

| TIME                | ID   | CREDITS                   | TITLE                                                                                      | CHAIR / SPEAKER                                               |
|---------------------|------|---------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 8:00 am - 5:30 pm   |      |                           | <b>FCMSC MENTORSHIP FORUM PROGRAM (BY INVITATION ONLY)</b>                                 |                                                               |
| 8:00 am - 9:30 am   | NMSS |                           | <a href="#">National MS Society Symposium</a>                                              |                                                               |
| 9:45 am - 11:15 am  | ISS1 |                           | <a href="#">Independently Supported Symposium 1</a>                                        |                                                               |
| 11:15 am - 12:30 pm |      |                           | <b>OPENING LUNCHEON</b>                                                                    |                                                               |
| 12:45 pm - 1:30 pm  | LEC1 | CME, CNE, PA              | <a href="#">John Kurtzke Memorial Lecture: Update on Progressive MS</a>                    | Robert Fox, MD                                                |
| 1:45 pm - 3:56 pm   | CC1  |                           | <a href="#">Whitaker Platform Session</a>                                                  | Amy Lovett Racke, PhD                                         |
| 1:45 pm - 3:45 pm   | CC2  | CME, PA, CNE              | <a href="#">Effective Assessment and Management Strategies for Complex Symptoms of MS</a>  | Kathleen Costello, MS, ANP-BC, MSCN, Chair                    |
|                     |      |                           | » Welcome and Introductions                                                                | Kathleen Costello, MS, ANP-BC, MSCN                           |
|                     |      |                           | » Complex Disorders of Sleep Associated with MS: Assessment and Management                 | Abbey Hughes, PhD                                             |
|                     |      |                           | » Assessment and Management of Pain Symptoms in People with MS                             | Scott D. Newsome, DO, MSCS, FAAN                              |
|                     |      |                           | » Complex Visual Symptoms Associated with MS: Assessment and Management                    | Robert K. Shin, MD                                            |
|                     |      |                           | » Q & A                                                                                    |                                                               |
| 1:45 pm - 3:45 pm   | CC3  | CME, CNE, PA              | <a href="#">MRI International Guidelines</a>                                               | David Li, MD, Co-Chair<br>Anthony Traboulsee, MD, Co-Chair    |
| 1:45 pm - 3:45 pm   | CC4  | CME, PA, CNE, OT, PT, SW  | <a href="#">To Work or Not to Work: So Many Questions!</a>                                 | Erin Giroux, BScOT(c), MSCS, Chair                            |
|                     |      |                           | » Canadian and US Disability Programs                                                      | Erin Giroux, BScOT(c), MSCS<br>Jamie R. Hall, Esq., JD        |
|                     |      |                           | » Factors that Can Determine Fitness for Work                                              | Erin Giroux, BScOT(c), MSCS<br>Jamie R. Hall, Esq., JD        |
|                     |      |                           | » MS and the Functional Capacity Evaluation                                                | Matthew Sutliff, PT, DPT, MSCS                                |
|                     |      |                           | » Work Accommodations                                                                      | Matthew Sutliff, PT, DPT, MSCS                                |
|                     |      |                           | » Going off Work – Applying for Disability                                                 | Jamie R. Hall, Esq., JD                                       |
|                     |      |                           | » Case Studies                                                                             | Erin Giroux, BScOT(c), MSCS<br>Matthew Sutliff, PT, DPT, MSCS |
|                     |      |                           | » Q & A                                                                                    | Panel                                                         |
| 1:45 pm - 3:45 pm   | CC5  | CNE, CPE                  | <a href="#">Managing Infusion Therapies: A Collaborative Approach</a>                      | Colleen Harris, MN, NP, MSCN, MSCS, Chair                     |
|                     |      |                           | » Introduction and Infusion Preparation                                                    | Colleen Harris, MN, NP, MSCN, MSCS                            |
|                     |      |                           | » Infusions and Maintenance of Therapies                                                   | Denise Bruen ANP-BC, MSN, MSCN                                |
|                     |      |                           | » Role of PharmD in Infusion Management                                                    | Jacquelyn Bainbridge, PharmD, FCCP, MSCS                      |
|                     |      |                           | » Case Studies                                                                             | Panel                                                         |
| 1:45 pm - 3:45 pm   | CC6  | CME, CNE, PA, APA, SW, OT | <a href="#">Assessment and Treatment of Sexual Dysfunction in One Visit</a>                | Frederick Foley, PhD, Chair                                   |
| 1:45 pm - 3:45 pm   | CC7  | CME, PA, CNE, SW, APA, OT | <a href="#">Case Studies in MS-related Cognitive Problems and Cognitive Rehabilitation</a> | Jeff Wilken, PhD                                              |

