD Vedant Kulkarni, MD Desiree Maltais, PT, PhD Brittany Hornby, DPT Kelli Chaviano, DO Christos Papdelis, PhD Heidi Haapala, MD Pooya Hosseinzadeh, MD Matt Halanski, MD Nancy Lennon, DPT, MS, PT Eric Chin, MD Lauren Jantzie, PhD Diana Cejas, MD, MPH Siddharth Srivastava Sam Nemanich, PhD Larissa Pavone, MD Karen Harpster, OT, PhD Raye-Ann DeRegnier, MD Amena Fine, MD, PhD Helen Long, PhD, CCC-SLP

# **life without limits** for people with disabilities Pediatric Therapy

Education

**Resource & Referral** 

Home & Community Based Services

Adult Services

Advocacy



Find an affiliate:

# AACPDM Presidential History

Winthrop Phelps, MD       1948         George G. Deaver, MD.       1949         Earl R. Carlson, MD.       1950         Bronson Crothers, MD       1951         Leslie B. Hohman, MD.       1952         Arnold Gesell, MD       1953         Meyer A. Perlstein, MD       1954         Lenox D. Baker, MD       1955         Margaret H. Jones Kanaar, MD       1956         Nicholson J. Eastman, MD       1957         William T. Green, MD       1958         Alvin J. Ingram, MD       1959         Raymond R. Rembolt, MD       1960         G.W.R. Eggers, MD       1961         Jessie Wright, MD       1963         Eric Denhoff, MD       1963         Eric Denhoff, MD       1964         Chester A. Swinyard, MD       1965         Samuel B. Thompson, MD       1964         Sedgwick Mead, MD       1964         William J. Hillman, MD       1969         Harriet E. Gillette, MD       1971         Lawrence T. Taft, MD       1972         Robert L. Samilson, MD       1973         Eliott D. O'Reilly, MD       1974         Hans U. Zellweger, MD       1975         Eugene E. Bleck, MD       1975

1

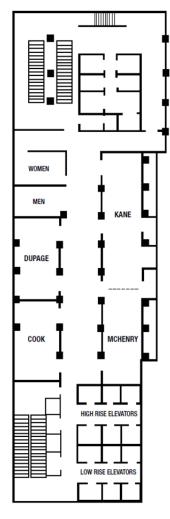
σu

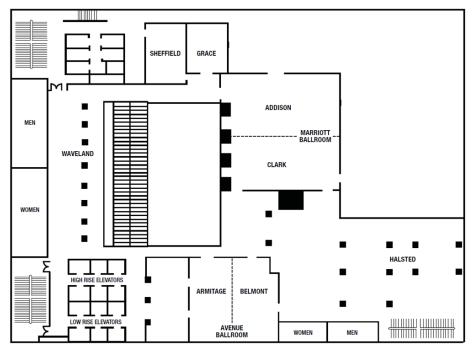
Alfred L. Scherzer, MD	1986
Robert P. Christopher, MD	
Leon Root, MD	1988
Alfred Healy, MD	
Gayle G. Arnold, MD	1990
James R. Gage, MD	1991
John F. McLaughlin, MD	
Michael A. Alexander, MD	
Helen M. Horstmann, MD	
Charlene Butler, EdD	1995
Robert K. Rosenthal, MD	1996
Peter L. Rosenbaum, MD	
Dennis C. Harper, PhD	
John F. Mantovani, MD	
Michael D. Sussman, MD	2001/2002
James A. Blackman, MD	2003
Robert W. Armstrong, MD	2004
Luciano S. Dias, MD	2005
Barry S. Russman, MD	2006
William L. Oppenheim, MD	2007
Diane L. Damiano, PhD PT	2008
Hank G. Chambers, MD	2009
Deborah J. Gaebler-Spira, MD	
Scott A. Hoffinger, MD	2011
Joseph P. Dutkowsky, MD	
Maureen E. O'Donnell, MD MSc FRCP (C)	
Richard D. Stevenson, MD	
Darcy Fehlings, MD MSc FRCP (C)	
Eileen Fowler, PhD PT	
Unni Narayanan, MBBS MSc FRCP (C)	
Sarah Winter, MD	
Jilda Vargus-Adams, MD, MPH	
Mauricio Delgado, MD	2020
Susan Sienko, PhD	2021
Tom F. Novacheck, MD	2022
Lesley E. Pritchard, PhD, PT	
M. Wade Shrader, MD	
Laurie Glader, MD	

# The Chicago Marriott Magnificent Mile Floor Plans

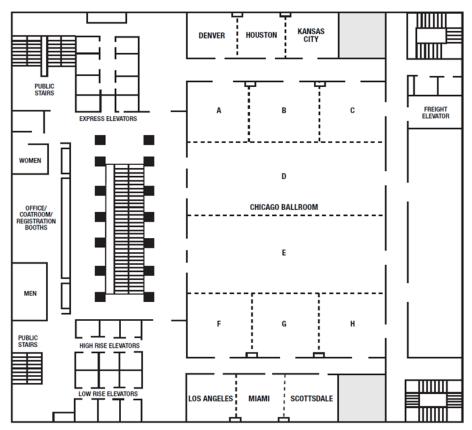
#### **3RD FLOOR DIAGRAM**







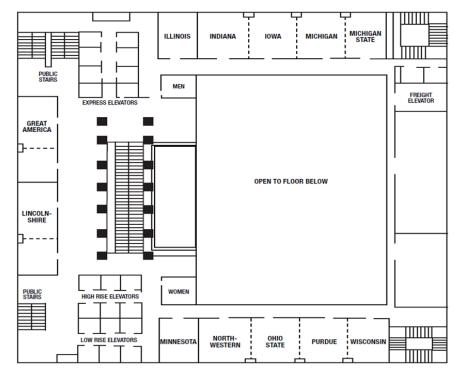
#### 5<sup>TH</sup> FLOOR DIAGRAM

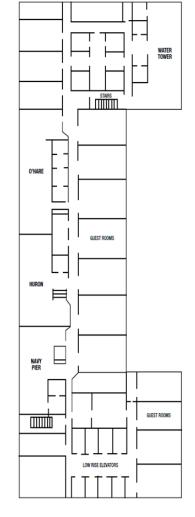


77<sup>TH</sup> ANNUAL MEETING Chicago Marriott Magnificent Mile | September 10-13, 2023

# The Chicago Marriott Magnificent Mile Floor Plans

#### **6TH FLOOR DIAGRAM**

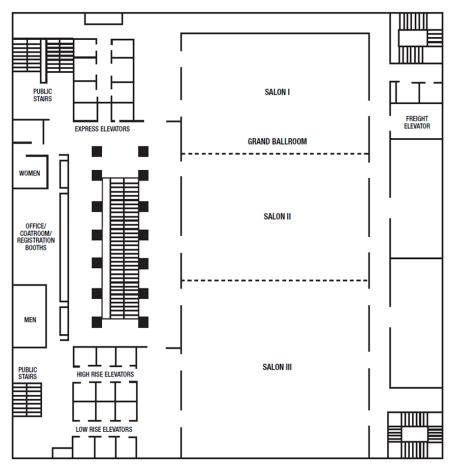




**10TH FLOOR DIAGRAM** 

#### **7TH FLOOR DIAGRAM**

11





# Make the Most of Your Conference Experience with the **AACPDM Events Mobile App!**

Take Notes | Create & Share Schedules | View e-Posters | Download Handouts | Maps

# 1. Download the AACPDM Events App



**Scan** the QR Code or go to the Apple App Store or Google Play and search for **AACPDM Events**.

**Install** and **open** the event app.

Find your event in the Upcoming Events (bottom row).

**Tap** the event icon to launch your event's app.



App Icon



```
Event Icon
```

# 2. Login to the App

To start using your event app, select **"Create Account"** and enter the event code **AACPDM2023**. Then, type your name and email address.

If you already have an account, select **"Login"** and enter your username (your email) and password.

# 3. App Tips

**Download** the app before you go! Wi-Fi connection on-site can affect the functionality of the app.

\*Please note: if you still have the app downloaded on your device from a previous year, we reccomend you delete it and redownload it to avoid glitches.

**Browse** the event information and create a personal schedule by tapping on the star next to presentations titles.

### 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-language pathologists, orthotists, dieticians, rehabilitation engineers, kinesiologists, nurses, psychologists, special education teachers and educators. Note: All levels of skill will be addressed.

# AACPDM Vision

To advance the health and well-being of all individuals with cerebral palsy and other childhood-onset disabilities.

# AACPDM Mission

Empowering and supporting a collaborative multidisciplinary community that

a. provides accessible and robust scientific education for health professionals and researchers

b. fosters innovative research as well as its dissemination and implementation

c. advocates for equitable access to evidence based and patient centered care

# Online Self-Reporting System Information for CME/CEU/CE Credits

After the AACPDM 77th 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 by no later than November 2023. 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.

#### **ACCREDITATION STATEMENT**

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and American Academy for Cerebral Palsy and Developmental Medicine. Amedco LLC is jointly accredited by the Accreditation Council for



JOINTLY ACCREDITED PROVIDER

Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

#### PHYSICIANS (ACCME) CREDIT DESIGNATION

Amedco LLC designates this live activity for a maximum of 27.75 AMA PRA Category 1 Credits<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### **PSYCHOLOGISTS (APA) CREDIT DESIGNATION**

This course is co-sponsored by Amedco and American Academy for Cerebral Palsy and Developmental Medicine. Amedco is approved by the American



Psychological Association to sponsor continuing education for psychologists. Amedco maintains responsibility for this program and its content. 27.75 hours.

#### The following state boards accept courses from APA providers

for Counselors: AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, MD, ME, MO, NC, ND, NH, NE, NJ, NM, NV, OK\*, OR, PA, RI, SC, SD, TN, TX, UT, VA, WI, WY

#### MI: No CE requirements.

**\*OK:** Accepts APA credit for live, in-person activities but not for ethics and/or online courses.

The following state boards accept courses from APA providers for MFTs: AK, AR, AZ, CA, CO, CT, DE, FL, GA, IA, ID, IN, KS, MD, ME, MO, NE, NC, NH, NJ, NM, NV, OK\*, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WI, WY

**AL MFTs:** Credits authorized by NBCC or any other state licensing agency will be accepted.

**MA MFTs:** Participants can self-submit courses not approved by the MAMFT board for review.

The following state boards accept courses from APA providers for Addictions Professionals: AK, AR, CO, CT, DC, DE, GA, IA, IN, KS, LA, MD, MO, MT, NC, ND, NE, NJ, NM, NY (held outside NY <u>ONLY</u>), OK\*, OR, SC, UT, WA, WI, WY

The following state boards accept courses from APA providers for Social Workers: AK, AR, AZ, CA, CO, DE, FL, GA, ID, IN, KY, ME, MN, MO, NE, NH, NM, OR, PA, VT, WI, WY

#### **TEXAS PHYSICAL THERAPY**

2023 LIVE - AACPDM Annual Conference has been approved for 27.75 continuing competence unit(s)(CCUs). Course Approval Number: 77793TX.

States with reciprocity with Texas Physical Therapy Association: AL, AK, AZ, CT, DE, GA, HI, ID, IN, IA, KS, KY, LA, ME, MA, MI, MN, MI, MS, NE, NH, NC, ND, OR, PA, RI, SC, SD, TN, UT, VT, VA, WA, WI, WY

#### PHYSICAL THERAPISTS /PHYSICAL THERAPY ASSISTANTS PHYSICAL THERAPY BOARD OF CALIFORNIA

The American Academy for Cerebral Palsy and Developmental

Medicine is recognized as an Approval Agency by the Physical Therapy Board of California.

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

- Category 1: Domain of OT
- Category 2: Occupational Therapy Process
- Category 3: Professional Issues

#### **NURSING CREDITS**

The American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) is a Provider approved by the California Board of Registered Nursing, Provider # CEP 14720. Please note that one continuing education unit (CEU) is equal to 10 continuing education contact hours. Register the number of hours you spent in total in the AACPDM 2023 Annual Meeting courses. For example - If you spent 20 hours in the AACPDM courses, this equals 2 CEUs.

#### AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION



#### LSVT Global

Advanced Level 2.6 ASHA CEUs

#### Speech Pathologists/CSD Students/SLP Assistants: The

American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) formed a cooperative agreement (or partnership) with LSVT Global. LSVT Global is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. This course is offered for up to 26.0 continuing maintenance hours (CMH), which is the equivalent of 2.60 ASHA CEUs.

# THANK YOU TO OUR COMMITTEES AND COUNCILS

COMMITTEE/COUNCIL	CHAIR
Adapted Sports & Recreation	Marianne A. Mousigian, MD
Advocacy	Rishi K. Agrawal, MD, MPH
Awards	Desiree B. Maltais, PT, PhD
Communications	Brittany D. Hornby, DPT
Complex Care	Kilby Mann, MD
Education	Kelli N. Chaviano, DO
International Affairs	Antigone S. Papavasiliou, MD
Lifespan Care	Heidi J. Haapala, MD
Membership	Michael T. Healy, MD
Publications	Unni G. Narayanan, MBBS, MSc, FRCS(C)
Research	Christos Papadelis, PhD
Nominating	Tom F. Novacheck, MD
Scientific Program	Bhooma Aravamuthan, MD, DPhil and Theresa Sukal Moulton, PT, DPT, PhD
Community Council	Angela Harris
Care Pathways Council	Stacey Miller BScPT, MRSc

# THANK YOU!

Spre

Rewiring the Spinal Cord with Noninvasive Neuromodulation

\*SCiP™ is an investigational device and is limited by Federal (USA) law to investigational use only. FDA has not yet reviewed the safety and effectiveness of SCIP™.

SCIP

Come see us at booth #303!

> \*SCIP™ activates the spinal cord to improve voluntary movement in children with cerebral palsy

SCIP<sup>™</sup> therapy is delivered with physical therapy by a certified pediatric physical therapist

www.spinex.co

### Registration

Annual Meeting registration will be open online through September 1, 2023.

### 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, Demonstration and Clinical Observation/Single Case Study Poster Presenters were also required to submit their poster as an E-Poster. There will be computer kiosks throughout the Chicago Marriott Magnificent Mile dedicated to E-Posters. 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 AACPDM 77th 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 the AACPDM 77th 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.
- Participants will be asked to provide input on the educational program of the AACPDM 77th 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 non-research 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.

### **Registration Hours**

Sunday, September 10*	7:00 AM - 8:00 PM
Monday, September 11**	7:00 AM - 6:00 PM
Tuesday, September 12**	7:00 AM - 4:30 PM
Wednesday, September 13**	7:00 AM - 2:30 PM

\*Registration will be located on the 5th floor on Sunday. \*\*Registration will be located on the 7th floor Monday, Tuesday and Wednesday.

### Speaker Ready Hours

Sunday, September 10

	& 5:00 PM - 7:00 PM
Monday, September 11	6:30 AM - 4:00 PM
Tuesday, September 12	6:30 AM - 4:00 PM
Wednesday, September 13	6:30 AM - 1:00 PM

12:00 PM - 1:00 PM

The Speaker Ready Room is located in the Grace Room (4th floor) — there will be a technician available during the designated hours to assist.



### 2023 Scientific Program Overview

This year's program was developed from a submission total of 647 abstracts. All electronically submitted abstracts were independently rated by the multidisciplinary scientific program committee of 24 members. The committee met in March 2023 to review the abstracts and finalize the program (e.g. Scientific poster or free paper, demonstration poster, clinical observation or single case study posters). Scientific posters and free papers 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. Mini Symposia 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 2023 program includes:

7 Pre-Conference Sessions
37 Morning Seminars
39 Mini Symposia
120 Scientific Papers
190 Scientific Posters
45 Demonstration Posters
23 Clinical Observation/Single Case Study

#### 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

#### Mini Symposia are rated on:

- Course Objective
- Content/Presenters
- Impact, Relevance & Importance

#### Morning Seminars are rated on:

- Course Objective
- Content/Presenters
- Impact, Relevance & Importance

### 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 applicants 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.

### **Grant Awards**

A key mission of the Academy is to promote excellence in research for the benefit of persons with cerebral palsy and childhood-onset disabilities. One way in which the Academy promotes research is through the annual Research Grants. Historically, the AACPDM has partnered with the Pedal with Pete Foundation, the Center for Progress, and the Cerebral Palsy Alliance Research Foundation to fund multiple grants, up to \$25,000 USD each! Areas of research should focus on topics related to cerebral palsy.

Research grant funding supports high-quality, clinical research projects/programs. The award may be used to fund planning for a project or to complete a small research project of high impact in any area relevant to the AACPDM's mission. The successful applicant will have a solid track record in childhood-onset disability research.

The Principal Investigator on the grant must be an AACPDM member in good standing. Only one grant application per member will be considered in a given budget year.

# **General Session Speakers**

# Gayle G. Arnold Lecture: A Practical, Common Sense Approach to Healthcare Workforce Professional Well-being

Gayle G. Arnold Lecture supported in part by an unrestricted grant from Children's Hospital Foundation

#### Corey Feist, JD, MBA



Corey Feist, JD, MBA is a health care executive with over 20 years of experience. Corey is the Co-Founder of the Dr. Lorna Breen Heroes' Foundation and recently served as the Chief Executive Officer of the University of Virginia Physicians Group, the medical group practice of UVA Health. Additionally, Corey has authored over a dozen publications on the need to

support the well-being of the healthcare workforce. He has served as an expert in multiple forums including as a keynote speaker, panelist, and moderator as well as provided formal testimony in the United States Congress. Corey holds his Masters in Business Administration from the UVA Darden School of Business, his Juris Doctorate from Penn State Dickinson School of Law, and his Bachelors degree from Hamilton College.

#### Presidential Guest Lecture: Disability Identity: My Story, Research and More!

#### Anjali Forber-Pratt, PhD



Anjali J. Forber-Pratt, Ph.D. is a disability activist, a two-time Paralympian, Fellow of the American Psychological Association. Dr. Forber-Pratt was appointed by President Biden as the Director of the National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR) within the Administration for Community Living in the Department of Health and Human Services. Dr.

Forber-Pratt also serves as the Chair of the Interagency Committee on Disability Research which exists to promote coordination and collaboration among federal departments and agencies conducting disability, independent living, and rehabilitation research programs. As a principal investigator, her expertise relates to disability identity development and has authored more than 40 peer-reviewed journal articles and numerous chapters. As a wheelchair-user for over 35 years, and Paralympic medalist, Dr. Forber-Pratt is nationally and internationally recognized as a disability leader and mentor. Globally, she is involved with disability advocacy efforts related to access to employment, education and sport through public speaking and media appearances. She has been actively involved to help create inclusive sport opportunities for individuals with disabilities in Bermuda, India, Zambia and Ghana. She was a White House Champion of Change in 2013 and the American Psychological Association awarded her the 2020 Citizen Psychologist Award for Advancing Disability as a Human Rights and Social Justice Issue Award.

# Early Detection of Cerebral Palsy: The Importance and Feasibility of Implementation in Clinical Practice

#### Garey Noritz, MD



Garey Noritz is an Internist and Pediatrician at Nationwide Children's Hospital and Professor of Pediatrics at The Ohio State University. He is Chief of the Division of Complex Care and Chair of the Council on Children with Disabilities of the American Academy of Pediatrics. Dr. Noritz graduated from Brown University School of Medicine. He completed his residencies in Internal

Medicine and Pediatrics at MetroHealth Medical Center/Case Western Reserve University School of Medicine. He is Board Certified in Internal Medicine, Pediatrics, Neurodevelopmental Disabilities, and Hospice/Palliative Medicine. Dr. Noritz is a founding member and on the Board of Directors of the Cerebral Palsy Research Network (CPRN), which is a collaboration to improve treatments and outcomes for people with CP. Dr. Noritz serves as the Principal Investigator of CPRN's clinical registry. Dr. Noritz was the lead author of the joint clinical report from the AAP and the ACPDM, "Providing a Primary Care Medical Home for Children and Youth with Cerebral Palsy." This comprehensive overview seeks to provide primary care physicians with guidance to detect CP in children; collaborate with specialists treating patients with CP; manage associated medical, developmental, and behavioral problems; and provide primary medical care to their patients with CP.

#### Paul Lipkin, MD



Dr. Lipkin specializes in Neurodevelopmental Disabilities and Developmental and Behavioral Pediatrics at the Kennedy Krieger Institute in Baltimore, and is a Professor of Pediatrics at the Johns Hopkins University School of Medicine. He has focused his academic work on surveillance and screening for developmental and behavior problems in children, including autism, for nearly

two decades through the American Academy of Pediatrics (AAP). He is co-author on the 2020 AAP Clinical Report providing guidance on this practice as well as the 2022 collaborative AAP and Centers for Disease Control (CDC) developmental milestones revision. Dr. Lipkin directed the Interactive Autism Network, a family-centered online research registry for autism from 2013 to 2019. He is currently focused and conducting research on suicide and safety in children with autism and other neurodevelopmental disorders as well as implementing developmental surveillance and screening in health care settings. Dr. Lipkin has been honored as the recipient of the AAP's Arnold J. Capute Award in 2011 for his efforts on behalf of children with disabilities, and as a Robert Wood Johnson Foundation Health Policy Fellow in 2010-2011, working in the Office of the US Secretary of Health and Human Services.

### **General Session Speakers**

#### Iona Novak, AM, PhD, MSc (Hons), BAppSc



Professor Iona Novak is the Cerebral Palsy Alliance Chair of Allied Health, at The University of Sydney, Australia. As an international keynote speaker and a Fulbright Scholar, Iona is a trusted authority in evidence-based practice. The core of her research is a commitment to discovering, testing, and translating innovative treatments prioritised by people with cerebral palsy.

Iona has made significant contributions internationally, in early diagnosis and discovering new therapies. Recognising the urgent need for solutions, Iona took the initiative to establish the "XCellerate", an Australian and American Cerebral Palsy Stem Cell Research Network committed to finding repairs for brain injury.

#### Donna Ferriero, MD, MS



Donna Ferriero, MD MS is a Distinguished Professor of Neurology and Pediatrics at UCSF. She is also a member of the Biomedical Sciences Graduate Program and the Weill Institute for Neurosciences. Dr. Ferriero is Director of the Neonatal Brain Disorder Laboratories and codirector of the Newborn Brain Research Institute at UCSF. Her laboratory has been critical in

defining the relationship of selectively vulnerable populations of neural cells during maturation dependent injury. She received the UCSF Chancellor's Award for the Advancement of Women and the Maureen Andrew Mentor Award from the Society for Pediatric Research. She is Past- President of the Child Neurology Society and the American Pediatric Society. She is the recipient of the 2000 Sydney Carter Award for excellence and leadership in Child Neurology, and was elected to the National Academy of Medicine in 2005. She received the Royer Award for Excellence in Academic Neurology in 2007 and the Willis Lecture for outstanding contributions to stroke research in 2010. She was elected to the Association of American Physicians in 2011 and to the American Academy of Arts and Sciences in 2013. Donna enjoys swimming, hiking and most of all watching the San Francisco Giants win a few games!

#### Mac Keith Press Basic Science Lecture: Structural and Functional Changes of Skeletal Muscles in Children with Cerebral Palsy

#### Walter Herzog, PhD



Dr. Walter Herzog did his undergraduate training in Physical Education at the Federal Technical Institute in Zurich, Switzerland (1978), his doctoral research at the University of Iowa, USA, in Engineering (1985), and postdoctoral training at the University of Calgary, Canada, in Neuroscience and Biomechanics (1987). He is a professor in Kinesiology, Engineering, Medicine,

and Veterinary Medicine at the University of Calgary, the Director of the Human Performance Lab, Canada Research Chair in Molecular and Cellular Biomechanics, and the Nigg Chair for Mobility and Longevity. His research interests are focused on the molecular mechanisms of muscle contraction, and musculoskeletal injuries and diseases with emphasis on knee joint osteoarthritis and skeletal muscle structure and function in children with Cerebral Palsy. He was president of the American, Canadian and International Societies for Biomechanics, was the Killam Prize Winner (2018) for Engineering and the recipient of the 2021 Researcher of the Year Award from Alberta Science and Technology.

#### Chambers Family Lifespan Lecture Mark Peterson. PhD



Dr. Mark Peterson is the Charles E. Lytle, Jr. Endowed Professor at the University of Michigan-Medicine, Department of Physical Medicine and Rehabilitation. His work focuses on understanding factors that influence health and life expectancy among individuals with disabilities across the lifespan. This includes efforts directed at identifying precision strategies to

prevent cardiometabolic dysregulation and secondary physical and psychological morbidity among children and adults with cerebral palsy, as well as a variety of frailty syndromes, and to better understand health disparities among individuals with disabilities from the context of access to preventive care and community wellness. Dr. Peterson has published more than 180 peer reviewed scientific articles in the fields of rehabilitation research, physical activity epidemiology, healthcare disparities, and preventive medicine. He is a PI and Co-I on numerous current and previously funded NIH, NIDILRR, and national Foundation grants.



# The AACPDM Community Council Proudly Presents the 2023 Community Forum

**When**: Sunday, September 10, 2023 9:30 AM - 3:30 PM CT **Where:** The Shirley Ryan Ability Lab, 355 East Erie, Chicago, IL 60611

# Forum Schedule:

8:30 AM – 9:30 AM: Registration

# 9:30 AM – 10:00 AM: Welcome Message

# 10:00 AM - 11:00 AM: Hot Topics Panel

- Presenter: Iona Novak, PhD (Stem Cells)
- Presenter: Prakash Jayabalan MD, PhD (Metabolomics)
- Presenter: Brenna Argall, PhD (Smart Wheelchair)

# 11:00 AM – 12:00 PM: Supporting Transitions to Adulthood

- Presenter: Christina Sarmiento, MD, Physiatrist
- Presenter: Patti Herbst, Executive Director, Center for Independence

# 12:00 PM – 1:00 PM: Lunch Break

# 1:00 PM – 2:30 PM: Mental Health, Cerebral Palsy and Psychotropic Medications

- Presenter: Dr. Heather Riodan, Neurologist
- Presenter: Dr. Aaron Hauptman, Psychiatrist

# 2:30 PM – 3:30 PM: Adapted Sports: Great Lakes Adaptive Sports Association (GLASA)

- Presenter: Cindy Housner, GLASA
- Presenter: Peyton Manigo
- Presenter: Mak Nong
- Presenter: Margaret Beaudoin



Scan the QR code for more information about the AACPDM Community Council.

Shirley Ryan



### AACPDM Awards

#### FRED P. SAGE AWARD

# 2023 RECIPIENT: VERÓNICA SCHIARITI MD, MHSC, PHD

#### **My Abilities First**

The Sage Award is given to the best audio/visual submission presenting clinical, research, or educational material on CDROM, DVD or in a digital format. The award is named after Fred Sage, MD, Past President (1981) and Chairman of the A/V Committee of the AACPDM. Dr. Sage envisioned the great potential of audiovisual use in the Academy. He advocated for ways to popularize this method of teaching, and this interest eventually lead to the Fred P. Sage Award for the best program submitted each year.

# MAC KEITH PRESS PROMISING CAREER AWARD RECIPIENT 2023 RECIPIENT: TO BE ANNOUNCED

The Mac Keith Press awards the best Free Paper or Scientific Poster to authors who have completed their training and commenced their current career within four years. The recipient must be a member of the AACPDM or have an application pending. The Awards Committee selects the recipient on-site and presents the award after the Annual Meeting.

# 2023 GAYLE G. ARNOLD AWARD FOR THE BEST SCIENTIFIC PAPER: TO BE ANNOUNCED

The 2023 Gayle G. Arnold Award is selected from a set of abstracts by the Awards Committee. Then the authors are invited to submit a manuscript for final judging. The award of \$2,000 is provided by the Children's Hospital in Richmond, Virginia. The editors of Developmental Medicine and Child Neurology Journal request to have first option on publication of this winning paper, as long as the authors comply with the publishing requirements of Mac Keith Press.

#### BEST SCIENTIFIC POSTER AWARD RECIPIENT 2023 RECIPIENT: TO BE ANNOUNCED

Every year, the AACPDM awards the Best Scientific Poster Award to the highest-rated poster as selected by the Awards Committee members.

#### BEST DEMONSTRATION POSTER AWARD RECIPIENTS 2023 RECIPIENT: TO BE ANNOUNCED

The AACPDM awards the Best Demonstration Poster Award. The award recipient is selected by popular vote during the Annual Meeting.

#### 2023 CORBETT RYAN PATHWAYS PIONEER AWARD Allison Kessler Vear, MD, MSc

This award is presented to an individual who represents excellence in pursuit of and quality of life who also lives with a personal physical challenge. The recipient excels at:

- Motivation and achievement in pursuing and accomplishing personal and vocational/professional goals,
- Demonstration of a creative approach to their pursuit of education and participation in their vocation/profession,
   Example of a positive approach to life
- Example of a positive approach to life,
- Service as a role model to persons in their sphere of influence, demonstrating sensitivity to others and respect for self.

#### 2023 DUNCAN WYETH AWARD

#### Anjali J. Forber-Pratt, PhD

This award is presented to an individual who demonstrates outstanding participation in or promotion of sports and recreation and serves as a role model for people with disabilities. The award is named after Mr. Duncan Wyeth for his passion for life and for encouraging people with disabilities of all ages to pursue interests and dreams based on their abilities and not to be limited by their disabilities. Duncan is an active advocate in his local community, nationally and internationally.

#### 2023 LIFETIME ACHIEVEMENT AWARD

#### Freeman Miller, MD

This award is presented to a special presidential guest lecturer selected by the First Vice President. During their lifetime, the recipient of this award has 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.

#### SCHOLARSHIP WINNERS

Thanks to the American Academy for Cerebral Palsy and Developmental Medicine, our donors, partners, and corporate sponsors, the AACPDM is pleased to provide Annual Meeting Scholarships to AACPDM members. Every year, we offer three types of scholarships for the Annual Meeting, namely International, Student, and OrthoPediatrics®

#### International Travel Scholarship Winners

Dilini V. Vipulaguna, MBBS, DCH, MD Paed Nihad A. Almasri, Professor Sivakumar Gopalakrishnan, PhD Vikus Trivedi, MBBS, MS, DNB, FACS

#### **OrthoPediatrics Scholarship Winners**

Buddhika J. Senevirathne, PT Amanda K. Kwong, BaPhysio(Hons), PhD Kellie Collins, DPT Shannon Strader, DO, MS Jichun Xu, MD Mark S. Katsma, DO Shaaron Brown, DPT Courtney Bishop, MPAS, PA-C

#### Student Scholarship Winners

Megan Evans, BS Angela Rittler, OTD, OTR/ Selamenesh Tsige Legas, MD Ellen Sutter, PT, DPT Julia A. Shah, MD Taryn Loomis Daniela A. Testani, MSc Mercedes Ruiz Brunner Natalie R. McBryde, BS Yvonne S.K Weerasinghe, B.Sc (Honors) SLT Junsoo Lee, BS Rachel Helena Oliveira Saihari S. Dukkipati, PhD Ross P. Wohlgemuth, M.S. Alahm Zidan, MSc. PT, PhD Shristi Shakya

### **AACPDM Awards**

#### **2023 MENTORSHIP AWARD**

Kathleen M. Friel, PhD

Burke Neurological Institute

The Mentorship Award recognizes an individual who has demonstrated outstanding leadership for trainees and colleagues in the field of cerebral palsy and other developmental disabilities.

### AACPDM Awards

#### **2023 GRANT RECIPIENTS**

The Academy's key mission is to promote research excellence that benefits people with cerebral palsy and childhood-onset disabilities. To achieve this, the Academy provides annual Research Grants. The AACPDM has collaborated with the Pedal with Pete Foundation, the Center for Progress, and the Cerebral Palsy Alliance Research Foundation to fund several grants, up to \$25,000 USD each. The focus of research should be on cerebral palsy-related topics.

The Research Grants support high-quality clinical research programs/projects. The grant can be used to finance planning for a project or to complete a small research project with significant impact related to the AACPDM's mission. The successful applicant must have a solid track record in childhood-onset disability research.







#### **C-PROGRESS** Funded

Kari Kretch, PT, DPT, PhD Division of Biokinesiology and Physical Therapy University of Southern California Dynamic body weight support for infants at risk for cerebral palsy: Immediate effects and parent perspectives.

Harshvardhan Singh, PT, MS, PhD University of Alabama at Birmingham Feasibility and response of functionally loaded high intensity circuit training on physical activity in adolescents with cerebral palsy.

#### **CPARF** Funded

Tamer A. El-Sobky Ain Shams University, Faculty of Medicine, Cairo, Egypt Development of a Multicenter Cerebral Palsy Registry in Arabic Speaking Countries: A Feasibility Study Protocol.

#### Pedal with Pete Funded

<u>Colleen Peyton, PT, DPT</u> Northwestern University Tracking Longitudinal Progression of Selective Motor Control From Infancy Through Childhood in Spastic Cerebral Palsy.

# Don't forget to vote for your favorite



Scan the QR code to download our mobile app and vote for your favorite LifeShot by Tuesday, September 12th at 6:00pm CT.

One submission per person.



Sponsored by:

COLUMBIA WEINBERG FAMILY CEREBRAL PALSY CENTER



#### 8:30 AM - 12:00 PM CT

AACPDM Board & Committee Meetings

#### **Preconference Sessions**

#### 8:00 AM - 12:00 PM CT

#### PC1: Transforming Your Early-Stage Research Program into an Established One

Christopher M. Modlesky, PhD, Kathleen Friel, PhD, Dalina Delfing, MS, Kristie F. Bjornson, PT, PhD, Stacey Dusing, PT, PhD, Corinna Bauer, PhD

Member: \$100 Non-Member: \$125 Student: \$75

Room: Clark (4th floor)

#### 8:00 AM - 12:00 PM CT

PC2: Learning to Read and Interpret Gait Lab Kinematics and Kinetics: Testing Your Skills In partnership with GCMAS

Ross Chafetz PT, DPT, PhD, MPH, Kirsten Tulchin-Francis PhD, Joseph Krzak PhD, Kristan Pierz MD, James McCarthy MD, MHCM, Freeman Miller MD

Member: \$100 Non-Member: \$125 Student: \$75

Room: Avenue (4th floor)

#### 8:00 AM - 5:15 PM CT

PC3: A Global Perspective on Technology Use in Rehabilitation Anna McCormick MD FRCPC, Sunil Agrawal MS, PhD, John Andersen MD, Diane Damiano PhD, FAPTA, Hana Alazem MD, Richard Lieber PhD, MBA, Naomi Gefen MPA, MsOT, Danielle Levac BSc.PT, MSc, PhD, Jessica Rose PhD, Vedant Kulkarni MD, Heather Feldner BS, MPT, PhD, James Sulzer PhD, Michael Pearlmutter BSc, BMA, Ralph Nitkin PhD, Christelle Pons, MD, PhD, Kornel Schadl MD, Megan O'Brien PhD, Christopher McCarthy PhD, Adam Scheinberg MD, Rachel Byrne BSc, Jules Dewald PhD, Sally Evans MD, Christa Studzinski PhD

Member: \$175 Non-Member: \$200 Student: \$75

Located off-site at Northwestern (645 N Michigan Ave, enter on Erie St, room 800 (8th floor))

#### 1:00 PM - 5:00 PM CT

PC4: The Value of Lived Experience: Partnering with Patients & Families in Research, QI, Education, & Health

Kristina Malik MD, Cristina Sarmiento MD, Brenda Agnew BA Member: \$100

Non-Member: \$125 Student: \$75

Room: Addison (4th floor)

#### 1:00 PM - 5:00 PM CT

PC5: Early Orthotic Management for Standing and Mobility in Children with Movement Limitations: Empowering Families Mary Rahlin PT DHS, Board-Certified Clinical Specialist in Pediatric Physical Therapy, Kristie Bjornson PT PhD MS, Kyra Kane BscPT MSc PhD, Sarah Luthy MD, Jennifer Lyman, Kilby Mann MD, Kurt Sobush MD, Charlene Shelton PhD

Member: \$100 Non-Member: \$125 Student: \$75

Room: Avenue (4th floor)

#### 1:00 PM - 5:30 PM CT

# PC6: Spine Deformity in Cerebral Palsy: A Comprehensive Approach

In partnership with SRS and POSNA

Jason Howard MD, Christina Hardesty MD, Freeman Miller MD, Suken Shah MD, Hiroko Matsumodo PhD, MSc Paediatric OT, Ron El-Hawary MD, Amit Jain MD, Laura Owens MD, Firoz Miyanji MD, FRCS(C), Benjamin Shrader BA, Jay Berry MD, MPH, Michelle Janas MSN, Hank Chambers

Member: \$100 Non-Member: \$125 Student: \$75

Room: Indiana/Iowa/Michigan/Michigan State (6th floor)

#### 1:00 PM - 5:00 PM CT

#### PC7: Initiating a Research Program Focused on Cerebral Palsy or Other Child-Onset Developmental Disabilities

#### Disabilities

Christos Papadelis PhD, Christopher Modlesky PhD, Paul Gross, BA, Bhooma Aravamuthan, MD, DPhil, Jill Heathcock, PT, PhD, Maria Nurminskaya, PhD, Michael Pearlmutter, MBA

Member: \$100 Non-Member: \$125 Student: \$75 Room: Clark (4th floor)

#### 1:00 PM - 5:00 PM CT

#### **Board of Directors Meeting** Room: Watertower (10th floor)

Room: Watertower (Tuth floor

#### 6:00 PM - 8:00 PM CT

#### Welcome Reception in the Exhibit Hall Room: Room: Chicago Ballroom (5th floor)

#### 7:00 AM - 7:45 AM CT

#### Let's Move

This year let's "mingle and move"!

Join the AACPDM Adapted Sports and Recreation Committee at the Marriott entrance facing Michigan Avenue for an organized run, stroll or roll. Maps are provided in the mobile app and at registration.

#### 7:00 AM - 8:00 AM CT

**Continental Breakfast in the Exhibit Hall** Room: Chicago ABCDE (5th floor)

8:00 AM - 9:30 AM CT

**General Session** Room: Grand Ballroom (7th floor)

Opening Address Gayle G. Arnold Lecture Presidential Guest Lecture

#### 9:30 AM - 9:45 AM CT

Coffee Break in the Exhibit Hall Room: Chicago ABCDE (5th floor)

#### 9:45 AM - 10:45 AM CT

#### MORNSEM01 - MORNSEM12

9:45 AM - 10:45 AM CT

#### MORNSEM01: EMPOWERING DIVERSE COMMUNITIES: IMPLEMENTATION OF EARLY DETECTION OF CEREBRAL PALSY WITHIN THE UNITED CEREBRAL PALSY AFFILIATE NETWORK

Valerie Pieraccini MS OTR, Nathalie Maitre MD, PhD, Mark Gormley MD, Rachel Byrne BS

Room: Marriott Ballroom (4th floor)

Learning Objectives:

- Understand the concept, the design and the barriers and solutions in the execution of implementing early detection in diverse community settings
- 2. Identify measurable, inclusive and equitable goals that can be generalized for early detection in similar organizations
- 3. Understand unique implementation science approaches to drive success in diverse community-based settings.
- Identify replicable models in the community similar to the UCP's affiliate network that can be scaled up and adapted.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM02: JOURNEY – A VIRTUAL SUPPORT GROUP PROMOTING OPTIMAL MENTAL HEALTH AND WELLNESS FOR CAREGIVERS OF CHILDREN AND YOUNG ADULTS WITH CEREBRAL PALSY

Lisa Zimmermann MSW, Margaret Hoffman MSW

Room: Chicago FGH (5th floor)

Learning Objectives:

- 1. Explain the research on CP caregivers' experiences of grieving and adjustment.
- 2. Discuss the importance of peer support in promoting positive mental health for caregivers.
- Describe the main components of a virtual caregiver support program.
- 4. Identify early learnings about program outcomes and caregiver feedback.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM03: IMPROVING CARE FOR YOUTH WITH CEREBRAL PALSY AFTER ORTHOPEDIC SURGERY UTILIZING TELEHEALTH

Nancy Lennon DPT, Elizabeth Koczur MPT

Room: Denver/Houston/Kansas City (5th floor)

Learning Objectives:

- 1. Identify barriers to and solutions for incorporating telehealth physical therapy services into clinical practice.
- 2. Describe the advantages of delivering physical therapy via telehealth.
- 3. Recognize the importance of educating stakeholders during implementation of telehealth services.
- 4. Appreciate how expanding access to care provides relief and eases stress for families and caregivers.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM04: THE WINDS OF CHANGE IN REHABILITATION: MEASURING ENGAGEMENT AS A KEY COMPONENT TO PARTICIPATION

Tonya Rich PhD, OTR/L, Claire Shrader MS, OTR/L, Brittany Virgil DPT

Room: Los Angeles/Miami/Scottsdale (5th floor)

Learning Objectives:

- 1. Define the concept of engagement across multiple rehabilitation disciplines
- 2. Discuss the association between engagement in rehabilitation and outcome achievement
- 3. Identify engagement outcome measures across the lifespan
- 4. Apply understanding of engagement concepts to their own clinical or research practice

#### 9:45 AM - 10:45 AM CT

#### MORNSEM05: EPIC-CP: DEVELOPING EQUITY AND INTEGRATED CARE PATHWAYS TO ADDRESS HEALTH INEQUITIES OF CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY AND THEIR FAMILIES.

Susan Woolfenden PhD, Katarina Ostojic PhD, Simon Paget MBBS

Room: Kane/McHenry (3rd floor)

Learning Objectives:

- 1. Upon completion participants will be able to describe the health inequities experienced by children and young people with cerebral palsy (CP) and their families.
- Upon completion participants will be able to summarise emerging evidence for equity and integrated care pathways to systematically identify and address these health inequities in the healthcare setting.
- Upon completion participants will understand how to use codesign with research advisors with a lived experience of CP to develop equity and integrated care pathways.
- 4. Upon completion participants will understand the common barriers and enablers to identify the unmet social needs of families and have strategies to address these.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM06: CONSIDERATIONS FOR EFFECTIVE SCHOOL READINESS ASSESSMENT OF CHILDREN WITH CEREBRAL PALSY

Stina Oftedal PhD, B Hlth Sc (Diet), Samudragupta Bora PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Roslyn Boyd PhD

Room: Avenue (4th floor)

Learning Objectives:

- 1. Describe the conceptual framework of School Readiness and associated risk and protective factors.
- Review the current state of the evidence for School Readiness in children with cerebral palsy who are at risk of neurodevelopmental delay, and the role of early intervention.
- 3. Propose a toolbox for School Readiness assessment of children with cerebral palsy based on evidence mapping and systematic review of instruments and highlight challenges in current protocols.
- Apply the knowledge presented to develop practical solutions for effective School Readiness assessment of children with cerebral palsy to optimize their transition to school using interactive case studies.

#### 9:45 AM - 10:45 AM CT

# MORNSEM07: SLEEP PROBLEMS IN THE CHILD WITH PHYSICAL DISABILITES

Golda Milo-Manson MD, MHSc, FRCPC

Room: Great America 1 & 2 (6th floor)

#### Learning Objectives:

- 1. Upon completion participants will gain knowledge of current evidence related to the management of sleep disorders in children/youth with neurodevelopmental and specifically physical disabilities
- Upon completion the participant will understand the role of medication in the treatment of sleep disorders in children with physical disabilities.
- 3. Upon completion the participant will understand when to consider the use of medication in sleep management.
- 4. Upon completion the participant will understand when to order a sleep study.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM08: EXPERIENCE-BASED CO-DESIGN - AN INNOVATIVE APPROACH TO SERVICE IMPROVEMENT FOR INDIVIDUALS WITH CHILDHOOD ONSET DISABILITIES AND THEIR FAMILIES

Jill Massey BSc/MSc

Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. Describe the principles and six stages of EBCD
- 2. Define the benefits and challenges of using EBCD approach
- 3. Apply the EBCD process to an identified improvement area from their experience of working within childhood onset disabilities.
- 4. Create an outline plan for an EBCD project applied to their area of clinical practice.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM09: HEALTHCARE TRANSITIONS FOR INDIVIDUALS WITH CP- RESOURCES AND CONSIDERATIONS FROM THE PEDIATRIC AND ADULT PROVIDER PERSPECTIVE Fabiola Reyes MD, Cherlyn Caneda MSN, Rajashree Srinivasan MBBS, Heakyung Kim MD

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- 1. Implement the TRAQ questionnaire and develop transitional care goals for adolescents in the process of transitioning into adult care
- 2. Understand how tone interventions may change based on activity and vocational goals in adulthood
- 3. Understand how school and psychology resources can help determine guardianship needs
- 4. List the recommended neurological and musculoskeletal screening recommendations in adults with CP

#### 9:45 AM - 10:45 AM CT

#### MORNSEM10: NERVE TRANSFERS AND NEURECTOMIES IN CEREBRAL PALSY: PERIPHERAL SOLUTIONS TO A CENTRAL PROBLEM

Eugene Park MD, Dan Zlotolow MD, Sami Tuffaha MD, Jessica Zawrotny MS, OTR/L

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Describe the pathomechanism of spasticity in cerebral palsy and the mechanism behind hyperselective neurectomies.
- 2. Perform a comprehensive evaluation of patients with upper extremity cerebral palsy as it relates to surgical indications and planning.
- 3. Incorporate hyperselective neurectomies for elbow and wrist flexors, as well as forearm pronators into their repertoire of surgeries for upper extremity cerebral palsy.
- Plan a comprehensive functional evaluation and postoperative therapy protocol for patients undergoing hyperselective neurectomies for upper extremity cerebral palsy.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM11: ORTHOPEDIC ASPECTS OF HEREDITARY SPASTIC PARAPARESIS: DIAGNOSIS AND TREATMENT OF LOWER LIMB DEFORMITIES

Sharon Eylon MD, Steven Bachrach MD, Jason Howard MD

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- Describe the clinical features, natural history and diagnostic workup to evaluate patients with Hereditary Spastic Paraparesis (HSP), in comparison to cerebral palsy (CP)
- 2. Debate on the protocol of X-rays for hip migration monitoring
- 3. Describe the non-operative treatment options for
- neuromodulation oral medications, botulinum toxin injections, bracing, assistive devices and therapies
- Describe surgical plans for patients considering joint contractures, rotational deformities, or gait limiting pathologies.

#### 9:45 AM - 10:45 AM CT

#### MORNSEM12: FROM BABY SHARKS TO MEGALODONS: A PATHWAY TO A PARTICIPATION MODEL FOR ORGANIZED SWIMMING

Juliana Libertin DPT, PCS, Kaitlin Barr DPT, Walter Guminiak AAS

Room: Lincolnshire 1 & 2 (6th floor)

Learning Objectives:

- 1. Explain how organized recreational sports improve physical fitness while promoting emotional development in children
- 2. Explore options to adapt swimming to meet the physical and emotional needs of children with physical disabilities
- 3. Evaluate and utilize community resources to implement an adaptive sports program
- 4. Describe steps to build an adaptive swim program and competitive swim program

#### 11:00 AM - 12:30 PM CT

#### FREE PAPER SESSIONS A-D

Free Paper Session A: Gait Room: Grand Ballroom I (7th floor)

#### 11:00 AM - 11:07 AM CT

# A1: Absolute Reliability of the Gait Outcomes Assessment List (GOAL) Questionnaire

<u>Jean Stout PT, MS, PhD(C)</u>, Marissa Thill MS, Meghan Munger MPH, Kathryn (Katie) Walt PT, DPT, Elizabeth Boyer PhD

#### 11:08 AM - 11:15 AM CT

# A2: Changes in Foot Posture over the Course of Childhood in Ambulatory Youth with Cerebral Palsy

<u>Chris Church MPT</u>, Nancy Lennon DPT, Madison Lennon BS, John Henley PhD, Thomas Shields BS, Tim Niiler PhD, Daveda Taylor DPT, Michael Shrader MD, Freeman Miller MD

#### 11:16 AM - 11:23 AM CT

A3: Gait Kinematic Trajectories in Youth with Cerebral Palsy throughout Childhood: Influence of Age and Orthopedic Surgery <u>Nancy Lennon DPT</u>, Chris Church MPT, Daniel Wagner BS, Tim Niiler PhD, John Henley PhD, Freeman Miller MD, Michael Shrader MD, Jason Howard MD

#### 11:24 AM - 11:31 AM CT

A4: Comparing Lower Extremity Muscle Activation Patterns of Simulated Walking Using An End-Effector-Type Robot With Real-Level and Stair Walking in Children with Spastic Bilateral Cerebral Palsy

<u>Juntaek Hong MD</u>, YongJin Ahn MD, Dain Shim MS, Joong-on Choi MS, Dong-wook Rha PhD

#### 11:32 AM - 11:39 AM CT

# A5: Sagittal Gait Kinematics of Patients with Cerebral Palsy and Pelvic Incidence-Lumbar Lordosis Mismatch

<u>Erikson Nichols MS, MMS</u>, Peter Cirrincione BA, Vishnu Deep Chandran PhD, Silvia Zanini MS, Jennifer Jezequel DPT, Bridget Assip DPT, Sherry Backus DPT, Dara Jones MD, David Scher MD, Paulo Selber MD

#### 11:45 AM - 11:52 AM CT

A6: Energy Expenditure During Ambulation in Patients With Hereditary Spastic Paraparesis And Cerebral Palsy <u>Robert Wimberly MD</u>, Kelly Jeans MS, Lizabeth Bunkell BS

#### 11:53 AM - 12:00 PM CT

#### A7: Predictors for Changes in Pelvic Rotation After Surgery in Ambulatory Children with Cerebral Palsy: Impact of Femoral Derotational Osteotomy

Reiko Hara PhD, Susan Rethlefsen DPT, Tishya Wren PhD, <u>Robert Kay MD</u>

#### 12:01 PM - 12:08 PM CT

#### A8: Factor Analysis of the Gait Outcomes Assessment List's Goal Questions: A New Method for Measuring Goal Prioritization in Ambulatory Patients With Cerebral Palsy

<u>Meghan Munger MPH</u>, Tom Novacheck MD, Nathan Shippee PhD, Timothy Beebe PhD, Beth Virnig PhD, MPH

#### 12:09 PM - 12:16 PM CT

#### A9: Gait Outcomes for Foot And Ankle Surgery In Children With Charcot-Marie-Tooth Disease: A Multisite Investigation

Sylvia Ounpuu MSc, <u>Kristan Pierz MD</u>, Susan Rethlefsen DPT, Jennifer Rodriguez-MacClintic PT, DPT, Gyula Acsadi MD, PhD, Tishya Wren PhD

#### Free Paper Session B: Lifespan

Room: Grand Ballroom II (7th floor)

#### 11:00 AM - 11:07 AM CT

#### B1: Effectiveness of Transition to Adulthood Programs Among Adolescents with Disabilities: A Realist-Informed Mixed-Methods Systematic Review

<u>Ahlam Zidan</u>, David Gabay, Sarah-Eve Poirier MSc, Marie Grandisson PhD, Steve Jacob PhD, Mathieu Ouimet PhD, Francine Julien-Gauthier PhD, Sarah Martin-Roy PhD, Marie-Ève Lamontagne PhD, Chantal Desmarais, Noémi Dahan-Oliel OT, PhD

#### 11:08 AM - 11:15 AM CT

#### B2: Transition To Adult Healthcare Among Children With Cerebral Palsy, Developmental Disabilities, And Typically Developing Children

Sarah Creveling MS, Mario Keko MPH, Haresh Rochani DrPh, MPH, MBBS, Joshua Vova MD, Christopher Modlesky PhD, <u>Gavin</u> <u>Colquitt PhD</u>

#### 11:16 AM - 11:23 AM CT

#### B3: Growing Pains: A Qualitative Approach to Understanding the Transition of Care Needs of Young Adults with Cerebral Palsy in a Pediatric Rehabilitation Clinic

<u>Cristina Sarmiento MD</u>, Jordan Wyrwa DO, Chloe Glaros MPH, MSW, Brooke Dorsey Holliman PhD, Lisa Brenner PhD</u>

#### 11:24 AM - 11:31 AM CT

B4: Altered Dexterity of Adults with Cerebral Palsy is Linked with Reduced Activation of the Higher-Threshold Spinal Motoneurons Saihari Dukkipati PhD, Sarah Walker BS, Michael Trevarrow PhD, Morgan Busboom DPT, Katie Schlieker DPT, Max Kurz PhD

#### 11:32 AM - 11:39 AM CT

# B5: Physical and Psychological Consequences of Falls in Individuals with Cerebral Palsy

<u>Elizabeth Boyer PhD</u>, Marissa Thill MS, Kari Pederson MSW, Sandy Tierney MSW, PhD, Nathan Wandersee AS Business Administration, Linda Krach MD

#### 11:45 AM - 11:52 AM CT

B6: The Outcome of Onabotulinumtoxina Injections for Painful Hips in Patients with Cerebral Palsy (Gmfcs 4 And 5) <u>Henry Chambers MD</u>, Kyle Ryan MD, Reid Chambers DO

#### 11:53 AM - 12:00 PM CT

B7: Evaluation of a Mindfulness Based Stress Reduction Intervention for Adults with Cerebral Palsy with Anxiety and/or Emotion Regulation Difficulties – A Randomised Control Trial Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD, Ingrid Honan BPsych (Hons), MClinNeuroPsych, PhD, Emma Waight BA, Katherine Swinburn BAppSc, MPH, Fiona Given BA LLB, Kate Hooke BSW, Annabel Webb MRes, Sarah McIntyre PhD, Georgina Henry BPsych (Hons)

#### 12:01 PM - 12:08 PM CT

# B8: Altered Systemic Metabolomics in Ambulatory Young Adults with Cerebral Palsy

<u>Chad Hanaoaka BS</u>, Raji Pichika PhD, Sudarshan Dayanidhi PT, PhD, Prakash Jayabalan MD, PhD

#### 12:09 PM - 12:16 PM CT

B9: Longitudinal Patterns of Post-Fracture Outpatient Physical/ Occupational Therapy Use and Its Association With 3-Year Mortality Among Adults With Cerebral Palsy

Rachel Gottlieb BS, Kate Panzer BAS, Daniel Whitney PhD, <u>Daniel</u> <u>Whitney PhD</u>

#### 12:17 PM - 12:24 PM CT

B10: Factors Impacting Positive and Negative Participation of Young People with Cerebral Palsy: A Delphi Study of Consumers and Health Professionals.

<u>Jacinta Quartermaine BS</u>, Tanya Rose PhD, Megan Auld PhD, Leanne Johnston PhD

#### Free Paper Session C: Neuropathology/Pathophysiology Room: Grand Ballroom III (7th floor)

#### 11:00 AM - 11:07 AM CT

C1: Efficacy of Transcranial Direct Current Stimulation for Improving Motor Function in Children with Cerebral Palsy: A Systematic Review and Meta-Analysis <u>Hyunjoon Kim MS</u>, Marie Kelly MPH, Xiwen Su MS, Claudio Ferre PhD

#### 11:08 AM - 11:15 AM CT

C2: Remote Ischemic Conditioning Enhances Bimanual Skill Learning and Corticospinal Excitability in Children with Unilateral Cerebral Palsy: A Phase II Randomized Controlled Trial Swati Surkar PT, PhD, <u>Shailesh Gardas PT</u>, Mary Scott Faircloth BS, DPT, Casey Burroughs DPT, Caroline Brown BS, Katie Woosley BS, DPT, Natalie McBryde BS, Exercise Physiology, David Turnure BS, DPT, John Willson PT, PhD, Jessica Cassidy DPT, PhD, Shailesh Kantak PT, PhD

#### 11:16 AM - 11:23 AM CT

C3: Relationship Between Mid-Level Visual Perceptual Dysfunctions and White Matter Integrity in Cerebral Visual Impairment

Marie Drottar MA, Claire Manley BS, Lotfi Merabet PhD, OD, MPH, <u>Corinna Bauer Ph.D.</u>

#### 11:24 AM - 11:31 AM CT

#### C4: White Matter Pathways Associated with Visual Search Dysfunctions in Cerebral Visual Impairment

Claire Manley BS, Marie Drottar MA, Lotfi Merabet PhD, OD, MPH, <u>Corinna Bauer Ph.D.</u>

#### 11:32 AM - 11:39 AM CT

#### C5: Reaching Accuracy Deficits are Related to Altered Prefrontal Cortex Activity in Children With Cerebral Palsy: A Functional Near-Infrared Spectroscopy (Fnirs) Study

<u>Owais Khan PT</u>, Tarkeshwar Singh PhD, Deborah Barany PhD, Christopher Modlesky PhD

#### 11:45 AM - 11:52 AM CT

#### C6: Sensorimotor Cortical Oscillations of Persons with Cerebral Palsy during an Adaptive Motor Control Task are Uncharacteristic

<u>Erica Hinton PhD</u>, Morgan Busboom DPT, Christine Embury PhD, Tony Wilson PhD, Max Kurz PhD

#### 11:53 AM - 12:00 PM CT

MONDAY

# C7: Integrity of the Spinal Cord Microstructure is Connected to the Sensory Acuity of Persons with Cerebral Palsy

<u>Max Kurz PhD</u>, Julia Edelstein BS, Sarah Baker MA, Saihari Dukkipati PhD, Erica Hinton PhD

#### 12:01 PM - 12:08 PM CT

# C8: Adults with Down Syndrome Exhibit Altered Entrainment of the Occipital Cortical Neural Generators

<u>Julia Edelstein BS</u>, Erica Hinton PhD, Tony Wilson PhD, Max Kurz PhD

#### 12:09 PM - 12:16 PM CT

# C9: Bilateral Coordination Develops Throughout Childhood and Adolescence in Typically-Developing Children

Brittany Wehausen BS, Karissa Wennstrom BS, Camryn Stasulas BS, Annika Ward BS, Karin Goodfriend MD, MPT, Sheila Schindler-Ivens PhD, PT, <u>Samuel Nemanich PhD</u>

#### 12:17 PM - 12:24 PM CT

#### C10: The We-Study; Does Botulinum Toxin a Make Walking Easier in Children with Cerebral Palsy? An Industry-Independent Double Blind Placebo-Controlled Trial

<u>Anne Elisabeth Raftemo Medical doctor</u>, Siri Merete Brændvik PhD, Karin Roeleveld PhD, Kjersti Ramstad PhD, Jasmina Majkic-Taisic MD, Torarin Lamvik MD, Ånen Aarli MD, Marcin Bonikowski MD PhD, Serge Colson PhD, Turid Follestad Follestad PhD, Torstein VIK MD, PhD, Guro Andersen PhD

#### Free Paper Session D: Basic Science/Genetics

Room: Marriott Ballroom (4th floor)

#### 11:00 AM - 11:07 AM CT

D1: Etiology of Cerebral Palsy in the BC Hip Surveillance Cohort <u>Stacey Miller BSc(PT), MRSc</u>, Caitlyn Siu BSc, Kishore Mulpuri MBBS, MS (Ortho), MHSc (Epi), FRCSC, Ram Mishaal MD

#### 11:08 AM - 11:15 AM CT

#### D2: Excessive Stiffness Promotes Fibrosis and Impairs Regeneration in Muscle Stem Cells from Children with Cerebral Palsy

<u>Taryn Loomis</u>, Vedant Kulkarni MD, Jon Davids MD, Marie Villalba BS, Lucas Smith PhD

#### 11:16 AM - 11:23 AM CT

D3: Whole-Brain Functional Connectivity Profiles in the Mature Central Nervous System after Perinatal Injury: Sensitive Preclinical Biomarker Linking Motor Deficits, White Matter Injury and Cognition

Lauren Jantzie PhD, Shenandoah Robinson MD, Eric Chin MD

#### 11:24 AM - 11:31 AM CT

D4: Selective Disruption of the Epigenome in Glutamatergic Neurons After Prenatal Hypoxia is Correlated to Persistent Neuronal Dysfunction Ana Cristancho MD/PhD

#### 11:32 AM - 11:39 AM CT

D5: Association of Feeding with Functional and Structural Brain Abnormalities in Infants with Hypoxic Ischemic Encephalopathy Sabrina Shandley PhD, Yvette Johnson MD, Dave Riley MD, Madhan Bosemani MD, Jonathan Nedrelow MD, Christos Papadelis PhD

#### 11:45 AM - 11:52 AM CT

# D6: Transcription Profiling Suggests a Mechanistic Link Between Hypoxia and Muscle Contracture

Andy Domenighetti PhD, Isabel O'Malley-Krohn BS, Jake Parsons BS, <u>Richard Lieber PhD, MBA</u>

#### 11:53 AM - 12:00 PM CT

#### D7: Does Collagen and Laminin Abundance in Muscles Reflect Spasticity in Children with Cerebral Palsy?

<u>Kristen Reider PhD, PT</u>, Rachel Thompson MD, Kara Shin MS, Yiran Deng, Kevin Chen BA, Shannon Wu BS, Sierra Pinal BA, Richard Bowen MD

#### 12:01 PM - 12:08 PM CT

# D8: Comprehensive Whole-Genome Sequence Annotation to Elucidate the Genetic Architecture of Cerebral Palsy

Darcy Fehlings MD FRCPC MSc, Mehdi Zarrei PhD, Maryam Oskoui MD, Richard Wintle PhD, Bank Enqchuan PhD, Neal Sondheimer MD, PhD, Michael Shevell MD, Adam Kirton MD, Edward Higginbotham MS, Carolyn Hunt BSC, MD, FRCP(C), Shannon Knights MD, Nomazulu Dlamini MBBS, MSc, PhD, Dawa Samdup FRCPC, Ronit Mesterman MD, Anna McCormick MD FRCPC, Jan Willem Gorter MD PhD, Stephen Scherer PhD, DSc, FRSC

#### 12:09 PM - 12:16 PM CT

# D9: The Quality of Phenotype Data in Genetic Studies of Cerebral Palsy

<u>Yana Wilson</u>, Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD, Shona Goldsmith PhD, Tasneem Karim MBBS, MPH, PhD, Georgina Henry BPsych (Hons), Jozef Gecz PhD, Gareth Baynam PhD, Nadia Badawi PhD, Sarah McIntyre PhD

#### 12:17 PM - 12:24 PM CT

D10: The Role of Pathogenic Alleles and Their Potential Link to Cerebral Palsy and Secondary Health Risks

Nedeke Ntekim OMS-II, Tyler Hamby PhD, Stephanie Acord MD, Carter Butson OMS-II, <u>Warren Marks MD</u>

#### 12:45 PM - 2:00 PM CT

#### Poster & Exhibit Review

Room: Chicago ABCDE (exhibit hall) , 4th floor (posters)

#### 2:00 PM - 3:30 PM CT

#### **General Session**

Room: Grand Ballroom (7th floor)

Early Detection of Cerebral Palsy: The Importance and Feasibility of Implementation in Clinical Practice (Endorsed by the Newborn Brain Society)

4:00 PM - 6:00 PM CT

#### MINISYMP01 - MINISYMP13

#### 4:00 PM - 6:00 PM CT

#### MINISYMP01: DEVELOPING A CAREER IN PEDIATRIC REHABILITATION RESEARCH

Ralph Nitkin PhD, Amy Darragh PhD, Stephanie Deluca PhD, Maria Nurminskaya PhD, Bernadette Gillick PhD

Room: Marriott Ballroom (4th floor)

Learning Objectives:

- 1. List some research opportunities in developmental medicine particularly related to support of children with disabilities and their families
- 2. Describe some opportunities to network with other researchers and access critical research infrastructure
- 3. Identify NIH research opportunities, funding mechanisms, and the peer-review system
- 4. List the needs and opportunities to develop an independent research career

#### 4:00 PM - 6:00 PM CT

#### MINISYMP02: SURVEILLANCE AND MANAGEMENT OF HIP DISPLACEMENT IN CHILDREN WITH CEREBRAL PALSY: CLINICAL AND ETHICAL DILEMMAS

Jason Howard MD, Benjamin Shore MD, MPH, FRCSC, Kishore Mulpuri MBBS, MS (Ortho), MHSc (Epi), FRCSC, Erich Rutz MD, PhD

#### Room: Chicago FGH (5th floor)

Learning Objectives:

- 1. To review new thinking on the pathophysiology of hip displacement (HD) in cerebral palsy (CP)
- 2. To review the state of hip surveillance in CP
- 3. To review the long term outcomes and goals of preventative and reconstructive surgery for HD in CP
- 4. To discuss controversies and ethical dilemmas regarding orthopedic surgery for HD in CP

#### 4:00 PM - 6:00 PM CT

# MINISYMP03: TOP 10 ARTICLES IN DEVELOPMENTAL DISABILITIES

Nancy Murphy MD, Richard Adams MD, Garey Noritz MD

Room: Denver/Houston/Kansas City (5th floor)

Learning Objectives:

- 1. Upon completion, participant will be able to describe recent publications and updates related to the care of children with CP and related disabilities.
- 2. Upon completion, participant will be able to decribe what is known and future directions related to current topics in the care of children with CP and related disabilities.
- 3. Upon completion, participant will be able to critically review scientific literature and apply relevant advances to the care of children with CP and related disabilities in their local settings.
- 4. Upon completion, participant will be able to disseminate updates on the care of children with CP and related disorders with local stakeholders (trainees, those with lived experience, communities, others).

#### 4:00 PM - 6:00 PM CT

#### MINISYMP04: THE FUTURE IS HERE: USING NON-INVASIVE BRAIN-COMPUTER INTERFACE TECHNOLOGY TO ENHANCE PARTICIPATION FOR CHILDREN WITH NEUROMOTOR DISABILITIES

Michelle Roy PT, Lesley Pritchard PT, PhD, John Andersen MD, FRCPC, Hosein Bahari MS, Jonathan Halton OT, Diane Damiano PhD, FAPTA

Room: Los Angeles/Miami/Scottsdale (5th floor)

Learning Objectives:

- 1. Describe the current state of BCI research in pediatric rehabilitation
- 2. Understand what BCI technology is and how it can be applied clinically
- 3. Consider the pros and cons of using BCI as an alternate access method
- 4. Apply implementation strategies to adopt BCI technology into clinical practice

#### 4:00 PM - 6:00 PM CT

#### MINISYMP05: THE NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE (NINDS) CEREBRAL PALSY COMMON DATA ELEMENTS (CDE): WHAT THEY ARE, WAYS TO USE THEM, AND GAPS

Joline Brandenburg MD, Carolina Mendoza-Puccini MD, Theresa Moulton PT, DPT, PhD, Robin Feldman BS, MBA, Angela Shierk PhD

#### Room: Kane/McHenry (3rd floor)

Learning Objectives:

- 1. Define CP CDEs, case report forms, and instruments.
- 2. Describe the process for developing and adding CP CDEs and instruments.
- 3. Demonstrate how to navigate the NINDS CDE website
- 4. Demonstrate how to use CP CDEs and case report forms in research, clinical practice, and education.

#### 4:00 PM - 6:00 PM CT

# MINISYMP06: UNDERSTANDING THE RATIONALE BEHIND PRACTICE VARIATION IN SELECTIVE DORSAL RHIZOTOMY

Paul Gross BA, Brandon Roque MD, MS, Jeffrey Leonard MD, Tom Novacheck MD, Joyce Oleszek MD, Bhooma Aravamuthan MD, DPhil, Caroline Colvin PT, DPT, PCS

Room: Avenue (4th floor)

Learning Objectives:

- 1. Understand key areas of agreement and divergence in SDR decision making criteria based on real world practices.
- 2. Describe the tools and measures that are consistently used to guide decision making for SDR.
- 3. Learn the key areas of existing research and gaps to support these decisions.
- 4. Describe the key disciplines and process shared across most surgical spasticity clinics for SDR.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP07: MAKING A DIFFERENCE WITH THE GOAL QUESTIONNAIRE: INCORPORATING PATIENT AND PARENT PRIORITIES INTO PRACTICE

Jean Stout PT, MS, PhD(C), Elizabeth Boyer PhD, Andrew Georgiadis MD, Pam Thomason MPT, Kathryn (Katie) Walt PT, DPT, Unni Narayanan MBBS, MSc, FRCSC

Room: Great America 1 & 2 (6th floor)

Learning Objectives:

- 1. Describe the unique nature of the GOAL Questionnaire and what it adds to functional patient reported outcome assessment.
- Understand the reliability and validity of the GOAL Questionnaire; and describe the scoring and interpretation of the GOAL across patients with different gross motor abilities.
- 3. Identify pearls and pitfalls of incorporating the GOAL Questionnaire into clinical practice.
- 4. Discuss how knowledge of patient and parent priorities related can augment and direct treatment planning.

#### 4:00 PM - 6:00 PM CT

# MINISYMP08: IDIOPATHIC TOE WALKING: AN EVIDENCE BASED APPROACH TO DIAGNOSIS AND TREATMENT

Jeremy Bauer MD, Jon Davids MD, Jenny Wilson MD, Amanda Stoltz PT, DPT, PCS

Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. To enhance the knowledge of the natural history of ITW
- 2. To formulate a treatment plan for children with ITW
- 3. To utilize QGA to diagnose ITW and to differentiate ITW from other disorders
- 4. To describe the differential diagnosis of ITW.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP09: LESSONS LEARNT FROM THE REACH CLINICAL TRIAL OF REHABILITATION EARLY FOR INFANTS AT HIGH RISK OF CONGENITAL HEMIPLEGIA – INFORMING CLINICAL PRACTICE AND FUTURE RESEARCH

Roslyn Boyd PhD, Susan Greaves PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Kimberley Scott PT, DPT, PhD, Jill Heathcock MPT, PhD

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- 1. Upon completion, the participant will be able to highlight the entry criteria for early upper limb rehabilitation for infants at high risk of UCP including early identification tools.
- Upon completion, the participant will be able to determine the setting, mode, toys and play based activities to undertake Baby CIMT for infants at high risk of Unilateral CP.
- Upon completion, the participant will be able to select appropriate setting, mode, toys and play based activities to undertake Baby BIM for infants at high risk of Unilateral CP.
- Upon completion, the participant will be able to measure of fidelity of delivery of intervention by therapists and enactment of intervention by parents in an Early Rehabilitation Clinical Trial.

#### 4:00 PM - 6:00 PM CT

# MINISYMP10: SLEEP IN INFANTS AND YOUNG CHILDREN WITH CEREBRAL PALSY

Angelynn Zimmerman OTR/L, MA, BCP, IBCLC, AOMT-C, Vlad Ianus MD, John Phillips MD

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Review normal sleep milestones in the first year of life
- 2. Identify 3 common problems causing sleep disturbance as a secondary issue and what referrals may be helpful and to whom.
- 3. Be able to list at least 3 non-drug treatments for a child with CP who has poor sleep
- 4. Describe normal sleep changes in the first year of life

#### 4:00 PM - 6:00 PM CT

#### MINISYMP11: SEXUALITY AND INTIMACY FOR INDIVIDUALS AFFECTED WITH CEREBRAL PALSY: A MULTIDISCIPLINARY APPROACH TO ENHANCE QUALITY OF LIFE

Heakyung Kim MD, Jan Moskowitz MSW, Susan Labhard MSN, RN

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- Upon completion, participants will be able to understand the importance of including sex/sexuality in assessments and learn how to initiate meaningful conversation relating sex/ sexuality.
- 2. Upon completion, participants will be able to understand physical challenges and limitation that people with CP experience related to sexual activity.
- 3. Upon completion, participants will be educated on available treatment options for management of medical conditions that people with CP experience related to sexual activity.
- 4. Upon completion, participants will be able to encourage the inclusion and attention to sexuality as a topic in health care and transition planning

#### 4:00 PM - 6:00 PM CT

#### MINISYMP12: AUGMENTATIVE & ALTERNATIVE COMMUNICATION (AAC): SUPPORTING A SPECTRUM OF COMMUNICATION NEEDS IN INDIVIDUALS WITH CEREBRAL PALSY AND OTHER NEUROMOTOR IMPAIRMENTS

Abygail Marx MS, CCC-SLP, Jaclyn Bender OTR/L, Anastasia Wilson BS in Arts

Room: Lincolnshire 1 & 2 (6th floor)

Learning Objectives:

- 1. Describe concepts underlying use of AAC and its importance in meeting communication needs for individuals with complex motor, sensory, and communication impairments including cerebral palsy and other neuromotor conditions.
- 2. Understand the importance of the feature matching process as a strategy for selecting and implementing appropriately matched AAC systems that best support a client's current communication and access needs.
- Demonstrate knowledge of current low-, mid-, and hightech AAC options, including tablet-based applications and dedicated communication devices, along with potential resources for funding these tools.
- 4. Identify language features, access settings and peripherals to support an individual's physical and sensory needs to allow for successful use of AAC systems.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP13: REDUCING RISK OF ASPIRATION PNEUMONIA - AN INTERPROFESSIONAL MODEL FOR ASPIRATION RISK MANAGEMENT ACROSS THE LIFESPAN

Toni Benton MD, Mary Beth Schubauer PhD, Elizabeth Finley RN, Jason Buckles PhD, Deann Griego

Room: Sheffield (4th floor)

Learning Objectives:

- 1. Understand the impact of aspiration on the health and safety of the individual with IDD.
- 2. Recognize the unique feeding needs of the individual with intellectual and developmental disabilities which can place them at risk for aspiration
- 3. Recognize the benefits of interprofessional collaboration in the recognition, evaluation, and management of the individual with IDD who may be at risk for aspiration
- 4. Participate in group simulation activity and discussion with an adult volunteer with IDD and risk for aspiration, strategies to reduce aspiration risk

# Special Interest Groups (SIGs)

Special interest groups (SIGs) are communities within AACPDM created around a shared interest in specific areas of knowledge, learning, or other characteristics of AACPDM's Vision and Mission. The work of the SIGs complement the Academy's activities. SIGs offer additional benefits such as access to subject-specific information and resources, educational opportunities, networking with like-minded peers, and volunteer leadership opportunities.

### Sigs are open for all to attend.

ADULTS AND AGING

6:15 PM - 7:45 PM Room: Avenue (4th floor)

#### COMPLEX CARE

6:15 PM - 6:30 PM - Meet and Greet Open to All 6:30 PM - 7:30 PM - Program for those not attending the tour. Room: Kane/McHenry (3rd floor)

6:30 PM - 9:30 PM - Tour at La Rabida Children's Hospital (6501 South Promontory Drive, Chicago, IL 60649). \*Must have RSVPed in advance for this tour.

\*Complementary transportation will pick up on Ohio Street outside of the Chicago Marriott Magnificent Mile. \*Food provided.

# Program & Events — Tuesday, September 12, 2023

#### 7:00 AM - 7:45 AM CT

#### Let's Move

This year let's "mingle and move"!

Join the AACPDM Adapted Sports and Recreation Committee at the Marriott entrance facing Michigan Avenue for an organized run, stroll or roll. Maps are provided in the mobile app and at registration.

#### 7:00 AM - 8:00 AM CT

#### **Continental Breakfast in Exhibit Hall** Room: Chicago ABCDE (5th floor)

#### 8:00 AM - 9:00 AM CT

#### **MORNSEM13 - MORNSEM25**

8:00 AM - 9:00 AM CT

# MORNSEM13: THINKING OUTSIDE THE BUN: YOUR ROLE IN COMMUNITY-BASED WELLNESS

Jennifer Angeli DPT, PhD, Daniel Meyer DPT

Room: Marriott Ballroom (4th floor)

#### Learning Objectives:

- 1. Identify wellness as a critical component of child health
- Recognize that health promotion is a job responsibility that will require time and effort in a novel workplace setting: the local community
- 3. Apply be well or other audience-identified wellness models as scalable exemplars for local practice
- Simulate the cursory steps of program development by completing a process map for a hypothetical communitybased wellness program

#### 8:00 AM - 9:00 AM CT

#### MORNSEM14: RECENT PRACTICE CHANGING PUBLICATIONS FOR THE PEDIATRIC COMPLEX CARE PROVIDER (2023)

Kristina Malik MD, Anna Jesus MD, Larry Desch MD, Irene Dietz MD

Room: Chicago FGH (5th floor)

#### Learning Objectives:

- 1. Discuss current topics and advances in the care of children with medical complexity.
- 2. Understand the multidisciplinary implications for each recent publication.
- 3. Identify methods to integrate findings into clinical practice.
- 4. Learn ways to improve patient's mental health and transition care through new research.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM15: I'M A PHYSIATRIST NOT A PSYCHIATRIST: ADDRESSING MENTAL HEALTH IN AN INTERDISCIPLINARY CLINIC FOR ADULTS WITH DEVELOPMENTAL DISABILITIES

Jensine Clark MD, Lauren Wang MD, Corey Keeton MD

Room: Los Angeles/Miami/Scottsdale (5th floor)

Learning Objectives:

- 1. Discuss prevalence and psychosocial risk factors for the development of mental health disorders in adults with developmental disabilities.
- Utilize screening tools to diagnose mental health disorders in patients with a variety of communication styles and/or levels of cognitive impairment.
- 3. Develop strategies to address and treat mental health disorders in adults with developmental disabilities.
- 4. Explore how an interdisciplinary approach can be utilized to treat mental health disorders.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM16: POWERED MOBILITY IN CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY: STATE-OF-THE-ART IN ASSESSMENT, TRAINING AND NEW TECHNOLOGIES

Mari Naaris MSc, Saranda Bekteshi PhD, Inti Vanmechelen MSc, Elegast Monbaliu PhD

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- 1. Set-up and optimize powered mobility skills training in children and young people with CP.
- 2. Assess movement disorders during powered wheelchair use and relate them to driving performance.
- 3. Implement the most recent instrumented assessment methods relevant to powered mobility.
- 4. Apply the new technological solutions in powered wheelchair mobility.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM17: IMPROVING CARE OF CHILDREN WITH CEREBRAL PALSY AT THE STATE LEVEL – INTRODUCING THE GEORGIA ALLIANCE FOR CEREBRAL PALSY – ADVOCACY AND CLINICAL COORDINATION IN ACTION

Cynthia Frisina MA, CARSS, Nathalie Maitre MD, PhD, Allison McIntyre OTR/L, Gavin Colquitt PhD

Room: Lincolnshire 1 & 2 (6th floor)

#### Learning Objectives:

- 1. Demonstrate an understanding of state and local cerebral palsy care models.
- 2. Demonstrate an understanding of how advocacy can improve cerebral palsy care coordination at the state and local level throughout the lifespan.
- 3. Describe resources needed to assist with creating a transformative state-wide care coordination model.
- 4. Demonstrate an understanding of methods to overcome barriers and engage stakeholders effectively.

# Program & Events — Tuesday, September 12, 2023

#### 8:00 AM - 9:00 AM CT

#### MORNSEM18: COMPLEXITIES IN THE STUDY OF CAREGIVER-REPORTED INFANT DEVELOPMENT: FINDINGS FROM THE PEDIATRAC PROJECT

Seth Warschausky PhD, Renee Lajiness-O'Neill PhD, Jennifer Gidley Larson PhD, ABPP-CN, H. Gerry Taylor PhD, ABPP-CN

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- Upon completion, the participant will be able to describe the importance of and distinctions between measures of response style and response validity in caregiver ratings, and complex associations with socio-demographics.
- 2. Upon completion, the participant will be able to evaluate the advantages and disadvantages of child development monitoring and screening with cross-sectional versus longitudinal metrics based on caregiver report.
- Upon completion, the participant will be able to describe biological sex and sociodemographic differences in caregiver ratings of infant development.
- Upon completion, the participant will be able to describe differences between the PediaTrac instrument and the ASQ-3.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM19: TARGETED SELF-GENERATED MOVEMENT STRATEGIES FOR INFANTS AND TODDLERS AT RISK Susan Duff EdD, MPT, OT/L, CHT

Room: Kane/McHenry (3rd floor)

Learning Objectives:

- 1. Upon completion, participant will be able to describe common hand and arm dysfunction present in infants and toddlers secondary to peripheral nerve or other neurological conditions.
- 2. Upon completion, participant will be able to identify low-cost and technology-based strategies to improve muscle activation and arm function in infants with various neuromotor conditions.
- Upon completion, participant will be able to identify considerations relevant to the timing and intensity of intervention methods for infants and toddlers, essential for successful home or clinic implementation.
- 4. Upon completion participant will be able to critique intervention strategies introduced by the speaker and audience as well as readiness for home or clinic implementation.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM20: WHAT DO TODAY'S PARENTS EXPECT FROM HEALTHCARE SERVICES? A PARENT-RESEARCH PARTNERSHIP TO DEVELOP AN UP-TO-DATE MEASURE OF FAMILY-CENTRED SERVICE

Kinga Pozniak PhD, Peter L Rosenbaum MD, CM, FRCP(C), DSc (HC), FRCPI Hon (Paed) RCPI, Elizabeth Chambers BA

Room: Denver/Houston/Kansas City (5th floor)

Learning Objectives:

- 1. Appreciate components of care that are important to families (ie. the tenets of Family-Centred Service)
- 2. Identify whether and how these components apply to their own practice
- 3. Reflect on clinical, attitudinal and structural barriers to implementing FCS in their own practice
- 4. Reflect on strategies for addressing/overcoming these barriers in their practice and at the systems level.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM21: INTERPRETING HIP SURVEILLANCE X-RAYS WITH THE HIPSCREEN APP: A PRIMER FOR THE RADIOLOGY NOVICE

Vedant Kulkarni MD, Jon Davids MD, Amanda Whitaker MD

Room: Avenue (4th floor)

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.

# Program & Events — Tuesday, September 12, 2023

#### 8:00 AM - 9:00 AM CT

#### MORNSEM22: EXPANDING THE DELIVERY OF PEDIATRIC CONSTRAINT-INDUCED MOVEMENT THERAPY: A MENTORSHIP APPROACH TO TRAIN THERAPISTS IN TRINIDAD AND TOBAGO

Patty Coker-Bolt PhD, OTR/L, FNAP, FAOTA, Mary Rebekah Trucks MS, OTR/L

Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. Understand how to use a translational framework to build capacity and support health equity for evidence-based interventions in countries where resources are limited.
- 2. Describe ways to train and mentor therapists in countries with workforce capacity challenges.
- 3. Discuss the resources available from the World Health Organization (WHO) Rehabilitation 2030 initiative which was launched to scale up rehabilitation in the most needed areas of the world.
- 4. Understand how to collaborate with practitioners abroad to develop culturally relevant models of interventions developed in Western settings.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM23: CASTING AS A PART OF MULTIMODAL TREATMENT APPROACH IN CHILDREN WITH CEREBRAL PALSY

Marcin Bonikowski MD, PhD, Nigar Dursun MD, Jorge Carranza PhD

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Understand complexity of secondary problems related to muscle shortening in children with cerebral palsy (CP) and importance of multimodal treatment approach
- 2. Understand the level of evidence for the use of serial casting
- 3. Develop skills in making clinical decisions on patient selection, type of casting and follow-up
- Learn how to incorporate casting into integrated rehabilitation process
   Discover methods for adapting the therapy program while using casts

#### 8:00 AM - 9:00 AM CT

#### MORNSEM24: ACCESSING THE CP RESEARCH NETWORK REGISTRIES FOR COMMUNITY RESEARCH AND SECONDARY ANALYSES

Paul Gross BA, Kristie Bjornson PT, PhD, MS, Mary Gannotti PT, PhD, Brandon Roque MD, MS

Room: Sheffield (4th floor)

Learning Objectives:

- 1. Describe the type and volume of data available in the CP Research Network registries.
- 2. Understand the protocol for accessing data in the CP Research Network registries.
- 3. What studies and datasets are available for secondary analyses.
- 4. How new community studies can be proposed and implemented to target specific populations.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM25: TO STAND OR NOT TO STAND: A DISCUSSION OF GOALS AND HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH MMFC1 SPINA BIFIDA

Jill Larson MD, Caren Mangarelli MD, MS, Ana-Marie Rojas MD, Vineeta Swaroop MD

Room: Great America 1 & 2 (6th floor)

Learning Objectives:

- 1. Upon completion, participant will be able to describe the current evidence regarding the benefits of a standing program for patients with MMFC 1 spina bifida.
- 2. Upon completion, participant will be able to define a standing program for patients with MMFC 1 spina bifida including when to initiate, what to use, and duration of time.
- Upon completion, participant will be able to understand the factors that contribute to decision-making to discontinue a standing program.
- Upon completion, participant will be able to define when orthopaedic surgery may be a reasonable recommendation for the goal of continuing supported standing in patients with MMFC 1 spina bifida

#### 9:00 AM - 9:30 AM CT

#### Coffee break in the Exhibit Hall

#### 9:30 AM - 11:30 AM CT

**General Session** Room: Grand Ballroom (7th floor)

Duncan Wyeth Award Mac Keith Press Basic Science Lecture Mentorship Award Lifetime Achievement Award Corbett Ryan Award

*<b>FUESDAY* 

#### 12:00 PM - 1:00 PM CT

**Product Theater sponsored by Jazz Pharmaceutical** First Come, first served. Lunch provided.

Room: Chicago FGH (5th floor)

#### 1:00 PM - 1:30 PM CT

International Scholar Highlight Room: Sheffield (4th floor)

#### 1:30 PM - 3:15 PM CT

#### **FREE PAPER SESSIONS E-H**

**Free Paper Session E: Early Detection and Diagnosis** Room: Marriott Ballroom (4th floor)

#### 1:30 PM - 1:37 PM CT

#### E1: Effect of NICU and Home-Based Intervention on Motor Outcomes of Moderate and Late Preterm Infants During First 6 Months of Life – A Randomized Clinical Trial

<u>Sonia Khurana PhD</u>, Bhamini Rao PhD, Leslie Edward Lewis MD, Daniel Russell PhD, Stacey Dusing PhD

#### 1:38 PM - 1:45 PM CT

#### E2: The Effect of Early Physical Therapy Interventions on Emotional Availability in Children with Neuromotor Delay and Their Caregiver

<u>Rebecca Molinini DPT</u>, Corri Stuyvenberg PT, DPT, MA, Regina Harbourne PT PhD FAPTA, Lin-Ya Hsu PhD, Michele Lobo PT PhD, Sarah McCoy MPT PhD, Sandra Willett PT PhD, Natalie Koziol PhD, James Bovaird PhD, Virginia Chu PhD, Sarah Price MSW PhD, Mary Shall PT PhD, Stacey Dusing PhD

#### 1:46 PM - 1:53 PM CT

#### E3: Randomised Controlled Trial of Parent-Delivered Early Intervention (Leap-Cp Learning Through Everyday Activities With Parents) for Infants at High Risk of Cerebral Palsy in Low-Middle Income Country

<u>Katherine Benfer PhD</u>, Asis Ghosh MSc, Koa Whittingham PhD, Iona Novak PhD, Robert Ware PhD, <u>Roslyn Boyd PhD</u>

#### 1:54 PM - 2:01 PM CT

E4: A Family- Centered, Early Intervention Package for Infants at High Risk for Neuro-Developmental Disabilities to Promote Language Development During Early Infancy: A Randomized Controlled Trial

<u>Yvonne Weerasinghe MPhil, BSc (honors) SLT, PGDHD</u>, Nalika Gunawardena MBBS, MD, Samanmali Sumanasena MD

#### 2:02 PM - 2:09 PM CT

#### E5: Quantifying the Activity Levels of Toddlers with Down Syndrome Playing in a Partial Body Weight Support System

<u>Mia Hoffman</u>, Reham Abuatiq PT, Alyssa LaForme Fiss PT, PhD, Julia Looper PhD, Katherine Steele PhD, Heather Feldner PT, MPT, PhD, PCS

#### 2:21 PM - 2:28 PM CT

#### E6: The Baby CHAMP Comparative Efficacy Trial: Effects of highdosage CIMT and Bimanual rehabilitation for infants and toddlers with Hemiparetic Cerebral Palsy

<u>Stephanie Deluca PhD</u>, Amy Darragh PhD, Mark Conaway PhD, Jill Heathcock MPT, PhD, Warren Lo MD, Thais Cabral PhD, Andrew Gordon PhD, Sharon Ramey PhD

#### 2:29 PM - 2:36 PM CT

## E7: REACH: Randomised Trial of Rehabilitation Very Early in Congenital Hemiplegia

<u>Roslyn Boyd PhD</u>, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Iona Novak PhD, Susan Greaves PhD, Margaret Wallen PhD, Catherine Morgan PhD, Nadia Badawi PhD, Catherine Elliott PhD, Jill Heathcock MPT, PhD, Ann-Christian Eliasson PhD, Natalie Maitre PhD, Koa Whittingham PhD, Robert Ware PhD

#### 2:37 PM - 2:44 PM CT

#### E8: Therapist Fidelity in a Multi-Site Randomized Comparative Efficacy Trial of Baby-Cimt and Baby-Bim for Infants with Unilateral Cerebral Palsy

<u>Kimberley Scott PT, DPT, PhD</u>, Jill Heathcock MPT, PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Roslyn Boyd PhD

#### 2:45 PM - 2:52 PM CT

E9: Outcomes of Preterm Infants Enrolled in a Randomized Clinical Trial of a Parent Administered Sensorimotor Intervention <u>Sandra Fucile PhD</u>, Kimberly Dow MD, Laurie Snider PhD, Karel O'Brien MD

#### 2:53 PM - 3:00 PM CT

E10: Evaluating Responsiveness of the Gross Motor Function Measure-66 Item Sets for Young Infants with or at High Risk for CP

Natalie Koziol PhD, <u>Christiana Butera EdM, PhD</u>, Silvana Pereira PhD, Nicole Greenberg PT, DPT, PCS, Lin-Ya Hsu PhD, Stacey Dusing PhD

#### Free Paper Session F: Rehab/Participation

Room: Grand Ballroom I (7th floor)

#### 1:30 PM - 1:37 PM CT

F1: Role of Environmental Factors and Social Determinants of Health in the Functioning of Children and Youth with CP in 8 Cities of Argentina

L. Johana Escobar Zuluaga BA, <u>Maria de las Mercedes Ruiz</u> <u>Brunner PhD</u>, Eduardo Cuestas PhD, M. Elisabeth Cieri PhD, Ana Laura Condinanzi BA, Federico Sanchez BA, Verónica Schiariti PhD

#### 1:38 PM - 1:45 PM CT

F2: The Effectiveness of Wheeled Mobility Skills Interventions in Children and Young People with Cerebral Palsy: A Systematic Review

<u>Mari Naaris MSc</u>, Saranda Bekteshi PhD, Maria Aufheimer MSc, Kathrin Gerling PhD, Hans Hallez PhD, Els Ortibus PhD, Marco Konings PhD, Elegast Monbaliu PhD

#### 1:46 PM - 1:53 PM CT

### F3: Construct Validity of the Both Hands Assessment Using Wrist-Worn Accelerometers

<u>Stina Oftedal PhD, B Hlth Sc (Diet)</u>, Andrea Burgess PhD, Roslyn Boyd PhD, Sarah Reedman PhD, Stewart Trost PhD, Robert Ware PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy

#### 1:54 PM - 2:01 PM CT

#### F4: Capable and Able: A Photovoice Study of Ankle-Foot Orthosis Perceptions and Use by Ambulatory Children with Cerebral Palsy and their Families

<u>Heather Feldner PT, MPT, PhD, PCS</u>, Brooke Suitum, Kristen Wan, Kristie Bjornson PT, PhD, MS

#### 2:02 PM - 2:09 PM CT

F5: Balance in Children with Obstetric Brachial Plexus Paralysis and Its Relationship with Upper Limb Injury Severity Ozlem Karatas MD, <u>Tugba Gokbel MD</u>, Cigdem Cekmece PhD,

Nigar Dursun MD

#### 2:21 PM - 2:28 PM CT

#### F6: Caregiver Perspectives of Spinal Cord Stimulation for Children with Cerebral Palsy: A Qualitative Study

<u>Siddhi Shrivastav PT, MS</u>, Charlotte Caskey BS, MS, Madeline Herrenkohl, Kristie Bjornson PT, PhD, MS, Katherine Steele PhD, Chet T. Moritz PhD, Heather Feldner PT, MPT, PhD, PCS

#### 2:29 PM - 2:36 PM CT

# F7: Investigating Possible Risk Factors for Burnout in Parents of Children with Disabilities

Daniel McKee DPT, Erin Wentzell DPT, DrPH(C)

#### 2:37 PM - 2:44 PM CT

*<b>FUESDAY* 

#### F8: The Effect of Umbilical Cord Blood Treatment on Improving Gross Motor Function in Individuals with Cerebral Palsy: Results From an Individual Participant Data Meta-Analysis

<u>Megan Finch-Edmondson PhD, BSc (Hon)</u>, Madison Paton PhD, Annabel Webb MRes, Mahmoud Reza Ashrafi MD, Charles Cox MD, Kylie Crompton BSc(hons), PhD, Alexandra Griffin PhD, MinYoung Kim MD, Steven Kosmach MSN, RN, Joanne Kurtzberg MD, Masoumeh Nouri PhD, Jessica Sun MD, Morteza Zarrabi MD, PhD, Iona Novak PhD

#### 2:45 PM - 2:52 PM CT

#### F9: Baby Intensive Early Active Treatment (babiEAT): A Pilot Randomised Controlled Trial of Feeding Therapy for Infants with Cerebral Palsy and Oropharyngeal Dysphagia

<u>Amanda Khamis PhD</u>, Nadia Badawi PhD, Catherine Morgan PhD, Iona Novak PhD

#### Free Paper Session G: Tone Management/Epidemiology Room: Grand Ballroom II (7th floor)

#### 1:30 PM - 1:37 PM CT

# G1: Multi-Center Improvement in Dystonia Detection in People with CP

<u>Bhooma Aravamuthan MD, DPhil</u>, Esra Pehlivan BS, Keerthana Chintalapati MD, Keisuke Ueda MD, Toni Pearson MBBS, Christie Becu MD, Michael Kruer MD, Deborah Grenard BS, Desiree Roge MD, Paul Gross BA, Amy Bailes PT PhD

#### 1:38 PM - 1:45 PM CT

#### G2: Individuals with Dyskinetic Cerebral Palsy Show Altered Upper Limb Kinematics in Comparison with Typically Developing Peers – A Statistical Parametric Mapping Study

<u>Inti Vanmechelen MSc</u>, Kaat Desloovere PhD, Helga Haberfehlner PhD, Brian Martens MD, Jeroen Vermeulen MD, Annemieke Buizer MD, Hilde Feys PhD, Elegast Monbaliu PhD

#### 1:46 PM - 1:53 PM CT

G3: Markerless Motion Tracking to Assess Upper Extremity Movements in Children and Adolescents with Dyskinetic Cerebral Palsy

<u>Inti Vanmechelen MSc</u>, Ellen Van Wonterghem MSc, Hans Hallez PhD, Jean-Marie Aerts PhD, Elegast Monbaliu PhD, Helga Haberfehlner PhD

#### 1:54 PM - 2:01 PM CT

# G4: Identifying Upper Extremity Features of Dystonia in People with Cerebral Palsy

<u>Laura Gilbert DO, MBA</u>, Sushma Gandham BA, Toni Pearson MBBS, Keisuke Ueda MD, Bhooma Aravamuthan MD, DPhil

#### 2:02 PM - 2:09 PM CT

#### G5: Selective Dorsal Rhizotomy Practice Variation

<u>Brandon Roque MD, MS</u>, Steven Wisniewski PhD, Samuel Browd MD, Manish Shah MD, Jeffrey Leonard MD, Robert Bollo MD, Jeffrey Raskin MS, MD, Virendra Desai MD, Charles Stevenson MD, Scellig Stone MD, Lisa Diller PhD, Paul Gross BA

#### 2:21 PM - 2:28 PM CT

#### G6: Causal Trends and Prevention Measures of Post-Neonatally Acquired Cerebral Palsy in Australia 1975-2014

<u>Emma Waight BA</u>, Sarah McIntyre PhD, Susan Woolfenden PhD, Shona Goldsmith PhD, Susan Reid PhD, Linda Watson, Annabel Webb MRes, Nadia Badawi PhD, Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD

#### 2:29 PM - 2:36 PM CT

# G7: Cerebral Palsy in Australia: Prevalence Estimates and Residential Remoteness

<u>Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD</u>, Sarah McIntyre PhD, Emma Waight BA, Susan Reid Ph, Shona Goldsmith PhD, Catherine Gibson PhD, Heather Scott BMgmt, Linda Watson, Megan Auld PhD, Gina Hinwood MSE, Fiona Kay MBBS FRACP GCAD, Clare Wiltshire BPhysio (Hons), BA, Grad Cert (Clinical Redesign), Nadine Davies, Nadia Badawi PhD

#### 2:37 PM - 2:44 PM CT

**G8: Cerebral Palsy Registers and Surveillance Systems: A Survey Understanding The Depth and Breadth of Data Collected Globally** <u>Shona Goldsmith PhD</u>, Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD, Nihad Almasri PhD, Guro Andersen PhD, Leanne Diviney, Ecaterina Bufteac Gincota PhD, Kate Himmelmann PhD, Israt Jahan PhD, Emma Waight BA, Sarah McIntyre PhD

#### 2:45 PM - 2:52 PM CT

#### G9: Deep-Learning Algorithm Accurately Measures Migration Percentage on Hip Surveillance Radiographs: Validation on a Data Set from 24 International Centers

<u>Vedant Kulkarni MD</u>, Chun-Hsaio Yeh MS, Justin Krogue MD, Michael Firtha DO, Marie Villalba BS, Patrick Donohue BS, Sangryul Jeon PhD, Stella Yu PhD

2:53 PM - 3:00 PM CT

G10: Perspectives of Health-Workers and Parents About Readiness to Implement and Incorporate Early Child Developmental Screening into Routine Clinic Services in South-Western Nigeria: A Qualitative Study

<u>Oluwatosin Olorunmoteni MBBS, MPH, FWACP</u>, Melissa Gladstone MD, Adeleye Adeomi MBBS, PhD, TemilOluwa Oyetoke MBBS

#### Free Paper Session H: Medical Complexity/Pain/Nutrition Room: Grand Ballroom III (7th floor)

1:30 PM - 1:37 PM CT

#### H1: What if Children with Cerebral Palsy Were Smaller? Burdens, Interests and Acceptance of Caregivers

Manuela Quiroga MD, Francisco Castro-Guzmán MD, Alejandro Mejía-Grueso MD, <u>María Fernanda García-Rueda MD</u>, Camilo Mendoza-Pulido MSc, Fernando Suárez-Obando PhD, José Luis Duplat MD

#### 1:38 PM - 1:45 PM CT

H2: Discharge Readiness for Transition from Hospital to Home for Children with Cerebral Palsy Undergoing Orthopedic Surgery Judith Vessey PhD, MBA. RN, FAAN, Rachel DiFazio PhD, RN, PPCNP-BC, FAAN, Patricia Miller MS, Brian Snyder MD, PhD, Benjamin Shore MD, MPH, FRCSC

#### 1:46 PM - 1:53 PM CT

#### H3: Deep Learning-Based Bone Mineral Density Prediction Assessment Using Plain Radiographs for Children

<u>Juntaek Hong MD</u>, Joong-on Choi MS, Dain Shim MS, YongJin Ahn MD, Dong-wook Rha PhD

1:54 PM - 2:01 PM CT

H4: Latent Class Analysis to Describe Patterning of Comorbidity in Adults with Cerebral Palsy Utilizing Medicare Services <u>Allie Leis PhD, MS</u>, Daniel Whitney PhD

#### 2:02 PM - 2:09 PM CT

H5: Surgery for Neuromuscular Scoliosis Is Associated with Reduced Pulmonary Mortality in Children with Cerebral Palsy <u>Matti Ahonen MD</u>, ilkka Helenius MD, Mika Gissler PhD, Ira Jeglinsky Kankainen Associate professor

#### 2:21 PM - 2:28 PM CT

H6: North American Validation of the Cerebral Palsy Growth Charts and the Relationship between Weight Percentiles and Health

Richard Stevenson MD, Mark Conaway PhD

#### 2:29 PM - 2:36 PM CT

H7: Does Skinfold Thickness Add to the Relationship Between Weight Percentile and Health in Children with Cerebral Palsy? <u>Richard Stevenson MD</u>, Mark Conaway PhD

#### 2:37 PM - 2:44 PM CT

H8: Uncovering the Hidden Crisis: An 8-Year Retrospective Study of the Prevalence of Undernutrition in Children with Cerebral Palsy in Northeast Mexico

<u>Sofia Villarreal-Zambrano MS</u>, Consuelo Ibarra-Rodriguez MD, Alejandra Sagástegui Roel, Jessica Villarreal Rios RD

#### 2:45 PM - 2:52 PM CT

H9: Candidate Pain Biomarkers in Communicative Adults with Cerebral Palsy and Bilateral White Matter Injury: Brain Structure, Connectivity, and Dimensions of Pain

<u>Nicole Gorny M.S.</u>, Claudia Campbell PhD, Alexander Hoon MD, MPH, Lauren Jantzie PhD, Colleen Lenz NP, Martin Lindquist MSc, PhD, Shenandoah Robinson MD, <u>Eric Chin MD</u>

#### 2:53 PM - 3:00 PM CT

### H10: Changes in Pain Intensity and Associated Factors in Young Children with Cerebral Palsy

<u>Heather Shearer DC, MSc, PhD</u>, Darcy Fehlings MD FRCPC MSc, Lauren Switzer MSc, HBSc

Tuesday, September 12, 2023:

#### 3:30 PM - 4:00 PM CT

**Coffee Break in Exhibit Hall** 

#### 4:00 PM - 6:00 PM CT

#### MINISYMP14 - MINISYMP26

#### 4:00 PM - 6:00 PM CT

# MINISYMP14: PERSPECTIVES ON WOMEN IN LEADERSHIP: SHE SAID HE SAID.

Joline Brandenburg MD, Eileen Fowler PhD, PT, Susan Sienko PhD, William Oppenheim MD, Richard Stevenson MD, Jilda Vargus-Adams MD MSc, Robert Armstrong MD PhD FRCPC, Maureen O'Donnell MD Msc FRCPC, Peter L Rosenbaum MD, CM, FRCP(C), DSc (HC), FRCPI Hon (Paed) RCPI, Darcy Fehlings MD FRCPC MSc

Room: Marriott Ballroom (4th floor)

#### Learning Objectives:

- 1. Understand more about perceived and actual leadership differences between women and men.
- 2. Describe successes and challenges men and women experience in advocating and sponsoring women to leadership positions.
- 3. Identify effective strategies to enhance progress towards promoting women to successful leadership roles.
- 4. Formulate one action item to advance their own leadership interests or leadership of women.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP15: CONTROVERSY IN THE UTILITY OF GAIT ANALYSIS: CONSISTENCY OF GAIT INTERPRETATION & TREATMENT RECOMMENDATIONS

Jean Stout PT, MS, PhD(C), Andrew Georgiadis MD, Kathryn (Katie) Walt PT, DPT, Michael Healy MD, Tom Novacheck MD

Room: Chicago FGH (5th floor)

Learning Objectives:

- 1. Discuss the controversy related to gait interpretation consistency and its influence on the utility of gait analysis as a clinical tool.
- 2. Explain the sources of variability that may contribute to the lack of consistency of interpretation and the benefits of a structured, on-going consistency assessment program.
- Identify the challenges associated with achieving consistency of problem identification and treatment recommendations among course participants.
- 4. Discuss the impact of consistency competency and consensus of gait data interpretation on providing quality patient care.

#### 4:00 PM - 6:00 PM CT

MINISYMP16: CP-ADAPT – SPEEDING UP CLINICAL TRIALS AND TRANSLATION OF NEW KNOWLEDGE INTO TREATMENT FOR CHILDREN WITH CEREBRAL PALSY VIA A RESEARCH NETWORK Iona Novak PhD, Michael Shrader MD, Darcy Fehlings MD FRCPC MSc, Michael Fahey PhD, Paul Gross BA

Room: Los Angeles/Miami/Scottsdale (5th floor)

#### Learning Objectives:

- 1. Upon completion, participants will be able to understand the field agreement to date on building such a network
- 2. Upon completion, participants will be able to describe the various opportunities for global collaboration
- 3. Upon completion, participants will be able to understand how to become a member and collaborate
- 4. Upon completion, participants will be able to choose ways to stay uncoiled with the network

#### 4:00 PM - 6:00 PM CT

#### MINISYMP17: USE OF THE BABYOSCAR (OBSERVATIONAL SELECTIVE CONTROL APPRAISAL) TO QUANTIFY INDIVIDUAL JOINT CONTROL IN INFANTS: SCORING THE TEST AND IMPLICATIONS FOR PROGNOSIS

Theresa Sukal-Moulton PT, DPT, PhD, Colleen Peyton PT, DPT

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- 1. Define selective motor control in older children and describe how it may appear in an infant.
- 2. Practice scoring items on the BabyOSCAR tool, adding summary scores.
- 3. Predict motor outcome based on elements of the BabyOSCAR score.
- 4. Describe the neural pathways that may be implicated in the expression of selective motor control in infants with and without CP.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP18: DEMYSTIFYING THE KNEE: EXPERT CONSENSUS INFORMED BY THE DELPHI PROCESS FOR SOFT TISSUE AND BONE SURGERIES PERFORMED ABOUT THE KNEE IN AMBULATORY CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY

Kristan Pierz MD, James McCarthy MD, MHCM, Henry Chambers MD, Tom Novacheck MD, Benjamin Shore MD, MPH, FRCSC, Erich Rutz MD, PhD

Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. Upon completion, participant will be able to describe the Delphi process
- Discuss where consensus does/does not exist for common procedures performed on the long bones, foot, and ankle for ambulatory children with cerebral palsy
- 3. Improve confidence in surgical recommendations and execution
- 4. Identify where additional work is needed to justify surgical recommendations

#### 4:00 PM - 6:00 PM CT

#### MINISYMP19: INTEGRATING CAREGIVER AND PATIENT PRIORITIES AND GOALS INTO SHARED DECISION-MAKING FOR CEREBRAL PALSY RELATED INTERVENTIONS

Laurie Glader MD, FAAP, Kristie Bjornson PT, PhD, MS, Amy Cutler MS, OTR/L, Rachel DiFazio PhD, RN, PPCNP-BC, FAAN, Angela Harris BS, Unni Narayanan MBBS, MSc, FRCSC, Adam Ostendorf MD, Brandon Roque MD, MS

Room: Denver/Houston/Kansas City (5th floor)

#### Learning Objectives:

- 1. Characterize common elements of shared decision making
- 2. Know how to utilize the SDM-Q9 to assess SDM
- 3. Identify caregiver/patient priorities around common interventions for individuals with CP

Utilize caregiver/patient perspectives to drive the SDM process

#### 4:00 PM - 6:00 PM CT

#### MINISYMP20: FOSTERING EXCEPTIONAL TEAMS

Nancy Murphy MD, Kilby Mann MD

Room: Great America 1 & 2 (6th floor)

Learning Objectives:

- 1. Identify behaviors and dynamics of exceptional teams.
- 2. Recognize and modify team dynamics that get in the way of exceptional team performance.
- 3. Bring 2-3 resources to their own teams to optimize participation, engagement and outcomes.
- 4. Identify and implement strategies to improve his/her team dynamics in daily work

#### 4:00 PM - 6:00 PM CT

# MINISYMP21: SO YOU ARE THE ONLY PROVIDER; A PRACTICAL APPROACH TO THE ADULT WITH CP

Unoma Akamagwuna MD, Tracy Pickar MSW, Toni Benton MD, Heidi Haapala MD

Room: Lincolnshire 1 & 2 (6th floor)

Learning Objectives:

- 1. Participants will list 3 strategies to educate and empower self-advocates and their families to participate in, direct, and guide their own care in regards to primary care management
- 2. Receive a practical guide on resources to access mental health resources for patients
- 3. Participants will learn about national resources that aid in accessing community supports
- Explore strategies to expand the role and capacity of communities to identify local needs and promote health and wellness

#### 4:00 PM - 6:00 PM CT

MINISYMP22: MULTIFACETED MEALTIME MANAGEMENT FOR CHILDREN WITH CEREBRAL PALSY: THE ART, SCIENCE, AND REALITY OF SUPPORTING ORAL FEEDING AROUND THE WORLD Gina Rempel MD, FRCPC, FASPEN, Cindy Dodds PhD, Marianne Gellert-Jones MA, CCC-SLP, Consuelo Ibarra-Rodriguez MD, David Opendi OT

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Identify points of controversy in the literature regarding approaches to address eating and drinking difficulties for children with cerebral palsy
- 2. Appreciate a broad and global perspective of eating and drinking in children with cerebral palsy
- 3. Recognize and value international strategies used to support eating and drinking in children with cerebral palsy
- Consider quality of life and supportive care models to mitigate risk and optimize mealtime participation for children with cerebral palsy

#### 4:00 PM - 6:00 PM CT

# MINISYMP23: THE DEVELOPMENT OF A CAUSAL DIAGRAM FOR CEREBRAL PALSY

Robert Reynolds MS MPH PhD, Steven Day PhD, Sarah McIntyre PhD, Shona Goldsmith PhD, Kate Himmelmann PhD, Nadia Badawi PhD

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- Describe causal diagramming using directed acyclic graphs (DAGs), and construct causal DAGs independently.
- 2. Understand how scientific evidence may be used in the construction and enhancement of a causal DAG.
- 3. Explain the current causal diagram for cerebral palsy, including its strengths and weaknesses.
- 4. Participate in the ongoing development and curation of the causal diagram for cerebral palsy.

#### 4:00 PM - 6:00 PM CT

# MINISYMP24: THERAPEUTIC PRIORITIES FOR INDIVIDUALS ACROSS THE LIFESPAN AT GMFCS LEVELS IV AND V

Ginny Paleg DScPT, MPT, PT, Elisabet Rodby-Bousquet PhD, PT, Claire Shrader MS, OTR/L

Room: Avenue (4th floor)

Learning Objectives:

- 1. Participants will be able to describe needs and priorities across the lifespan for individuals functioning at GMFCS Levels IV and V.
- 2. Participants will be able to identify, analyze, and mitigate risk for contractures and deformities.
- 3. Participants will demonstrate understanding of the importance of breaking up sedentary behavior with activity and participation at each life stage.
- Participants will be able to apply three intervention strategies to address an individual's priorities and needs in their own setting.

#### 4:00 PM - 6:00 PM CT

#### MINISYMP25: THAT LOOKS LIKE IT HURTS: THE SEQUEL! CASE BASED DISCUSSION OF INTERVENTIONS TO IMPROVE FUNCTION OF THE PEDIATRIC AND ADOLESCENT FOOT IN CEREBRAL PALSY

Robert Wimberly MD, Rachel Thompson MD, Jason Rhodes MD

Room: Kane/McHenry (3rd floor)

Learning Objectives:

- To improve the understanding of the pediatric orthopaedic surgeon's approach to common foot difference in children with cerebral palsy
- 2. An enhanced understanding of the advanced assessment of foot deformity through 3 dimensional gait analysis, foot pressure mapping, and radiographic interpretation
- To consider when nonsurgical approaches to foot pathology are appropriate and when surgical management may be more beneficial
- To better assess the possible benefits of foot pathology management on function and quality of life for patients with cerebral palsy

#### 4:00 PM - 6:00 PM CT

MINISYMP26: MAKING LARGE INTERNATIONAL CARE STRIDES THROUGH SCHOLARSHIPS AND EDUCATION -- THE IMPACT OF AACPDM SCHOLARSHIPS AND GLOBAL ACTIVITIES OF THE INTERNATIONAL AFFAIRS COMMITTEE

Nathan Rosenberg MD, Antigone Papavasiliou MD, PhD, FAAP, Sandra Hollung PhD, Peter Lichtenthal MD

Room: Sheffield (4th floor)

Learning Objectives:

- 1. Upon completion, participants will increase their knowledge about the AACPDM international efforts towards knowledge transfer and capacity building.
- 2. Upon completion, participants will describe how a single AACPDM international scholarship can have multiplicative impacts on health care in underserved countries.
- 3. Upon completion, participants will identify barriers to change in health care in low to middle income countries.
- 4. Upon completion, participants will share how they can utilize the AACPDM international committee experience to inform their own international endeavors.

#### 7:00 PM - 11:59 PM CT

#### **Networking Gala**

Join us for dinner with the largest dinosaur that ever lived at the Tuesday evening networking dinner and celebration at Chicago's historic Field Museum! We know this will be a fun evening and a wonderful opportunity to celebrate being together again. This is a ticketed event and must be purchased by September 1, 2023. Transportation is provided and will pick up on Ohio Street outside of the Chicago Marriott Magnificent Mile.



Photo Credit: "The Field Museum - Chicago 2015" by vwcampin is licensed under CC BY 2.0. To view a copy of this license, visit https://creativecommons. org/licenses/by/2.0/?ref=openverse.

#### 7:00 AM - 8:00 AM CT

**Continental Breakfast in the Exhibit Hall** Room: Chicago ABCDE (5th floor)

#### 8:00 AM - 9:00 AM CT

#### **MORNSEM26 - MORNSEM37**

8:00 AM - 9:00 AM CT

#### MORNSEM26: HOW PARTICIPATORY RESEARCH INFORMED PRACTICE AND POLICY AT A CANADIAN CHILDHOOD DISABILITY RESEARCH ORGANIZATION: REFLECTIONS FROM CANCHILD

Michelle Phoenix, PhD, Alice Soper MSc, Olaf Kraus De Camargo MD FRCPC

Room: Marriott Ballroom (4th floor)

#### Learning Objectives:

- 1. Build awareness of the value of PR in childhood disability research.
- 2. Increase knowledge on how PR can be applied at an organizational level.
- 3. Identify opportunities for building capacity in PR.
- 4. Apply tools and strategies for supporting PR.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM27: "MY CP IS GETTING WORSE" - HOW CENTRAL NERVOUS SYSTEM DISEASES DISRUPT THE "STATIC" NATURE OF CP

Rebecca Siegel MD, Edward Hurvitz MD, Linda Krach MD, Alejandra Camacho MD

Room: Los Angeles/Miami/Scottsdale (5th floor)

Learning Objectives:

- 1. Consider secondary conditions affecting the central nervous system when patients with CP present with functional decline.
- 2. Identify red-flags for spinal cord injuries, brain tumors, stroke and myelopathy
- 3. Learn how to diagnosis and classify patients with CP and SCI.
- 4. Gain knowledge about the role of rehabilitation medicine in diagnosis and management of secondary medications conditions adversely affecting CP.

#### 8:00 AM - 9:00 AM CT

# MORNSEM28: SKELETAL MUSCLE ADAPTATION TO CEREBRAL PALSY

Richard Lieber PhD, MBA

Room: Chicago FGH (5th floor)

#### Learning Objectives:

- 1. Upon completion, participant will be able to describe the basic anatomical and physiological properties of human skeletal muscles.
- 2. Upon completion, participant will be able to describe the anatomical, biomechanical and physiological properties of human muscle contractures.
- Upon completion, participant will be able to describe the insights into muscle contractures revealed by transcriptional profiling.
- 4. Upon completion, participant will be able to understand potential therapeutic interventions to relieve contractures in children in cerebral palsy.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM29: IMPLEMENTING A HIGH-DOSE CAREGIVER-DRIVEN THERAPY ACROSS THE CONTINUUM OF CARE (NICU-TO-HOME): STRATEGIES UTILIZED IN A MULTI-CENTER RANDOMIZED CONTROLLED TRIAL (PROJECT CORBETT)

Weiyang Deng PT, PhD, Sofia Anastasopoulos DPT, Raye-Ann DeRegnier MD, Nicole Pouppirt MD

#### Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. Explain the gaps in current early intervention therapies and the difficulties of delivering an intervention in NICU and home settings throughout the first year of life.
- 2. Describe the steps needed to implement an intervention framework in home settings throughout the first year of life.
- 3. Summarize participating families' feedback towards a high dosage, caregiver-directed, 1-year-long intervention from focus group interviews.
- 4. Assess the feasibility of an early intervention RCT.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM30: EDUCATIONAL SERIES FOR FAMILIES AFFECTED BY PEDIATRIC STROKE OR BRAIN INJURY BUILDS COMMUNITY WHILE EMPOWERING FAMILIES

Mara Yale PhD, Patricia Musolino MD, PhD, Brian Wishart DO, Gretchen Murphy

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Describe ingredients that make an educational series and outreach program successful
- 2. List ideas for 2-4 topics per year to begin to build local community that includes families, clinicians, and others
- 3. Motivate others in their organization to consider supporting an educational series and outreach program
- 4. Recruit families to partner in designing a first session, workshop, or event to meet their needs

#### 8:00 AM - 9:00 AM CT

#### MORNSEM31: IMPLEMENTING HIP SURVEILLANCE FOR CHILDREN WITH CEREBRAL PALSY: MOVING BEYOND THE GUIDELINES AND RECOGNIZING THE ADDED BENEFITS

Stacey Miller BSc(PT), MRSc, Maria Juricic BScKin, BScPT, MRSc, Kishore Mulpuri MBBS, MS (Ortho), MHSc (Epi), FRCSC

Room: Denver/Houston/Kansas City (5th floor)

Learning Objectives:

- 1. Upon completion, participants will be able to describe the evidence for hip surveillance in children with cerebral palsy.
- 2. Upon completion, participants will be able to describe strategies for implementing hip surveillance.
- 3. Upon completion, participants will be able to list barriers and potential solutions to implementing hip surveillance guidelines in their local context.
- 4. Upon completion, participants will be able to recognize potential side benefits to implementing hip surveillance in their local context.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM32: 'EYE-GAZE TECHNOLOGY IN CHILDREN AND YOUTH WITH SEVERE CEREBRAL PALSY: EVIDENCE-BASED RECOMMENDATIONS AND FUTURE PERSPECTIVES'

Saranda Bekteshi PhD, Petra Karlsson PhD, Elegast Monbaliu PhD

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- Structure eye-gaze training programs in their clinical practice aimed at improving eye-gaze performance and skill-acquisition processes in children and youth with severe cerebral palsy.
- 2. Assess eye-gaze training progress using evidence-based scales and methods that are time- and cost-efficient, such as eye-gaze games or goal attainment scales to evaluate readiness and performance.
- Implement the international eye-gaze clinical guidelines that provide in-depth, consensus-based insights to support all the steps before and after introducing eye-gaze technology to a person with cerebral palsy.
- 4. Understand the current gaps in eye-gaze research and future perspectives that include state-of-the-art methods.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM33: DEVELOPMENT OF AN INDIVIDUALIZED CAREGIVER EDUCATION INTERVENTION FOR PARENTS OF CHILDREN WITH CEREBRAL VISUAL IMPAIRMENT

Karen Harpster PhD, OTR/L, Haley Oliver OTD, OTR/L, Tricia Gribben BA, OTR/L

Room Lincolnshire 1 & 2 (6th floor)

Learning Objectives:

- 1. Describe current evidence-based evaluation and intervention methods for children with cerebral visual impairment (CVI)
- Describe evidence-based vision related task and environmental adaptations for children with CVI that are currently being used in clinical practice.
- Demonstrate how to translate functional vision evaluation findings into individualized task and environmental adaptations to support a child's vision during functional activities.
- Develop an individualized plan for environmental and task adaptations to promote occupation-based functional skills for children with CVI.

#### 8:00 AM - 9:00 AM CT

#### MORNSEM34: CASE BASED DISCUSSION OF MANAGEMENT IN PROGRESSIVE DYSTONIA AND ADVANCEMENTS IN TREATMENT

Larissa Pavone MD, Sarah Macabales DO, Jeffrey Raskin MS, MD, Ana-Marie Rojas MD

#### Room: Avenue (4th floor)

Learning Objectives:

- 1. Discuss medical management of challenging to treat dystonia
- 2. Understand surgical options available for dystonia
- 3. Better understand how tone may change over time
- 4. List scales used to measure dystonia

#### 8:00 AM - 9:00 AM CT

#### MORNSEM35: THE WINDS OF CHANGE: INTEGRATING DIVERSITY INTO PEDIATRIC RESEARCH PARTICIPATION AND RECRUITMENT

Veronika Mak MSc, Lindsay Gissler BS, Alina Grimaldo, Julia Schiller BA

Room: Kane/McHenry (3rd floor)

Learning Objectives:

- 1. Recognize potential barriers which prevent opportunities for research participation
- 2. Identify communication strategies for building effective community partnerships
- 3. Discuss family perspectives regarding research involvement and strategies to increase research engagement
- 4. Synthesize examples of efforts for broadening representation in research for historically marginalized communities (HMC)

VEDNESDAY

#### 8:00 AM - 9:00 AM CT

#### MORNSEM36: THE BABY MOVES SMARTPHONE APP: ADVANCING THE GENERAL MOVEMENTS ASSESSMENT IN RESEARCH AND CEREBRAL PALSY SCREENING

Amanda Kwong PhD, Colleen Peyton PT, DPT

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- 1. Apply the concepts from the Baby Moves smartphone app to clinical practice and/or research
- 2. Discuss the benefits and challenges of parent-collected data
- 3. Communicate effectively to parents who collect video recordings
- 4. Describe how screening of the general population may be possible using smartphone applications

#### 8:00 AM - 9:00 AM CT

#### MORNSEM37: USE OF WEARABLE SENSORS FOR THE ASSESSMENT OF THE UPPER LIMB IN CHILDREN WITH CEREBRAL PALSY

Giuseppina Sgandurra MD, PhD, Elena Beani PT, PhD, Silvia Filogna PhD, Giuseppe Prencipe PhD

Room: Great America 1 & 2 (6th floor)

Learning Objectives:

- 1. Upon completion, participants will be able to understand the importance of the use of technologies in children healthcare
- 2. Upon completion, participants will be able to use wearable sensors in children
- 3. Upon completion, participants will be able to identify the most appropriate type of wearables to use
- 4. Upon completion, participants will be able to understand the relevance of AI algorithms for supporting the clinicians in upper limb assessment

#### 9:00 AM - 9:30 AM CT

#### Coffee break in the Exhibit Hall

#### 9:30 AM - 11:15 AM CT

#### FREE PAPER SESSIONS I-L

**Free Paper Session I: Early Detection and Intervention** Room: Marriott Ballroom (4th floor)

#### 9:30 AM - 9:37 AM CT

#### 11: Two-Year Outcomes of Infants Admitted to a Neonatal Intensive Care Unit with Risk Factors for Cerebral Palsy in Bangladesh

Anna te Velde BAppSc(Pthy); PhD, <u>Tasneem Karim MBBS, MPH,</u> <u>PhD</u>, Annabel Webb MRes, Saifuddin Ahmed, Mohammad Shafiul Islam, Iskander Hossain, Catherine Morgan PhD, Iona Novak PhD, Khandaker Gulam PhD, Nadia Badawi PhD

#### 9:38 AM - 9:45 AM CT

12: Early Spontaneous Movements in the First Months of Life and Developmental Outcomes At Later Age Infants Born to Mothers with Gestational Diabetes Mellitus

<u>Bilge Nur Yardımcı Lokmanoğlu PhD</u>, Akmer Mutlu PhD

#### 9:46 AM - 9:53 AM CT

I3: Cerebral Palsy Diagnosis in BC: An Exploration of Factors Impacting Diagnostic and Rehabilitation Services <u>McIntosh Taylor</u>, Ash Sandhu BSc, Vivian Wong BA, Ram Mishaal MD

#### 9:54 AM - 10:01 AM CT

I4: Mini-SCALE: Selective Control Assessment of the Lower Extremity in Infants and Young Children: Evidence of Content and Construct Validity

<u>Loretta Staudt PT,MS</u>, Barbara Sargent PhD, PT, Eileen Fowler PhD, PT

#### 10:02 AM - 10:09 AM CT

# I5: Prediction of Adverse Neurodevelopmental Outcomes in a State-Wide Early Detection Network (Qedin-Cp)

<u>Carly Luke MPaedPhys, BPhty</u>, Lynda McNamara BPhty Hons, Morgan Carlton PhD, Christine Finn BPT, Sarah Gibson BPT, Kym Morris BPT, Bernadette Shannon B.Occ.Thy, Ellena Oakes B.Occ. Thy, Anya Gordon MPaedPhys, MPhtyStudies, BS (Hons), Rachel Thomas BPT, Joanne George PhD BPT, Megan Kentish B.Phty: Grad Cert Phty (paeds) T, Robert Ware PhD, Roslyn Boyd PhD

#### 10:21 AM - 10:28 AM CT

I6: Infants At High Risk of Spastic Cerebral Palsy Demonstrate Decreased Selective Leg Joint Control as Early as 3 Months of Age <u>Barbara Sargent PhD, PT</u>, Kathryn Havens PhD, Masayoshi Kubo PhD, PT, Tai-Wei Wu MD

#### 10:29 AM - 10:36 AM CT

17: The Alberta Infant Motor Scale as a Measure of Gross Motor Abilities After Early Complex Cardiac Surgery: Scores, Predictive Validity, and Prediction from Demographic and Surgical Variables <u>Rebecca Baril MD</u>, Ari Joffe BMSc, MD, John Andersen MD, FRCPC, Julie Sorenson MPT, Sara Khademioureh MS, Irina Dinu PhD, Charlene Robertson MD

#### 10:37 AM - 10:44 AM CT

## 18: BabyOSCAR Score at 3 Months Predicts Gmfcs Level at Age 2, in Infants with Spastic CP

<u>Colleen Peyton PT, DPT</u>, David Aaby MS, Vanessa Barbosa OTR, CNT, PhD, Raye-Ann DeRegnier MD, Arend Bos PhD MD, Theresa Moulton PT, DPT, PhD

#### 10:45 AM - 10:52 AM CT

#### 19: Accuracy of Early Markers to Predict Motor Severity, Type and Topography Classifications of Cerebral Palsy in Infants: A Systematic Review

<u>Anna te Velde BAppSc(Pthy); PhD</u>, Iona Novak PhD, Nadia Badawi PhD, Megan Finch-Edmondson PhD, BSc (Hon), Madison Paton PhD, Ashleigh Hines PhD, Esther Tantsis MBBS, BMedSci, DCH, PhD, FRACP (Neurology), Alexandra Griffin PhD, Georgina Henry BPsych (Hons), Maria Mc Namara BAppPsych, MPsych, PhD, Emma Stanton BHlthSc/MOT, Monica Toohey BPhysio, Annabel Webb MRes, Lynda McNamara BPhty Hons, Catherine Morgan PhD

#### 10:53 AM - 11:00 AM CT

110: Use of Parent's Observations of Social Interactions (POSI) To Screen for Autism in a High-Risk Infant Follow-Up Program Lydia Schneider MD, Aarabhi Rajagopal MD, Robin Manus BS, Sharon Veis MA, Raye-Ann DeRegnier MD

#### Free Paper Session J: Orthopedics

Room: Grand Ballroom I (7th floor)

#### 9:30 AM - 9:37 AM CT

J1: Efficacy of a Multimodal Surgical Site Injection in Pediatric Patients with Cerebral Palsy Undergoing Hip Reconstruction: A Multi-Center Randomized Controlled Trial

<u>Danielle Greig MD</u>, Christina Sun MPH, Daniel McBride BS, Bailey Young DO, Vineeta Swaroop MD, Rachel Thompson MD

#### 9:38 AM - 9:45 AM CT

#### J2: Flexibility Studies in Neuromuscular Scoliosis: A Comparison of Predictive Ability of Three Radiographic Techniques Jenny Zheng BS, Stuart Mitchell MD, David Spiegel MD, Christine Goodbody MD, Keith Baldwin MD

#### 9:46 AM - 9:53 AM CT

#### J3: Bone Complications of Pamidronate Therapy in Children with Cerebral Palsy: A Retrospective Series

<u>Freeman Miller MD</u>, Luiz Silva MD, Burak Kaymaz MD, Yusuke Hori MD, Kenneth Rogers PhD, Arianna Trionfo MD, Richard Bowen MD, Jason Howard MD, Michael Shrader MD

#### 9:54 AM - 10:01 AM CT

# J4: Muscle Strength, Muscle Volume and Muscle Stiffness in High Functioning Children with Cerebral Palsy

<u>Alexandra Palmcrantz PT</u>, Eva Pontén MD, PhD, Antea Destro MSc, Ferdinand von Walden MD, PhD, Ruoli Wang PhD, Cecilia Lidbeck PhD

#### 10:02 AM - 10:09 AM CT

#### J5: Posterior Instrumented Fusion to L5 versus to Pelvis in Cerebral Palsy Associated Neuromuscular Scoliosis: A Systematic Review of Radiographic and Functional Outcomes <u>Patrick Thornley FRCSC, ABOS Part I</u>, Ali Pirshahid MD, Suken Shah MD, Peter Gabos MD, M. Wade Shrader MD, Jason Howard MD

#### 10:21 AM - 10:28 AM CT

# J6: Does Social Deprivation Affect Severity of Hip Subluxation in Cerebral Palsy?

Kevin Orellana BS, Rachel Lenhart MD, Daniel Yang MS, Keith Baldwin MD, <u>Christine Goodbody MD</u>

#### 10:29 AM - 10:36 AM CT

#### J7: Hip Displacement After Triradiate Cartilage Closure in Ambulatory Cerebral Palsy: Who Needs Continued Radiographic Surveillance?

Amelia Lindgren MD, Kenneth Rogers PhD, Michael Shrader MD, Freeman Miller MD, J<u>ason Howard MD</u>

#### 10:37 AM - 10:44 AM CT

J8: Medial Column Soft Tissue Imbrication with Internal Brace Augmentation Following Lateral Column Lengthening in the Cerebral Palsy Population with Pes Planovalgus Foot Deformities: A Novel Indication Sean Tabaie MS MD

#### 10:45 AM - 10:52 AM CT

#### J9: Role of Pelvic Osteotomy in Cp Hip Dislplacement

<u>Jae Jung Min MD</u>, Soon-sun Kwon PhD, Dae Hyun Kim MD, Chin Youb Chung MD, Ki Hyuk Sung MD, Hee Joung Joung PhD, Moon Seok Park MD

#### 10:53 AM - 11:00 AM CT

# J10: The Foot Posture Index: Are Three Components as Good as Six? (10)

Susan Rethlefsen DPT, <u>Alison Hanson MS PT</u>, Sylvia Ounpuu MSc, Jennifer Rodriguez-MacClintic PT, DPT, Kristan Pierz MD, Tishya Wren PhD

#### Free Paper Session K: Health Service

Room: Grand Ballroom II (7th floor)

#### 9:30 AM - 9:37 AM CT

# K1: Barriers to Access to Gait Analysis for Children and Adolescents (1)

<u>Melissa Bent MD</u>, Susan Rethlefsen DPT, Veronica Beltran BS, Tishya Wren PhD

#### 9:38 AM - 9:45 AM CT

#### K2: Out-of-Pocket Costs of Cerebral Palsy for People with Cerebral Palsy and Their Families

<u>Georgina Henry BPsych (Hons)</u>, Sarah McIntyre PhD, Annabel Webb MRes, Fiona Garrity, Sophie Marmont, James Espie, Alison Pearce PhD, Claire Galea MS, Nadia Badawi PhD

#### 9:46 AM - 9:53 AM CT

#### K3: Outpatient Encounters, Continuity of Care and Unplanned Hospital Care for Children and Young People with Cerebral Palsy in New South Wales, Australia

<u>Simon Paget MBBS</u>, Sarah McIntyre PhD, Francisco Schneuer PhD, Tanya Martin MPH, Louise Sellars MSN, Heather Burnett MD, Sophie Price MPT, Natasha Nassar PhD

#### 9:54 AM - 10:01 AM CT

#### K4: The Complexity of Decision-Making with a Young Child with Cerebral Palsy: Understanding Mothers' Lived Experiences Using a Phenomenological Approach

<u>Meghan Munger MPH</u>, Rhonda Cady PhD, RN, Timothy Beebe PhD, Nathan Shippee PhD, Tom Novacheck MD, Beth Virnig PhD, MPH

#### 10:02 AM - 10:09 AM CT

#### K5: Effectiveness of Family Centered Care through Capacity Building of Caregivers of Children with Cerebral Palsy on their Quality of Life and Family Empowerment

Deepalaxmi Poojari MPT ,PhD candidate, Shashikiran Umakanth MD, G Arun Maiya PhD, <u>Bhamini Rao PhD</u>, Sonia Khurana PhD, Marie Brien MPT, Hitesh Shah MD, Radhika Attal MPT

#### 10:21 AM - 10:28 AM CT

#### K6: Implementation of Clinical Practice Guidelines of Eye-Gaze Control Technology for People with Cerebral Palsy: Barriers and facilitators identified by clinicians

Breyana Stevens-Hofer BS, <u>Petra Karlsson PhD</u>, Michelle McInerney PhD, Margaret Wallen PhD

#### 10:29 AM - 10:36 AM CT

K7: Health Information Behavior of People with Cerebral Palsy <u>Ira Jeglinsky Kankainen</u>, Jonas Tana PhD

#### 10:37 AM - 10:44 AM CT

K8: Use Of Primary Healthcare Services Among Children and Youths with Cerebral Palsy in Norway, A Registry-Based Study <u>Stine Johansen BS</u>, Guro Andersen PhD, Stian Lydersen PhD, Runa Kalleson PhD, Sandra Hollung PhD

#### 10:45 AM - 10:52 AM CT

#### K9: Variability of State-Based Early Intervention Eligibility Criteria in Ability to Predict Neuromotor Impairments in Nicu Graduates

Sophie Frankenthal, <u>Raye-Ann DeRegnier MD</u>, Lynn Boswell MS, Sarah Heigel MSN

#### 10:53 AM - 11:00 AM CT

#### K10: Preliminary Effectiveness of an Electronic Patient-Reported Outcome Measure and Decision Support Tool on Early Intervention Service Quality

<u>Mary Khetani ScD, OTR/L</u>, Vera Kaelin ScD, Sabrin Rizk PhD, Marlene Angulo, Zurisadai Salgado BS, Yi-Fan Chen PhD, Vivian Villegas OTD, MS, OTR/L, Jodi Dooling-Litfin PhD, Natalie Leland PhD, Elizabeth Lerner Papautsky PhD, Natalie Murphy MPH, Beth McManus PhD, MPH

#### Free Paper Session L: Upper Extremity/Hand

Room: Grand Ballroom III (7th floor)

#### 9:30 AM - 9:37 AM CT

#### L1: Limited Throw Distance was Associated with Limited Upper Extremity Power in Children with Cerebral Palsy

<u>Cory Cribb MS</u>, Sarah Creveling MS, Katelyn Jackson BS, Christopher Modlesky PhD, Noelle Moreau PhD, PT, Li Li PhD, Gavin Colquitt PhD

#### 9:38 AM - 9:45 AM CT

L2: Effects of Non-Invasive Brain Stimulation on Upper Extremity Outcomes in Children with Cerebral Palsy: A Systematic Review and Meta-Analysis

<u>Nicole Hawkins MS, OTR/L</u>, Yu Gu PhD, MPH, Kathleen Friel PhD, Andrew Gordon PhD

#### 9:46 AM - 9:53 AM CT

#### L3: HABIT-ILE Australia: Randomised Trial of Hand-Arm Bimanual Intensive Training Including Lower Extremity for Children with Bilateral Cerebral Palsy

<u>Leanne Sakzewski PhD</u>, Bachelor Occupational Therapy, Yannick Bleyenheuft PhD, Iona Novak PhD, Catherine Elliott PhD, Sarah Reedman PhD, Catherine Morgan PhD, Kerstin Pannek PhD, Jurgen Fripp PhD, Robert Ware PhD, Roslyn Boyd PhD

#### 10:21 AM - 10:28 AM CT

L6: Comparing Intensity and Duration of Habitual Dominant and Non-Dominant Arm Activity among Neurotypical Children and Children with Hemiplegic Cerebral Palsy (HCP) Nidhi Amonkar BS, Vaishnavi Shahane BS, Deborah Bubela PhD, Patrick Kumavor PhD, Kristin Morgan PhD, Sudha Srinivasan PhD

#### 10:29 AM - 10:36 AM CT

L7: The Effect of Motor Learning Based Upper Extremity Interventions on the Contribution of the Trunk to Upper Extremity Movements in Children with Unilateral Spastic Cerebral Palsy

<u>Dalina Delfing MS</u>, Shivakeshavan Ratnadurai-Giridharan PhD, Kathleen Friel PhD, Andrew Gordon PhD

#### 10:37 AM - 10:44 AM CT

L8: Long-term effects of Hand-Arm Bimanual Intensive Training on Real-world Bimanual Performance in Children with Unilateral Cerebral Palsy.

<u>Shailesh Gardas PT</u>, Casey Burroughs DPT, Grant Kirkman BS Exercise Physiology, Christine Lysaght DPT, Holly Holland OTR/L, Swati Surkar PT, PhD

#### 10:45 AM - 10:52 AM CT

#### L9: Trajectory of Development of the Impaired Hand During the First 15 Months of Life in Infants with Unilateral Cerebral Palsy (UCP) Leanne Sakzewski PhD, Bachelor Occupational Therapy, Robert Ware PhD, Susan Greaves PhD, Andrea Burgess PhD, Bernadette Shannon B.Occ.Thy, Ann-Christian Eliasson PhD, Roslyn Boyd PhD

#### 10:53 AM - 11:00 AM CT

#### L10: Brain Activity Aa Rest Explains Bimanual Hand Function in Children with Unilateral Cerebral Palsy

<u>Rachel Vaughn MOT,OTR/L</u>, Jasper Mark BS, Rachana Gangwani PT, MS, Holly Holland OTR/L, Deborah Thorpe PT, PhD, Joshua Alexander MD, Swati Surkar PT, PhD, Jessica Cassidy DPT, PhD

#### 12:45 PM - 1:45 PM CT

**General Session** Room: Grand Ballroom (7th floor)

#### Chambers Family Lifespan Lecture Closing Remarks 2024 Committee Introduction

#### 2:00 PM - 4:00 PM CT

#### MINISYMP27 - MINISYMP39

#### 2:00 PM - 4:00 PM CT

MINISYMP27: ENSURING A MEDICAL HOME FOR CHILDREN AND YOUTH WITH CEREBRAL PALSY: MULTIDISCIPLINARY TAKEAWAYS FROM NEW AAP & AACPDM GUIDELINES Kristina Malik MD, Garey Noritz MD, Lynn Davidson MD, Kilby

Mann MD, Nancy Murphy MD

Room: Los Angeles/Miami/Scottsdale (5th floor)

Learning Objectives:

- 1. Discuss key recommendations from the new guidelines.
- 2. Implement best practices into their clinical care and identify toolkits that aid care.

Provide general preventive care guidance for children with CP. Ensure multidisciplinary best care for children with CP.

#### 2:00 PM - 4:00 PM CT

#### MINISYMP28: NEURO-ORTHOPAEDIC JOURNAL CLUB: TOP 10 ARTICLES IN THE LAST YEAR RELATING TO THE ORTHOPAEDIC MANAGEMENT OF CHILDREN WITH NEUROMUSCULAR DISORDERS

Amanda Whitaker MD, Monica Payares-Lizano MD, Benjamin Shore MD, MPH, FRCSC, Jon Davids MD, Vedant Kulkarni MD

Room: Chicago FGH (5th floor)

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!

#### 2:00 PM - 4:00 PM CT

#### MINISYMP29: LET'S LOOK AT THE LIMB: EXPERT CONSENSUS INFORMED BY THE DELPHI PROCESS FOR LOWER EXTREMITY SURGERIES PERFORMED IN AMBULATORY CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY

Kristan Pierz MD, Unni Narayanan MBBS, MSc, FRCSC, Thomas Dreher MD, Jason Rhodes MD, Jeffrey Shilt MD, Robert Kay MD

Room: Marriott Ballroom (4th floor)

Learning Objectives:

- 1. Upon completion, participant will be able to describe the Delphi process
- Discuss where consensus does/does not exist for common procedures performed on the long bones, foot, and ankle for ambulatory children with cerebral palsy
- 3. Improve confidence in surgical recommendations and execution
- 4. Identify where additional work is needed to justify surgical recommendations

#### 2:00 PM - 4:00 PM CT

#### MINISYMP30: TASK-SPECIFIC TRAINING IN CEREBRAL PALSY: FROM JARGON TOWARDS EVIDENCE AND KEY INGREDIENTS Ashleigh Hines PhD, Iona Novak PhD, Anna te Velde BAppSc(Pthy); PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Michelle Jackman PhD, Alexandra Griffin PhD

Room: Great America 1 & 2 (6th floor)

Learning Objectives:

- 1. Identify the key ingredients of task-specific intervention approaches
- 2. Describe the various evidence base using the traffic light system
- 3. Identify effective evidence-based interventions from the major clinical practice guidelines
- 4. Understand how to engage children to provide outcomes that matter to children

#### 2:00 PM - 4:00 PM CT

MINISYMP31: TRANSLATING RESEARCH INTO CLINICAL CARE: USING NEUROMUSCULAR ELECTRICAL STIMULATION TO IMPROVE FUNCTION FOR INDIVIDUALS WITH CEREBRAL PALSY Kelly Greve PT, DPT, PhD, Jessica Rose PhD, Kornel Schadl MD, Christopher Joseph DPT

#### Room: Indiana/Iowa (6th floor)

Learning Objectives:

- 1. Recognize concepts, technologies, and protocols for the clinical application of NMES as a strengthening intervention for individuals with CP.
- 2. Understand protocols for stimulation to the muscle fibers as it relates to electrical impulses.
- 3. Identify clinical applications of NMES to alter muscle tone and enhance function in individuals with CP.
- 4. Familiarize and implement NMES that can be used for individuals with CP in the clinical setting.

VEDNESDAY

#### 2:00 PM - 4:00 PM CT

MINISYMP32: EARLY DETECTION OF INFANTS AND YOUNG CHILDREN AT HIGH RISK OF CEREBRAL PALSY IN LOW RESOURCE SETTINGS-THE BORN-TO-GET-THERE-CONSORTIUM Roslyn Boyd PhD, Katherine Benfer PhD, Nana Tashivilli PhD, Physiotherapy, Carly Luke MPaedPhys, BPhty

Room: Michigan/Michigan State (6th floor)

Learning Objectives:

- 1. Upon completion, Participants will understand the best inclusion criteria, best accurate measures with clinical utility for surveillance for Cerebral Palsy and other like conditions in Low Resource Settings.
- Upon completion, participants will understand the best processes for training, reliability calibration and implementation of accurate measures for surveillance for Cerebral Palsy and other like conditions in Low Resource Settings.
- 3. Upon completion, participants will understand the various cultural considerations for surveillance for Cerebral Palsy and other like conditions in Low Resource Settings.
- Upon completion, participants will understand the barriers and facilitators to implementation of surveillance for Cerebral Palsy in Low Resource Settings.

#### 2:00 PM - 4:00 PM CT

#### MINISYMP33: ADAPTIVE SPORT OPPORTUNITIES, PEER INCLUSION, AND TRANSITION INTO COMMUNITY FITNESS FOR PEOPLE WITH CEREBRAL PALSY (CP)

Jennifer Miros MPT, Julie Grassi PT, M.Ed., Sarah Moran DPT, Kelley Newman DPT, PCS, HPCS

Room: Northwestern/Ohio (6th floor)

Learning Objectives:

- 1. Demonstrate an understanding of how to adapt sports for individuals with CP or other COD.
- 2. Demonstrate an understanding of how to adapt a triathlon for individuals with CP or other COD.
- Demonstrate an understanding of how to identify community stake holders to participate in planning and funding of community adaptive sports programs and triathlons.
- 4. Describe resources and equipment needed to assist with making a triathlon accessible to individuals with CP or other COD.

#### 2:00 PM - 4:00 PM CT

#### MINISYMP34: MORE THAN A GAIT LAB: MOTION ANALYSIS TO GUIDE INTERPROFESSIONAL CARE AND OPTIMIZE OUTCOMES ACROSS THE LIFESPAN

Anna McCormick MD FRCPC, Tasos Karakostas MPT, PhD, John Henley PhD, Jon Davids MD, Hana Alazem MD, Albert Tu FRCS(C), Amanda Rande BSc Kinesiology

Room: Avenue (4th floor)

Learning Objectives:

- 1. Appreciate the evolving role of motion analysis in facilitating optimal care and function in individuals with childhood acquired disabilities across the lifespan.
- 2. List new uses of the gait/motion analysis laboratory.
- 3. List new tools available to assess motion, measure outcomes and optimize care.
- 4. Participate in thought provoking discussions regarding optimizing the use of a motion analysis lab, assessing upper extremity function and the role of new tools available for motion analysis.

#### 2:00 PM - 4:00 PM CT

MINISYMP35: INCREASING HEALTHCARE ACCESS: DEVELOPMENT OF AN ACCESSIBLE NEUROPSYCHOLOGICAL BATTERY FOR INDIVIDUALS WITH SEVERE MOTOR AND SPEECH IMPAIRMENT Petra Karlsson PhD, Jacqueline Kaufman PhD, Seth Warschausky PhD

Room: Purdue/Wisconsin (6th floor)

Learning Objectives:

- 1. Upon completion, participant will be able to recognize when standardized assessment procedures are limiting the full participation of a child leading to a likely underestimate of cognitive skills and abilities.
- 2. Upon completion, participant will have had hands-on experience of using switch and eye-gaze technology to select answers in tests.
- 3. Upon completion, participant will be able to evaluate specific tests and subtests that might be most appropriate for children with motor impairment.
- 4. Upon completion, participant will have had the opportunity to discuss case studies that illustrate the theoretical elements in this session.

#### 2:00 PM - 4:00 PM CT

# MINISYMP36: CLINICAL PROBLEM SOLVING IN THE CARE OF NONVERBAL ADULTS WITH CEREBRAL PALSY

Cristina Sarmiento MD, Mary Schmidt DO, Heidi Haapala MD, Jensine Clark MD

Room: Denver/Houston/Kansas City (5th floor)

Learning Objectives:

- 1. Incorporate a comprehensive differential diagnosis into the development of an action plan for adults with CP with pain, functional changes, or behavioral changes.
- 2. Describe diagnostic and therapeutic considerations for common rehabilitation-related issues in adults with CP.
- 3. Understand the unique role of the caregiver in caring for adults with CP and how to effectively incorporate the caregiver perspective.
- 4. Explain the importance of considering social determinants of health and assessing barriers to care in caring for adults with CP.

#### 2:00 PM - 4:00 PM CT

#### MINISYMP37: MYELOMENINGOCELE FUNCTIONAL CLASSIFICATION (MMFC) – A NEW COMPREHENSIVE VIEW OF FUNCTIONALITY IN CHILDREN WITH SPINA BIFIDA

Jill Larson MD, Vineeta Swaroop MD, Ana-Marie Rojas MD, Nicole Hroma DPT, Sara Beyler CO, LO, Tasos Karakostas MPT, PhD

Room: Kane/McHenry (3rd floor)

Learning Objectives:

- Describe the new functional classification of spina bifida (MMFC) as it relates to manual muscle testing, functional motor scale and the use of assistive devices
- 2. Analyze gait patterns or functional movements in spina bifida patients from each of the different MMFC functional levels and understand the rational for use of assistive devices
- 3. Understand and apply orthotic considerations in spina bifida patients from each of the different MMFC functional levels
- 4. Define the orthopedic surgery considerations and interventions in spina bifida patients from each of the different MMFC functional levels

#### 2:00 PM - 4:00 PM CT

#### MINISYMP38: IMPROVING THE HEALTH AND WELL-BEING OF ADULTS WITH CEREBRAL PALSY: INTERNATIONAL AND PERSONAL PERSPECTIVES

Rachel Byrne BS, Mark Peterson PhD, Ashley Whaley M.S., CCC-SLP, Jennifer Ryan MSc, PhD

Room: Lincolnshire 1 & 2 (6th floor)

Learning Objectives:

- 1. Understand the risk of developing noncommunicable diseases including mental health outcomes in adults with CP.
- 2. Describe the pain phenotype and treatment disparities faced by adults with CP.
- 3. Define issues pertaining to unmet rehabilitation and medical needs in adults with CP globally.
- 4. Expand upon advocacy efforts that improve stakeholder engagement in clinical care and research.

#### 2:00 PM - 4:00 PM CT

#### MINISYMP39: COMMON DATA MODELS AND RESEARCH DATA SOURCES: THE PRACTICAL REALITIES OF LEVERAGING RICH DATA SETS TO ACCELERATE DISCOVERY

Paul Gross BA, Sarah McIntyre PhD, Yana Wilson, Theresa Sukal-Moulton PT, DPT, PhD, Carolina Mendoza-Puccini MD

Room: Sheffield (4th floor)

Learning Objectives:

- 1. Understand the large sources of data to support CP research and how to access them.
- 2. Understand scope of existing CDE definitions from NINDS and ICPGC
- 3. Describe practical realities of using existing datasets and new public use data
- 4. Establish the priorities for overcoming barriers to use.

#### 2:00 PM - 6:00 PM CT

### Board of Directors Meeting

Room: Watertower (10th floor)

# **Educating Students** with Cerebral Palsy

A COMPREHENSIVE GUIDE FOR EDUCATORS AND PARENTS



# Adine Ray Usher, EdD

Foreword by Richard Ellenson



#### **Clinical Observation Or Single Case Study Posters**

# CO01: Cerebral Palsy: More Than Meets the Eye. A Case of Twins with Atypical Presentation

<u>Ram Mishaal MD</u>, Mia Francl MD, Mor Cohen-Eilig MD, Christine Tyson PhD, Jan Friedman MD, PhD, Kathryn Selby MD

# CO02: Oral Aversions and Feeding Delays In Patients with Myelomeningocele

Lubna Ayoubi MD, Jessica Pruente MD

#### CO03: Rural Access to Pediatric Research Teleneuromodulation in the Home Setting

<u>Preston Christopher BS</u>, Brady Riedner PhD, Marissa Gavioli BS, Annika Bach BA, Chrysanthy Ikonomidou MD, PhD, Melissa Villegas MD, Bernadette Gillick PhD, Gwendolyn Nytes, Daniel Lench

COO4: Case Study: Hereditary Spastic Paraplegia, SPG3a Type Mutation, Nine Years Between Movement Science Visits Lizabeth Bunkell BS, Kelly Jeans MS, <u>Robert Wimberly MD</u>

# C005: Lower Limb Muscle Activity During Aquatic Treadmill Walking: A Case Series

<u>Joseph Harrington MS</u>, Brain Knarr PhD, Vivek Dutt MBBS, David Kingston PhD

COO6: Clinical and Electromyographic Gait Analysis in Vanishing White Matter Leukodystrophy Jennifer Wu MD, PhD, Brian Wishart DO

**CO07: Serial Casting in Older Toe Walkers With Contractures** <u>Amanda Whitaker MD</u>, Suzanne Bratkovich MSPT

# CO08: Progressive Neurodegeneration in Cobalamin G Deficiency

Kendall Hulk DO, Katherine Bentley MD, Krishan Yalamanchi MD

#### COO9: Bone Breakdown in Guillain-Barré Caroline Gormley DO, Nanette Aldahondo MD

CO10: When One Chronic Disease Obscures Another: Gait Changes in a Patient with Hemophilia <u>Kilby Mann MD</u>, Michael Wang MD, Joanna Roybal DPT

CO11: Minimally Invasive Surgical Correction of Hallux Valgus Deformity in a Pediatric Patient with Cerebral Palsy: A Novel Indication Sean Tabaie MS MD

#### CO12: A Rare Case of Pediatric Anti-NMDA Receptor Encephalitis Kathy Guo MD, Dylan Mann MD, Mark Gormley MD

CO13: Elongation of Wrist and Finger Flexor Muscles in an Individual with Athetoid Cerebral Palsy Temporarily Reduces Fluctuating Muscle Activity and Resulting Torques

Afsheen Sajjadi MS, <u>Divya Joshi BS</u>, Ana Maria Acosta PhD, Theresa Moulton PT, DPT, PhD, Carson Ingo PhD, Julius Dewald PT, PhD

#### CO14: Novel Use of a Robotic Exoskeleton for the Gait Training for Persons with Cerebral Palsy

<u>Morgan Busboom DPT</u>, Brad Corr DPT, Katie Schlieker DPT, Max Kurz PhD

CO15: Post-Surgical Rehabilitation Considerations in Children with SMA Type I Undergoing Hip Reconstruction Surgery Fabiola Reyes MD, Kayla Clem DPT, Bridget Dayton BS

#### CO16: Why a Patient with Congenital Ichthyosis Was Not Walking

Vera Tsetlina MD, Elisabeth Bates MSN, CPNP, Deborah Cassidy DO, <u>Hana Azizi MD</u>

# CO17: High Tech Vs. Low Tech: A Team Approach to Improve Function and QOL

<u>Leslie Marriott OTR/L, BCP</u>, Timothy Krater DO, Grace Rucker MS, OTR/L, Jessica Siegler CO, Sara Hutchinson MS, MPO, CPO

### CO18: High Fever - An Imminent Risk for Brain Damage in Children From East African Countries

<u>Fernanda Silva PhD</u>, Rafael Silva, Pauline Kimweri PT

# CO19: Investigating Markerless Motion Capture for Children with Cerebral Palsy

<u>Amanda Rande Bsc Kinesiology</u>, Ion Robu MS, Gregor Kuntze PhD, Elizabeth Condliffe PhD, MD, Rubini Pathy MD, Elise Laende PhD, Gina Ursulak PT, Msc

#### CO20: Preoperative Rehabilitation Prior to Multi-Level Surgery (MLS) in a Young Man with GMFCS Level II Cerebral Palsy and How it Helped Accelerate His Recovery Following a Covid-19 Hospitalization

<u>Brittany Virgil DPT</u>, Brittany Virgil DPT, Kellie Ramos PT, DPT, Catherine Jones PT, Maura Mcmanus MD, Michael Shrader MD, Nicole Mamula OT

#### CO21: Outcomes After an Interdisciplinary Intensive Therapy Program for a Child with Diplegic Cerebral Palsy, GMFCS Level II

<u>Dana Chole PT/DPT, PCS</u>, Jamie Hall PT, DPT, PhD, Jessica Nicolaescu Master Of Occupational Therapy

#### CO22: Navigated Radiofrequency Ablation Peripheral Rhizotomy for Lumbosacral Hypertonia in a Non-Ambulatory Patient with Spinal Fusion: Indications, Surgical Techniques, and Lessons Learned

Melissa Lopresti MD, MPH, <u>Victoria Jane Horak BA</u>, Robin Trierweiler BS, CNIM, Lauren Stone MD, Timothy Krater DO, Jeffrey Raskin MS, MD

#### **CO23: Using Botulinum Toxin Injections to Improve Speech and Swallow in a Patient with Leigh Syndrome** <u>Elisabeth Bates MSN, CPNP</u>, Vera Tsetlina MD, Deborah Cassidy DO, Hana Azizi MD

#### **Demonstration Posters**

DP01: Adopting the Hammersmith Infant Neurologic Examination (HINE) Tool for Early Detection of Young Children at High Risk of CP In Ethiopia: A Knowledge Implementation Project

<u>Selamenesh Tsige Legas MD, Pediatrician</u>, Darcy Fehlings MD FRCPC Msc, Amha Mekasha MD, Amber Makino FRCPC, Rudaina Banihani MS, Atsede Legesse MD

DP02: Applying Optically Pumped Magnetoencephalography to Better Understand Cerebral Palsy in Children Brittany Howell PhD, Stephanie Deluca PhD, <u>Megan Evans BS</u>

#### DP03: Effect of Central Nervous System Stimulants on Physical Function in Children with Cerebral Palsy: A Protocol for a Pilot Randomized Controlled Trial

<u>Anwar Almutairi PT, PhD</u>, Mansour Alotaibi PT, MBA, PhD, Afrah Alkazemi Pharmd, Ahmad Taqi Pharmd, Maha Alharbi Msc., Pharmd, BCPS, Laura Vogtle PhD

#### DP04: Graphical User Interfaces for Individualized Locomotor Training for Infants with or at High Risk of Cerebral Palsy Using a Robotic Assistive Device

<u>Monique Shotande PhD</u>, Julie Skorup DPT, Stephanie Walters PT, Morgan Alcott DPT, Beth Smith PT, DPT, PhD, Laura Prosser PT, PhD, Thubi Kolobe PhD, Andrew Fagg PhD

#### DP05: Neonatal Intensive Care Unit Initiation of a Randomized Clinical Trial of Early Detection and Therapeutic Improvement of Motor Delay in High Risk Infants

<u>Aneta Jedraszko MPH</u>, Christopher White BS, Vanessa Rodriguez BA, Steven Guldberg BS, Janette Bell RN, Thomas Shanley M.D., Nicole Pouppirt MD, Raye-Ann Deregnier MD

#### DP06: Protocol for the Digital Health Care System to Provide a Developmental Training Guide for In-Home, Parent-Centered, Early Intervention in Preterm Infants: A Randomized Controlled Trial

<u>Soohyun Wi PhD</u>, Junghyun Kim PhD, Jeong Min Kim MD, Yae Lim Lee MD, Eun-Jeong Choi MS, Hyung-Ik Shin PhD, Moon Suk Bang PhD, Woo Hyung Lee PhD

#### DP07: Welcome Groups – An Innovative Universal Group Facilitating Earlier Access to Intervention Karli Bourgue TR

# DP08: A Parallel Clinic Approach to Interdisciplinary Care of Children with CP

<u>Fabiola Reyes MD</u>, Cherlyn Caneda MSN, Bonnie Samson PA, Roni Stern MSN, Robert Wimberly MD, Erin Soich BS

#### DP09: Building the Los Angeles Early Identification and Intervention for Infants at Risk for Cerebral Palsy Network: EI3 Network

<u>Stacey Dusing PhD</u>, Amy Yeh MD, Sai Iyer MD, Nora Lui PT, Margaret Swaine MD, Christine Mirzaian MD, MPH, Los Angeles El3 Network

#### DP10: Direct, Indirect and Psychosocial Costs in Rare Musculoskeletal Conditions: Caregivers' Perspectives.

<u>Rose Elekanachi Msc</u>, Laurie Snider PhD, Noémi Dahan-Oliel OT; PhD, Shahrzad Nematollahi PhD, Sarah Cachecho OT, Seyhan Sena Tavukçu BS

#### DP11: Family Impact of Childhood Neurodevelopment Disorders (Ndds): A Conceptual Framework Ramesh Lamsal

DP12: Mental Health Services in a Multidisciplinary Cerebral Palsy Clinic

<u>Jessica Dodge MD</u>, Minnelly Vasquez MSW

DP13: Physical Medicine and Rehabilitation Approach to Implementing a Health Care Transition Program to Prepare the Family and Child with Cerebral Palsy Into Adult Care <u>Cherlyn Caneda MSN</u>, Fabiola Reyes MD, Erin Soich BS, Bridget Dayton BS, Julie Rogers

#### DP14: Prevention in Action: Implementing Congenital Cytomegalovirus Clinical Practice Guidelines in Australia to Reduce Disability

<u>Katherine Swinburn Bappsc, MPH</u>, Hayley Smithers-Sheedy Bappsc (Sp Path), MPH, PhD, Lisa Hui MBBS PhD, Antonia Shand MBCHB, Mmed (Clin Epi), Nadia Badawi PhD, William Rawlinson MBBS, Bsc (Med), PhD (Cantab), GCM, Hanako Stump, Tanya Tripathi PhD

DP15: Benefits of a Special Education Navigator in a Pediatric Complex Care Clinic: Promoting Education Through Interdisciplinary Partnership Christine Murphy MD, Jane Lozano BA, M.Ed.

DP16: Let's Get Physical: Pilates as an Avenue to Increase Physical Activity in Adults with Cerebral Palsy at GMFCS IV/V <u>Claire Shrader MS, OTR/L</u>, Carol Shrader BA Communication, Jessica Ramsey BS Biology

#### DP17: The Child Brain Lab: Integrating and Innovating Meaningful Care and Research in Children with Brain-Related Disorders

Marie Claire De Wit MD, PhD, <u>Marij Roebroeck PhD</u>, Robert Pangalila MD, PhD, Neeltje Van Haren PhD, Marie-Lise Van Veelen MD, PhD

#### DP18: The Lifespan Transition Clinic (LTC):): An Interprofessional Approach for Transition to Adult Healthcare for Youth With Neurodevelopmental Disabilities, and Their Families

<u>Kimberly Solondz OTR/L</u>, Katherine Breithaupt OTD, OTR/L, Maureen Delongis MSW, Dawn Macready-Santos MSW

DP19: Burnout in Pediatric Physical Therapy: Facilitating Attuned Interactions (FAN) and Moving Towards Solutions Brittany Hornby DPT, PCS, Elena Bradley DPT, PCS, Tarra Dendinger MPT, Heather Mclean MPT, Stephanie Tabrisky MPT

DP20: Can Do Camp: How Accessible Camps Provide Family Wellness for Those with Cerebral Palsy Kelli Croll MSPT, Victoria Polega BS

#### DP22: Guided Growth of the Proximal Femur to Prevent Further Hip Migration in Cerebral Palsy Patients; The GUIDANCE Study

<u>Renee Van Stralen MD</u>, Arno Ten Ham MD, Melinda Witbreuk PhD, Sophie Moerman PhD, Adhiambo Witlox PhD, Elgun Zeegers MD, Jaap Tolk PhD

#### DP23: The Forgotten Hands: Do They Need Resting Hand Splints? Daphne O'Young OT, Iris Tung MA

DP24: Beitostølen Healthsport Center, Norway, Toddler Rehabilitation Program: Establishing a Mobility and Active Family Life Rehabilitation Program for Children Aged 2-5 Years with Disability

<u>Elisabeth Helle Msc</u>, Anna Ullenhag PhD, Reidun Jahnsen PhD, Astrid Nyquist PhD, Guro Andersen PhD, Grethe Maanum PRM MD PhD MHA

# DP25: Pool Pals: Enhancing Participation for Children with Neurological Impairments

<u>Juliana Libertin DPT, PCS</u>, Grace Rucker MS, OTR/L, Ashley Berman MA CCC-SLP

DP26: Table Talk: Strategies to Enhance Mealtime Participation, Socialization, and Autonomy for Children with Complex Communication Needs Marianne Gellert-Jones MA, CCC-SLP

### DP27: A Paradigm Shift When Working with a Rehabilitation Team in an Orphanage in Nanjing, China

Frances Baratta-Ziska PT, DPT, MS<u>, Lorene Janowski DPS</u>, <u>OTR/L, BCP, MS</u>

#### DP28: Addressing the World Health Organization 2030 Agenda: Efforts in Zambia

<u>Emily Hillaker D.O.</u>, Jina Libby MD, Michael Bova MD, Anna Tricarico MS, Rebecca Scharf MD, MPH

#### DP29: Episodic Care for Children with Cerebral Palsy: A Novel Clinical Tool Daniel Mckee DPT, Kerry Vela DPT

DP30: Quick Reference Card for Implementation of AACPDM Hip Surveillance Care Pathway X-Ray Recommendations <u>Melanie White DO</u>, Emily Larson MD, Joline Brandenburg MD, Karla Wheeler RN, Jessica Ochs RN, Natalie Peterson BA

### DP31: Video Game-Based Therapy with Kinect Sensor Technology in Pediatric Rehabilitation for Improve Upper Extremities Function.

Apiphan lamchaimongkol MD, Sivaporn Vongpipatana PA

#### DP32: What Are We Doing? Leveraging Best Evidence for Quantifying Intervention Fidelity to Define Dose-Response to Physical Therapy

Kimberley Scott PT, DPT, PhD, Brad Corr DPT, Max Kurz PhD

#### DP33: A Smart Walker Trainer for Children with Cerebral Palsy

Sivakumar Gopalakrishna PhD, Nayan Prakash M.Tech, Shamanth S. M.Tech, Harikishan Shetty M.Tech, <u>Bhamini Rao PhD</u>, V. Venkatesan PhD

#### DP35: Exploring Novel Methods of Pediatric Power Wheelchair Training Using Immersive Virtual Reality Technology

<u>Sara Drisdelle Msc</u>, Jordan Sheriko MD

#### DP36: Pediatric Mobile Manual Standing Wheelchair

<u>Linda Krach MD</u>, Jonathon Gallaher MS, Eric Nickel MS, Gregory Voss BS, MBA, Gary Goldish MD, Andrew Hansen PhD, Patricia Mccracken DPT

#### DP37: Quantification of Upper-Limb Movement Using a Mobile Health Ipad Application in Children with Hemiparetic Cerebral Palsy

Camryn Stasulas BS, Annika Ward BS, Brittany Wehausen BS, Karissa Wennstrom BS, Md Raihan Mia BS, Sheikh Iqbal Ahamed PhD, <u>Samuel Nemanich PhD</u>

# DP38: Smart Hallway for Gait Analysis in Children with Cerebral Palsy

<u>Hana Alazem</u>, Anna Mccormick MD FRCPC, Albert Tu FRCS(C), Michelle Larin Msc, Kevin Cheung MD, Akshay Seth MD, Natalie Baddour PhD, Edward Lemaire PhD

# DP39: Video-Based Analysis of Bilateral Arm Use in Children with Hemiparetic Cerebral Palsy

<u>Shelby Ziccardi</u>, Kathryn Raddatz, Stephen Guy PhD, Rachel Hawe DPT, PhD

#### DP40: A Kinematic Approach to Examining Bimanual Coordination in Children with Bilateral Cerebral Palsy <u>Grace-Anne Herard DPT</u>, Andrew Gordon PhD, Marina Brandão PhD

#### DP41: A Position Statement on the Therapy Needs of Patients with Aromatic L-Amino Acid Decarboxylase Deficiency Following Gene Therapy

Hui-Min Lee PT, PhD, Saadet Mercimek-Andrews MD, PhD, FCCMG, FRCPC, Gabriella Horvath MD, PhD, Diana Marchese MD, Richard E. Poulin III BA, Med, Edd, Alexis Krolick Bsc, Msc, DNP, <u>Kati-Lyn Tierney PT, DPT, PCS</u>, Jasmine Turna Bsc, PhD, Judy Wei MS, Wuh-Liang Hwu MD, PhD

DP42: Implementation of Mobility Training in an Outpatient Clinic for Children with Motor Disorders Valerie Pieraccini MS OTR, Brittany Dichraff DPT

DP43: Movement as Medicine: A Tertiary Prevention Model of Physical Therapy (PT) for Individuals with Cerebral Palsy (CP) Throughout the Lifespan Deborah Priluck PT, DPT, NCS

**DP44: Pressure Mapping: Are You Mapping Effectively?** <u>Ronni Rowe OTR, ATP</u>, Abbye Gieringer OTR/L, Lucy Ericson OTR/L, Robert Wimberly MD

DP45: Creating Caregiver Connections - A CP Center's Responsibility <u>Kelsey Steffen MAT</u>

#### **Scientific Posters**

SP01: Improving Motor Function in Children with Cerebral Palsy Through Repetitive Transcranial Magnetic Stimulation: A Systematic Review and Meta-Analysis

<u>Marie Kelly MPH</u>, HYUNJOON KIM MS, Xiwen Su MS, Claudio Ferre PhD

#### SP02: Anti-Sclerostin Effects of Environmental Enrichment as a Rehabilitative Therapy on Bone Formation in an Animal Model of Cerebral Palsy with Bone Loss

<u>Hye Kyoung Lee PT</u>, Jeong Hyun Heo MS, Yoon-Kyum Shin PhD, Dawoon Baek PhD, Jihye Hwang BS, Eomhyeong Jeong MS, Jung Hwan Kim BS, Sung-Rae Cho MD

#### SP03: Evidence for Variability in Neurological Outcomes: Comparison of Genetic Diagnoses Between Autism Spectrum Disorder and Cerebral Palsy

<u>Melanie Napier Msc, Msc</u>, Karen Wain MS, Lindsay Dyer MS, Amanda Lindy PhD, Kirsty Mcwalter MS, Michelle Morrow PhD, Paul Kruszka MD, MPH, Francisca Millan MD

#### SP04: Knowledge Translation Strategies Used To Promote Evidence-Based Rehabilitation For Children With Cerebral Palsy: A Scoping Review

<u>Jessica Hanson Bsc, Msc</u>, Tatiana Ogourtsova PhD OT, Annette Majnemer Bsc, Msc, PhD

#### SP05: Effects of a Multidisciplinary Clinic on Admissions, Length of Stay, and Emergency Department Visits for Children with Neuromuscular Disorders

<u>Uma Balachandran BA</u>, Liam Butler BS, Renee Ren BA, Olivia Blanchard BA, Katrina Nietsch MS, Erin Abbott BA, Andrew Palosaari MD, Elaine Lin MD, Sheena Ranade MD

#### SP06: Over Two Years of Data from PTC Pinpoint CP Spectrum: A Sponsored No-Cost 424-Gene Panel for Patients with Symptoms Suggestive of CP and Absence of Risk Factors for an Acquired Brain Injury

<u>Ryan Miller MS, CGC</u>, Jeffrey Kopesky MS, Ana Morales MS, Dianalee Mcknight PhD, FACMG

# SP07: Multi-Disciplinary Cerebral Visual Impairment Clinc: A Parent's Perspective

<u>Karen Harpster PhD, OTR/L</u>, Terry Schwartz MD, Lauren Buse BA, Emily Heinzelman BA, Michaela Lewis BA, Melissa Rice OD

# SP08: Neural Correlates of Dynamic Visual Search in Individuals with Cerebral Visual Impairment

Claire Manley BS, Corinna Bauer Ph.D., Marie Drottar MA, Zahide Pamir Ph.D., Peter Bex Ph.D., <u>Lotfi Merabet PhD, OD, MPH</u>

# SP09: Exploring Predictors of Participation from Pre-School to School Aged Children with Cerebral Palsy

<u>Daniela Testani Msc, Hbsc</u>, Heather Shearer DC, Msc, PhD, Sarah Munce PhD, Gillian King PhD, Lauren Switzer Msc, Hbsc, Darcy Fehlings MD FRCPC Msc

#### SP11: Diversifying Caregiver Input to Upgrade the Young Children's Participation and Environment Measure (YC-PEM) for Equitable Pediatric Re/Habilitation Practice

<u>Vivian Villegas OTD, MS, OTR/L</u>, Zurisadai Salgado BS, Dianna Bosak OTD, Michelle Phoenix PhD, Rachel Teplicky MS, Natalie Parde PhD, Mary Khetani Scd, OTR/L

#### SP12: International Collaboration to Develop a Standardized Data Framework for Rare Congenital Disorders: Application to Arthrogryposis Multiplex Congenita

<u>Ahlam Zidan</u>, Shahrzad Nematollahi PhD, Klaus Dieterich PhD, Harold Van Bosse PhD, Isabel Filges PhD, Hanneke J.I.P. De Vries PhD5, Bonita Sawatzky PhD6, Judith Hall PhD7, Daniel Natera De Benito PhD, Tanya Bedard MPH, Victoria Castillo Sanchez MA, Carolina Navalon, Kamran Shazand PhD, Tony Pan PhD, Coleman Hilton Msc, Noemi Dahan-Oliel PhD

#### SP13: Persons with Cerebral Palsy Display Uncharacteristic Entrainment of the Occipital Neural Generators

<u>Claire Killian BA</u>, Erica Hinton PhD, Elizabeth Heinrichs-Graham PhD, Seth Springer, Tony Wilson PhD, Max Kurz PhD

#### SP14: Prechtl's General Movement Assessment and Hammersmith Infant Neurological Evaluation Predict Developmental Outcomes

<u>Sarah Heigel MSN</u>, Lynn Boswell MS, Jordan Avery BA, Denise Barnes APRN, Sophie Frankenthal, Deborah Gaebler-Spira MD, Alison Goetgeluck PT, DPT, PCS, Aneta Jedraszko MPH, Robin Manus BS, Mary Kay Santella BS, Raye-Ann Deregnier MD, Timothy Krater DO

#### SP15: Clinical Associations and Predictors of Epilepsy and Drug Resistance in Children with Cerebral Palsy: A Population-Based Study

Nimra Feroze Msc, Tasneem KARIM BS, Katarina Ostojic BS, Sarah Mcintyre PhD, Elizabeth Barnes MS, Byoung Chan Lee, Nadia Badawi PhD, Russell Dale (SCHN) Dale Mrcpch, PhD, Deepak Gill FRACP, <u>Kavitha Kothur (SCHN) Kothur FRACP,PhD</u>

SP16: Effect of Psychostimulant Medications on Physical Function in Children with Cerebral Palsy: A Scoping Review Anwar Almutairi PT, PhD, Naif Alrashdi PhD, Laura Vogtle PhD, Mansour Alotaibi PT, MBA, PhD

#### SP17: Videofluoroscopic Swallowing Study Predicts Clinical Outcomes in Critically Ill Children with Acute Dysphagia Jihong Choi MD, Jaeyoung Choi MD, Sumi Oh, Hyuna Jang, Joongbum Cho MD, PhD, Jeong-Yi Kwon MD, PhD

#### SP18: Effects of Hip Brace on Proximal Femoral Geometry in Non-Ambulatory Children with Cerebral Palsy: A Randomized Clinical Trial

<u>Hyeonseong Woo MD</u>, Bo Ryun Kim MD, PhD, Jin A Yoon MD, PhD, Hyun Jung Han PhD, Young Il Yoon PhD, Jiwoon Lim MD, Seung U Lee OT, Seon Cho PT, Yong Beom Shin MD, PhD, Hyun Jung Lee MD, Jee Hyun Suh MD, Jaewon Beom MD, PhD, Yulhyun Park MD, Ju Seok Ryu MD, PhD

#### SP19: Heterogenicity of Tasks and Outcome Measures in Dual Tasking Studies in Children with Cerebral Palsy <u>Meaghan Rubsam PT, DPT, PCS</u>, Tanvi Bhatt PhD, Gay Girolami PT, MS, PhD

SP20: Real-World Validation of a Wearable Sensor for Tracking Tummy Time Duration in Infants Born Preterm <u>Ketaki Inamdar PhD</u>, Stacey Dusing PhD, Peter Pidcoe PhD, Sheryl Finucane PhD, Leroy Thacker PhD, Jessica Manning BS, Dhriti Thakur BS, Kayla Bowler DPT, Virginia Chu PhD

#### SP21: Characterization of Clinical MRI Findings in Moderately-Late Preterm Infants Diagnosed with Cerebral Palsy: A Single Center Retrospective Study

<u>Elizabeth Fisher BS</u>, Divakar Mithal MD, PhD, Laura Bliss MD, Alok Jaju MD, Jessie Aw-Zoretic MD

#### SP22: Opioid Prescription Patterns among Commercially Insured Children with and without Cerebral Palsy

<u>Lubna Ayoubi MD</u>, Alecia Daunter MD, Jessica Pruente MD, Steven Erickson Pharmd, Daniel Whibley PhD, Daniel Whitney PhD

# SP23: Home Health Nursing Agencies' Services for Children with Medical Complexity: Caregiver and Home Health Nurse Perspectives

<u>Sarah Sobotka MD, MSCP</u>, Emma Lynch MPH, Savithri Nageswaran MD, MPH

# SP24: Investigating the Significance of Early Asymmetries with the Hammersmith Infant Neurological Examination in High Risk Infants

<u>Alison Goetgeluck PT, DPT, PCS</u>, Jordan Avery BA, Lynn Boswell MS, Sarah Heigel MSN, Aneta Jedraszko MPH, Mary Kay Santella BS, Christa Weigel PT, DPT, PCS, Raye-Ann Deregnier M.D.

#### SP25: Infants at High Risk of Spastic Cerebral Palsy Demonstrate More Selective Leg Joint Control During Supported Treadmill Stepping Compared to Supine Spontaneous Kicking

<u>Barbara Sargent PhD, PT</u>, Nora Almoadi PT, MS, Kathryn Havens PhD, Masayoshi Kubo PhD, PT, Tai-Wei Wu MD

SP26: The Use of a Modified Delphi Technique in Outcome Measure Development: Consensus with International Experts Caroline Elfassy OT, Sarah Cachecho OT, Jessica Collins OT, Johanne Higgins PhD, Laurie Snider PhD, Noemi Dahan-Oliel PhD

#### SP27: Identifying Gaps in Pre-Operative Care for Children with Severe Neurologic Impairment Undergoing Musculoskeletal Surgery: Initial Steps Towards Development of a Care Pathway

<u>Priya Sayal MD, FRCPC</u>, Catherine Diskin MB Bch BAO, MRCPI, Msc, Natasha Bath NP-Paediatrics, Mscn, Bscn, Stanley Moll RN(EC), MN, NP, Maitreya Coffey MD, FAAP, FRCP(C), Julia Orkin MD, M.Sc., FRCP(C)

# SP28: Knee and Ankle Co-Contraction in Children with Spastic Hemiplegic Cerebral Palsy

<u>Jessica Lewis PT, DPT</u>, Kirsten Tulchin-Francis PhD, Mallory Rowan MS, Jan Klamar MD

#### SP29: Meaningful Outcomes for Children with Brain-Related Disorders and Their Caregivers: What Do They Value Most? Myrna Heydenrijk-Kikkert MD

#### SP30: Do Early Prone Motor Skills Impact Long-Term Motor and Cognitive Developmental Profile in Very Preterm Infants? <u>Ketaki Inamdar PhD</u>, Virginia Chu PhD, Sheryl Finucane PhD, Peter Pidcoe PhD, Leroy Thacker PhD, Arya Salgaonkar MPT, Jennifer Burnsed MD, MS, Richard Stevenson MD, Mary Shall PT PhD, Amy Harper MD, Karen Hendricks-Muñoz MD, MPH, Meagan Miller CCRC, Jodi Darring BS, Stacey Dusing PhD

#### SP31: Comparison of Lower Limb 3D Kinematic Outcomes Between Marker-Based and Markerless Motion Capture System During Overground Walking in Children with Cerebral Palsy(CP)

<u>Jutharat Poomulna</u>, Brain Knarr PhD, Vivek Dutt MBBS, David Kingston PhD

#### SP32: Prevalence of Factors Associated with Motor Decline in Brazilian Adolescents with Cerebral Palsy and Implications For Participation

Paula Chagas PhD, Rayane Felix Lôbo Monteiro, Aline Toledo PhD, Ana Priscila Teixeira OT<sup>3</sup>, Nadine Cabral PT<sup>3</sup>, Ana Cristina Camargos PhD<sup>4</sup>, Deborah Fontes PT<sup>5</sup>, Egmar Longo PhD, Julia Castilho PT, Hércules Leite HRL, Viviann Pontes PT, Kënnea Ayupe PhD, Amanda Lima PT, Rafaela Moreira PhD, Alana Gomes PT, Luziani Santos PT, Rosane Morais PhD, <u>Isabella Sudati Msc</u>, Camila Santana Msc, Ana Carolina De Campos PhD

#### SP33: Update on The Reliability of Gait Analysis Interpretation in Cerebral Palsy: Inter-Institution Agreement Alison Hanson MS PT, Susan Rethlefsen DPT, Eva Ciccodicola DPT, Robert Kay MD, Henry Chambers MD, Tishya Wren PhD

SP34: Muscle Power Generation is Significantly Associated with Higher Levels of Walking Capacity, Activity and Participation in Individuals with Cerebral Palsy Mattie Pontiff PT, DPT, PhD, Noelle Moreau PhD, PT

# SP35: Pes Valgus and Tibial Torsion in Ambulatory Children with Cerebral Palsy

Eva Ciccodicola DPT, <u>Alison Hanson MS PT</u>, Oussama Abousamra MD, Tishya Wren PhD

SP36: Factors Facilitating Successful Transition From Pediatric to Adult Care Systems: Lived Experience of Young Adults with Neurodevelopmental Conditions and Their Caregivers

Rhonda Cady PhD, RN, Tori Bahr MD, Carrie Au-Yeung MPH

SP37: NICU To Early Intervention: Family Transition Experiences In The Two Months After Discharge

<u>Corri Stuyvenberg PT, DPT, MA</u>, Christine Spence PhD, Audrey Kane PhD, OTR/L, Amy Harper MD, Karen Hendricks-Muñoz MD, MPH, Jennifer Burnsed MD, MS, Richard Stevenson MD, Stacey Dusing PhD

SP38: Bimanual Coordination During a Functional Task in Children with Bilateral Cerebral Palsy Grace-Anne Herard DPT, Andrew Gordon PhD, Ya-Ching Hung Edd

SP39: The Treatment of Patellofemoral Instability in Cerebral Palsy Henry Chambers MD

SP40: Exploring the Role of Adaptive Sports in Children with Spina Bifida

Julia Shah MD, Daniel Whitney PhD, Jessica Pruente MD

SP41: Lifespan Morbidity Risk for Adults with Spinal Muscular Atrophy: A Retrospective Cohort Study Alecia Daunter MD, Erin Neil Knierbein DO, Daniel Whitney PhD

SP42: Axial Plane Boney Deformity (APD) in the Cerebral Palsy Pelvis: A Comparative Anatomical Study Akbar Syed MD, Jenny Zheng BS, <u>Christine Goodbody MD</u>, David Spiegel MD, Keith Baldwin MD

SP43: Early Detection of Neurodevelopmental Disorders in Pediatric Primary Care: A Scoping Review Paulette O'Hara OTD OTR/L, Pamela Talero Cabrejo OTD, OTR/L, Tracey Earland PhD, OTR/L, FNAP

SP44: Impact of Femoral Derotation Osteotomy and Equinus Varus Foot Correction on Transverse Plane Asymmetry in Patients with Hemiplegic Cerebral Palsy

<u>Mauro Morais Filho MD, Msc, PhD</u>, Marcelo Fujino MD, Cátia Kawamura PT, José Augusto Lopes Msc, Fernanda Azevedo MD

SP45: Investigating Sensory Circuits for Hand Function in Pediatric Hemiplegia: A Clinical to Preclinical Study Michelle Corkrum MD, PhD, Tong Wen MD, PhD, <u>Jason</u> <u>Carmel MD, PhD</u>

SP46: The Effectiveness of Robotic Assisted Therapy (RAT) in the Treatment of Children with Cerebral Palsy After Single Event Multilevel Surgery (SEMLS) - A Large Cohort Prospective Study

Marek Jóźwiak MD, Beata Adamczak MS, Zaid Al-Shakarchi BA

SP47: Grip Strength Follow-Up and Stability After 1 Year in Adults with Cerebral Palsy

Tomoko Sugiyama MD, Daniel Whitney PhD, Edward Hurvitz MD

#### SP48: Actigraphy Informs Distinct Real-World Arm Use Outcomes in Unilateral Cerebral Palsy Youngsub Hwang, Jeong-Yi Kwon PhD, Sungeun Kim

# SP49: The Relation of Caregiver-Reported Pain and Sleep Experiences in Cerebral Palsy

<u>Alyssa Merbler PhD</u>, Chantel Burkitt PhD, Breanne Breanne PhD, Alexis Friesen, Frank Symons PhD

# SP50: What Are Physiotherapists' Perceptions of Using an F-Word Framework When Working with Children and Young People with Cerebral Palsy?

<u>Xanthe Hodgson Graduate Diploma Physiotherapy, Masters</u> <u>Degree Advanced Physiotherapy</u>, Harriet Shannon PhD, Lucy Alderson PhD, Lesley Katchburian PhD

SP51: Improving the Physical Health of Children and Adults with Cerebral Palsy Thomas Moran Ph.D., Juntack Oh PhD

#### SP52: Long-Term Reoperation Risk and Causes for Revision After Spinal Fusion in Pediatric Patients with Cerebral Palsy and Scoliosis

Christopher Seaver BS, Candice Legister BS, Sara Morgan PhD, CPO, Casey Palmer BA, Eduardo Beauchamp MD, Tenner Guillaume MD, Walter Truong MD, Steven Koop MD, Joseph Perra MD, <u>Daniel Miller MD</u>

#### SP53: Standard AP Pelvis Radiographs Underestimate Femoral Head Coverage in Cerebral Palsy: A Three-

**Dimensional Computed Tomographic Comparison** <u>Benjamin Shore MD, MPH, FRCSC</u>, Hillary Nguyen BA, Pratik Pradhan BS, Mohammadreza Movahhedi PhD, Mallika Singh MS, Eduardo Novais MD, MPH, FRCSC, Ata Kiapour PhD

#### SP54: Comprehensive Three-Dimensional Hip Morphology in Cerebral Palsy: Validation of a Population-Based Radiographic Study

<u>Benjamin Shore MD, MPH, FRCSC</u>, Hillary Nguyen BA, Pratik Pradhan BS, Mohammadreza Movahhedi PhD, Mallika Singh MS, Eduardo Novais MD, MPH, FRCSC, Ata Kiapour PhD

SP55: Effective Care Coordination is Disproportionately Lacking in Families of Children with Cerebral Palsy: Results of the National Survey of Children's Health (2016-2020) Sarah Creveling MS, Mario Keko MPH, Haresh Rochani Drph, MPH, MBBS, Allison Mcintyre OTR/L, Nathalie Maitre MD, PhD, Joshua Vova MD, Christopher Modlesky PhD, <u>Gavin Colquitt PhD</u>

#### SP56: Adult Cerebral Palsy Patient-Reported Outcomes From A Community Registry: Follow-Up Report On Chronic Pain Findings

<u>Cristina Sarmiento MD</u>, Mary Gannotti PT, PhD, Paul Gross BA, Deborah Thorpe PT, PhD, Edward Hurvitz MD, Garey Noritz MD, Linda Krach MD

#### SP57: Knowledge Translation of Early Identification of Cerebral Palsy (Kite CP) Study: Rates of Early Cerebral Palsy Screening Among a High-Risk Prospective Cohort of Australian Infants

<u>Amanda Kwong PhD</u>, Alicia Spittle PhD, Catherine Morgan PhD, Roslyn Boyd PhD, Abbey Eeles PhD

#### SP58: The Prechtl's General Movement Assessment, Hammersmith Infant Neurological Examination, and Sensory Profile-2 in Prediction of Cerebral Palsy at Two Years of Age in High-Risk Infants

Hatice Adiguzel Ass. Prof., Halil Ibrahim Celik PhD, Yusuf Unal Sarikabadayi MD, Nevin Ergun Proffessor, <u>Bulent Elbasan PhD</u>

#### SP59: Effectiveness of a Four-Week Powered Wheelchair Training Intervention in Children and Young People with Severe Cerebral Palsy

<u>Mari Naaris Msc</u>, Marco Konings PhD, Maria Aufheimer Msc, Kathrin Gerling PhD, Hans Hallez PhD, Els Ortibus PhD, Elegast Monbaliu PhD

#### SP60: Phonation Style in Motherese Toward Pre-Linguistic Infants at High Risk of Cerebral Palsy

<u>Fabrizia Festante PhD</u>, Okko Räsänen PhD, Manu Airaksinen PhD, Olena Chorna MS, Viviana Marchi MD,PhD, Andrea Guzzetta PhD

# SP62: Biomechanical Properties of Hip Adductor Muscles in Children with Cerebral Palsy

<u>Ross Wohlgemuth M.S.</u>, Marie Villalba BS, Vedant Kulkarni MD, Jon Davids MD, Lucas Smith PhD

#### SP63: The Ventilatory Response to Acute Incremental Exercise in Individuals with Cerebral Palsy

<u>Linnéa Corell</u>, Emma Hjalmarsson PT, Rodrigo Fernandez-Gonzalo PhD, Jessica Norrbom PhD, Annika Kruse Dr, Eva Pontén MD, PhD, Ferdinand Von Walden MD, PhD

#### SP64: A Preliminary Prospective Study of the Trajectory of Pain Pre- and Post-Orthopedic Surgery in Children with Cerebral Palsy

Elizabeth Boyer PhD, Stacy Ngwesse, Aleksys Patterson, Lisa Lykken BS, Tom Novacheck MD, Frank Symons PhD, <u>Chantel</u> <u>Burkitt PhD</u>

#### SP65: Patient- and Family-Level Factors are Associated with Caregivers' Functional Priorities for Their Ambulatory Children with Spastic Cerebral Palsy

<u>Meghan Munger MPH</u>, Tom Novacheck MD, Nathan Shippee PhD, Timothy Beebe PhD, Beth Virnig PhD, MPH

# SP66: Autism and Neurodevelopmental Disability Risks in Children with Tracheostomies and Ventilators

<u>Sarah Sobotka MD, MSCP</u>, Emma Lynch MPH, Robert Graham MD, Michael Msall MD

#### SP67: Reaching and Grasping in Infants with Hemiparetic Cerebral Palsy in Mini-MACS Levels I and II

Thais Cabral PhD, <u>Elizabeth Maus DPT</u>, Angela Rittler OTD, OTR/L, Jill Heathcock MPT, PhD, Amy Darragh PhD

#### SP68: Evidence-Based Infant Assessment for Cerebral Palsy: Relationship to Clinical Diagnosis Timelines

<u>Ellen Sutter DPT</u>, Kellie Collins DPT, Melissa Villegas MD, Janet Legare MD, Jens Eickhoff PhD, Bernadette Gillick PhD

#### SP69: Body Mass Index in Children with Cerebral Palsy: Gross Motor Function Level, Eating and Drinking Ability, and Use of Medication as Predictors

<u>Buddhika Senevirathne BPT, Mphil</u>, Athauda Jeewanthi Msc, Jagath Munasinghe MD, Piyadasa Kodithuwakku PhD

# SP70: Effect of Social Disparity on Scoliosis Severity in Cerebral Palsy

Rachel Lenhart MD, Kevin Orellana BS, <u>Christine Goodbody MD</u>, Keith Baldwin MD

#### SP71: Social Determinants of Health for Children with Medical Complexity

Matthew Witham PhD, LMFT, Rhonda Cady PhD, RN

#### SP72: Scoliosis Development in Spinal Muscular Atrophy: The Influence of Genetic Severity, Functional Level, and Disease-Modifying Agents

Armagan Can Ulusaloglu MD, Ali Asma MD, Mena Scavina DO, William Mackenzie MD, Michael Shrader MD, <u>Jason Howard MD</u>

#### SP73: Adult Cerebral Palsy Patient-Reported Outcomes from a Community Registry: Follow-Up Report on the Impact of Gross Motor Function and Age on Functional Decline <u>Cristina Sarmiento MD</u>, Mary Gannotti PT, PhD, Paul Gross BA, Deborah Thorpe PT, PhD, Edward Hurvitz MD, Garey Noritz MD, Linda Krach MD

#### SP74: Effects Of Conversion From Gastrostomy To Gastrojejunostomy Tube Before Spinal Fusion For Children With Neuromuscular Scoliosis

Candice Legister BS, Chrystina James MD, Walter Truong MD, Tenner Guillaume MD, Danielle Harding PA-C, Casey Palmer BA, Sara Morgan PhD, CPO, Eduardo Beauchamp MD, Joseph Perra MD, <u>Daniel Miller MD</u>

#### SP75: Estimating The Prevalence And Incidence Of Cerebral Palsy In Children And Youth In BC: Implications For Multi-Level Surveillance

<u>Anya Smith PhD</u>, Qian Zhang MPH, Jeffrey Bone PhD, Stacey Miller Bsc(PT), Mrsc, Ash Sandhu Bsc, Trevor Fowler, Ethan Ponton Bsc, Varun Nair BS, Ceilidh Matthews BS, Ram Mishaal MD, Kishore Mulpuri MBBS, MS (Ortho), Mhsc (Epi), FRCSC

# SP76: Age-Related Decrease in Hypo-Sensitivity in People with CP

Ariel Lyons-Warren MD PhD, Danielle Barber MD PhD, Evelyne Kezia None, Aditya Mahat BS, Sruthi Thomas MD PhD, <u>Bhooma</u> <u>Aravamuthan MD, Dphil</u>

#### SP77: Effects of Experiential Learning in the Clinical Reasoning Skills of Allied Health Students Implementing Pediatric Constraint Induced Movement Therapy Heather Roberts PhD, Angela Shierk PhD, Brenna Merillat BS

#### SP78: Inter-Day Reliability of Leg Muscle Size, Echo Intensity, and Architecture Estimates From Ultrasound in Children with Cerebral Palsy

<u>Junsoo Lee BS</u>, Suzanne Vogler, Gavin Colquitt PhD, Kevin Mccully PhD, Christopher Modlesky PhD

#### SP79: Use of Temperature Monitoring Smart Socks for Early Pressure Sore Detection by Adolescents with Spina Bifida: A Feasibility and Accuracy Study

<u>Melissa Bent MD</u>, Abigail Padilla BS, Kelleen Lopez MPH, Veronica Beltran BS, Jacquelyn Valenzuela-Moss BS, Sam Wimmer BS, Michelle Chavez BA, Jordan Robinson MS

#### SP80: The Longitudinal Association Between Nutritional Status and Gross Motor Function in Children with Cerebral Palsy

<u>Stina Oftedal PhD, B Hlth Sc (Diet)</u>, Roslyn Boyd PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Robert Ware PhD, Kristie Bell PhD

#### SP81: CP EDEN: Simplify and Amplify Early Detection of Infants with Cerebral Palsy in Low Resource Settings

<u>Tasneem Karim MBBS, MPH, PhD</u>, Anna Te Velde Bappsc(Pthy); PhD, Annabel Webb Mres, Saifuddin Ahmed, Mohammad Shafiul Islam, Iskander Hossain, Catherine Morgan PhD, Iona Novak PhD, Khandaker Gulam PhD, Nadia Badawi PhD

### SP82: Motor Imagery in Individuals with Unilateral Cerebral Palsy

<u>Cathleen Buckon OTR/L, MS</u>, Susan Sienko PhD, Michael Aiona MD, Scott Frey PhD

#### SP83: Clinical Outcomes Measurement in Pediatric Lower Limb Prosthetics: A Scoping Systematic Review

Kevin Koenig MPO, CPO, Michelle Hall MS, CPO, FAAOP(D), <u>Caroline Gormley DO</u>, Sara Morgan PhD, CPO, Meghan Munger MPH, Mary Kaleta PT, DPT, PCS

#### SP84: Ankle-Foot Orthoses Among Children With Cerebral Palsy: A Cross-Sectional Population-Based Register Study Of 8,928 Children Living In Sweden, Norway, Finland, Iceland, Scotland, And Denmark.

<u>Jessica Stockman Msc</u>, Guðbjörg Eggertsdóttir MS, Mph, Mark Gaston MA Frcsed(Tr&Orth) PhD, Ira Jeglinsky Kankainen Associate Professor, Sandra Hollung PhD, Kirsten Nordbye Nielsen MS, Philip Von Rosen PhD, Ann Alriksson-Schmidt PhD

#### SP85: Osteotomy Rates in Pediatric Cerebral Palsy Patients in the United States From 1997-2019: HCUP KID Analysis Amanda Whitaker MD, Shana Kong BS

#### SP86: A Commitment That is Worth it: Investigating the Impact of Selective Dorsal Rhizotomy on Individuals with Non-Ambulatory Cerebral Palsy

<u>Amanda Walsh BS</u>, Kristen Blatt PT, DPT, Jeffrey Leonard MD, Kara Monnin PhD, Unni Narayanan MBBS, Msc, FRCSC, Natalie Truba PhD, Garey Noritz MD, Laurie Glader MD, FAAP

SP87: Hip Dysplasia in Adults with Cerebral Palsy Tomoko Sugiyama MD, Daniel Whitney PhD, Edward Hurvitz MD

#### SP88: Agreement Between the Gross Motor Ability Estimator-2 and the Gross Motor Ability Estimator-3 in Young Children with Cerebral Palsy

<u>Sam Pierce PT, PhD</u>, Julie Skorup DPT, Beth Smith PT, DPT, PhD, Thubi Kolobe PhD, Laura Prosser PT, PhD

# SP89: Is Pes Varus Associated with Knee Valgus During Gait in Children with Charcot-Marie-Tooth Disease?

Tishya Wren PhD, Susan Rethlefsen DPT, Noella Wren, <u>Robert Kay MD</u>

# SP90: Timely Diagnosis of Cerebral Visual Impairment: An Observational Study

Melissa Rice OD, Jillian Eltzroth BS, MPH, Terry Schwartz MD, Karen Harpster PhD, OTR/L

#### SP91: A Semi-Automated Ultrasound Approach to Estimate Migration Percentage of the Hip in Children with Cerebral Palsy

Thanh-Tu Pham Beng, Edmond Lou PhD, Lawrence Le PhD, John Andersen MD FRCPC

#### SP92: Changes in Sitting Balance After Selective Dorsal Rhizotomy and Inpatient Rehab and Durability of Change at 1 Year

<u>Heather Forst MA, OTR/L, BCP, CBIS</u>, NIKLAS DAMBERG BA, Tonye Sylvanus MBBS, Mark Jankowski MS

#### SP93: Early Detection Using the GMA to Identify High Risk Infants with Prolonged Hospitalization

Lynn Boswell MS, Aneta Jedraszko MPH, Jordan Avery BA, Crean Ann Marie DPT, Elyse Hahn MS, Sarah Heigel MSN, Jeanette Hill MS, Nicole Pouppirt MD, Mary Kay Santella BS, Stein Kristina MSOT, De Regnier Raye-Ann MD

#### SP94: The 6-Minute Frame Running Test is a Valid Cardiopulmonary Exercise Test in Individuals with Cerebral Palsy

Ferdinand Von Walden MD, PhD, Arnoud Edelman Bos Msc, <u>Linnéa</u> <u>Corell</u>, Rodrigo Fernandez-Gonzalo PhD, Jessica Norrbom PhD, Annika Kruse Dr, Eva Pontén MD, PhD, Petra Van Schie PT, PhD, Annemieke Buizer MD, PhD, Emma Hjalmarsson PT

#### SP95: Preliminary Epidemiology of Cerebral Palsy in Argentina: Findings of the Argentine Cerebral Palsy Register (RAR-PC)

<u>Maria De Las Mercedes Ruiz Brunner PhD</u>, Eduardo Cuestas PhD, Federico Sanchez BA, L. Johana Escobar Zuluaga BA, M. Elisabeth Cieri PhD, Ana Laura Condinanzi BA, Israt Jahan PhD, Khandaker Gulam PhD

#### SP96: Outcomes among Patients with Cerebral Palsy Undergoing Ankle Open Reduction Internal Fixation for Ankle Fractures

Meera Dhodapkar BA, <u>Ally Yang MD</u>, Will Jiang BS, Scott Halperin BS, David Frumberg MD, Jonathan Grauer MD

#### SP97: Does Size Really Matter? Incidence of Peri-Prosthetic Fractures After Femoral Osteotomy in Patients with Cerebral Palsy

Robert Kay MD, <u>Sam Wimmer BS</u>, Tishya Wren PhD, Susan Rethlefsen DPT, Oussama Abousamra MD

SP98: HABIT-ILE for Children with Hemiplegia: Describing the Relationship Between Intervention Content, Fine Motor Versus Gross Motor Goals, and Functional Outcome Change Lexie Lançon Mscot, Chloé Roy BS, William Fortin BS, Marie-Claude Cardinal MOT, Odette Bau MPT, Julie Desgagnés MA, Minxin Cheng MS, Yannick Bleyenheuft PhD, Geoffroy Saussez PhD, Maxime T. Robert PhD, <u>Danielle Levac Bsc.PT, Msc, PhD</u>

#### SP99: Reproducibility of Prechtl's General Movements Assessment and the Motor Optimality Score – Revised (MOS-R) in Infants 'At Risk' of Adverse Neurodevelopmental Outcomes

<u>Carly Luke Mpaedphys, Bphty</u>, Arend Bos PhD MD, Michelle Jackman PhD, Anya Gordon Mpaedphys, Mphtystudies, BS (Hons), Christine Finn BPT, Dyvonne Baptist BN, Robert Ware PhD, Roslyn Boyd PhD

#### SP100: Validation of in-Clinic Upper Extremity Functional Reach Measurement in Children with Cerebral Palsy with Microsoft Kinect

Garrett Rupp BA, John Collins MS, Avery Takata MS, <u>Patrick Curran MD</u>

SP101: Responsiveness and Minimal Important Change of Four Balance Measures in Adults with Bilateral Spastic Cerebral Palsy Undergoing Balance Rehabilitation <u>Hee Joung Joung PhD</u>, Jae Jung Min MD, Dae Hyun Kim MD, Chin Youb Chung MD, Moon Seok Park MD

SP102: Automatic Differentiation of Dystonia and Choreoathetosis Using Machine Learning During Functional Upper Limb Tasks in the Dyskinetic Cerebral Palsy Population Inti Vanmechelen Msc, Chandu Chankarla MS, Helga Haberfehlner PhD, Kaat Desloovere PhD, Hilde Feys PhD, Elegast Monbaliu PhD

#### SP103: Transition from Child to Adult Services for Young People with Cerebral Palsy in Ireland: Influencing Factors at Multiple Ecological Levels.

Jennifer Fortune PhD, <u>Jennifer Ryan PhD</u>, Aisling Walsh PhD, Michael Walsh, Claire Kerr PhD, Thilo Kroll PhD, Grace Lavelle PhD, Mary Owens, Owen Hensey, Meriel Norris PhD

#### SP104: The Effect of Ankle-Foot-Orthosis on Loading of the Uninvolved Extremity in Children with Hemiplegic Cerebral Palsy

<u>Tasos Karakostas MPT, PhD</u>, Ana-Marie Rojas MD, Jill Larson MD, Vineeta Swaroop MD, Luciano Dias MD

#### SP105: Hindfoot Varus in Children with CMT

<u>Jeremy Bauer MD</u>, Patrick Do BS, Jing Feng PhD, Stuart Ferguson MBBS SP106: Intra-Operative Simulated Weight Bearing Radiograph Predicts Foot Alignment at 1 Year Post-Op Following Equinus Surgery in Children with CP Vedant Kulkarni MD, Michael Firtha DO, Marie Villalba BS, Jon Davids MD

# SP107: Clinical Utility of a Genetic Diagnosis by Exome Sequencing in Patients with Cerebral Palsy

<u>Alexandra Santana Almansa MD</u>, Dustin Gable MD, PhD, Zoë Frazier MS, Abigail Sveden MS, CGC, Maya Chopra MBBS FRACP, Annapurna Poduri MD, MPH, Siddharth Srivastava MD

# SP108: Implementation of a Standardized CP Diagnostic Pathway for High-Risk Infants

<u>Ram Mishaal MD</u>, Vivian Wong BA, Carol Lai MPH, Chetna Jetha OT, Carolyn Chowne RN, Mscn, Mor Cohen-Eilig MD

SP109: Anti-Reflux Procedures in Children with Neurological Impairment: A National Survey of Physician Perspectives Tammie Dewan MD, Msc, Vishal Avinashi MD, MPH, Kate Nelson MD, PhD, Paul Beaudry MD, Msc, Nathalie Gaucher MD, PhD, Marie-Joelle Dore-Bergeron MD

SP110: Exploring Inequities in Health Care Resources and Services for Children with Cerebral Palsy (CP) in Europe Antigone Papavasiliou MD, PhD, FAAP, Agnieszka Kinsner-Ovaskainen MD, PhD, Daniel Virella MS,MD, Sandra Hollung PhD, Malika Malika Delobel MD, Katalin Hollody, David Neubauer MD, Catherine Arnaud MD, PhD

#### SP111: Reproducibility of Winters Et Al. Classification and Prevalence of Transverse Plane Asymmetry in Spastic Hemiplegic Cerebral Palsy

<u>Mauro Morais Filho MD, Msc, PhD</u>, Cátia Kawamura PT, Marcelo Fujino MD, José Augusto Lopes Msc, Laís Przysiada MD, Maria Eduarda Silva MD

SP112: Understanding Physical Activity During a Single Session of Robotic Gait Training Using Heart Rate Jessica Youngblood Msc, Tyler Santos None, Benjamin Norman Mkin, Elizabeth Condliffe PhD, MD

### SP113: Comparing Plantar Pressures Across

**Myelomeningocele Function Classifications** Kirsten Tulchin-Francis PhD, <u>Jessica Lewis PT, DPT</u>, Mallory Rowan MS, Jan Klamar MD

### SP114: Factors Influencing Receipt of Therapy Services in the NICU and After NICU Discharge

Stacey Dusing PhD, <u>Shaaron Brown DPT</u>, Jennifer Burnsed MD, MS, Christine Spence PhD, Audrey Kane PhD, OTR/L, Karen Hendricks-Muñoz MD, MPH, SPEEDI Research Team

#### SP115: Stakeholder Priorities Concerning Healthcare for Adults with Cerebral Palsy Across the Lifespan Ashley Whaley M.S., CCC-SLP, Mark Peterson PhD,

Rachel Byrne BS

SP116: Collagen Fibers within Hamstring Muscle of Children with Cerebral Palsy Show Re-Alignment During Dynamic Stretching

<u>Ross Wohlgemuth M.S.</u>, Marie Villalba BS, Vedant Kulkarni MD, Jon Davids MD, Lucas Smith PhD

SP117: 3-D Instrumented Gait Analysis of the Lower Extremity in Children with Flexible Pes Planus: What the Eyes Cannot See?

Mayuri Gad, Atul Bhaskar, Chasanal Rathod

SP118: Neurodynamics Derived From Early Neonatal Electroencephalography are Associated with Neurological and Developmental Function in Infants with Cerebral Palsy Jilda Vargus-Adams MD Msc, Rui Liu PhD, Kyle Cullion BS, Grace Westerkamp BS, Alexis Mitelpunkt MD, Brad Kurowski MD, MS, Kelly Greve PT, DPT, PhD, Bruce Aronow PhD, Amy Bailes PT PhD, Karen Harpster PhD, OTR/L, Stephanie Merhar MD, Ernest Pedapati MD

#### SP119: Botulinum Toxin Injection Dosing Does Not Predict Percentage of Rootlets Transected During Selective Dorsal Rhizotomy Mary Lynch MD, Joline Brandenburg MD

SP120: Contribution of Sensory Tract Integrity to Fingertip Force Modulation During Precision Grip in Children with Unilateral Cerebral Palsy

<u>Jennifer Gutterman MS</u>, Claudio Ferre PhD, Kathleen Friel PhD, Andrew Gordon PhD

#### SP121: Facilitators and Barriers for Parent Enactment of Intensive, Parent-Directed Early Intervention for Infants with Unilateral Cerebral Palsy

<u>Kimberley Scott PT, DPT, PhD</u>, Timothy Rethorn PT, DPT, Catherine Quatman-Yates PT, DPT, PhD, Jill Heathcock MPT, PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy, Roslyn Boyd PhD

### SP122: Change in Motor Error Over Time During Physical Therapy in Young Children with Cerebral Palsy

<u>Julie Skorup DPT</u>, Morgan Alcott DPT, Athylia Paremski BA, Laura Prosser PT, PhD

SP123: Core Outcome Measures in Acquired Childhood Aphasia: A Dutch National Longitudinal Study Femke Nouwens Dr., Robert Pangalila MD, PhD, Ineke Meulen, Van Der PhD

SP124: Blinded Assessor Training in a Pediatric Rehabilitation Multi-Site Randomized Clinical Trial Thais Cabral PhD, <u>Elizabeth Maus DPT</u>, Angela Rittler OTD, OTR/L, Sam Pierce PT, PhD, Amy Darragh PhD, Jill Heathcock MPT, PhD, I-Acquire Team PhD

SP125: A Physical Therapy Intervention Using Hippotherapy and the Equine Environment to Improve Upper Extremity Function and Participation in Children with Cerebral Palsy Julia Mazzarella PT, DPT, PhD, Jill Heathcock MPT, PhD SP126: Mental and Behavioral Health Access and Needs among Children with Medical Complexity Kristina Malik MD

SP127: The Effect of Intensive Rehabilitation Program on Motor and Cognitive Functions in Children with Cerebral Palsy

Guler Gozpinar MD, Tugba Gokbel MD, Melike Akarsu MS, Begum Capa Tayyare PhD, <u>Nigar Dursun MD</u>

SP128: Neuro Developmental Outcomes of Infants Recruited to High-Risk Infant Follow-Up Program in a Low Middle-Income Country: A Retrospective Longitudinal Cohort Study Ziad Mohamed Safinaz Bachelor Of Science (Honors) In Physiotherapy, Warnakulasuriya Fernando Bachelor Of Science (Honors) In Physiotherapy, Kudaduru Gedara Sujani Indunil Kumarasiri Bsc(Hons) In Physiotherapy, Nuwan Hithatiya Edirisooriyage MBBS, <u>Dilini Vipulaguna MD, MBBS, DCH</u>, Samanmali Sumanasena MD

SP129: Opening Pressure and Post-Lumbar Puncture Headache in Children Undergoing Intrathecal Baclofen Trial Amanda Summers BS, Jenny Wilson MD

SP130: Does Hip Flexion Contracture Influence the Result of Orthopedic Surgery in Ambulatory Children with Bilateral Cerebral Palsy?

<u>Jacques Riad</u>, Michael Shrader MD, Jason Howard Beng, B.Med. Sci., MD, FRCSC, Freeman Miller MD

#### SP131: Home-Based Upper Limb Rehabilitation for Children with Cerebral Palsy Living in Costa Rica: A Movement-Tracking Videogame with a Family-Centred Design

<u>Daniela Chan Viquez PT, Msc</u>, Heilyn Fernandez Huertas PT, Ajmal Khan Msc, Carles Montserrat PT, Msc, Fernanda Chacon Vargas BS, Sarah Munce PhD, Darcy Fehlings MD FRCPC Msc, Virginia Wright PT, PhD, Elaine Biddiss Masc, PhD, Peng

#### SP132: Short-Burst Interval Treadmill Training Increases Step Length and Stability for Children with Cerebral Palsy Charlotte Caskey BS, MS, Siddhi Shrivastav PT, MS, Kristie Bjornson PT, PhD, PCS, Desiree Roge MD, Chet T. Moritz PhD, Katherine Steele PhD

SP133: Goal Attainment, Communication Competencies, and Psychosocial Impact: An Eye-Tracking Intervention in Children with Dyskinetic Cerebral Palsy Saranda Bekteshi PhD, Petra Karlsson PhD, Floor Puttemans Msc, Ella Copermans Msc, Bernard Dan PhD, Elegast Monbaliu PhD

#### SP134: Stress and Subjective Workload in Relation to Goal Attainment and Communication Competencies in Children with Dyskinetic Cerebral Palsy: An Eye-Tracking Intervention Study

<u>Saranda Bekteshi PhD</u>, Petra Karlsson PhD, Ella Copermans Msc, Floor Puttemans Msc, Bernard Dan PhD, Elegast Monbaliu PhD

**SP135: Dysphagia in Children with Cerebral Palsy** <u>Christina Hardesty MD</u>, Mckay Jarman BS, Todd Otteson MD, MPH, Jill Azok MD, Tiffany Jarman BSN

#### SP136: Predictive Accuracy of Early Screening in First Nations Infants at Risk of Adverse Neurodevelopmental Outcomes in the LEAP-CP Study

<u>Carly Luke Mpaedphys, Bphty</u>, Leeann Mick-Ramsamy MPH, Arend Bos PhD MD, Robert Ware PhD, Anya Gordon Mpaedphys, Mphtystudies, BS (Hons), Chloe Taifalos BPT, Hailey Williams BPT, Maria Smith, Katherine Benfer PhD, Margot Bosanquet MD, Shaneen Leishman Bsc, Roslyn Boyd PhD

### SP137: Clinical Utility of Chromosomal Microarray and Next Generation Sequencing Testing in Children with Unexplained Intellectual Disability

<u>Dae-Hyun Jang</u>

SP138: Development and Validation of a Remote Video Acquisition and Analysis Protocol Using Artificial Intelligence (AI) for Evaluation of Gait

<u>Shri Harini Ramesh</u>, Edward Lemaire PhD, Natalie Baddour PhD, Kevin Cheung MD, Albert Tu FRCS(C)

#### SP139: Methodological Strategies Used to Develop One-Year Pain Intensity Trajectories in Children and Youth with Cerebral Palsy

<u>Heather Shearer DC, Msc, PhD</u>, Pierre Côté DC, PhD, Sheilah Hogg-Johnson Mmath, PhD, Darcy Fehlings MD FRCPC Msc

#### SP140: Practice Variation of Botulinum Toxin Injections

<u>Shannon Strader DO, MS</u>, Paul Gross BA, Darcy Fehlings MD FRCPC Msc, Joline Brandenburg MD, Patrick Galyean BS, Susan Zickmund PhD, Sruthi Thomas MD, PhD

#### SP141: The Effects of Dual Task Training in Children with Cerebral Palsy: A Scoping Review Meaghan Rubsam PT, DPT, PCS, Tanvi Bhatt PhD

#### SP142: Development of Best Practice Guidelines for the Peri- and Post-Operative Care of Patients with Implanted Programmable Devices Undergoing Spine Fusion

<u>Walter Truong MD</u>, Hiroko Matsumodo PhD, Jaysson Brooks MD, Patrick Cahill MD, Ryan Fitzgerald MD, Ying Li MD, Brandon Ramo MD, PSSG Pediatric Spine Study Group, Sara Morgan PhD, CPO

# SP143: Epidemiology of Fractures in Children with Cerebral Palsy

<u>Christina Hardesty MD</u>, Mckay Jarman BS, Grigory Manyak BA, Ian Dorney BS, Lukas Bobak BS, David Kaelber MD, PhD, MPH

#### SP144: Assessment of Proximal Femur and Acetabulum Growth in Children with Cerebral Palsy Based on Pamidronate Lines

Luiz Silva MD, <u>Freeman Miller MD</u>, Burak Kaymaz MD, Yusuke Hori MD, Kenneth Rogers PhD, Arianna Trionfo MD, Richard Bowen MD, Jason Howard Beng, MD, Michael Shrader MD

#### SP145: An Investigation of the Relationship Between Dystonia Severity and Functional Independence and Quality of Life in Children with Dystonia: A Preliminary Study Kamile UZUN AKKAYA PhD, Pelin ATALAN EFKERE Msc, Zekiye BAŞARAN Msc, Esra SERDAROĞLU PhD, Bulent Elbasan PhD

### SP146: Cognitive Debriefing to Develop a Survey of Bone Health Among Adults with Cerebral Palsy

<u>Jodi Kreschmer MS</u>, Shannen Bolde MS, Claire Kalpakjian PhD, <u>Daniel Whitney PhD</u>

#### SP147: Use of Gamification in Mobile Applications for Children with Disabilities: A Scoping Review

Ebrahim Mahmoudi Kojidi, Paul Yoo PhD, OT, <u>Ananya Chandra BA</u>, Roberta Cardoso PhD, Carlos Denner PhD, Annette Majnemer Bsc, Msc, PhD, <u>Keiko Shikako PhD</u>, Bachelor Occupational Therapy

SP148: Developmental Trajectory of High-Risk Premature Babies Tracked by DDST-II During 18 Months Of Age Soyoung Lee MD, PhD, Chulmin Park MD

#### SP149: Timely Surgical Intervention Leads to Better Outcome after Reconstructive Hip Surgery in Cerebral Palsy Patients <u>Renee Van Stralen MD</u>, Dagmar Kempink MD, Sandra Titulaer MD, Denise Eygendaal PhD, Max Reijman PhD, Jaap Tolk PhD

#### SP150: Teleconsultation for Children with Developmental Disabilities During the Corona Pandemic: Caregiver's Experience

<u>Urmila Dahake MD</u>, Jaya Prasad Tripathy MD

#### SP151: Engaging Stakeholders in the Development of a Shared Decision-Making Resource for the First Prosthesis Design After Lower Limb Amputation

<u>Chelsey Anderson PhD</u>, Stefania Fatone PhD, Mark Mañago DPT, PhD, Laura Swink OTR/L, PhD, Andrew Kittelson DPT, PhD, Dawn Magnusson PT, PhD, Cory Christiansen PT, PhD

#### SP152: Quantifying Immersive Virtual Reality Games for Rehabilitation: A Quantitative Assessment Tool for Matching Games to Therapy Tasks

Avital Goldfarb M, Adi Margalit Msc, Anat Meroz Cohen Msc, Einat Rubinstein BS, Moran Dekel BPT, MPH, Raz Martikaro Bpt, Roni Partouche BA, Gal Raz PhD, <u>Alexis Mitelpunkt MD</u>

#### SP153: Children's Medical Home in China (CMHC): Developmental Promotion Pathway for Enablement, Functioning And Participation

<u>Michael Msall MD</u>, Tingyu Li MD, Haiqi Li MD, James W Mitchell, Arlene Roman, Jianli Shi, Lucy Xueman Liu, Ting Zhang, Guoqiang Chen, Meng Chen MD, Xinhua Cui, Shiyao Wang, Hong Jing, Rui Gu, Xiaohui Yang, Guangxiu Yang, Li Li, Yingshan Shi MD

#### SP154: "I Expected That the System Would Guide Me" Qualitative Interviews with Parents of Children with Cerebral Palsy: Discussing Use of Video and Care Services

Aimee Miley BA BS, Sydney Thompson MS, BA, Bruce Aronow PhD, Amy Bailes PT PhD, Brad Kurowski MD, MS, Alexis Mitelpunkt MD, Kelly Greve PT, DPT, PhD, <u>Jilda Vargus-Adams MD Msc</u>

#### SP155: Test Item Properties of the Babyoscar (Observational Selective Control Appraisal) Scores Using Rasch Analysis Vanessa Barbosa OTR, CNT, PhD, Theresa Sukal-Moulton PT, DPT, PhD, Colleen Peyton PT, DPT

SP156: Axial Plane Pelvic Asymmetry (APPS) in Cerebral Palsy Results from Iliac-Wing External Rotation Deformity Akbar Syed MD, Jenny Zheng BS, David Spiegel MD, Christine Goodbody MD, Keith Baldwin MD

#### SP157: Microstructural Damages in the Corticospinal Tracts of Children with Hemiplegic Cerebral Palsy: A Multimodal **Neuroimaging Study**

Emily Brock B.S., Shannon Conrad MS, Sadra Shahdadian PhD, Yanlong Song PhD, Stephanie Acord MD, Yvette Johnson MD, Angela Shierk PhD, WARREN MARKS MD, Christos Papadelis PhD

#### SP158: Implementation of a Remote Individualized Home Program for Children and Adolescents with Cerebral Palsy **During the Covid-19 Pandemic**

RACHEL OLIVEIRA Msc, Priscilla Figueiredo PhD, Marisa Mancini PhD, Leonardo Abrahão MD, Edna Reis PhD, Andrew Gordon PhD, Marina Brandão PhD

#### SP159: Hip Surveillance and Treatment Patterns for Children with Spinal Muscular Atrophy

Mark Katsma D.O., Patrick Curran MD, Alyssa Wieand BS, Talia Soto BA, Andrew Skalsky MD

#### SP160: Instituting Hip Surveillance in a Large Metropolitan Area: The Progress Seen in 5 Years

Sean Tabaie MS MD, Ryan Travers BS, Curt Martinez BS, Alana Sadur BS

SP161: Remote Delivery of a Pediatric Constraint-Induced Movement Therapy Protocol (CHAMP-T): A Feasibility Study Jill Heathcock MPT, PhD, Amy Darragh PhD, Warren Lo MD, Elizabeth Maus DPT, Angela Rittler OTD, OTR/L

#### SP162: Impact of COVID-19 on the Children with Cerebral Palsy and Their Caregivers- Challenges in Health, Service Access and Quality of Life

Dilini Vipulaguna MD, MBBS, DCH, K A Chamika Hansamalee BS Physiotherapy

#### SP163: Joystick-Operated Ride-On-Toys as Enjoyable and Motivating Toys to Promote Bimanual Upper Extremity Activity and Functional Use in Children with Hemiplegic Cerebral Palsy (HCP)

Sudha Srinivasan PhD, Vaishnavi Shahane BS, Nidhi Amonkar BS, Pari Patel, Megha Tirumali, Patharapa (Candy) Promprasert, Kristin Morgan PhD, Patrick Kumavor PhD

#### SP164: Motor Phenotype Characterization in Neurodevelopmental Disorders with Underlying Genetic **Etiologies**

Alexandra Santana Almansa MD, Jennifer Bain MD, PhD, Siddharth Srivastava MD

#### SP165: Effects of Hand Arm Bimanual Intensive Therapy (HABIT) on the Perception of Hand Use and Real-World **Bimanual Performance in Children with Unilateral Cerebral Palsy**

Natalie Mcbryde BS, Exercise Physiology, Christine Lysaght DPT, Holly Holland OTR/L, Shailesh Gardas PT, Grant Kirkman BS Exercise Physiology, Casey Burroughs DPT, John Willson PT, PhD, Swati Surkar PT, PhD

#### SP166: A Novel Method to Identify Premotor Tracts of the **Cortico-Cerebellar Pathways in Children with Cerebral Palsy:** A Neuroimaging Diffusion Study

Ophelie Martinie MS, Philippe Karan MS, Catherine Mercier PhD, Maxime Descoteaux PhD, Maxime Robert PhD

#### SP167: Rethinking the Use of Cell Salvage in Neuromuscular **Lower Extremity Surgery**

Michelle Mo MD, Hillary Nguyen BA, Danielle Cook MA, Robert Brustowicz MD, Benjamin Shore MD, MPH, FRCSC

#### SP168: Accessibility of Outpatient Physical Therapy for Illinois Children Ages 0-3

Amelia Rodriguez, Jessica Trenkle DPT, Alison Liddle PT, MPP, PCS

### SP169: Online Parent Mediated Home Based Intervention for Children with Autism in During COVID-19 Pandemic, **Caregiver's Experience**

Urmila Dahake MD, Snehal Golangade MPT

#### SP170: Effects of Robot-Assisted Therapy on Gait Parameters in Pediatric Patients with Spastic Cerebral Palsy Faustyna Manikowska PhD, Anna Krzyżańska Msc, Sabina

Brazevič PhD, Marek Jóźwiak MD

#### SP171: Implementation of Telehealth in Pediatrics Physical **Therapy Education During COVID-19 Pandemic: The Perception of Internship Students**

Isabella Sudati PT, Rayane Felix Lôbo Monteiro, Ana Beatriz Nasser PT, Nelci Adriana Cicuto Ferreira Rocha PhD, Ana Carolina Campos PhD

#### SP172: Social Determinants of Health on the Intervention in **Early Cerebral Palsy**

Salathiel Kendrick-Allwood, Melissa Murphy PhD, Nathalie Maitre MD, PhD, Laverne Walker MSW, Katie Shin BS

#### SP173: Posture, Positioning, and Caregiver Reports Before Hip Surgery in Children with Cerebral Palsy

Ronni Rowe OTR, ATP, Lucy Ericson OTR/L, Abbye Gieringer OTR/L, Robert Wimberly MD, Laura Mayfield MPH, Gabrielle Marchelli MS, Chanhee Jo PhD, Karina Zapata PT, DPT, PhD

#### SP174: Barriers to Early Diagnosis of Cerebral Palsy: An **Assessment Survey of BC Physicians**

Vivian Wong BA, Chetna Jetha OT, Mor Eilig-Cohen MD, Stephanie Glegg PhD, Stacey Miller Bsc(PT), Mrsc, Olivia Scoten BS, Ram Mishaal MD

#### SP175: Cerebral Activity and Mobility Changes After an Intensive Task-Oriented Mobility Training for Children with Cerebral Palsy: Preliminary Results

<u>Isabella Sudati PT</u>, Luana Pereira Oliveira Gonçalves, Ana Paula Zanardi Da Silva BS, Laura Gabrielle Lima Gonçalves, Maria Julia Checo Melger, Daniela Godoi-Jacomassi PhD, Natalia Duarte Pereira PhD, Nelci Adriana Cicuto Ferreira Rocha PhD, Hendrik Santosa PhD, Theodore Huppert PhD, Ana Carolina Campos PhD

#### SP176: Functional Outcomes of Ultra Sound Guided Bont-A Injections for Children with Cerebral Palsy; Experience From Sri Lanka

Warnakulasuriya Fernando Bachelor Of Science (Honors) In Physiotherapy, Ziad Mohamed Safinaz Bachelor Of Science (Honors) In Physiotherapy, Priyanwada Wijayasinghe, Janani Kombala Liyanage Bsc In Physiotherapy, Kudaduru Gedara Sujani Indunil Kumarasiri Bsc(Hons) In Physiotherapy, Amila Karunathilake B.Sc. (Hons) In Physiotherapy, Thilini Madushika Bsc In Physiotherapy, Nuwan Hithatiya Edirisooriyage MBBS, Sandhya Jayasooriya Diploma In Nursing, Shirom Rajeev Siriwardana MBBS, <u>Dilini Vipulaguna MD, MBBS, DCH</u>, Samanmali Sumanasena MD

# SP177: Qualitative Trends in Adaptive Clothing in Children with Special Needs

Mackenzie Brown DO

#### SP178: Providing Anticipatory Guidance for Children with Gastrostomy Tubes: Impact of an Online Curriculum on Resident Documentation

<u>Emily Goodwin MD</u>, Maria Johnson BS, Elizabeth Rhyne MD, Evan Weber MD, Elena Huang MD, Matt Hall PhD, Robert Riss MD, Jeffrey Colvin MD

# SP179: Instrumented Glove as a Quantitative Measure of Muscle Tone in Assessing Hypertonicity

<u>Andrew Skalsky MD</u>, Alyssa Wieand BS, Anna Jensen MA, Jiaxi Liu MS, Cagri Yalcin PhD, Tse-Nga Ng PhD, Harinath Garudadri PhD, Talia Soto BA

#### SP180: The Development of Clinical Practice Considerations for Ankle-Foot Orthosis Prescription and Monitoring for Young Children with Cerebral Palsy

<u>Pegah Firouzeh PhD Candidate</u>, Christopher Morris Msc Dphil, Lyn Sonnenberg MD, MSC, Med, Patricia Manns PhD, Lesley Pritchard PT, PhD

#### SP181: Building Equity: Community-Based Adaptive Sports and Fitness Facilities in the United States Mary Beth Schubauer PT, PhD, ATP

# SP182: Monitoring Human Rights to Inform Public Health Policy and Research

<u>Ananya Chandra BA</u>, Keiko Shikako PhD, Bachelor Occupational Therapy, Raphael Lencucha PhD, Sebastien Jodoin PhD, Derrick Cogburn PhD

#### SP183: Neuromodulation Combined with Physical Therapy to Improve Spasticity, Walking Speed and Self-Reported Fatigue in Children with Cerebral Palsy

<u>Siddhi Shrivastav PT, MS</u>, Charlotte Caskey BS, MS, Kristie Bjornson PT, PhD, PCS, Katherine Steele PhD, Desiree Roge MD, Chet T. Moritz PhD

#### SP184: Quantification of Muscle Stiffness in Spastic Hemiplegic Cerebral Palsy Using Magnetic Resonance Elastography

<u>Diego Caban-Rivera BS</u>, Curtis Johnson PhD, Daniel Smith PhD, Michael Shrader MD, Stephanie Lee MS, Parma Montufar Wright BA, Chris Church MPT, Faaiza Kazmi MD, Jason Howard MD

#### SP185: Experience of Young Adults with Cerebral Palsy and Their Parents in the South East of England on Transition and How Their Ideal Adult Service Should Look

<u>Susie Turner Bsc (Hons) Physiotherapy</u>, Jane Goodwin PhD, Charlotte Nash Undergraduate, Johanna Smith Msc, Charlie Fairhurst MBBS, Jill Cadwgan MBBS

#### SP186: Spreading Electronic Health Record Innovations for Pediatric Rehabilitation: Toward Use of Standardized Documentation of Therapy Sessions

<u>Kelly Tanner PhD, OTR/L, BCP</u>, Ben Reader DPT, Sara O'Rourke MOT, OTR/L, BCP, Michelle Byars PT, Amy Bailes PT PhD

#### SP187: Unilaterally Affected Gait Pattern Differences in Children with Cerebral Palsy Versus Children with Post Infancy Brain Injury

<u>Jose Salazar-Torres Beng, Ph.D</u>, Chris Church MPT, Nancy Lennon DPT, Jason Howard Beng, MD, Freeman Miller MD, Thomas Shields BS, Laura Owens MD, Ran Zhang PhD, Michael Shrader MD

#### SP188: "He Could Go Wherever He Wanted": Driving Proficiency, Developmental Change, and Caregiver Perceptions Following Powered Mobility Training for Children 1-3 Years with Disabilities

<u>Heather Feldner PT, MPT, PhD, PCS</u>, Anna Fragomeni PT, MPT, PCS, Kim Ingraham PhD, Kiana Keithley, Patricia Kuhl PhD, Audrey Lynn, Andrew Meltzoff PhD, Katherine Steele PhD, Nicole Zaino PhD, Mia Hoffman MS

#### SP189: Muscle Architecture is Predictive of Lower Extremity Power Generation During a Novel Power Leg Press Test in Individuals with Cerebral Palsy (CP) Mattie Pontiff PT, DPT, PhD, Noelle Moreau PhD, PT

#### SP190: Reduction in limb-movement complexity at termequivalent age is associated with motor developmental delay in high-risk infants for cerebral palsy

<u>Hyun lee Shin</u>, Moon Suk Bang PhD, Hyung-Ik Shin PhD, Woo Hyung Lee PhD, Sung Eun Hyun PhD, Yaelim Lee, Jeong Min Kim MD

SP191: Mental Health Matters: Red Flags, Barriers, Facilitators, and Impact of Mental Health Management for Children with Developmental Disabilities and Their Families Kayla Heslon Bsc, Jessica Hanson Bsc, Msc, <u>Tatiana</u> <u>Ogourtsova PhD OT</u>

SP192: Developmental Coordination Disorder or Not? Factors Related to Misdiagnosis and Recommendations to Enhance Early Identification

Joelle Cohen Msc Applied OT, Riley Doskas Msc Applied OT, Kristin Ray Msc Applied OT, Laurie Riel-Pare Msc Applied OT, <u>Tatiana Ogourtsova PhD OT</u>

#### Booth 100 – Ann & Robert H. Lurie Children's Hospital of Chicago

The Pediatric Neurosurgery division at Lurie Children's Hospital is a top 10 program which provides exceptional care to children with neurological conditions. Our mission is to offer comprehensive and innovative neurosurgical treatments to all children, ensuring their wellbeing and long-term health. Our commitment to multidisciplinary collaboration facilitates patient-centric care. The management of movement disorders caused by cerebral palsy demonstrates such comprehensive and personalized care. Dr. Raskin and colleagues are dedicated to providing that comprehensive approach to managing CP, focused on improving mobility, reducing hypertonia from spasticity and dystonia, and enhancing the overall quality of life for children.

www.luriechildrens.org/en/specialties-conditions/pediatricneurosurgery/c

#### Booth 101 - United Cerebral Palsy

United Cerebral Palsy is the indispensable resource for individuals with cerebral palsy and other disabilities, their families, and communities. Founded in 1949, UCP's 56 affiliates – 54 in the U.S. and 2 in Canada – provide disability programs, resources, services, educational instruction and workforce training annually for more than 150,000 children and adults at all levels of ability and stages of life. UCP believes people with disabilities deserve to be treated as full members of an inclusive society to achieve their greatest potential and "live life without limits."

www.ucp.org

#### Booth 102 – GeneDx

GeneDx delivers personalized and actionable health insights that inform diagnosis, direct treatment and improve drug discovery. The company is transforming healthcare through its industry-leading exome and genome testing and interpretation, fueled by one of the world's largest rare disease data sets and its powerful clinical interpretation engine, Centrellis. GeneDx is uniquely positioned to accelerate the use of genomic and largescale clinical information to enable precision medicine as the standard of care.

www.genedx.com/

#### Booth 104 - Nemours Children's Health

Families from around the world come to the Cerebral Palsy Center at Nemours Children's Hospital, Delaware. That's because we help kids with cerebral palsy (CP) live their best life.

Led be renowned specialists in orthopedics, neurology, neurosurgery, rehabilitation and more, we have everything your child needs, all in one place. We work as a team and plan care focused around your child.

www.nemours.org/services/cerebral-palsy-center.html

#### **Booth 105 – Orthopediatrics**

Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 46 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This product offering spans trauma and 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 over 70 countries outside the United States.

www.orthopediatrics.com

#### **Booth 108 – Trexo Robotics**

Trexo Robotic Gait Trainer Helps Children Gain Strength, Endurance and Proper Gait Patterns. Trexo's adjustability makes it a versatile tool to help most children with a disability experience over-the-ground walking. "The benefits of this device is endless. Being able to use this device on a regular basis just to fine tune their gait pattern, stretch out their muscles, and improve their gait styles would be very beneficial!" - JO-ANNE WELTMAN, OWNER OF S.M.I.L.E. THERAPY FOR KIDS

#### **Booth 109 – Amneal Pharmaceuticals**

Amneal Pharmaceuticals, Inc. (NYSE: AMRX), headquartered in Bridgewater, NJ, is focused on the development, manufacturing and distribution of generic and specialty drug products.

Amneal has an extensive generics portfolio of approximately 250 product families and is expanding its portfolio to include complex dosage forms such as biosimilars, in a broad range of therapeutic areas. The Company also markets a portfolio of branded pharmaceutical products through its Specialty segment focused principally on central nervous system and endocrine disorders.

amneal.com

#### Booth 112 - Aretech

Aretech is the world leader in robotic body-weight support systems. At the core of all Aretech products is our patented body-weight support system that provides dynamic BWS and fall protection to the patient as they perform therapy activities. Aretech's offers two overground systems. ZeroG 3D features 3-dimensional tracking so the patient can move freely in any direction within a workspace up to 500 square feet. ZeroG consists of a robotic trolley which rides on an overhead track for gait, balance, and perturbation training.

www.aretechllc.com/

# Booth 113 – Medical Rehabilitation Research Resource (MR3) Network

The Medical Rehabilitation Research Resource (MR3) Network comprises six Rehabilitation Research Resource Centers that provide infrastructure and access to expertise, technologies, and resources to foster clinical and translational research in medical rehabilitation. MR3 Network centers offer expertise from the cell to whole body across the lifespan to implementation into practice with expertise in regenerative rehabilitation, neuromodulation, pediatric rehabilitation, technology for real-world assessment, and translation/dissemination research.

ncmrr.org/

#### **Booth 115 – HMS School for Children with Cerebral Palsy**

HMS School for Children with Cerebral Palsy is an approved private school in Philadelphia serving children with Cerebral Palsy and traumatic brain injury at birth. Located in Philadelphia, Pennsylvania, for over 140 years, HMS has provided top level care and education to children who need it most.

www.hmsschool.org

#### Booth 116 - Cook Children's Health Care System

Cook Children's Health Care System embraces an inspiring promise- to improve the health of every child in our region through the prevention and treatment of illness, disease and injury. Based in Fort Worth, Texas, we're proud of our long and rich tradition of not only serving our community but patients around the world.

www.cookchildrens.org

#### Booth 117 - Galileo USA

Are you ready to accelerate patients functional outcomes? Galileo for all ages & abilities will optimize exercises through neuromuscular mechano-stimulation in short training times to knock out spasticity and train the whole-body in a small footprint. With 48 kids studies and 450+ studies over 26 years in all populations Galileo's evidence-based devices are the gold standard in medical/fitness with full-line of precision, sidealternating devices used in positions standing, tilt tables, chairs and dumbbells.

We love collaborating with passionate experts dedicated to advancing rehab to improve lives. With purchase comes education, training materials, posters and more. For information check out www.GalileoUSA.

#### Booth 200 - Gillette Children's

Gillette Children's is a global beacon of care for patients who have brain, bone, and movement conditions that start in childhood. Gillette Children's hospital and clinics have earned national and world renown for excellence in the treatment of cerebral palsy, gait and motion analysis, pediatric orthopedics, pediatric neurology and neurosurgery, and pediatric rehabilitation medicine.

Through innovative research, treatments, and supportive technologies, Gillette Children's focuses on what is possible. If a solution does not exist, we build it. If a question is unanswered, we research it. If a child has a dream, it becomes our dream, too.

www.gillettechildrens.org/

#### Booth 203 – Piramal Critical Care

With nearly 20 years in the healthcare industry, Piramal Critical Care, (PCC) is committed to delivering critical care solutions to patients and healthcare providers. PCC is leading the way in intrathecal medicine with offerings for pain (MITIGO) and spasticity management (Gablofen) while representing a culture built on innovation and service.

www.piramalcriticalcare.com

#### Booth 204 - SPIO Inc

SPIO<sup>™</sup> (Stabilizing Pressure Input Orthosis) is a dynamic compression system made of patented, breathable, Lycra-blend material with a multi-directional stretch and high rebound factor. SPIO<sup>™</sup> assists with stability and provides feedback through deep pressure and tactile stimulation. The unique compression ratios and design improve functional movement; limb and body position awareness; and general stability and balance.

www.spioworks.com

#### Booth 205 - Ora Medical

Ora Medical is a startup whose mission is to improve access to rehabilitation services for all people with limited mobility.

They develop innovative walking assistance tools and remote rehabilitation solutions to address this pressing need.

www.oramedical.ca/

#### Booth 206 - Bionic Power Inc.

Bionic Power's purpose is to design and develop lower-body smart orthoses that improve quality of life by enhancing personal mobility and walking abilities. STAND TALLER, WALK STRONGER™

We are a Canadian, privately held company that has developed and holds IP rights on wearable technology. This technology addresses the rapidly growing market for mobility assistance in patients with knee pathologies. Our Agilik smart orthosis targets pediatric patients with crouch gait due to various pathologies such as CP, spina bifida, muscular dystrophy and other kneeextension-deficiency disorders whose strength and endurance often deteriorate as they get older.

bionic-power.com

#### Booth 207 - Ipsen Biopharmaceuticals, Inc.

Ipsen is a global biopharmaceutical company focused on innovation and specialty care. At Ipsen, we focus our resources, investments and energy on discovering, developing and commercializing medicines in three key therapeutic areas – Oncology, Rare Disease and Neuroscience. Our North American operations are located in Cambridge, Massachusetts, one of the company's three global hubs. Based in the heart of Kendall Square, our fully integrated biopharmaceutical business includes Commercial, Research & Development, Manufacturing, and Business Development. Combined with our Canadian headquarters in Mississauga, Ontario, and other locations, we employ approximately 600 people in North America. For more information please visit www.ipsenus.com.

#### Booth 208 - Scottish Rite for Children

Scottish Rite for Children treats many of the world's most complex orthopedic cases, as well as certain related arthritic and neurological disorders and learning disorders, such as dyslexia. The specialists in our six Centers for Excellence spend a lifetime practicing, researching and pioneering pediatric orthopedic care.

scottishriteforchildren.org/

#### Booth 210 - Possibility Neurotechnologies

Possibility Neurotechnologies is dedicated to integrating braincomputer interface (BCI) technology into everyday life, enabling those with severe neurological disabilities to interact and communicate in transformative ways. Our flagship product, Think2Switch™, serves as a middleware solution, allowing individuals to control household electronic devices using only their thoughts. By creating user-friendly and accessible technology, we aim to enhance independence and quality of life, making previously unimaginable interactions possible for those in need.

#### Booth 211 - Inuka Rehabilitation Hospital

Inuka Rehabilitation Hospital is the only rehabilitation hospital in Tanzania. It serves about 100 patients per day or 2500 per month. The top diagnosis in children are Cerebral Palsy, Global Developmental Delay, Rickets, Clubfoot, autism and intellectual disability. Staff includes 2 physicians, 1Physician assistant, 3 Physical therapists, 2 Occupational therapistts, 3 orthopedic technicians, 5 nurses and 2 social workers.

#### Booth 212 - Shirley Ryan Abilitylab

The Shirley Ryan AbilityLab, formerly the Rehabilitation Institute of Chicago (RIC), is the global leader in physical medicine and rehabilitation for adults and children with the most severe, complex conditions — from traumatic brain and spinal cord injury to stroke, amputation and cancer-related impairment. It's care and research designated the "No. 1 Rehabilitation Hospital in America" by U.S. News & World Report every year since 1991. Shirley Ryan AbilityLab became the first-ever "translational" research hospital in which clinicians, scientists, innovators and technologists work together in the same space, surrounding patients, discovering new approaches and applying (or "translating") research real time.

#### **Booth 213 – Altimate Medical**

Since 1987, Altimate Medical and its EasyStand brand has led the standing industry with unsurpassed technology. Altimate Medical has expanded its product portfolio and made several acquisitions of well-known brands within the complex rehab technology market. The Altimate Medical brands include: ActiveAid, EasyStand, Justify It, Zing, and Medical Positioning.

www.easystand.com

#### Booth 215 - BTS Bioengineering

BTS Bioengineering connects the world of healthcare and sport with cutting-edge motion capture technologies.

The ultimate goal of BTS Bioengeneering technologies is to help people overcome their restricted mobility and enhance their performance so that they can face life and competition to the best of their ability. We develop technologies as we are very familiar with the needs of the people for whom they are intended.

For patients and sports people, of course, but primarily for doctors, rehabilitators, physiotherapists, and athletic trainers, who need to find the same simplicity and fluidity in their use as someone who moves confidently.

www.btsengineering.com

#### Booth 216 - Pathways.org

Pathways.org creates and distributes free tools to maximize all children's motor, sensory, and communication development. They empower parents to work with their healthcare provider to understand and encourage their baby's development to keep them on track or catch potential delays early. They promote screening of motor, sensory, and communication development by 4 months of age, to take advantage of baby's neuroplasticity.

#### Booth 300 - Etac

Founded in 1973, Etac is a world-leading developer and provider of ergonomic assistive devices and patient handling equipment. Etac offers state-of-the-art products for a wide range of daily needs and care settings, for people at all stages of life. Our ambition is to provide solutions that optimize quality of life for the individual, family members and caregivers.

www.etac.com/en-us/us/

#### Booth 303 - SpineX, Inc.

At SpineX we are pushing the boundaries of research to find the most effective solutions for people living with neurological conditions. We are a clinical-stage medtech company developing noninvasive spinal cord neuromodulation therapies to rewire and retrain the spinal cord.

spinex.co

#### **Booth 305 - Shriners Children's**

Shriners Children's is a leader in providing care for orthopedic conditions, burn injuries, spinal cord injuries and other spine disorders, rehabilitation, sports injuries and craniofacial conditions. We also offer specialized services, including orthotics and prosthetics and motion analysis. We strive to provide the care and support our patients need to reach their goals and discover their full potential. All care and services are provided regardless of the families' ability to pay or insurance status.

www.shrinerschildrens.org

#### Booth 306 - SK Life Science, Inc.

SK Life Science, Inc. is focused on developing treatments for CNS disorders.

We have a pipeline of eight compounds in development. The first approved drug is XCOPRI, an anti-epileptic drug indicated for focal seizures in adult patients.

For more information on XCOPRI or SK life science, visit www. XCOPRIhcp.com or www.SKLifeScienceInc.com

#### Booth 308 - St. Andrew's Children's Clinic

The mission of St. Andrew's Children's Clinic in Nogales, Arizona is to provide free, specialized medical care to children living in Mexico who cannot get the care or afford the care they need in their home country

#### Booth 309 - Jazz Pharmaceuticals

At Jazz, we develop life-changing medicines for people with limited or no options, so they can live their lives more fully. By transforming biopharmaceutical discoveries into novel medicines, we are working to give people around the world the opportunity to redefine what's possible – to make the "small wins" big again.

#### Booth 310 - PTC Therapeutics, Inc.

PTC is an established global biopharmaceutical company that delivers transformative therapies for people living with rare diseases. For 25 years, we have been harnessing our scientific platforms to create new therapies that address the underlying cause of the disease and deliver on our promise to create more moments for patients.

www.ptcbio.com/

#### Booth 311 - LSVT Global, Inc.

LSVT Global offers world-class continuing education courses for speech, physical and occupational therapists globally in our evidence-based and effective treatments for Parkinson's, Pediatrics, and other Populations! LSVT LOUD and LSVT BIG are foundational speech, physical and occupational therapies grounded in over 30 years of scientifically validated research. Our newest product, LSVT LOUD for KIDS, is the result of 20 years of research exploring the impact of LSVT LOUD treatment to improve communication in childhood populations with motor speech disorders. Join our global network and partner with us on our mission.

Inspire hope. Be empowered. Transform lives.

#### Booth 312 - Ultraflex Systems, Inc.

For 32+ years Ultraflex Systems, Inc. is a leading researcher, developer and manufacturer of patented components and custom orthoses utilizing adjustable torsion and elastomeric springs for human limbs to improve joint biomechanics with improved alignment, training, lengthening and strengthening of muscles/ tissues for patients with neuro/ortho limb dysfunction. Our CFAB is 100% digital with industry leading 3 day or less turnaround from receipt of cast or scan. See our latest generation Ultraflex One and third generation ADR ankle components that outperform competitors in low mass, force range

#### Booth 313 - Phoenix Children's

Nationally recognized as a premier destination for pediatric medical care, research, and medical education, Phoenix Children's provides care to the fourth largest pediatric market in the 5th largest city in the United States, serving the Phoenix/Scottsdale/ Tempe metropolis. The Phoenix Children's healthcare system is rapidly growing to facilitate patient access including multiple ambulatory buildings, and scheduled opening of satellite hospitals throughout the county.

#### Booth 314 - Ivy Rehab for Kids

Within the Ivy Rehab Network, Ivy Rehab for Kids delivers physical therapy, occupational therapy, speech therapy, and feeding therapy to cater to our patients and parents. Guiding children from birth to adulthood, we provide personalized, timely therapy in a caring environment, under the attentive care of our committed staff. Our skilled team designs individualized treatment plans, closely collaborating with each patient and their care team to create the best strategy. With 150+ clinics across 10 states, we're committed to serving the pediatric community. Find a nearby clinic at www.ivyrehabforkids.com to embark on the journey toward exceptional care.

#### Booth 315 - MARS VR Lab

MARS VR LAB is a group of passionate medical, therapeutic and technology- driven people helping to discover the wonder of childhood with those who need it most.

https://marsvrlab.com/

# **Booth 316 – Fluffy Friends for Children with Chronic Conditions**

Fluffy Friends is a trauma-informed program that enhances physician rapport, which has been proven to improve clinical outcomes. The goals are to ensure patients feel safe and secure in their physicians' care enough to ameliorate medically induced post-traumatic stress disorder and mitigate physician burnout by improving work-life fulfillment. Each Fluffy Friend has a representation of their diagnoses in a secret pocket, so patients don't feel so alone. They can take their Fluffy Friend to sleepovers, etc. and avoid the social ramifications and stigma that come with disclosure. The storybook guide provides physicians with a simple method to introduce Fluffy Friends.

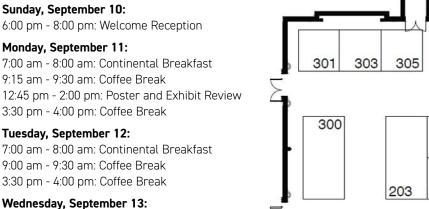
www.fluffyfriends3c.org

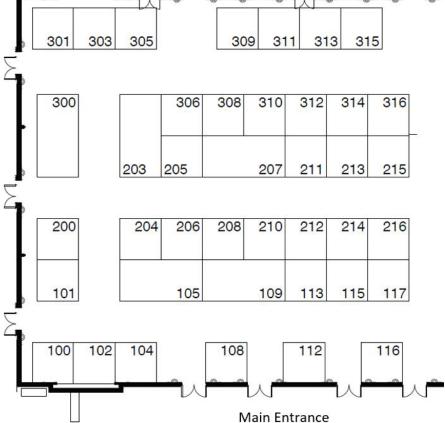
### Exhibit Hall

#### **EXHIBIT HALL HOURS**

7:00 am - 8:00 am: Continental Breakfast

9:00 am - 9:30 am: Coffee Break





Company	Booth #
Ann & Robert H. Lurie Children's Hospital of Chicago Pediatric Neurosurgery Department	100
United Cerebral Palsy	101
GeneDx	102
Nemours Children's Health	104
Orthopediatrics	105
Trexo Robotics	108
Amneal Pharmaceuticals	109
Aretech	112
Medical Rehabilitation Research Resource (MR3) Network	113
HMS School for Children with Cerebral Palsy	115
Cook Children's Health Care System	116
Galileo USA	117
Gillette Children's	200
Piramal Critical Care	203
SPI0 Inc	204
Ora Medical	205
Bionic Power Inc.	206
Ipsen Biopharmaceuticals, Inc.	207

Company	Booth #
Scottish Rite for Children	208
Possibility Neurotechnologies	210
Inuka Rehabilitation Hospital	211
Shirley Ryan Abilitylab	212
Altimate Medical	213, 214
BTS Bioengineering	215
Pathways.org	216
Etac	300
SpineX, Inc.	303
Shriners Children's	305
SK Life Science	306
St. Andrews Children's Clinic	308
Jazz Pharmaceuticals	309
PTC Therapeutics, Inc.	310
LSVT Global, Inc.	311
Ultraflex Systems, Inc.	312
Phoenix Children's	313
Ivy Rehab for Kids	314
MARS VR Lab	315
Fluffy Friends for Children with Chronic Conditions	316

### Additional Displays

### Local Lounge Listing

Visit Chicago based organizations in the South Alcove just outside of the Exhibit Hall

Center For Independence Through Conductive Education

**RePlay for Kids** 

### Mac Keith Press Display

Mac Keith Press will be located in the North Alcove outside of the exhibit hall

### **Ipsen Product Demonstration**

Ipsen will have several opportunities for product demonstrations taking place in the 5th Floor Office (behind the registration desk). Space is limited.

Monday: 1:40 PM - 2:00 PM Tuesday: 1:30 PM - 1:50 PM, 1:00 PM -1:20 PM, and 3:00 PM- 4:00 PM

# **THANK YOU TO OUR SPONSORS!**

# PLATINUM LEVEL





# GOLD LEVEL



# SILVER LEVEL









# **BRONZE LEVEL**



















# ESSENTIAL LEVE

Holland Bloorview Kids Rehabilitation Hospital











AltimateMedical creating products, changing lives



Adine Ray Usher, EdD Consultant/Advocate for Students with Physical Disabilities



OVEMENT





#### PLATINUM:

#### Ipsen Biopharmaceuticals, Inc.

Ipsen is a global biopharmaceutical company focused on innovation and specialty care. At Ipsen, we focus our resources, investments and energy on discovering, developing and commercializing medicines in three key therapeutic areas – Oncology, Rare Disease and Neuroscience. Our North American operations are located in Cambridge, Massachusetts, one of the company's three global hubs. Based in the heart of Kendall Square, our fully integrated biopharmaceutical business includes Commercial, Research & Development, Manufacturing, and Business Development. Combined with our Canadian headquarters in Mississauga, Ontario, and other locations, we employ approximately 600 people in North America. For more information please visit www.ipsenus.com.

#### Orthopediatrics

Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 46 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This product offering spans trauma and 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 over 70 countries outside the United States.

www.orthopediatrics.com

#### GOLD:

#### Jazz Pharmaceuticals

At Jazz, we develop life-changing medicines for people with limited or no options, so they can live their lives more fully. By transforming biopharmaceutical discoveries into novel medicines, we are working to give people around the world the opportunity to redefine what's possible – to make the "small wins" big again.

#### SILVER:

#### **Amneal Pharmaceuticals**

Amneal Pharmaceuticals, Inc. (NYSE: AMRX), headquartered in Bridgewater, NJ, is focused on the development, manufacturing and distribution of generic and specialty drug products.

Amneal has an extensive generics portfolio of approximately 250 product families and is expanding its portfolio to include complex dosage forms such as biosimilars, in a broad range of therapeutic areas. The Company also markets a portfolio of branded pharmaceutical products through its Specialty segment focused principally on central nervous system and endocrine disorders.

amneal.com

#### **DePuy Synthes**

At DePuy Synthes, our mission is to keep people moving through innovations in orthopaedic surgery, support and education for providers, and a dedication to improving diversity, inclusivity, and equality throughout the healthcare system.

With new advancements in orthopaedic devices, medical technology, and digital surgery across the continuum of care, we are proud to provide surgeons with solutions as diverse as their patients.

www.jnjmedtech.com/en-US/companies/depuy-synthes

#### **Gillette Children's**

Gillette Children's is a global beacon of care for patients who have brain, bone, and movement conditions that start in childhood. Gillette Children's hospital and clinics have earned national and world renown for excellence in the treatment of cerebral palsy, gait and motion analysis, pediatric orthopedics, pediatric neurology and neurosurgery, and pediatric rehabilitation medicine.

Through innovative research, treatments, and supportive technologies, Gillette Children's focuses on what is possible. If a solution does not exist, we build it. If a question is unanswered, we research it. If a child has a dream, it becomes our dream, too.

www.gillettechildrens.org/

#### **Mac Keith Press**

Mac Keith Press was founded by Ronnie Mac Keith in 1959 to improve the lives of disabled children, their families and carers by extending the knowledge and understanding of the fields of developmental medicine and paediatric neurology. We are an independent, registered charity and funded by the sale of our publications. These include 150+ books, courses, videos, and the journal of Developmental Medicine and Child Neurology.

Mac Keith Press aims to improve the care of children with neurodevelopmental disability by extending the knowledge

and understanding of developmental medicine and paediatric neurology. We publish the field-leading journal,

Developmental Medicine & Child Neurology, and books and courses in related subject areas. Our publications are of interest to researchers, clinicians, therapists, parents and all involved in the care of children and young people with neurodevelopmental conditions.

mackeith.co.uk/

Visit them in the North Alcove on the 5th floor at the AACPDM Annual Meeting!

#### **BRONZE:**

#### La Rabida Children's Hospital

Located on Chicago's south side, La Rabida Children's Hospital is a pediatric safety net hospital providing specialized, familycentered health care to children with medically complex conditions, disabilities, and chronic illness. Through expertise, compassion, and advocacy we help children and their families reach their fullest potential, regardless of their ability to pay.

https://larabida.org/

#### LSVT Global, Inc.

LSVT Global offers world-class continuing education courses for speech, physical and occupational therapists globally in our evidence-based and effective treatments for Parkinson's, Pediatrics, and other Populations! LSVT LOUD and LSVT BIG are foundational speech, physical and occupational therapies grounded in over 30 years of scientifically validated research. Our newest product, LSVT LOUD for KIDS, is the result of 20 years of research exploring the impact of LSVT LOUD treatment to improve communication in childhood populations with motor speech disorders. Join our global network and partner with us on our mission.

Inspire hope. Be empowered. Transform lives.

#### Nemours Children's Health

Families from around the world come to the Cerebral Palsy Center at Nemours Children's Hospital, Delaware. That's because we help kids with cerebral palsy (CP) live their best life.

Led be renowned specialists in orthopedics, neurology, neurosurgery, rehabilitation and more, we have everything your child needs, all in one place. We work as a team and plan care focused around your child.

www.nemours.org/services/cerebral-palsy-center.html

#### SpineX, Inc.

At SpineX we are pushing the boundaries of research to find the most effective solutions for people living with neurological conditions. We are a clinical-stage medtech company developing noninvasive spinal cord neuromodulation therapies to rewire and retrain the spinal cord.

spinex.co

#### **United Cerebral Palsy**

United Cerebral Palsy is the indispensable resource for individuals with cerebral palsy and other disabilities, their families, and communities. Founded in 1949, UCP's 56 affiliates — 54 in the U.S. and 2 in Canada — provide disability programs, resources, services, educational instruction and workforce training annually for more than 150,000 children and adults at all levels of ability and stages of life. UCP believes people with disabilities deserve to be treated as full members of an inclusive society to achieve their greatest potential and "live life without limits."

www.ucp.org

#### **Neurocrine Biosciences**

Neurocrine Biosciences, Inc. is an American biopharmaceutical company founded in 1992. The company is headquartered in San Diego, California, and led by CEO Kevin Gorman. Neurocrine develops treatments for neurological and endocrine-related diseases and disorders.

www.neurocrine.com/

#### Shirley Ryan AbilityLab

The Shirley Ryan AbilityLab, formerly the Rehabilitation Institute of Chicago (RIC), is the global leader in physical medicine and rehabilitation for adults and children with the most severe, complex conditions — from traumatic brain and spinal cord injury to stroke, amputation and cancer-related impairment. It's care and research designated the "No. 1 Rehabilitation Hospital in America" by U.S. News & World Report every year since 1991. Shirley Ryan AbilityLab became the first-ever "translational" research hospital in which clinicians, scientists, innovators and technologists work together in the same space, surrounding patients, discovering new approaches and applying (or "translating") research real time.

sralab.org

#### Weinberg Family Cerebral Palsy Center

The Weinberg Family Cerebral Palsy Center is dedicated to improving the quality of life for people of all ages living with cerebral palsy. Through comprehensive care, research and education, we are committed to providing care, education, resources, and support for our patients, families, and health professionals.

Our multidisciplinary care approach draws on the full array of resources at Columbia University Irving Medical Center and the NewYork-Presbyterian Hospital. Together, our team of worldclass experts in orthopedics, physical and rehabilitation medicine, neurology, and mental health, along with social work and care coordination services work to ensure families receive complete and coordinated care.

#### ESSENTIAL:

# Adine Ray Usher, EdD Consultant/Advocate for Students with Physical Disabilities

I serve as a consultant and advocate for the concerns and challenges of school-age students who live with the conditions of cerebral palsy. My services are sought nationally and internationally by families, by public and private schools and by the Guardianship Division of the New York State Appellate Courts.

#### **Altimate Medical**

Since 1987, Altimate Medical and its EasyStand brand has led the standing industry with unsurpassed technology. Altimate Medical has expanded its product portfolio and made several acquisitions of well-known brands within the complex rehab technology market. The Altimate Medical brands include: ActiveAid, EasyStand, Justify It, Zing, and Medical Positioning.

# Sponsor Listing

#### Cook Children's Health Care System

Cook Children's Health Care System embraces an inspiring promise- to improve the health of every child in our region through the prevention and treatment of illness, disease and injury. Based in Fort Worth, Texas, we're proud of our long and rich tradition of not only serving our community but patients around the world.

#### www.cookchildrens.org

#### Fralin Biomedical Research Institute at VTC

Founded in 2010, the Fralin Biomedical Research Institute at VTC is one of the nation's fastest-growing academic biomedical research enterprises and a destination for world-class researchers. The institute's Virginia Tech scientists focus on diseases that are the leading causes of death and suffering in the United States, including brain disorders, heart disease, and cancer. In just 10 years, the research institute has experienced unprecedented growth: doubling its enterprise and lab facilities in Roanoke, while also investing in brand-new laboratories on the Children's National Research & Innovation Campus in Washington, D.C.

https://fbri.vtc.vt.edu/

#### Galileo USA

Are you ready to accelerate patients functional outcomes? Galileo for all ages & abilities will optimize exercises through neuromuscular mechano-stimulation in short training times to knock out spasticity and train the whole-body in a small footprint. With 48 kids studies and 450+ studies over 26 years in all populations Galileo's evidence-based devices are the gold standard in medical/fitness with full-line of precision, sidealternating devices used in positions standing, tilt tables, chairs and dumbbells.

We love collaborating with passionate experts dedicated to advancing rehab to improve lives. With purchase comes education, training materials, posters and more. For information check out www.GalileoUSA.

#### GeneDx

GeneDx delivers personalized and actionable health insights that inform diagnosis, direct treatment and improve drug discovery. The company is transforming healthcare through its industry-leading exome and genome testing and interpretation, fueled by one of the world's largest rare disease data sets and its powerful clinical interpretation engine, Centrellis. GeneDx is uniquely positioned to accelerate the use of genomic and largescale clinical information to enable precision medicine as the standard of care.

www.genedx.com/

#### Holland Bloorview Kids Rehabilitation Hospital

Holland Bloorview Kids Rehabilitation Hospital believes in creating a world where all youth and children belong. They are the only children's rehabilitation hospital in Canada focused on combining world-class care, transformational research, and academic leadership in the field of child and youth rehabilitation and disability. Providing both inpatient and outpatient services, Holland Bloorview is renowned for its expertise in co-creating with clients and families to provide exceptional care and is the only organization to ever achieve 100 per cent in three successive quality surveys by Accreditation Canada.

hollandbloorview.ca/

#### Ivy Rehab for Kids

Within the Ivy Rehab Network, Ivy Rehab for Kids delivers physical therapy, occupational therapy, speech therapy, and feeding therapy to cater to our patients and parents. Guiding children from birth to adulthood, we provide personalized, timely therapy in a caring environment, under the attentive care of our committed staff. Our skilled team designs individualized treatment plans, closely collaborating with each patient and their care team to create the best strategy. With 150+ clinics across 10 states, we're committed to serving the pediatric community. Find a nearby clinic at www.ivyrehabforkids.com to embark on the journey toward exceptional care.

#### Mars VR Lab

MARS VR LAB is a group of passionate medical, therapeutic and technology- driven people helping to discover the wonder of childhood with those who need it most.

https://marsvrlab.com/

#### **Northwestern University**

Northwestern University Department of Physical Therapy and Human Movement Sciences promotes optimal health outcomes for our patients and society through the advancement of rehabilitation science and practice. In our academic medical environment, we prioritize the discovery and integration of new knowledge with education and clinical practice. We are committed to equity, diversity, and inclusion. We educate and train the next generation of physical therapists and scientists who will advance professional practice and movement sciences to promote wellness and optimal health outcomes for the patient, the community, and society.

https://www.feinberg.northwestern.edu/sites/pthms/index.html

#### Pathways.org

Pathways.org creates and distributes free tools to maximize all children's motor, sensory, and communication development. They empower parents to work with their healthcare provider to understand and encourage their baby's development to keep them on track or catch potential delays early. They promote screening of motor, sensory, and communication development by 4 months of age, to take advantage of baby's neuroplasticity.

# Sponsor Listing

#### **Phoenix Children's**

Nationally recognized as a premier destination for pediatric medical care, research, and medical education, Phoenix Children's provides care to the fourth largest pediatric market in the 5th largest city in the United States, serving the Phoenix/Scottsdale/ Tempe metropolis. The Phoenix Children's healthcare system is rapidly growing to facilitate patient access including multiple ambulatory buildings, and scheduled opening of satellite hospitals throughout the county.

#### **Piramal Critical Care**

With nearly 20 years in the healthcare industry, Piramal Critical Care, (PCC) is committed to delivering critical care solutions to patients and healthcare providers. PCC is leading the way in intrathecal medicine with offerings for pain (MITIGO) and spasticity management (Gablofen) while representing a culture built on innovation and service.

#### PTC Therapeutics, Inc.

PTC is an established global biopharmaceutical company that delivers transformative therapies for people living with rare diseases. For 25 years, we have been harnessing our scientific platforms to create new therapies that address the underlying cause of the disease and deliver on our promise to create more moments for patients.

www.ptcbio.com/

#### DISCLOSURE INDEX KEY

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

 ${\sf F}$  = 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)

Full Name	Financial Relationship
Richard Adams MD	No financial relationships
Brenda Agnew BA	No financial relationships
Sunil Agrawal MS, PhD	No financial relationships
YongJin Ahn MD	No financial relationships
Matti Ahonen MD	No financial relationships
Unoma Akamagwuna MD	No financial relationships
Hana Alazem MD	No financial relationships
Peace Amaraegbulam FWACS	No financial relationships
Sofia Anastasopoulos DPT	No financial relationships
John Andersen MD	Ipsen Biopharmaceuticals, Inc (A)
John Andersen MD, FRCPC	No Financial Relationships
Bhooma Aravamuthan MD, DPhil	Neurocrine Biosciences: (A,F)
Robert Armstrong MD PhD FRCPC	No Financial Relationships
Steven Bachrach MD	No Financial Relationships
Nadia Badawi PhD	No Financial Relationships
Hosein Bahari MS	No Financial Relationships
Rebecca Baril MD	No Financial Relationships
Kaitlin Barr DPT	No Financial Relationships
Corinna Bauer Ph.D.	No Financial Relationships
Jeremy Bauer MD	OrthoPediatrics, Inc (A)
Elena Beani PT, PhD	No Financial Relationships
Saranda Bekteshi PhD	No Financial Relationships
Jaclyn Bender OTR/L	No Financial Relationships
Katherine Benfer PhD	No Financial Relationships
Melissa Bent MD	No Financial Relationships
Toni Benton MD	No Financial Relationships

Sara Beyler CO, LO	No Financial Relationships
Kristie Bjornson PT, PhD, MS	No Financial Relationships
Marcin Bonikowski MD PhD	Abbvie (F)  Ipsen (A,F) Merz (A,F)
Samudragupta Bora PhD	No Financial Relationships
Roslyn Boyd PhD	No Financial Relationships
Elizabeth Boyer PhD	No Financial Relationships
Joline Brandenburg MD	No Financial Relationships
Jason Buckles PhD	No Financial Relationships
Mustafa BURAK MSc	No Financial Relationships
Christiana Butera EdM, PhD	No Financial Relationships
Rachel Byrne BS	No Financial Relationships
Alejandra Camacho MD	No Financial Relationships
Cherlyn Caneda MSN	No Financial Relationships
Jorge Carranza PhD	No Financial Relationships
Ross Chafetz PT, DPT, PhD, MPH	No Financial Relationships
Henry Chambers MD	Abbvie (A) Constant Therapeutics (A) MicroTransponder (A) Neurolutions (A) Regenera (A) SanBio (A) Stemedica (A) TRCare (A) Fujifilm Toyoma Chemical Co (A) OrthoPediatrics, Inc (A)
Elizabeth Chambers BA	No Financial Relationships
Chris Church MPT	No Financial Relationships
Jensine Clark MD	No Financial Relationships
Patty Coker-Bolt PhD, OTR/L, FNAP, FAOTA	No Financial Relationships
Gavin Colquitt PhD	No Financial Relationships
Caroline Colvin PT, DPT, PCS	No Financial Relationships
Cory Cribb MS	No Financial Relationships
Ana Cristancho MD/PhD	
	No Financial Relationships
Amy Cutler MS, OTR/L	No Financial Relationships No Financial Relationships
Amy Cutler MS, OTR/L	No Financial Relationships
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA	No Financial Relationships No Financial Relationships
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA Amy Darragh PhD	No Financial Relationships No Financial Relationships Cardinal Health (B)
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA Amy Darragh PhD Jon Davids MD	No Financial Relationships No Financial Relationships Cardinal Health (B) Orthopediatrics Inc (A,E)
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA Amy Darragh PhD Jon Davids MD Lynn Davidson MD	No Financial Relationships No Financial Relationships Cardinal Health (B) Orthopediatrics Inc (A,E) No Financial Relationships
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA Amy Darragh PhD Jon Davids MD Lynn Davidson MD Steven Day PhD Dalina Delfing MS	No Financial Relationships No Financial Relationships Cardinal Health (B) Orthopediatrics Inc (A,E) No Financial Relationships No Financial Relationships No Financial Relationships
Amy Cutler MS, OTR/L Diane Damiano PhD, FAPTA Amy Darragh PhD Jon Davids MD Lynn Davidson MD Steven Day PhD	No Financial Relationships No Financial Relationships Cardinal Health (B) Orthopediatrics Inc (A,E) No Financial Relationships No Financial Relationships

Larry Desch MD	No Financial Relationships
Irene Dietz MD	No Financial Relationships
Rachel DiFazio PhD, RN, PPCNP-BC, FAAN	No Financial Relationships
Cindy Dodds PhD	No Financial Relationships
Thomas Dreher MD	Nuvasive (A)
Susan Duff EdD, MPT, OT/L, CHT	No Financial Relationships
Saihari Dukkipati PhD	No Financial Relationships
Nigar Dursun MD	No Financial Relationships
Stacey Dusing PhD	No Financial Relationships
Julia Edelstein BS	No Financial Relationships
Ron El-Hawary MD	Depuy Synthes (E) Medtronic (E) OrthoPediatrics, Inc (A,J) Pediatric Spine Foundation (A) Scoliosis Research Society (A)
Sinem ERTURAN MSc	No Financial Relationships
Sharon Eylon MD	No Financial Relationships
Michael Fahey PhD	Cerebral Palsy Alliance (E) Fenix Innovations (A) NHMRC (E,F) SIgma Pharmaceuticals (J)
Darcy Fehlings MD FRCPC MSc	No Financial Relationships
Robin Feldman BS, MBA	No Financial Relationships
Heather Feldner BS, MPT, PhD	Permobil (E)
Megan Finch-Edmondson PhD, BSc (Hon)	Cerebral Palsy
	Alliance (B,E)
Elizabeth Finley RN	Alliance (B,E) No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT	
Elizabeth Finley RN	No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT	No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD	No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD	No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD	No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT	No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD	No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT	No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT Naomi Gefen MPA, MsOT Marianne Gellert-Jones	No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT Naomi Gefen MPA, MsOT Marianne Gellert-Jones MA, CCC-SLP	No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT Naomi Gefen MPA, MsOT Marianne Gellert-Jones MA, CCC-SLP Andrew Georgiadis MD Jennifer Gidley Larson	No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT Naomi Gefen MPA, MsOT Marianne Gellert-Jones MA, CCC-SLP Andrew Georgiadis MD Jennifer Gidley Larson Ph.D., ABPP-CN	No Financial Relationships No Financial Relationships
Elizabeth Finley RN Eileen Fowler PhD, PT Kathleen Friel PhD Cynthia Frisina MA, CARSS Sandra Fucile PhD Mary Gannotti PT, PhD María Fernanda García-Rueda MD Shailesh Gardas PT Naomi Gefen MPA, MsOT Marianne Gellert-Jones MA, CCC-SLP Andrew Georgiadis MD Jennifer Gidley Larson Ph.D., ABPP-CN Laura Gilbert DO, MBA	No Financial Relationships No Financial Relationships

Tugba Gokbel MD	No Financial Relationships	
Shona Goldsmith PhD	No Financial Relationships	
Christine Goodbody MD	No Financial Relationships	
Mark Gormley MD	Abbvie (A)	
	Constant Therapeutics (A)	
	MicroTransponder (A)	
	Neurolutions (A)	
	Regenera (A) SanBio (A)	
	Stemedica (A)	
	TRCare (A)	
	Fujifilm Toyoma	
	Chemical Co. (A)	
	Biopharmaceuticals, Inc (A)	
Nicole Gorny M.S.	No Financial Relationships	
Julie Grassi PT, M.Ed.	No Financial Relationships	
Danielle Greig MD	No Financial Relationships	
Kelly Greve PT, DPT, PhD	No Financial Relationships	
Tricia Gribben BA, OTR/L	No Financial Relationships	
Deann Griego n/a	No Financial Relationships	
Alexandra Griffin PhD	No Financial Relationships	
Alina Grimaldo n/a	No Financial Relationships	
Paul Gross BA	No Financial Relationships	
Walter Guminiak AAS	No Financial Relationships	
Heidi Haapala MD	No Financial Relationships	
Jonathan Halton OT	No Financial Relationships	
Chad Hanaoaka BS	No Financial Relationships	
Alison Hanson MS PT	No Financial Relationships	
Christina Hardesty MD	Medtronic (A) OrthoPediatrics, Inc (A)	
Karen Harpster PhD, OTR/L	No Financial Relationships	
Angela Harris BS	No Financial Relationships	
Nicole Hawkins MS, OTR/L	No Financial Relationships	
Jill Heathcock MPT, PhD	No Financial Relationships	
John Henley PhD	No Financial Relationships	
Georgina Henry BPsych (Hons)	No Financial Relationships	
Kate Himmelmann PhD	No Financial Relationships	
Ashleigh Hines PhD	No Financial Relationships	
Erica Hinton PhD	No Financial Relationships	
Margaret Hoffman MSW	No Financial Relationships	
Mia Hoffman n/a	No Financial Relationships	
Sandra Hollung PhD	No Financial Relationships	
Ingrid Honan BPsych (Hons), MClinNeuroPsych, PhD	No Financial Relationships	
Juntaek Hong MD	No Financial Relationships	
Jason Howard MD	No Financial Relationships	

Nicole Hroma DPT	No Financial Relationships	Danielle Levac BSc.PT, MSc, PhD	No Financial Relationships
Meihuan Huang n/a	No Financial Relationships	Juliana Libertin DPT, PCS	No Financial Relationships
Edward Hurvitz MD	No Financial Relationships	Peter Lichtenthal MD	No Financial Relationships
Vlad Janus MD	No Financial Relationships	Richard Lieber PhD, MBA	No Financial Relationships
Consuelo Ibarra-Rodriguez MD	No Financial Relationships	Taryn Loomis n/a	No Financial Relationships
Michelle Jackman PhD	No Financial Relationships	Carly Luke MPaedPhys, BPhty	No Financial Relationships
Amit Jain MD	Depuy Synthes (A)	Sarah Macabales DO	No Financial Relationships
	Globus (A)	Veronika Mak MSc	No Financial Relationships
	Stryker (A)	Kristina Malik MD	No Financial Relationships
Lauren Jantzie PhD	No Financial Relationships		No Financial Relationships
Ira Jeglinsky Kankainen	No Financial Relationships	Caren Mangarelli MD, MS Kilby Mann MD	No Financial Relationships
Associate professor		Abygail Marx MS, CCC-SLP	No Financial Relationships
Anna Jesus MD	No Financial Relationships	Jill Massey BSc/MSc	No Financial Relationships
Stine Johansen BS	No Financial Relationships	Hiroko Matsumodo PhD	No Financial Relationships
Christopher Joseph DPT	No Financial Relationships		No Financial Relationships
Maria Juricic BScKin,	No Financial Relationships	Christopher McCarthy PhD James McCarthy MD, MHCM	OrthoPediatrics, Inc (F)
BScPT, MRSc		Anna McCormick MD FRCPC	, , , ,
Kyra Kane BscPT, MSc, PhD	No Financial Relationships		No Financial Relationships
Tasos Karakostas MPT, PhD	No Financial Relationships	Allison McIntyre OTR/L Daniel McKee DPT	No Financial Relationships
Petra Karlsson PhD	No Financial Relationships		No Financial Relationships
Jacqueline Kaufman PhD	No Financial Relationships	Carolina Mendoza-Puccini MD	No Financial Relationships
Robert Kay MD	Johnson & Johnson (J)	Daniel Meyer DPT	No Financial Relationships
	Medtronic (J) Pfizer (J)	Freeman Miller MD	No Financial Relationships
	Zimmer Biomet (J)	Stacey Miller BSc(PT), MRSc	No Financial Relationships
Corey Keeton MD	No Financial Relationships	Golda Milo-Manson MD MHSc FRCPC	No Financial Relationships
Amanda Khamis PhD	No Financial Relationships	Jae Jung Min MD	No Financial Relationships
Owais Khan PT	No Financial Relationships	Jennifer Miros MPT	No Financial Relationships
Mary Khetani ScD, OTR/L	CanChild Centre for Childhood Disability Research (A,F)	Firoz Miyanji MD, FRCS(C)	AO Spine (A) Depuy Synthes (A) Orthopediatrics Inc (A)
Sonia Khurana PhD	No Financial Relationships		Setting Scoliosis Straight
HYUNJOON KIM MS	No Financial Relationships		Foundation (E)
Elizabeth Koczur MPT	No Financial Relationships		SRS (A) Zimvie (A)
Linda Krach MD	No Financial Relationships	Christopher Modlesky PhD	No Financial Relationships
Olaf Kraus De	No Financial Relationships	Rebecca Molinini DPT	No Financial Relationships
Camargo MD, FRCPC Vedant Kulkarni MD		Elegast Monbaliu PhD	No Financial Relationships
	Orthopediatrics Inc (A)	Sarah Moran DPT	No Financial Relationships
Max Kurz PhD	No Financial Relationships	Jan Moskowitz MSW	No Financial Relationships
Amanda Kwong PhD	No Financial Relationships	Theresa Moulton PT, DPT, PhD	No Financial Relationships
Susan Labhard MSN, RN	No Financial Relationships	Kishore Mulpuri MBBS, MS	Allergan (E)
Renee Lajiness-O'Neill PhD	No Financial Relationships	(Ortho), MHSc (Epi), FRCSC	Depuy Synthes (E)
Jill Larson MD	No Financial Relationships		Ipsen (A)
Allie Leis PhD, MS	No Financial Relationships		Johnson & Johnson (E) OrthoPediatrics, Inc (a,e)
Nancy Lennon DPT	No Financial Relationships		Pega Medical (E)
Jeffrey Leonard MD	No Financial Relationships	Meghan Munger MPH	No Financial Relationships

Gretchen Murphy n/a	No Financial Relationships	Larissa Pavone MD	No Financial Relationships
Nancy Murphy MD	No Financial Relationships	Monica Payares-Lizano MD	No Financial Relationships
Patricia Musolino MD, PhD	2seventy bio, inc (J)	Michael Pearlmutter BSc, BMA	No Financial Relationships
	ALD Connect (A)	Mark Peterson PhD	No Financial Relationships
	Beam Therapeutics (J)	Colleen Peyton PT, DPT	GM Trust (F)
	Bluebird Bio (J) Editas Medicine (J)	John Phillips MD	No Financial Relationships
	EMD Serono, Inc (J)	Michelle Phoenix PhD	No Financial Relationships
	Lippincott Williams and	Tracy Pickar MSW	No Financial Relationships
	wilkins (Wolters Kluwer	Valerie Pieraccini MS OTR	No Financial Relationships
	Health) (A) United Leukodystrophy	Kristan Pierz MD	No Financial Relationships
	foundation (A)	Christelle Pons	No Financial Relationships
	Young Genetic Stroke	Deepalaxmi Poojari Master in	No Financial Relationships
	Alliance (A)	Paediatric Physiotherapy(MPT),	
Mari Naaris MSc	No Financial Relationships	PhD candidate	
Unni Narayanan MBBS,	No Financial Relationships	Nicole Pouppirt MD	No Financial Relationships
MSc, FRCSC	No Einancial Delationships	Kinga Pozniak PhD	No Financial Relationships
Samuel Nemanich PhD	No Financial Relationships	Lesley Pritchard PT, PhD	No Financial Relationships
Kelley Newman DPT, PCS, HPCS	No Financial Relationships	Jacinta Quartermaine BS	No Financial Relationships
Erikson Nichols MS, MMS	No Financial Relationships	Anne Elisabeth Raftemo	No Financial Relationships
Ralph Nitkin PhD	No Financial Relationships	Medical doctor	
Garey Noritz MD	Abbot Nutrition (A) Sarepta (A)	Mary Rahlin PT, DHS, Board-	No Financial Relationships
Tom Novacheck MD	No Financial Relationships	Certified Clinical Specialist in Pediatric Physical Therapy	
Iona Novak PhD	No Financial Relationships	Amanda Rande BSc Kinesiology	No Financial Relationships
Maria Nurminskaya PhD	No Financial Relationships	Jeffrey Raskin MS, MD	No Financial Relationships
Megan O'Brien PhD	No Financial Relationships	Greg Redding	No Financial Relationships
Maureen O'Donnell	No Financial Relationships	Kristen Reider PhD, PT	No Financial Relationships
MD Msc FRCPC		Gina Rempel MD, FRCPC, FASPEN	No Financial Relationships
Stina Oftedal PhD, B Hlth Sc (Diet)	No Financial Relationships	Fabiola Reyes MD	No Financial Relationships
Joyce Oleszek MD	No Financial Relationships	Jason Rhodes MD	OrthoPediatrics, Inc (A,F)
Haley Oliver OTD, OTR/L	No Financial Relationships	Tonya Rich PhD, OTR/L	No Financial Relationships
Oluwatosin Olorunmoteni MBBS,	No Financial Relationships	Shenandoah Robinson MD	No Financial Relationships
MPH, FWACP		Brandon Rocque MD, MS	Flatiron (A)
David Opendi OT	No Financial Relationships		Genentech (E)
William Oppenheim MD	No Financial Relationships		Giliad (A)
Adam Ostendorf MD	No Financial Relationships		Pfizer (A,E)
Katarina Ostojic PhD	No Financial Relationships	Elisabet Rodby-Bousquet PhD, PT	No Financial Relationships
Sylvia Ounpuu MSc	No Financial Relationships	Ana-Marie Rojas MD	No Financial Relationships
Laura Owens MD	No Financial Relationships	Jessica Rose PhD	No Financial Relationships
Simon Paget MBBS	No Financial Relationships	Peter L Rosenbaum MD, CM,	No Financial Relationships
Ginny Paleg DScPT, MPT, PT	Prime Engineering (A)	FRCP(C), DSc (HC), FRCPI Hon (Paed) RCPI	
Alexandra Palmcrantz PT	No Financial Relationships	Nathan Rosenberg MD	No Financial Relationships
Christos Papadelis PhD	No Financial Relationships	Michelle Roy PT	No Financial Relationships
Antigone Papavasiliou MD, PhD, FAAP	No Financial Relationships	Maria de las Mercedes Ruiz	No Financial Relationships
Eugene Park MD	No Financial Relationships	Brunner PhD	

Erich Rutz MD, PhD	No Financial Relationships
Jennifer Ryan MSc, PhD	No Financial Relationships
Leanne Sakzewski PhD, Bachelor Occupational Therapy	No Financial Relationships
Barbara Sargent PhD, PT	No Financial Relationships
Cristina Sarmiento MD	No Financial Relationships
Kornel Schadl MD	No Financial Relationships
Adam Scheinberg MBBS DCH FRACP FAFRM MMed	No Financial Relationships
Julia Schiller BA	No Financial Relationships
Mary Schmidt DO	No Financial Relationships
Lydia Schneider MD	No Financial Relationships
Mary Beth Schubauer PhD	No Financial Relationships
Kimberley Scott PT, DPT, PhD	No Financial Relationships
Giuseppina Sgandurra MD, PhD	No Financial Relationships
Suken Shah MD	Depuy Synthes (A,E)
Sabrina Shandley PhD	No Financial Relationships
Heather Shearer DC, MSc, PhD	No Financial Relationships
Angela Shierk PhD	No Financial Relationships
Jeffrey Shilt MD	No Financial Relationships
Benjamin Shore MD, MPH, FRCSC	OrthoPediatrics, Inc (A)
Michael Shrader MD	NIH (A)
Benjamin Shrader BA Dramatic Writing, Minor in Political Science	No Financial Relationships
Claire Shrader MS, OTR/L	No Financial Relationships
Siddhi Shrivastav PT, MS	No Financial Relationships
Rebecca Siegel MD	No Financial Relationships
Susan Sienko PhD	AACPDM (A) Shriners Children's (B,E)
Hayley Smithers-Sheedy BAppSc (Sp Path), MPH, PhD	No Financial Relationships
Adil Soaliman	No Financial Relationships
Alice Soper MSc	No Financial Relationships
Rajashree Srinivasan MBBS	No Financial Relationships
Sudha Srinivasan PhD	No Financial Relationships
Loretta Staudt PT,MS	No Financial Relationships
Richard Stevenson MD	No Financial Relationships
Amanda Stoltz PT, DPT, PCS	No Financial Relationships
Jean Stout PT, MS, PhD(C)	No Financial Relationships
Theresa Sukal-Moulton PT, DPT, PhD	No Financial Relationships
James Sulzer PhD	No Financial Relationships
Swati Surkar PT, PhD	No Financial Relationships
michael Sussman MD	No Financial Relationships
Vineeta Swaroop MD	No Financial Relationships

Sean Tabaie MS MD	Arthrex (A) Johnson & Johnson (A)
	OrthoPediatrics, Inc (A,E)
Nana Tashivilli PhD	No Financial Relationships
H. Gerry Taylor Ph.D., ABPP-CN	No Financial Relationships
McIntosh Taylor n/a	No Financial Relationships
Anna te Velde BAppSc(Pthy); PhD	No Financial Relationships
Pam Thomason MPT	No Financial Relationships
Rachel Thompson MD	No Financial Relationships
Patrick Thornley FRCSC, ABOS Part I	No Financial Relationships
Mary Rebekah Trucks MS, OTR/L	No Financial Relationships
Albert Tu FRCS(C)	No Financial Relationships
Sami Tuffaha MD	Checkpoint Surgical (A)
Kirsten Tulchin-Francis PhD	Analog Devices (J)
Inti Vanmechelen MSc	No Financial Relationships
Jilda Vargus-Adams MD MSc	No Financial Relationships
Rachel Vaughn MOT,OTR/L	No Financial Relationships
Judith Vessey PhD, MBA. RN, FAAN	No Financial Relationships
Sofia Villarreal-Zambrano MS	No Financial Relationships
Brittany Virgil DPT	No Financial Relationships
Emma Waight BA	No Financial Relationships
Kathryn (Katie) Walt PT, DPT	No Financial Relationships
Seth Warschausky Ph.D.	No Financial Relationships
Yvonne Weerasinghe MPhil, BSc (honors) SLT, PGDHD	No Financial Relationships
Amanda Whitaker MD	Lippincott Williams and wilkins (Wolters Kluwer Health) (F)
Daniel Whitney PhD	No Financial Relationships
Anastasia Wilson BS in Arts	No Financial Relationships
Yana Wilson n/a	No Financial Relationships
Jenny Wilson MD	teva: (E)
Robert Wimberly MD	No Financial Relationships
Brian Wishart DO	No Financial Relationships
Susan Woolfenden PhD	No Financial Relationships
Mara Yale PhD	No Financial Relationships
Bilge Nur Yardımcı Lokmanoğlu PhD	No Financial Relationships
Jessica Zawrotny MS, OTR/L	No Financial Relationships
Ahlam Zidan n/a	No Financial Relationships
Angelynn Zimmerman OTR/L, MA,	No Financial Relationships
BCP, IBCLC, AOMT-C	
BCP, IBCLC, AOMT-C Lisa Zimmermann MSW	No Financial Relationships

#### A

Aaby, David, 18 Aarli, Ånen, C10 Abuatig, Reham, E5 Acord, Stephanie, D10 Acsadi, Gyula, A9 Adams, Richard, MINISYMP03 Adeomi, Adeleye, G10 Aerts, Jean-Marie, G3 Agnew, Brenda, PC4 Agrawal, Sunil, PC3 Ahmed, Saifuddin, I1 Ahn, YongJin, A4, H3 Ahonen, Matti, H5 Akamagwuna, Unoma, MINISYMP21 Akinci, Murat, L4 Alazem, Hana, PC3, MINISYMP34 Alexander, Joshua, L10 Almasri, Nihad, G8 Amaraegbulam, Peace, A10 Amonkar, Nidhi, L6 Anastasopoulos, Sofia, MORNSEM29 Andersen, Guro, G8, K8, C10 Andersen, John, 17, PC3, MINISYMP04 Angeli, Jennifer, MORNSEM13 Angulo, Marlene, K10 Aravamuthan, Bhooma, G1, G4, PC7, MINISYMP06 Armstrong, Robert, MINISYMP14 Ashrafi, Mahmoud Reza, F8 Assip, Bridget, A5 Attal, Radhika, K5 Aufheimer, Maria, F2 Auld, Megan, G7, B10 Aydin Özarslan, Ezgi, L4

#### B

Bachrach, Steven, MORNSEM11 Backus, Sherry, A5 Badawi, Nadia, D9, E7, F9, G6, G7, I1, I9, K2, MINISYMP23 Bahari, Hosein, MINISYMP04 Bailes, Amy, G1 Baker, Sarah, C7 Baldwin, Keith, J2, J6 Barany, Deborah, C5 Barbosa, Vanessa, 18 Baril, Rebecca, 17 Barr, Kaitlin, MORNSEM12 Bauer, Corinna, C3, C4, PC1 Bauer, Jeremy, MINISYMP08 Baynam, Gareth, D9 Beani, Elena, MORNSEM37 Becu, Christie, G1 Beebe, Timothy, A8, K4

Bekteshi, Saranda, F2, MORNSEM16, MORNSEM32 Beltran, Veronica, K1 Bender, Jaclyn, MINISYMP12 Benfer, Katherine, E3, MINISYMP32 Bent, Melissa, K1 Benton, Toni, MINISYMP13, MINISYMP21 Beyler, Sara, MINISYMP37 Bjornson, Kristie, F4, F6, PC1, PC5, MORNSEM24, MINISYMP19 Bleyenheuft, Yannick, L3 Bollo, Robert, G5 Bonikowski, Marcin, C10, MORNSEM23 Bora, Samudragupta, MORNSEM06 Bos, Arend, 18 Bosemani, Madhan, D5 Boswell, Lynn, K9 Bovaird, James, E2 Bowen, Richard, D7, D7, J3 Boyd, Roslyn, E3, E7, E8, F3, I5, L3, L9, MORNSEM06, MINISYMP09, MINISYMP32 Boyer, Elizabeth, A1, B5, MINISYMP07 Brændvik, Siri Merete, C10 Brandenburg, Joline, MINISYMP05, MINISYMP14 Brenner, Lisa, B3 Brien, Marie, K5 Browd, Samuel, G5 Brown, Caroline, C2 Bubela, Deborah, L6 Buckles, Jason, MINISYMP13 Buizer, Annemieke, G2 Bunkell, Lizabeth, A6 Burak, Mustafa, L4, L5 Burgess, Andrea, F3, L9 Burnett, Heather, K3 Burroughs, Casey, C2, L8 Busboom, Morgan, B4, C6 Butera, Christiana, E10 Butson, Carter, D10 Byrne, Rachel, MORNSEM01, MINISYMP38

#### С

Cabral, Thais, E6 Cady, Rhonda, K4 Camacho, Alejandra, MORNSEM27 Campbell, Claudia, H9 Caneda, Cherlyn, MORNSEM09 Cao, Jianguo, F10 Carlton, Morgan, I5 Carranza, Jorge, MORNSEM23 Caskey, Charlotte, F6 Cassidy, Jessica, C2, L10 Castro-Guzmán, Francisco, H1 Cekmece, Cigdem, F5 Chafetz, Ross, PC2

Chambers, Elizabeth, MORNSEM20 Chambers, Henry, B6, PC6, MINISYMP18 Chambers, Reid, B6 Chandran, Vishnu Deep, A5 Chen. Kevin. D7. D7 Chen, Yi-Fan, K10 Chin, Eric, D3, H9 Chintalapati, Keerthana, G1 Choi, Joong-on, A4, H3 Chu, Virginia, E2 Chung, Chin Youb, J9 Church, Chris, A2, A3 Cieri, M. Elisabeth, F1 Cirrincione, Peter, A5 Clark, Jensine, MORNSEM15, MINISYMP36 Coker-Bolt, Patty, MORNSEM22 Colquitt, Gavin, B2, B2, L1, MORNSEM17 Colson, Serge, C10 Colvin, Caroline, MINISYMP06 Conaway, Mark, E6, H6, H7 Condinanzi, Ana Laura, F1 Cox, Charles, F8 Creveling, Sarah, B2, B2, L1 Cribb, Cory, L1 Cristancho, Ana, D4 Crompton, Kylie, F8 Cuestas, Eduardo, F1 Cutler, Amy, MINISYMP19

# D

Dahan-Oliel, Noémi, B1 Damiano, Diane, PC3, MINISYMP04 Dan, Bernard, MINISYMP16, MINISYMP23 Darragh, Amy, E6, MINISYMP01 Davids, Jon, D2, MORNSEM21, MINISYMP08, MINISYMP28, MINISYMP34 Davidson, Lynn, MINISYMP27 Davies, Nadine, G7 Day, Steven, MINISYMP23 Dayanidhi, Sudarshan, B8 Delfing, Dalina, L7, PC1 Deluca, Stephanie, E6, MINISYMP01 Deng, Weiyang, MORNSEM29 Deng, Yiran, D7 DeRegnier, Raye-Ann, I8, K9, 110, MORNSEM29 Desai, Virendra, G5 Desch, Larry, MORNSEM14 Desloovere, Kaat, G2 Desmarais, Chantal, B1 Destro, Antea, J4 Dietz, Irene, MORNSEM14 DiFazio, Rachel, H2, MINISYMP19 Diller, Lisa, G5 Dinu, Irina, 17 Diviney, Leanne, G8

Dlamini, Nomazulu, D8 Dodds, Cindy, MINISYMP22 Domenighetti, Andy, D6 Donohue, Patrick, G9 Dooling-Litfin, Jodi, K10 Dorsey Holliman, Brooke, B3 Dow, Kimberly, E9 Dreher, Thomas, MINISYMP29 Drottar, Marie, C3, C4 Duff, Susan, MORNSEM19 Dukkipati, Saihari, B4, C7 Duplat, José Luis, H1 Dursun, Nigar, F5, MORNSEM23 Dusing, Stacey, E1, E2, E10, PC1

#### Ε

Edelstein, Julia, C7, C8 ELBASAN, Bülent, L4, L5 El-Hawary, Ron, PC6 Eliasson, Ann-Christian, E7, L9 Elliott, Catherine, E7, L3 Embury, Christine, C6 Enqchuan, Bank, D8 ERTURAN, Sinem, L4, L5 Escobar Zuluaga, L. Johana, F1 Espie, James, K2 Eylon, Sharon, MORNSEM11

## F

Fahey, Michael, MINISYMP16, MINISYMP16 Faircloth, Mary Scott, C2 Fehlings, Darcy, D8, H10, H10, MINISYMP14, MINISYMP16, MINISYMP16 Feldman, Robin, MINISYMP05 Feldner, Heather, E5, F4, F6, PC3 Ferre, Claudio, C1 Feys, Hilde, G2 Finch-Edmondson, Megan, F8, 19 Finley, Elizabeth, MINISYMP13 Finn, Christine, 15 Firtha, Michael, G9 Follestad, Turid Follestad, C10 Fowler, Eileen, I4, MINISYMP14 Frankenthal, Sophie, K9 Frankl, Michal, MORNSEM11 Friel, Kathleen, L2, L7, PC1 Fripp, Jurgen, L3 Frisina, Cynthia, MORNSEM17, MORNSEM17 Fucile, Sandra, E9

#### G

Gabay, David, B1 Gabos, Peter, J5 Galea, Claire, K2 Gandham, Sushma, G4 Gangwani, Rachana, L10 Gannotti, Mary, MORNSEM24 García-Rueda, María Fernanda, H1 Gardas, Shailesh, C2, L8 Garrity, Fiona, K2 Gecz, Jozef, D9 Gefen, Naomi, PC3 Gellert-Jones, Marianne, MINISYMP22 George, Joanne, 15 Georgiadis, Andrew, MINISYMP07, MINISYMP15 Gerling, Kathrin, F2 Ghosh, Asis, E3, MINISYMP32 Gibson, Catherine, G7 Gibson, Sarah, I5 Gidley Larson, Jennifer, MORNSEM18 Gilbert, Laura, G4 Gillick, Bernadette, MINISYMP01 Gincota, Ecaterina Bufteac, G8 Gissler, Lindsay, MORNSEM35 Gissler, Mika, H5 Given, Fiona, B7 Glader, Laurie, MINISYMP19 Gladstone, Melissa, G10 Glaros, Chloe, B3 Gokbel, Tugba, F5 Goldsmith, Shona, D9, G6, G7, G8, MINISYMP23 Goodbody, Christine, J2, J6 Goodfriend, Karin, C9 Gordon, Andrew, E6, L2, L7 Gordon, Anya, 15 Gormley, Mark, MORNSEM01 Gorny, Nicole, H9 Gorter, Jan Willem, D8 Gottlieb, Rachel, B9 Grandisson, Marie, B1 Grassi, Julie, MINISYMP33 Greaves, Susan, E7, L9, MINISYMP09 Greenberg, Nicole, E10 Greig, Danielle, J1 Grenard, Deborah, G1 Greve, Kelly, MINISYMP31 Gribben, Tricia, MORNSEM33 Griego, Deann, MINISYMP13 Griffin, Alexandra, F8, I9, MINISYMP30 Grimaldo, Alina, MORNSEM35 Gross, Paul, G1, G5, PC7, MORNSEM24, MINISYMP06. MINISYMP16. MINISYMP39 Gu, Yu, L2 Gulam, Khandaker, I1 Guminiak, Walter, MORNSEM12 Gunawardena, Nalika, E4

#### Η

Haapala, Heidi, MINISYMP21, MINISYMP36 Haberfehlner, Helga, G2, G3 Hallez, Hans, F2, G3 Halton, Jonathan, MINISYMP04 Hamby, Tyler, D10 Hanaoaka, Chad, B8 Hanson, Alison, J10 Hara, Reiko, A7 Harbourne, Regina, E2 Hardesty, Christina, PC6 Harpster, Karen, MORNSEM33 Harris, Angela, MINISYMP19 Havens, Kathryn, 16 Hawkins, Nicole, L2 Healy, Michael, MINISYMP15 Heathcock, Jill, E6, E7, E8, PC7, MINISYMP09 Heigel, Sarah, K9 Helenius, ilkka, H5 Henley, John, A2, A3, MINISYMP34 Henry, Georgina, B7, D9, I9, K2 Herrenkohl, Madeline, F6 Higginbotham, Edward, D8 Himmelmann, Kate, G8, MINISYMP23 Hines, Ashleigh, 19, MINISYMP30 Hinton, Erica, C6, C7, C8 Hinwood, Gina, G7 Hoffman, Margaret, MORNSEM02 Hoffman, Mia, E5 Holland, Holly, L8, L10 Hollung, Sandra, K8, MINISYMP26 Honan, Ingrid, B7 Hong, Juntaek, A4, H3 Hooke, Kate, B7 Hoon, Alexander, H9 Hori, Yusuke, J3 Hossain, Iskander, I1 Howard, Jason, A3, J3, J5, J5, J7, PC6, MORNSEM11, MINISYMP02 Hroma, Nicole, MINISYMP37 Hsu, Lin-Ya, E2, E10 Huang, Meihuan, F10 Huang, wujie, F10 Hunt, Carolyn, D8 Hurvitz, Edward, MORNSEM27

#### |

Ianus, Vlad, MINISYMP10 Ibarra-Rodriguez, Consuelo, H8, MINISYMP22 Islam, Mohammad Shafiul, I1

Guzzetta, Andrea, MINISYMP32

#### J

Jackman, Michelle, MINISYMP30 Jackson, Katelyn, L1 Jacob, Steve, B1 Jahan, Israt, G8 Jain, Amit, PC6 Jantzie, Lauren, D3, H9 Jayabalan, Prakash, B8 Jeans, Kelly, A6 Jeglinsky Kankainen, Ira, H5, K7 Jeon, Sangryul, G9 Jesus, Anna, MORNSEM14 Jezequel, Jennifer, A5 Joffe, Ari, 17 Johansen, Stine, K8 Johnson, Yvette, D5 Johnston, Leanne, B10 Jones, Dara, A5 Joseph, Christopher, MINISYMP31 Joung, Hee Joung, J9 Julien-Gauthier, Francine, B1 Juricic, Maria, MORNSEM31

#### K

Kaelin, Vera, K10 Kalleson, Runa, K8 Kane, Kyra, PC5 Kantak, Shailesh, C2 Karakostas, Tasos, MINISYMP34, MINISYMP37 Karatas, Ozlem, F5 Karim, Tasneem, D9, I1 Karlsson, Petra, K6, MORNSEM32, MINISYMP35 Kaufman, Jacqueline, MINISYMP35 Kay, Fiona, G7 Kay, Robert, A7, MINISYMP29 Kaymaz, Burak, J3 Keeton, Corey, MORNSEM15 Keko, Mario, B2, B2 Kelly, Marie, C1 Kentish, Megan, 15 Khademioureh, Sara, 17 Khamis, Amanda, F9 Khan, Owais, C5 Khetani, Mary, K10 Khurana, Sonia, E1, K5 Kim, Dae Hyun, J9 Kim, Heakyung, MORNSEM09, MINISYMP11 Kim, Hyunjoon, C1 Kim, MinYoung, F8 Kirkman, Grant, L8 Kirton, Adam, D8 Kitnasamy, Gopi, MINISYMP32 Knights, Shannon, D8

Koczur, Elizabeth, MORNSEM03 Konings, Marco, F2 Kosmach, Steven, F8 Koziol, Natalie, E2, E10 Krach, Linda, B5, MORNSEM27 Kraus De Camargo, Olaf, MORNSEM26 Kroque, Justin, G9 Kruer, Michael, G1, MINISYMP39 Kubo, Masayoshi, I6 Kulkarni, Vedant, D2, G9, PC3, MORNSEM21, MINISYMP28 Kumavor, Patrick, L6 Kurtzberg, Joanne, F8 Kurz, Max, B4, C6, C7, C8 Kwon, Soon-sun, J9 Kwong, Amanda, MORNSEM36

#### L

Labhard, Susan, MINISYMP11 LaForme Fiss, Alyssa, E5 Lajiness-O'Neill, Renee, MORNSEM18 Lamontagne, Marie-Ève, B1 Lamvik, Torarin, C10 Larson, Jill, MORNSEM25, MINISYMP37 Leis, Allie, H4 Leland, Natalie, K10 Lenhart, Rachel, J6 Lennon, Madison, A2 Lennon, Nancy, A2, A3, MORNSEM03 Lenz, Colleen, H9 Leonard, Jeffrey, G5, MINISYMP06 Lerner Papautsky, Elizabeth, K10 Levac, Danielle, PC3 Lewis, Leslie Edward, E1 Li, Li, L1 Libertin, Juliana, MORNSEM12 Lichtenthal, Peter, MINISYMP26 Lidbeck, Cecilia, J4 Lieber, Richard, D6, PC3, MORNSEM28 Lindgren, Amelia, J7 Lindquist, Martin, H9 Lo, Warren, E6 Lobo, Michele, E2 Loomis, Taryn, D2 Looper, Julia, E5 Luke, Carly, 15, MINISYMP32 Lydersen, Stian, K8 Lysaght, Christine, L8

#### Μ

Macabales, Sarah, MORNSEM34 Maitre, Nathalie, E7, MORNSEM01, MORNSEM17 Maiya, G Arun, K5 Majkic-Taisic, Jasmina, C10 Mak, Veronika, MORNSEM35 Malik, Kristina, PC4, MORNSEM14, MINISYMP27 Mangarelli, Caren, MORNSEM25 Manley, Claire, C3, C4 Mann, Kilby, MINISYMP20, MINISYMP27 Manus, Robin, 110 Mark, Jasper, L10 Marks, Warren, D10 Marmont, Sophie, K2 Martens, Brian, G2 Martin, Tanya, K3 Martin-Roy, Sarah, B1 Marx, Abygail, MINISYMP12 Massey, Jill, MORNSEM08 Matsumodo, Hiroko, PC6 Mc Namara, Maria, 19 McBride, Daniel, J1 McBryde, Natalie, C2 McCarthy, Christopher, PC3 McCarthy, James, PC2, MINISYMP18 McCormick, Anna, D8, PC3, MINISYMP34 McCoy, Sarah, E2 McInerney, Michelle, K6 McIntyre, Allison, MORNSEM17 McIntyre, Sarah, B7, D9, G6, G7, G8, K2, K3, MINISYMP23, MINISYMP39 McKee, Daniel, F7 McManus, Beth, K10 McNamara, Lynda, 15, 19 Mejía-Grueso, Alejandro, H1 Mendoza-Puccini, Carolina, MINISYMP05, MINISYMP39 Mendoza-Pulido, Camilo, H1 Merabet, Lotfi, C3, C4 Mesterman, Ronit, D8 Meyer, Daniel, MORNSEM13 Miller, Freeman, A2, A3, J3, J7, PC2, PC6 Miller, Patricia, H2 Miller, Stacey, D1, MORNSEM31 Milo-Manson, Golda, MORNSEM07 Min, Jae Jung, J9 Miros, Jennifer, MINISYMP33 Mishaal, Ram, D1, I3 Mitchell, Stuart, J2 Miyanji, Firoz, PC6 Modlesky, Christopher, B2, C5, L1, PC1, PC7 Molinini, Rebecca, E2 Monbaliu, Elegast, F2, G2, G3, MORNSEM16, MORNSEM32 Moran, Sarah, MINISYMP33 Moreau, Noelle, L1 Morgan, Catherine, E7, F9, I1, I9, L3 Morgan, Kristin, L6 Moritz, Chet T., F6 Morris, Kym, 15 Moskowitz, Jan, MINISYMP11

Moulton, Theresa, 18, MINISYMP05 Mulpuri, Kishore, D1, MORNSEM31, MINISYMP02 Munger, Meghan, A1, A8, K4 Murphy, Gretchen, MORNSEM30 Murphy, Nancy, MINISYMP03, MINISYMP20, MINISYMP27 Murphy, Natalie, K10 Musolino, Patricia, MORNSEM30 Mutlu, Akmer, 12

#### Ν

Naaris, Mari, F2, MORNSEM16 Narayanan, Unni, A10, MINISYMP07, MINISYMP19, MINISYMP29 Nassar, Natasha, K3 Nedrelow, Jonathan, D5 Nemanich, Samuel, C9 Newman, Kelley, MINISYMP33 Nichols, Erikson, A5 Nielsen, Jens Bo, MINISYMP16 Niiler, Tim, A2, A3 Nitkin, Ralph, PC3, MINISYMP01 Noritz, Garey, MINISYMP03, MINISYMP27 Nouri, Masoumeh, F8 Novacheck, Tom, A8, K4, MINISYMP06, MINISYMP15, MINISYMP18 Novak, Iona, E3, E7, F8, F9, I1, I9, L3, MINISYMP16, MINISYMP30 Ntekim, Nedeke, D10 Nurminskaya, Maria, PC3, PC7, MINISYMP01

# 0

O'Malley-Krohn, Isabel, D6 Oakes, Ellena, 15 O'Brien, Karel, E9 O'Brien, Megan, PC3 O'Donnell, Maureen, MINISYMP14 Oftedal, Stina, F3, MORNSEM06 Oleszek, Joyce, MINISYMP06 Oliver, Haley, MORNSEM33 Olorunmoteni, Oluwatosin, G10, G10 Opendi, David, MINISYMP22 Oppenheim, William, MINISYMP14 Orellana, Kevin, J6 Ortibus, Els, F2 Oskoui, Maryam, D8 Ostendorf, Adam, MINISYMP19 Ostojic, Katarina, MORNSEM05 Ouimet, Mathieu, B1 Ounpuu, Sylvia, A9, J10, PC2 Owens, Laura, PC6 Oyetoke, TemilOluwa, G10, G10

#### Ρ

Paget, Simon, K3, MORNSEM05 Paleg, Ginny, MINISYMP24 Palmcrantz, Alexandra, J4 Pannek, Kerstin, L3 Panzer, Kate, B9 Papadelis, Christos, D5, PC7 Papavasiliou, Antigone, MINISYMP26 Park, Eugene, MORNSEM10 Park, Moon Seok, J9 Parsons, Jake, D6 Paton, Madison, F8, I9 Pavone, Larissa, MORNSEM34 Payares-Lizano, Monica, MINISYMP28 Pearce, Alison, K2 Pearlmutter, Michael, PC3, PC7 Pearson, Toni, G1, G4 Pederson, Kari, B5 Pehlivan, Esra, G1 Pereira, Silvana, E10 Peterson, Mark, MINISYMP38 Peyton, Colleen, 18, MORNSEM36, MINISYMP17 Phillips, John, MINISYMP10 Phoenix, Michelle, MORNSEM26 Pichika, Raji, B8 Pickar, Tracy, MINISYMP21 Pieraccini, Valerie, MORNSEM01 Pierz, Kristan, A9, J10, PC2, MINISYMP18, MINISYMP29 Pinal, Sierra, D7, D7 Pirshahid, Ali, J5 Poirier, Sarah-Eve, B1 Pons, Christelle, PC3 Pontén, Eva, J4 Poojari, Deepalaxmi, K5 Pouppirt, Nicole, MORNSEM29 Pozniak, Kinga, MORNSEM20 Price, Sarah, E2 Price, Sophie, K3 Pritchard, Lesley, MINISYMP04

# Q

Quartermaine, Jacinta, B10 Quiroga, Manuela, H1

# R

Rackauskaite, Gija, MINISYMP23 Raftemo, Anne Elisabeth, C10 Rahlin, Mary, PC5 Rajagopal, Aarabhi, I10 Ramey, Sharon, E6 Ramstad, Kjersti, C10 Rande, Amanda, MINISYMP34 Rao, Bhamini, E1, K5 Raskin, Jeffrey, G5, MORNSEM34

Ratnadurai-Giridharan, Shivakeshavan, L7 Redding, Greg, PC6 Reedman, Sarah, F3, L3 Reid, Susan, G6, G7 Reider, Kristen, D7 Rempel, Gina, MINISYMP22 Rethlefsen, Susan, A7, A9, K1, J10 Reves, Fabiola, MORNSEM09 Reynolds, Robert, MINISYMP23 Rha, Dong-wook, A4, H3 Rhodes, Jason, MINISYMP25, MINISYMP29 Rich, Tonya, MORNSEM04 Riley, Dave, D5 Ritterband-Rosenbaum, Anina, MINISYMP16 Rizk, Sabrin, K10 Robert, Glenn, MORNSEM08 Robertson, Charlene, 17 Robinson, Shenandoah, D3, H9, PC6 Rochani, Haresh, B2, B2 Rocque, Brandon, G5, MORNSEM24, MINISYMP06, MINISYMP19 Rodby-Bousquet, Elisabet, MINISYMP24 Rodriguez-MacClintic, Jennifer, A9, J10 Roeleveld, Karin, C10 Roge, Desiree, G1 Rogers, Kenneth, J3, J7 Rojas, Ana-Marie, MORNSEM25, MORNSEM34, MINISYMP37 Rose, Jessica, PC3, MINISYMP31 Rose, Tanya, B10 Rosenbaum, Peter L, MORNSEM20, MINISYMP14 Rosenberg, Nathan, MINISYMP26 Roy, Michelle, MINISYMP04 Ruiz Brunner, Maria de las Mercedes, F1 Russell, Daniel, E1 Rutz, Erich, MINISYMP02, MINISYMP18 Ryan, Jennifer, MINISYMP38 Ryan, Kyle, B6

# S

Sagástegui roel, Alejandra, H8 Sakzewski, Leanne, E7, E8, F3, L3, L9, MORNSEM06, MINISYMP09, MINISYMP30 Salgado, Zurisadai, K10 Samdup, Dawa, D8 Sanchez, Federico, F1 Sandhu, Ash, I3 Sargent, Barbara, I4, I6 Sarmiento, Cristina, B3, PC4, MINISYMP36 Schadl, Kornel, PC3, MINISYMP31 Scheinberg, Adam, PC3 Scher, David, A5 Scherer, Stephen, D8 Schiariti, Verónica, F1

Schiller, Julia, MORNSEM35 Schindler-Ivens, Sheila, C9 Schlieker, Katie, B4 Schmidt, Mary, MINISYMP36 Schneider, Lvdia, I10 Schneuer, Francisco, K3 Schubauer, Mary Beth, MINISYMP13 Scott, Heather, G7 Scott, Kimberley, E8, MINISYMP09 Selber, Paulo, A5 Sellars, Louise, K3 Sgandurra, Giuseppina, MORNSEM37 Shah, Hitesh, K5 Shah, Manish, G5 Shah, Suken, J5, J5, PC6 Shahane, Vaishnavi, L6 Shall, Mary, E2 Shandley, Sabrina, D5 Shannon, Bernadette, I5, L9 Shearer, Heather, H10, H10 Shevell, Michael, D8 Shields, Thomas, A2 Shierk, Angela, MINISYMP05 Shilt, Jeffrey, MINISYMP29 Shim, Dain, A4, H3 Shin, Kara, D7, D7 Shippee, Nathan, A8, K4 Shore, Benjamin, H2, MINISYMP02, MINISYMP18, MINISYMP28 Shrader, Benjamin, PC6 Shrader, Claire, MORNSEM04, MINISYMP24 Shrader, M. Wade, A2, A3, J3, J5, J7, MINISYMP16 Shrivastav, Siddhi, F6 Siegel, Rebecca, MORNSEM27 Sienko, Susan, MINISYMP14 Silva. Luiz. J3 Singh, Tarkeshwar, C5 Siu, Caitlyn, D1 Smith, Lucas, D2 Smithers-Sheedy, Hayley, B7, D9, G6, G7, G8 Snider, Laurie, E9 Snyder, Brian, H2 Soaliman, Adil, PC6 Sondheimer, Neal, D8 Soper, Alice, MORNSEM26 Sorenson, Julie, 17 Spiegel, David, J2 Srinivasan, Rajashree, MORNSEM09 Srinivasan, Sudha, L6 Stanton, Emma, 19 Stasulas, Camryn, C9 Staudt, Loretta, 14 Steele, Katherine, E5, F6

Stevens-Hofer, Breyana, K6 Stevenson, Charles, G5 Stevenson, Richard, H6, H7, MINISYMP14 Stoltz, Amanda, MINISYMP08 Stone, Scellig, G5 Stout, Jean, A1, MINISYMP07, MINISYMP15 Stuyvenberg, Corri, E2 Su, Xiwen, C1 Suárez-Obando, Fernando, H1 Suitum, Brooke, F4 Sukal-Moulton, Theresa, MINISYMP17, MINISYMP39 Sulzer, James, PC3 Sumanasena, Samanmali, E4 Sun, Christina, J1 Sun, Jessica, F8 Sung, Ki Hyuk, J9 Surkar, Swati, C2, L8, L10 Sussman, michael, MINISYMP14 Swaroop, Vineeta, J1, MORNSEM25, MINISYMP37 Swinburn, Katherine, B7 Switzer, Lauren, H10

#### T

Tabaie, Sean, J8 Tana, Jonas, K7 Tanay, Mary, MORNSEM08 Tantsis, Esther, 19 Tashivilli, Nana, MINISYMP32 Taylor, Daveda, A2 Taylor, H. Gerry, MORNSEM18 Taylor, McIntosh, 13 te Velde, Anna, I1, I9, MINISYMP30 Thill, Marissa, A1, B5 Thomas, Rachel, 15 Thomason, Pam, MINISYMP07 Thompson, Rachel, D7, J1, MINISYMP25 Thornley, Patrick, J5 Thorpe, Deborah, L10 Tierney, Sandy, B5 Toohey, Monica, 19 Trevarrow, Michael, B4 Trionfo, Arianna, J3 Trost, Stewart, F3 Trucks, Mary Rebekah, MORNSEM22 Tu, Albert, MINISYMP34 Tuffaha, Sami, MORNSEM10 Tulchin-Francis, Kirsten, PC2 Turnure, David, C2

#### U

Ueda, Keisuke, G1, G4 Umakanth, Shashikiran, K5

#### V

Van Wonterghem, Ellen, G3 Vanmechelen, Inti, G2, G3, MORNSEM16 Vargus-Adams, Jilda, MINISYMP14 Vaughn, Rachel, L10 Veis, Sharon, 110 Vermeulen, Jeroen, G2 Vessey, Judith, H2 VIK, Torstein, C10 Villalba, Marie, D2, G9 Villarreal Rios, Jessica, H8 Villarreal-Zambrano, Sofia, H8 Villegas, Vivian, K10 Virgil, Brittany, MORNSEM04 Virnig, Beth, A8, K4 von Walden, Ferdinand, J4 Vova, Joshua, B2

# W

Wagner, Daniel, A3 Waight, Emma, B7, G6, G7, G8 Walker, Sarah, B4 Wallen, Margaret, E7, K6 Walt, Kathryn (Katie), A1, MINISYMP07, MINISYMP15 Wan, Kristen, F4 Wandersee, Nathan, B5 Wang, Lauren, MORNSEM15 Wang, Ruoli, J4 Ward, Annika, C9 Ware, Robert, E3, E7, F3, I5, L3, L9 Warschausky, Seth, MORNSEM18, MINISYMP35 Watson, Linda, G6, G7 Webb, Annabel, B7, F8, G6, I1, I9, K2 Weerasinghe, Yvonne, E4 Wehausen, Brittany, C9 Wennstrom, Karissa, C9 Wentzell, Erin, F7 Whaley, Ashley, MINISYMP38 Whitaker, Amanda, MORNSEM21, MINISYMP28 Whitney, Daniel, B9, H4 Whittingham, Koa, E3, E7 Willett, Sandra, E2 Willson, John, C2 Wilson, Anastasia, MINISYMP12 Wilson, Jenny, MINISYMP08 Wilson, Tony, C6, C8 Wilson, Yana, D9, MINISYMP39 Wiltshire, Clare, G7 Wimberly, Robert, A6, MINISYMP25 Wintle, Richard, D8 Wishart, Brian, MORNSEM30 Wisniewski, Steven, G5 Wong, Vivian, 13

Woolfenden, Susan, G6, MORNSEM05 Woosley, Katie, C2 Wren, Tishya, A7, A9, K1, J10 Wu, Shannon, D7 Wu, Tai-Wei, I6 Wyrwa, Jordan, B3

## Y

Yaşar, Evren, L4 Yale, Mara, MORNSEM30 Yang, Daniel, J6 Yardımcı Lokmanoğlu, Bilge Nur, I2 Yeh, Chun-Hsaio, G9 Young, Bailey, J1 Yu, Stella, G9

# Z

Zanini, Silvia, A5 Zarrabi, Morteza, F8 Zarrei, Mehdi, D8 Zawrotny, Jessica, MORNSEM10 Zheng, Jenny, J2 Zidan, Ahlam, B1 Zimmerman, Angelynn, MINISYMP10 Zimmermann, Lisa, MORNSEM02 Zlotolow, Dan, MORNSEM10

#### A

Abbott, Erin, SP05 Abousamra, Oussama, SP35, SP97 Abrahão, Leonardo, SP158 Acord, Stephanie, SP157 Acosta, Ana Maria, CO13 Adamczak, Beata, SP46 Adiguzel, Hatice, SP58 Ahamed, Sheikh Igbal, DP37 Ahmed, Saifuddin, SP81 Aiona, Michael, SP82 Airaksinen, Manu, SP60 Akarsu, Melike, SP127 Alazem, Hana, DP38 Alcott, Morgan, DP04, SP122 Aldahondo, Nanette, CO09 Alderson, Lucy, SP50 Alharbi, Maha, DP03 Alkazemi, Afrah, DP03 Almoadi, Nora, SP25 Almutairi, Anwar, DP03, SP16 Alotaibi, Mansour, DP03, SP16 Alrashdi, Naif, SP16 Alriksson-Schmidt, Ann, SP84 Al-shakarchi, Zaid, SP46 Amonkar, Nidhi, SP163 Andersen, Guro, DP24 Andersen, John, SP91 Anderson, Chelsey, SP151 Ann Marie, Crean, SP93 Aravamuthan, Bhooma, SP76 Arnaud, Catherine, SP110 Aronow, Bruce, SP118, SP154 Asma, Ali, SP72 Atalan Efkere, Pelin, SP145 Aufheimer, Maria, SP59 Au-Yeung, Carrie, SP36 Avery, Jordan, SP14, SP24, SP93 Avinashi, Vishal, SP109 Aw-Zoretic, Jessie, SP21 Ayoubi, Lubna, CO02, SP22 Ayupe, Kënnea, SP32 Azevedo, Fernanda, SP44 Azizi, Hana, CO16, CO23 Azok, Jill, SP135

#### В

Başaran, Zekiye, SP145 Bach, Annika, C003 Badawi, Nadia, DP14, SP15, SP81 Baddour, Natalie, DP38, SP138 Baek, Dawoon, SP02 Bahr, Tori, SP36 Bailes, Amy, SP118, SP154, SP186 Bain, Jennifer, SP164 Balachandran, Uma, SP05 Baldwin, Keith, SP42, SP70, SP156 Bang, Moon Suk, DP06, SP191 Banihani, Rudaina, DP01 Baptist, Dyvonne, SP99 Baratta-Ziska, Frances, DP27 Barber, Danielle, SP76 Barbosa, Vanessa, SP155 Barnes, Denise, SP14 Barnes, Elizabeth, SP15 Bates, Elisabeth, CO16, CO23 Bath, Natasha, SP27 Bau. Odette. SP98 Bauer, Corinna, SP08 Bauer, Jeremy, SP105 Beauchamp, Eduardo, SP52, SP74 Beaudry, Paul, SP109 Bedard, Tanya, SP12 Beebe, Timothy, SP65 Bekteshi, Saranda, SP133, SP134 Bell, Janette, DP05 Bell, Kristie, SP80 Beltran, Veronica, SP79 Benfer, Katherine, SP136 Bent, Melissa, SP79 Bentley, Katherine, CO08 Beom, Jaewon, SP18 Berman, Ashlev, DP25 Bex, Peter, SP08 Bhaskar, Atul, SP117 Bhatt, Tanvi, SP19, SP141 Biddiss, Elaine, SP131 Bjornson, Kristie, SP132, SP183 Blanchard, Olivia, SP05 Blatt. Kristen. SP86 Blevenheuft, Yannick, SP98 Bliss, Laura, SP21 Bobak, Lukas, SP143 Bolde, Shannen, SP146 Bone, Jeffrey, SP75 Bos, Arend, SP99, SP136 Bosak, Dianna, SP11 Bosanquet, Margot, SP136 Boswell, Lynn, SP14, SP24, SP93 Bourgue, Karli, DP07 Bova, Michael, DP28 Bowen, Richard, SP144 Bowler, Kayla, SP20 Boyd, Roslyn, SP57, SP80, SP99. SP121, SP136 Boyer, Elizabeth, SP64 Bradley, Elena, DP19 Brandão, Marina, DP40, SP158 Brandenburg, Joline, DP30, SP119, SP140 Bratkovich, Suzanne, CO07 Brazevič, Sabina, SP170 Breanne, Breanne, SP49 Breithaupt, Katherine, DP18

Brock, Emily, SP157 Brooks, Jaysson, SP142 Brown, Mackenzie, SP177 Brown, Shaaron, SP114 Brustowicz, Robert, SP167 Buckon, Cathleen, SP82 Buizer, Annemieke, SP94 Bunkell, Lizabeth, CO04 Burkitt, Chantel, SP49, SP64 Burnsed, Jennifer, SP30, SP37, SP114 Burroughs, Casey, SP165 Busboom, Morgan, CO14 Buse, Lauren, SP07 Butler, Liam, SP05 Byars, Michelle, SP186 Byrne, Rachel, SP115

# С

Caban-Rivera, Diego, SP184 Cabral, Nadine, SP32 Cabral, Thais, SP67, SP124 Cachecho, Sarah, DP10, SP26 Cadwgan, Jill, SP185 Cady, Rhonda, SP36, SP71 Cahill, Patrick, SP142 Camargos, Ana Cristina, SP32 Campos, Ana Carolina, SP171, SP175 Caneda, Cherlyn, DP08, DP13 Capa Tayyare, Begum, SP127 Cardinal, Marie-Claude, SP98 Cardoso, Roberta, SP147 Carmel, Jason, SP45 Caskey, Charlotte, SP132, SP183 Cassidy, Deborah, CO16, CO23 Castilho, Julia, SP32 Castillo Sanchez, Victoria, SP12 Celik, Halil Ibrahim, SP58 Chacon Vargas, Fernanda, SP131 Chagas, Paula, SP32 Chambers, Henry, SP33, SP39 Chan Viquez, Daniela, SP131 Chandra, Ananya, SP147, SP182 Chankarla, Chandu, SP102 Chavez, Michelle, SP79 Checo Melger, Maria Julia, SP175 Chen, Guogiang, SP153 Chen, Meng, SP153 Cheng, Minxin, SP98 Cheung, Kevin, DP38, SP138 Cho, Joongbum, SP17 Cho, Seon, SP18 Cho, Sung-Rae, SP02 Choi, Eun-Jeong, DP06 Choi, Jaeyoung, SP17 Choi, Jihong, SP17 Chole, Dana, CO21 Chopra, Maya, SP107

Chorna, Olena, SP60 Chowne, Carolyn, SP108 Christiansen, Cory, SP151 Christopher, Preston, CO03 Chu, Virginia, SP20, SP30 Chung, Chin Youb, SP101 Church, Chris, SP184, SP187 Ciccodicola, Eva, SP33, SP35 Cicuto Ferreira Rocha, Nelci Adriana, SP171, SP175 Cieri, M. Elisabeth, SP95 Clem, Kayla, CO15 Coffey, Maitreya, SP27 Cogburn, Derrick, SP182 Cohen, Joelle, SP61 Cohen-Eilig, Mor, CO01, SP108 Collins, Jessica, SP26 Collins, John, SP100 Collins, Kellie, SP68 Colquitt, Gavin, SP55, SP78 Colvin, Jeffrey, SP178 Condinanzi, Ana Laura, SP95 Condliffe, Elizabeth, CO19, SP112 Conrad, Shannon, SP157 Cook, Danielle, SP167 Copermans, Ella, SP133, SP134 Corell, Linnéa, SP63, SP94 Corkrum, Michelle, SP45 Corr, Brad, CO14, DP32 Côté, Pierre, SP139 Creveling, Sarah, SP55 Croll, Kelli, DP20 Cuestas, Eduardo, SP95 Cui. Xinhua. SP153 Cullion, Kyle, SP118 Curran, Patrick, SP100, SP159

#### D

Dahake, Urmila, SP150, SP169 Dahan-Oliel, Noémi, DP10, SP12, SP26 Dale, Russell (SCHN), SP15 Damberg, Niklas, SP92 Dan, Bernard, SP133, SP134 Darragh, Amy, SP67, SP124, SP161 Darring, Jodi, SP30 Daunter, Alecia, SP22, SP41 Davids, Jon, SP62, SP106, SP116 Dayton, Bridget, CO15, DP13 de Campos, Ana Carolina, SP32 De Vries, Hanneke J.i.p., SP12 de Wit, Marie Claire, DP17 Dekel, Moran, SP152 DeLongis, Maureen, DP18 DeLuca, Stephanie, DP02 Dendinger, Tarra, DP19 Denner, Carlos, SP147 DeRegnier, Raye-Ann, DP05, SP14, SP24

Descoteaux, Maxime, SP166 Desgagnés, Julie, SP98 Desloovere, Kaat, SP102 Dewald, Julius, CO13 Dewan, Tammie, SP109 Dhodapkar, Meera, SP96 Dias, Luciano, SP104 Dichraff, Brittany, DP42 Dieterich, Klaus, SP12 Diskin, Catherine, SP27 Do, Patrick, SP105 Dodge, Jessica, DP12 Dore-Bergeron, Marie-Joelle, SP109 Dorney, Ian, SP143 Doskas, Riley, SP61 Drisdelle, Sara, DP35 Drottar, Marie, SP08 Duarte Pereira, Natalia, SP175 Dursun, Nigar, SP127 Dusing, Stacey, DP09, SP20, SP30, SP37, SP114 Dutt, Vivek, CO05, SP31 Dyer, Lindsay, SP03

# Ε

Earland, Tracey, SP43 Edelman Bos, Arnoud, SP94 Eeles, Abbey, SP57 Eggertsdóttir, Guðbjörg, SP84 EI3 Network, Los Angeles, DP09 Eickhoff, Jens, SP68 Eilig-Cohen, Mor, SP174 Elbasan, Bulent, SP58, SP145 Elekanachi, Rose, DP10 Elfassy, Caroline, SP26 Eltzroth, Jillian, SP90 Ergun, Nevin, SP58 Erickson, Steven, SP22 Ericson, Lucy, DP44, SP173 Escobar Zuluaga, L. Johana, SP95 Evans, Megan, DP02 Eygendaal, Denise, SP149

#### F

Fagg, Andrew, DP04 Fairhurst, Charlie, SP185 Fatone, Stefania, SP151 Fehlings, Darcy, DP01, SP09, SP131, SP139, SP140 Feldner, Heather, SP188 Felix Lôbo Monteiro, Rayane, SP32, SP171 Feng, Jing, SP105 Ferguson, Stuart, SP105 Fernandez Huertas, Heilyn, SP131 Fernandez-Gonzalo, Rodrigo, SP63, SP94 Fernando, Warnakulasuriya, SP128, SP176 Feroze, Nimra, SP15

Ferre, Claudio, SP01, SP120 Festante, Fabrizia, SP60 Feys, Hilde, SP102 Figueiredo, Priscilla, SP158 Filges, Isabel, SP12 Finn, Christine, SP99 Finucane, Sheryl, SP20, SP30 Firouzeh, Pegah, SP180 Firtha, Michael, SP106 Fisher, Elizabeth, SP21 Fitzgerald, Ryan, SP142 Fontes, Deborah, SP32 Forst, Heather, SP92 Fortin, William, SP98 Fortune, Jennifer, SP103 Fowler, Trevor, SP75 Fragomeni, Anna, SP188 Francl, Mia, CO01 Frankenthal, Sophie, SP14 Frazier, Zoë, SP107 Frey, Scott, SP82 Friedman, Jan, CO01 Friel, Kathleen, SP120 Friesen, Alexis, SP49 Frumberg, David, SP96 Fujino, Marcelo, SP44, SP111

# G

Gable, Dustin, SP107 Gad, Mayuri, SP117 Gaebler-Spira, Deborah, SP14 Gallaher, Jonathon, DP36 Galyean, Patrick, SP140 Gannotti, Mary, SP56, SP73 Gardas, Shailesh, SP165 Garudadri, Harinath, SP179 Gaston, Mark, SP84 Gaucher, Nathalie, SP109 Gavioli, Marissa, CO03 Gellert-Jones, Marianne, DP26 Gerling, Kathrin, SP59 Gieringer, Abbye, DP44, SP173 Gill, Deepak, SP15 Gillick, Bernadette, CO03, SP68 Girolami, Gay, SP19 Glader, Laurie, SP86 Glegg, Stephanie, SP174 Godoi-Jacomassi, Daniela, SP175 Goetgeluck, Alison, SP14, SP24 Gokbel, Tugba, SP127 Golangade, Snehal, SP169 Goldfarb, Avital, SP152 Goldish, Gary, DP36 Gomes, Alana, SP32 Goodbody, Christine, SP42, SP70, SP156 Goodwin, Emily, SP178 Goodwin, Jane, SP185

Gopalakrishna, Sivakumar, DP33, DP34, SP10 Gordon, Andrew, DP40, SP38, SP120, SP158 Gordon, Anva, SP99, SP136 Gormley, Caroline, CO09, SP83 Gormley, Mark, CO12 Gozpinar, Guler, SP127 Graham, Robert, SP66 Grauer, Jonathan, SP96 Greve, Kelly, SP118, SP154 Gross, Paul, SP56, SP73, SP140 Gu, Rui, SP153 Guillaume, Tenner, SP52, SP74 Gulam, Khandaker, SP81, SP95 Guldberg, Steven, DP05 Guo, Kathy, CO12 Gutterman, Jennifer, SP120 Guy, Stephen, DP39 Guzzetta, Andrea, SP60

#### Η

Haberfehlner, Helga, SP102 Hahn, Elyse, SP93 Hall, Jamie, CO21 Hall, Judith, SP12 Hall, Matt, SP178 Hall, Michelle, SP83 Hallez, Hans, SP59 Halperin, Scott, SP96 Han, Hyun Jung, SP18 Hansamalee, K A Chamika, SP162 Hansen, Andrew, DP36 Hanson, Alison, SP33, SP35 Hanson, Jessica, SP04, SP190 Hardesty, Christina, SP135, SP143 Harding, Danielle, SP74 Harper, Amy, SP30, SP37 Harpster, Karen, SP07, SP90, SP118 Harrington, Joseph, CO05 Havens, Kathryn, SP25 Hawe, Rachel, DP39 Heathcock, Jill, SP67, SP121, SP124, SP125, SP161 Heigel, Sarah, SP14, SP24, SP93 Heinrichs-Graham, Elizabeth, SP13 Heinzelman, Emily, SP07 Helle, Elisabeth, DP24 Hendricks-Muñoz, Karen, SP30, SP37, SP114 Hensey, Owen, SP103 Heo, Jeong Hyun, SP02 Herard, Grace-Anne, DP40, SP38 Heslon, Kayla, SP190 Heydenrijk-Kikkert, Myrna, SP29 Higgins, Johanne, SP26 Hill, Jeanette, SP93

Hillaker, Emily, DP28 Hilton, Coleman, SP12 Hinton, Erica, SP13 Hithatiya edirisooriyage, Nuwan, SP128, SP176 Hjalmarsson, Emma, SP63, SP94 Hodgson, Xanthe, SP50 Hogg-Johnson, Sheilah, SP139 Holland, Holly, SP165 Hollody, Katalin, SP110 Hollung, Sandra, SP84, SP110 Horak. Victoria Jane. CO22 Hori, Yusuke, SP144 Hornby, Brittany, DP19 Horvath, Gabriella, DP41 Hossain, Iskander, SP81 Howard, Jason, SP72, SP130, SP144, SP184, SP187 Howell, Brittany, DP02 Huang, Elena, SP178 Hui, Lisa, DP14 Hulk, Kendall, CO08 Hung, Ya-Ching, SP38 Huppert, Theodore, SP175 Hurvitz, Edward, SP47, SP56, SP73, SP87 Hutchinson, Sara, CO17 Hwang, Jihye, SP02 Hwang, Youngsub, SP48 Hwu, Wuh-Liang, DP41 Hyun, Sung Eun, SP191

#### I

Iamchaimongkol, Apiphan, DP31 Ikonomidou, Chrysanthy, CO03 Inamdar, Ketaki, SP20, SP30 Ingo, Carson, CO13 Ingraham, Kim, SP188 Islam, Mohammad Shafiul, SP81 Iyer, Sai, DP09

# J

Jackman, Michelle, SP99 Jahan, Israt, SP95 Jahnsen, Reidun, DP24 Jaju, Alok, SP21 James, Chrystina, SP74 Jang, Dae-Hyun, SP137 Jang, Hyuna, SP17 Jankowski, Mark, SP92 Janowski, Lorene, DP27 Jarman, McKay, SP135, SP143 Jarman, Tiffany, SP135 Jayasooriya, Sandhya, SP176 Jeans, Kelly, CO04 Jedraszko, Aneta, DP05, SP14, SP24, SP93 Jeewanthi, Athauda, SP69 Jeglinsky Kankainen, Ira, SP84

Jensen, Anna, SP179 Jeong, Eomhyeong, SP02 Jetha, Chetna, SP108, SP174 Jiang, Will, SP96 Jing, Hong, SP153 Jo, Chanhee, SP173 Jodoin, Sebastien, SP182 Johnson, Curtis, SP184 Johnson, Maria, SP178 Johnson, Yvette, SP157 Jones, Catherine, C020 Joshi, Divya, C013 Joung, Hee Joung, SP101 Jóźwiak, Marek, SP46, SP170

## K

Kaelber, David, SP143 Kaleta, Mary, SP83 Kalpakjian, Claire, SP146 Kane, Audrey, SP37, SP114 Karakostas, Tasos, SP104 Karan, Philippe, SP166 Karim, Tasneem, SP15, SP81 Karlsson, Petra, SP133, SP134 Karunathilake, Amila, SP176 Katchburian, Lesley, SP50 Katsma, Mark, SP159 Kawamura, Cátia, SP44, SP111 Kay, Robert, SP33, SP89, SP97 Kaymaz, Burak, SP144 Kazmi, Faaiza, SP184 Keithley, Kiana, SP188 Keko, Mario, SP55 Kelly, Marie, SP01 Kempink, Dagmar, SP149 Kendrick-Allwood, Salathiel, SP172 Kerr, Claire, SP103 Kezia, Evelyne, SP76 Khan, Ajmal, SP131 Khetani, Mary, SP11 Kiapour, Ata, SP53, SP54 Killian, Claire, SP13 Kim, Bo Ryun, SP18 Kim, Dae Hyun, SP101 Kim, Hyunjoon, SP01 Kim, Jeong Min, DP06, SP191 Kim, Jung Hwan, SP02 Kim, Junghyun, DP06 Kim, Sungeun, SP48 Kimweri, Pauline, CO18 King, Gillian, SP09 Kingston, David, CO05, SP31 Kinsner-Ovaskainen, Agnieszka, SP110 Kirkman, Grant, SP165 Kittelson, Andrew, SP151 Klamar, Jan, SP28, SP113 Knarr, Brain, CO05, SP31

Kodithuwakku, Pivadasa, SP69 Koenig, Kevin, SP83 Kolobe, Thubi, DP04, SP88 Kombala Liyanage, Janani, SP176 Kong, Shana, SP85 Konings, Marco, SP59 Koop, Steven, SP52 Kopesky, Jeffrey, SP06 Kothur, Kavitha, SP15 Krach, Linda, DP36, SP56, SP73 Krater, Timothy, CO17, CO22 Kreschmer, Jodi, SP146 Kristina, Stein, SP93 Krolick, Alexis, DP41 Kroll, Thilo, SP103 Kruse, Annika, SP63, SP94 Kruszka, Paul, SP03 Krzyżańska, Anna, SP170 Kubo, Masayoshi, SP25 Kuhl, Patricia, SP188 Kulkarni, Vedant, SP62, SP106, SP116 Kumarasiri, Kudaduru Gedara Sujani Indunil, SP128, SP176 Kumavor, Patrick, SP163 Kuntze, Gregor, CO19 Kurowski, Brad, SP118, SP154 Kurz, Max, C014, DP32, SP13 Kwon, Jeong-Yi, SP17, SP48 Kwong, Amanda, SP57

#### L

Laende, Elise, CO19 Lai, Carol, SP108 Lamsal, Ramesh, DP11 Lançon, Lexie, SP98 Larin, Michelle, DP38 Larson, Emily, DP30 Larson, Jill, SP104 Lavelle, Grace, SP103 Le, Lawrence, SP91 Lee, Byoung Chan, SP15 Lee, Hui-Min, DP41 Lee, Hye Kyoung, SP02 Lee, Hyun Jung, SP18 Lee, Junsoo, SP78 Lee, Seung U, SP18 Lee, Soyoung, SP148 Lee, Stephanie, SP184 Lee, Woo Hyung, DP06, SP191 Lee, Yae Lim, DP06 Lee, Yaelim, SP191 Legare, Janet, SP68 Legas, Selamenesh Tsige, DP01 Legesse, Atsede, DP01 Legister, Candice, SP52, SP74 Leishman, Shaneen, SP136 Leite, Hércules, SP32

Lemaire, Edward, DP38, SP138 Lencucha, Raphael, SP182 Lenhart, Rachel, SP70 Lennon, Nancy, SP187 Leonard, Jeffrev, SP86 Levac, Danielle, SP98 Lewis, Jessica, SP28, SP113 Lewis, Michaela, SP07 Li, Haiqi, SP153 Li, Li, SP153 Li, Tingyu, SP153 Li, Ying, SP142 Libby, Jina, DP28 Libertin, Juliana, DP25 Liddle, Alison, SP168 Lim. Jiwoon. SP18 Lima, Amanda, SP32 Lima Gonçalves, Laura Gabrielle, SP175 Lin, Elaine, SP05 Lindy, Amanda, SP03 Liu, Jiaxi, SP179 Liu, Rui, SP118 Lo. Warren. SP161 Longo, Egmar, SP32 Lopes, José Augusto, SP44, SP111 Lopez, Kelleen, SP79 LoPresti, Melissa, CO22 Lou, Edmond, SP91 Lozano, Jane, DP15 Lui, Nora, DP09 Luke, Carly, SP99, SP136 Lykken, Lisa, SP64 Lynch, Emma, SP23, SP66 Lynch, Mary, SP119 Lynn, Audrey, SP188 Lyons-Warren, Ariel, SP76 Lysaght, Christine, SP165

#### Μ

Maanum, Grethe, DP24 Mackenzie, William, SP72 Macready-Santos, Dawn, DP18 Madushika, Thilini, SP176 Magnusson, Dawn, SP151 Mahat, Aditya, SP76 Mahmoudi Kojidi, Ebrahim, SP147 Maitre, Nathalie, SP55, SP172 Majnemer, Annette, SP04, SP147 Makino, Amber, DP01 Malik, Kristina, SP126 Malika Delobel, Malika, SP110 Mamula, Nicole, CO20 Mañago, Mark, SP151 Mancini, Marisa, SP158 Manikowska, Faustyna, SP170 Manley, Claire, SP08 Mann, Dylan, CO12

Mann. Kilbv. CO10 Manning, Jessica, SP20 Manns, Patricia, SP180 Manus, Robin, SP14 Manyak, Grigory, SP143 Marchelli, Gabrielle, SP173 Marchese, Diana, DP41 Marchi, Viviana, SP60 Margalit, Adi, SP152 Marks, Warren, SP157 Marriott, Leslie, CO17 Martikaro, Raz, SP152 Martinez, Curt, SP160 Martinie, Ophelie, SP166 Matsumodo, Hiroko, SP142 Matthews. Ceilidh. SP75 Maus, Elizabeth, SP67, SP124, SP161 Mayfield, Laura, SP173 Mazzarella, Julia, SP125 McBryde, Natalie, SP165 McCormick, Anna, DP38 McCracken, Patricia, DP36 McCully, Kevin, SP78 McIntyre, Allison, SP55 McIntyre, Sarah, SP15 McKee, Daniel, DP29 McKnight, Dianalee, SP06 McLean, Heather, DP19 McManus, Maura, CO20 McWalter, Kirsty, SP03 Mekasha, Amha, DP01 Meltzoff, Andrew, SP188 Merabet, Lotfi, SP08 Merbler, Alyssa, SP49 Mercier, Catherine, SP166 Mercimek-Andrews, Saadet, DP41 Merhar, Stephanie, SP118 Merillat, Brenna, SP77 Meroz Cohen, Anat, SP152 Meulen, van der, Ineke, SP123 Mia, Md Raihan, DP37 Mick-Ramsamy, Leeann, SP136 Miley, Aimee, SP154 Millan, Francisca, SP03 Miller, Daniel, SP52, SP74 Miller, Freeman, SP130, SP144, SP187 Miller, Meagan, SP30 Miller, Ryan, SP06 Miller, Stacey, SP75, SP174 Min, Jae Jung, SP101 Mirzaian, Christine, DP09 Mishaal, Ram, C001, SP75, SP108, SP174 Mitchell, James W, SP153 Mitelpunkt, Alexis, SP118, SP152, SP154 Mithal, Divakar, SP21 Mo, Michelle, SP167 Modlesky, Christopher, SP55, SP78

Moerman, Sophie, DP22 Moll, Stanley, SP27 Monbaliu, Elegast, SP59, SP102, SP133, SP134 Monnin, Kara, SP86 Montserrat, Carles, SP131 Montufar Wright, Parma, SP184 Morais, Rosane, SP32 Morais Filho, Mauro, SP44, SP111 Morales, Ana, SP06 Moran, Thomas, SP51 Moreau, Noelle, SP34, SP189 Moreira, Rafaela, SP32 Morgan, Catherine, SP57, SP81 Morgan, Kristin, SP163 Morgan, Sara, SP52, SP74, SP83, SP142 Moritz, Chet T., SP132, SP183 Morris, Christopher, SP180 Morrow, Michelle, SP03 Moulton, Theresa, CO13 Movahhedi, Mohammadreza, SP53, SP54 Msall, Michael, SP66, SP153 Mulpuri, Kishore, SP75 Munasinghe, Jagath, SP69 Munce, Sarah, SP09, SP131 Munger, Meghan, SP65, SP83 Murphy, Christine, DP15 Murphy, Melissa, SP172

#### Ν

Naaris, Mari, SP59 Nageswaran, Savithri, SP23 Nair, Varun, SP75 Napier, Melanie, SP03 Narayanan, Unni, SP86 Nash, Charlotte, SP185 Nasser, Ana Beatriz, SP171 Natera De Benito, Daniel, SP12 Navalon, Carolina, SP12 Neil Knierbein, Erin, SP41 Nelson, Kate, SP109 Nemanich, Samuel, DP37 Nematollahi, Shahrzad, DP10, SP12 Neubauer, David, SP110 Ng, Tse-Nga, SP179 Nguyen, Hillary, SP53, SP54, SP167 Ngwesse, Stacy, SP64 Nickel, Eric, DP36 Nicolaescu, Jessica, CO21 Nietsch, Katrina, SP05 Nordbye Nielsen, Kirsten, SP84 Noritz, Garey, SP56, SP73, SP86 Norman, Benjamin, SP112 Norrbom, Jessica, SP63, SP94 Norris, Meriel, SP103 Nouwens, Femke, SP123 Novacheck, Tom, SP64, SP65

Novais, Eduardo, SP53, SP54 Novak, Iona, SP81 Nyquist, Astrid, DP24

#### 0

Ochs, Jessica, DP30 Oftedal, Stina, SP80 Ogourtsova, Tatiana, SP04, SP61, SP190 Oh, Juntack, SP51 Oh, Sumi, SP17 O'Hara, Paulette, SP43 Oliveira, Rachel, SP158 Orellana, Kevin, SP70 Orkin, Julia, SP27 O'Rourke, Sara, SP186 Ortibus, Els, SP59 Ostojic, Katarina, SP15 Otteson, Todd, SP135 Owens, Laura, SP187 Owens, Mary, SP103 O'Young, Daphne, DP23

## Ρ

Padilla, Abigail, SP79 Palmer, Casey, SP52, SP74 Palosaari, Andrew, SP05 Pamir, Zahide, SP08 Pan, Tony, SP12 Pangalila, Robert, DP17, SP123 Papadelis, Christos, SP157 Papavasiliou, Antigone, SP110 Parde, Natalie, SP11 Paremski, Athylia, SP122 Park, Chulmin, SP148 Park, Moon Seok, SP101 Park, Yulhyun, SP18 Partouche, Roni, SP152 Patel, Pari, SP163 Pathy, Rubini, CO19 Patterson, Aleksys, SP64 Pedapati, Ernest, SP118 Pediatric Spine Study Group, PSSG, SP142 Pereira Oliveira Gonçalves, Luana, SP175 Perra, Joseph, SP52, SP74 Peterson, Mark, SP115 Peterson, Natalie, DP30 Peyton, Colleen, SP155 Pham, Thanh-Tu, SP91 Phoenix, Michelle, SP11 Pidcoe, Peter, SP20, SP30 Pieraccini, Valerie, DP42 Pierce, Sam, SP88, SP124 Poduri, Annapurna, SP107 Polega, Victoria, DP20 Pontén, Eva, SP63, SP94 Pontes, Viviann, SP32 Pontiff, Mattie, SP34, SP189

Ponton, Ethan, SP75 Poomulna, Jutharat, SP31 Poulin III, Richard E., DP41 Pouppirt, Nicole, DP05, SP93 Pradhan, Pratik, SP53, SP54 Prakash, Nayan, DP33 Priluck, Deborah, DP43 Pritchard, Lesley, SP180 Promprasert, Patharapa (Candy), SP163 Prosser, Laura, DP04, SP88, SP122 Pruente, Jessica, C002, SP22, SP40 Przysiada, Laís, SP111 Puttemans, Floor, SP133, SP134

# Q

Quatman-Yates, Catherine, SP121

# R

Räsänen, Okko, SP60 Raddatz, Kathryn, DP39 Ramesh, Shri Harini, SP138 Ramo, Brandon, SP142 Ramos, Kellie, CO20 Ramsey, Jessica, DP16 Ranade, Sheena, SP05 Rande, Amanda, CO19 Rao, Bhamini, DP33, DP34, SP10 Raskin, Jeffrey, CO22 Rathod, Chasanal, SP117 Rawlinson, William, DP14 Ray, Kristin, SP61 Raz, Gal, SP152 Reader, Ben, SP186 Reijman, Max, SP149 Reis, Edna, SP158 Ren, Renee, SP05 Research Team, SPEEDI, SP114 Rethlefsen, Susan, SP33, SP89, SP97 Rethorn, Timothy, SP121 Reyes, Fabiola, CO15, DP08, DP13 Rhyne, Elizabeth, SP178 Riad, Jacques, SP130 Rice, Melissa, SP07, SP90 Riedner, Brady, CO03 Riel-Pare, Laurie, SP61 Riss, Robert, SP178 Rittler, Angela, SP67, SP124, SP161 Robert, Maxime T., SP98, SP166 Roberts, Heather, SP77 Robinson, Jordan, SP79 Robu, Ion, CO19 Rochani, Haresh, SP55 Rodriguez, Amelia, SP168 Rodriguez, Vanessa, DP05 Roebroeck, Marij, DP17 Roge, Desiree, SP132, SP183 Rogers, Julie, DP13

Rogers, Kenneth, SP144 Rojas, Ana-Marie, SP104 Roman, Arlene, SP153 Rowan, Mallory, SP28, SP113 Rowe, Ronni, DP44, SP173 Roy, Chloé, SP98 Roybal, Joanna, C010 Rubinstein, Einat, SP152 Rubsam, Meaghan, SP19, SP141 Rucker, Grace, C017, DP25 Ruiz Brunner, Maria de las Mercedes, SP95 Rupp, Garrett, SP100 Ryan, Jennifer, SP103 Ryu, Ju Seok, SP18

## S

S., Shamanth, DP33, DP34, SP10 Sadur, Alana, SP160 Safinaz, Ziad Mohamed, SP128, SP176 Sajjadi, Afsheen, CO13 Sakzewski, Leanne, SP80, SP121 Salazar-Torres, Jose, SP187 Salgado, Zurisadai, SP11 Salgaonkar, Arya, SP30 Samson, Bonnie, DP08 Sanchez, Federico, SP95 Sandhu, Ash, SP75 Santana, Camila, SP32 Santana Almansa, Alexandra, SP107, SP164 Santella, Mary Kay, SP14, SP24, SP93 Santos, Luziani, SP32 Santos, Tyler, SP112 Santosa, Hendrik, SP175 Sargent, Barbara, SP25 Sarikabadayi, Yusuf Unal, SP58 Sarmiento, Cristina, SP56, SP73 Saussez, Geoffroy, SP98 Sawatzky, Bonita, SP12 Sayal, Priya, SP27 Scavina, Mena, SP72 Scharf, Rebecca, DP28 Schlieker, Katie, CO14 Schubauer, Mary Beth, SP181 Schwartz, Terry, SP07, SP90 Scoten, Olivia, SP174 Scott, Kimberley, DP32, SP121 Seaver, Christopher, SP52 Selby, Kathryn, CO01 Senevirathne, Buddhika, SP69 Serdaroğlu, Esra, SP145 Seth, Akshay, DP38 Shah, Julia, SP40 Shahane, Vaishnavi, SP163 Shahdadian, Sadra, SP157 Shakya, Shristi, DP34, SP10

Shall, Mary, SP30 Shand, Antonia, DP14 Shanley, Thomas, DP05 Shannon, Harriet, SP50 Shazand, Kamran, SP12 Shearer, Heather, SP09, SP139 Sheriko, Jordan, DP35 Shetty, Harikishan, DP33, DP34, SP10 Shi, Jianli, SP153 Shi, Yingshan, SP153 Shields, Thomas, SP187 Shierk, Angela, SP77, SP157 Shikako, Keiko, SP147, SP182 Shin, Hyun lee, SP191 Shin, Hyung-Ik, DP06, SP191 Shin. Katie. SP172 Shin, Yong Beom, SP18 Shin, Yoon-Kyum, SP02 Shippee, Nathan, SP65 Shore, Benjamin, SP53, SP54, SP167 Shotande, Monique, DP04 Shrader, Carol, DP16 Shrader, Claire, DP16 Shrader, Michael, CO20, SP72, SP130, SP144, SP184, SP187 Shrivastav, Siddhi, SP132, SP183 Siegler, Jessica, CO17 Sienko, Susan, SP82 Silva, Fernanda, CO18 Silva, Luiz, SP144 Silva, Maria Eduarda, SP111 Silva, Rafael, CO18 Singh, Mallika, SP53, SP54 Siriwardana, Shirom rajeev, SP176 Skalsky, Andrew, SP159, SP179 Skorup, Julie, DP04, SP88, SP122 Smith, Anya, SP75 Smith, Beth, DP04, SP88 Smith, Daniel, SP184 Smith, Johanna, SP185 Smith, Lucas, SP62, SP116 Smith, Maria, SP136 Smithers-Sheedy, Hayley, DP14 Snider, Laurie, DP10, SP26 Sobotka, Sarah, SP23, SP66 Soich, Erin, DP08, DP13 Solondz, Kimberly, DP18 Song, Yanlong, SP157 Sonnenberg, Lyn, SP180 Soto, Talia, SP159, SP179 Spence, Christine, SP37, SP114 Spiegel, David, SP42, SP156 Spittle, Alicia, SP57 Springer, Seth, SP13 Srinivasan, Sudha, SP163 Srivastava, Siddharth, SP107, SP164 Stasulas, Camryn, DP37

Steele, Katherine, SP132, SP183, SP188 Steffen, Kelsey, DP45 Stern, Roni, DP08 Stevenson, Richard, SP30, SP37 Stockman, Jessica, SP84 Stone, Lauren, CO22 Strader, Shannon, SP140 Stump, Hanako, DP14 Stuyvenberg, Corri, SP37 Su, Xiwen, SP01 Sudati, Isabella, SP32, SP171, SP175 Sugiyama, Tomoko, SP47, SP87 Suh, Jee Hyun, SP18 Sukal-Moulton, Theresa, SP155 Sumanasena, Samanmali, SP128, SP176 Summers, Amanda, SP129 Surkar, Swati, SP165 Sutter, Ellen, SP68 Sveden, Abigail, SP107 Swaine, Margaret, DP09 Swaroop, Vineeta, SP104 Swinburn, Katherine, DP14 Swink, Laura, SP151 Switzer, Lauren, SP09 Syed, Akbar, SP42, SP156 Sylvanus, Tonye, SP92 Symons, Frank, SP49, SP64

## T

Tabaie, Sean, CO11, SP160 Tabrisky, Stephanie, DP19 Taifalos, Chloe, SP136 Takata, Avery, SP100 Talero Cabrejo, Pamela, SP43 Tanner, Kelly, SP186 Taqi, Ahmad, DP03 Tavukçu, Seyhan Sena, DP10 te Velde, Anna, SP81 Team, I-Acquire, SP124 Teixeira, Ana Priscila, SP32 Ten Ham, Arno, DP22 Teplicky, Rachel, SP11 Testani, Daniela, SP09 Thacker, Leroy, SP20, SP30 Thakur, Dhriti, SP20 Thomas, Sruthi, SP76, SP140 Thompson, Sydney, SP154 Thorpe, Deborah, SP56, SP73 Tierney, Kati-Lyn, DP41 Tirumali, Megha, SP163 Titulaer, Sandra, SP149 Toledo, Aline, SP32 Tolk, Jaap, DP22, SP149 Travers, Ryan, SP160 Trenkle, Jessica, SP168 Tricarico, Anna, DP28 Trierweiler, Robin, CO22

Trionfo, Arianna, SP144 Tripathi, Tanya, DP14 Tripathy, Jaya Prasad, SP150 Truba, Natalie, SP86 Truong, Walter, SP52, SP74, SP142 Tsetlina, Vera, C016, C023 Tu, Albert, DP38, SP138 Tulchin-Francis, Kirsten, SP28, SP113 Tung, Iris, DP23 Turna, Jasmine, DP41 Turner, Susie, SP185 Tyson, Christine, C001

#### U

Ullenhag, Anna, DP24 Ulusaloglu, Armagan Can, SP72 Ursulak, Gina, C019 Uzun Akkaya, Kamile, SP145

#### V

Valenzuela-Moss, Jacquelyn, SP79 van Bosse, Harold, SP12 van Haren, Neeltje, DP17 van Schie, Petra, SP94 Van Stralen, Renee, DP22, SP149 van Veelen, Marie-Lise, DP17 Vanmechelen, Inti, SP102 Vargus-Adams, Jilda, SP118, SP154 Vasquez, Minnelly, DP12 Vela, Kerry, DP29 Venkatesan, V., DP33, DP34, SP10 Villalba, Marie, SP62, SP106, SP116 Villegas, Melissa, CO03, SP68 Villegas, Vivian, SP11 Vipulaguna, Dilini, SP128, SP162, SP176 Virella, Daniel, SP110 Virgil, Brittany, CO20 Virnig, Beth, SP65 Vogler, Suzanne, SP78 Vogtle, Laura, DP03, SP16 von Rosen, Philip, SP84 von Walden, Ferdinand, SP63, SP94 Vongpipatana, Sivaporn, DP31 Voss, Gregory, DP36 Vova, Joshua, SP55

#### W

Wain, Karen, SP03 Walker, Laverne, SP172 Walsh, Aisling, SP103 Walsh, Amanda, SP86 Walsh, Michael, SP103 Walters, Stephanie, DP04

Wang, Michael, CO10 Wang, Shiyao, SP153 Ward, Annika, DP37 Ware, Robert, SP80, SP99, SP136 Webb. Annabel. SP81 Weber, Evan, SP178 Wehausen, Brittany, DP37 Wei, Judy, DP41 Weigel, Christa, SP24 Wen, Tong, SP45 Wennstrom, Karissa, DP37 Westerkamp, Grace, SP118 Whaley, Ashley, SP115 Wheeler, Karla, DP30 Whibley, Daniel, SP22 Whitaker, Amanda, CO07, SP85 White, Christopher, DP05 White, Melanie, DP30 Whitney, Daniel, SP22, SP40, SP41, SP47, SP87, SP146 Wi, Soohyun, DP06 Wieand, Alyssa, SP159, SP179 Wijayasinghe, Priyanwada, SP176 Williams, Hailey, SP136 Willson, John, SP165 Wilson, Jenny, SP129 Wilson, Tonv. SP13 Wimberly, Robert, CO04, DP08, DP44, SP173 Wimmer, Sam, SP79, SP97 Wishart, Brian, CO06 Witbreuk, Melinda, DP22 Witham, Matthew, SP71 Witlox. Adhiambo. DP22 Wohlgemuth, Ross, SP62, SP116 Wong, Vivian, SP108, SP174 Woo, Hyeonseong, SP18 Wren, Noella, SP89 Wren, Tishya, SP33, SP35, SP89, SP97 Wright, Virginia, SP131 Wu, Jennifer, CO06 Wu, Tai-Wei, SP25

# X

Xueman Liu, Lucy, SP153

# Y

Yalamanchi, Krishan, CO08 Yalcin, Cagri, SP179 Yang, Ally, SP96 Yang, Guangxiu, SP153 Yang, Xiaohui, SP153 Yeh, Amy, DP09 Yoo, Paul, SP147 Yoon, Jin A, SP18 Yoon, Young II, SP18 Youngblood, Jessica, SP112

# Z

Zanardi da Silva, Ana Paula, SP175 Zapata, Karina, SP173 Zeegers, Elgun, DP22 Zhang, Qian, SP75 Zhang, Ran, SP187 Zhang, Ting, SP153 Zheng, Jenny, SP42, SP156 Ziccardi, Shelby, DP39 Zickmund, Susan, SP140



# **NO ROOM FOR ERROR**

# Introducing

**The updated Lioresal® Intrathecal (baclofen injection) refill kit** with the first and only 100% sterile presentation on the market<sup>1</sup>



# The newly redesigned Lioresal<sup>®</sup> refill kit is built for efficiency, with:



a presentation that follows the flow of clinical process to ensure consistency and predictability from refill to refill



more than a dozen enhancements based on feedback from healthcare professionals like you\* including a Quick Reference Guide, additional sterile drape, and a new sharps holder

\*Based on feedback from healthcare professionals who manage IT baclofen pumps.

# Important Safety Information for ITB Therapy with Lioresal® Intrathecal (baclofen injection)

#### Indications and Usage

Lioresal<sup>®</sup> Intrathecal (baclofen injection) is a muscle relaxant and antispastic that is indicated for use in the management of severe spasticity of cerebral or spinal origin. Lioresal<sup>®</sup> Intrathecal is intended for use by the intrathecal route in single bolus test doses (via spinal catheter or lumbar puncture) and, for chronic use, only in implantable pumps approved by the FDA specifically for the administration of Lioresal<sup>®</sup> Intrathecal into the intrathecal space. Lioresal<sup>®</sup> Intrathecal via an implantable pump should be reserved for patients unresponsive to oral baclofen therapy or those who experience intolerable CNS side effects at effective doses. Patients with spasticity due to traumatic brain injury should wait at least one year after the injury before consideration of long term intrathecal baclofen therapy. Prior to implantation of a device for chronic intrathecal infusion of Lioresal<sup>®</sup> Intrathecal, patients must show a response to Lioresal<sup>®</sup> Intrathecal in a screening trial. Please review the dosing and administration section of the Lioresal<sup>®</sup> Intrathecal prescribing information for further details.

Abrupt discontinuation of intrathecal baclofen, regardless of the cause, has resulted in sequelae that include high fever, altered mental status, exaggerated rebound spasticity, and muscle rigidity, that in rare cases has advanced to rhabdomyolysis, multiple organ-system failure and death. Prevention of abrupt discontinuation of intrathecal baclofen requires careful attention to programming and monitoring of the infusion system, refill scheduling and procedures, and pump alarms. Patients and caregivers should be advised of the importance of keeping scheduled refill visits and should be educated on the early symptoms of baclofen withdrawal. Special attention should be given to patients at apparent risk (e.g., spinal cord injuries at T-6 or above, communication difficulties, history of withdrawal symptoms from oral or intrathecal baclofen). Consult the technical manual of the implantable infusion system for additional postimplant clinician and patient information.

# Please visit www.LIORESAL.com for full prescribing Information.

References: 1. Saol Therapeutics Inc. Data on file: NDA 020075 Lioresal; 3.2.P.8 Stability and 3.2.P.8.2 Post-Approval Stability Protocol and Stability Commitment.



Lioresal is a registered trademark of Amneal Pharmaceuticals LLC. ©2023 Amneal Pharmaceuticals LLC. All Rights Reserved. PP-CVA-LIORE-US-0004



# Living With Cerebral Palsy: Villiam's Story

At 13 months old, William was diagnosed with quadriplegic spastic cerebral palsy by the team at Nemours Children's Hospital, Delaware.

"It's clear that our group of expert therapists truly care about William and our entire family. Also, Dr. Shrader and Dr. Owens always have William's best interest in mind and serve as valuable resources for us," says Jess, William's mom. "There is a real team approach at Nemours Children's; everyone works together to help him reach his full potential."

"We all have big plans for William! He is a smart, funny, personable, resilient, social and very determined 5-year-old boy."

Learn more about our world-renowned Cerebral Palsy Center. Visit us at Booth #407.



Well Beyond Medicine<sup>®</sup>



Learn More

Notes	