|                   |       |                                    |                                                                                                                                                                                                                                                                                                                  |                               |
|-------------------|-------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1:45 pm - 3:45 pm | CC8   | CME, PA, CNE, CPE, APA, SW, OT, PT | <a href="#">The MS Provider's Guide to the ABC's of How Drugs are Priced in the United States</a>                                                                                                                                                                                                                | Kavita V. Nair, PhD, Chair    |
|                   |       |                                    | » Drug Pricing: Why We Need to Understand More About It                                                                                                                                                                                                                                                          | Daniel Kantor, MD, FAAN, FANA |
|                   |       |                                    | » Terminology Used in US Drug Pricing                                                                                                                                                                                                                                                                            | Kavita V. Nair, PhD           |
|                   |       |                                    | » Drug Reimbursement and Rebates in US Drug Pricing                                                                                                                                                                                                                                                              | Robert Brett McQueen, PhD     |
|                   |       |                                    | » Discussion / Q & A                                                                                                                                                                                                                                                                                             | Panel                         |
| 4:00 pm - 5:30 pm | ISS2  |                                    | <a href="#">Independently Supported Symposium 2</a><br><a href="#">Taking a Closer Look at Spasticity in Patients with MS: Am I Missing the Obvious?</a><br><br><i>This activity is sponsored by Medscape.</i><br><i>This activity is supported by an educational grant received from Greenwich Biosciences.</i> |                               |
| 3:30 pm - 7:00 pm |       |                                    | <b>EXHIBIT HALL OPEN</b>                                                                                                                                                                                                                                                                                         |                               |
| 5:30 pm - 7:00 pm |       |                                    | <b>OPENING RECEPTION IN EXHIBIT HALL</b>                                                                                                                                                                                                                                                                         |                               |
| 6:00 pm - 7:00 pm | PROD1 |                                    | <a href="#">Product Theater 1</a>                                                                                                                                                                                                                                                                                |                               |
| 7:00 pm - 8:30 pm |       |                                    | <b>NETWORKING RECEPTION</b>                                                                                                                                                                                                                                                                                      |                               |
| 7:00 pm - 8:30 pm |       |                                    | <b>FCMSC SCHOLAR RECEPTION (BY INVITATION ONLY)</b>                                                                                                                                                                                                                                                              |                               |
| 8:30 pm - 9:30 pm |       |                                    | <b>VA MS CENTERS OF EXCELLENCE RECEPTION</b>                                                                                                                                                                                                                                                                     |                               |

## AMERICANS WITH DISABILITIES ACT

CMSC is committed to making its programming, including this learning event, accessible to all. Event staff will be glad to assist you with special needs. For assistance, please contact us prior to the event at [info@mscare.org](mailto:info@mscare.org) or (201) 487-1050.

| TIME               | ID         | CREDITS                    | TITLE                                                                                                                                          | CHAIR / SPEAKER                                              |
|--------------------|------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 7:00 am - 8:00 am  | ISS3       |                            | <a href="#">Independently Supported Symposium 3</a>                                                                                            |                                                              |
| 8:00 am - 8:45 am  | LEC2       | CME, CNE, PA, CPE          | <a href="#">Presidential Lecture: Escalation Therapy vs. Early Aggressive Treatment</a>                                                        | Ellen M. Mowry, MD                                           |
| 9:00 am - 12:00 pm | FUND1      | CME, CNE, CPE, PA, APA, SW | <a href="#">Fundamentals of MS Care – Part 1</a>                                                                                               | Constance B. Easterling, RN, MSN, APRN, MSCN, Chair          |
|                    |            |                            | <a href="#">Diagnosing the Disease and Managing Specific Populations</a>                                                                       |                                                              |
|                    |            |                            | » History of Multiple Sclerosis                                                                                                                | Randall Schapiro, MD, FAAN                                   |
|                    |            |                            | » The Natural History of MS (Epidemiology, Immunology, Pathophysiology)                                                                        | Bruce Cohen, MD                                              |
|                    |            |                            | » Making the Diagnosis: Disease Mimics, Use of Paraclinical Tools                                                                              | Derrick Robertson, MD                                        |
| 9:00 am - 12:00 pm | REHAB1     | CME, CNE, APA, SW, OT      | » Pediatric MS: Management and Transition to Adult Care                                                                                        | Jennifer Boyd, RN, MHSc, MSCN                                |
|                    |            |                            | <a href="#">Current Topics and Trends in MS Rehab – Part 1 Management of MS Fatigue: Physical, Behavioral, Medical and Combined Approaches</a> | Patricia Bobryk, MHS, PT, MSCS, ATP, Moderator               |
|                    |            |                            | » Introduction                                                                                                                                 | Nora Fritz, PhD, PT, DPT, NCS, Chair                         |
|                    |            |                            | » Behavioral Approaches to Fatigue                                                                                                             | Nora Fritz, PhD, PT, DPT, NCS                                |
|                    |            |                            | » Physical Approaches to Fatigue                                                                                                               | Anna Kratz, PhD                                              |
|                    |            |                            | » Medical Approaches to Fatigue                                                                                                                | Nora Fritz, PhD, PT, DPT, NCS                                |
| 9:00 am - 12:00 pm | SYM1       | CME, CNE                   | <a href="#">Viral Infections in MS: What Have We Learned from Covid-19</a>                                                                     | Tiffany Braley, MD                                           |
| 9:00 am - 12:00 pm | SYM2       | CME, PA, CNE, CPE          | <a href="#">Choices &amp; Controversies in MS Management: A Pro/Con Case-based Discussion</a>                                                  | Joseph Berger, MD                                            |
|                    |            |                            | <i>This session was developed with support from the VAMSCoE.</i>                                                                               |                                                              |
|                    |            |                            | » Introduction                                                                                                                                 | Mitchell T. Wallin, MD, MPH<br>Michelle Cameron, MD, PT, MCR |
|                    |            |                            | » Treatment of Active MS will Prevent Disability Progression – Yes                                                                             | Olaf Stuve, MD                                               |
|                    |            |                            | » Treatment of Active MS will Prevent Disability Progression – No                                                                              | John R. Rinker, II, MD                                       |
|                    |            |                            | » Rituximab is an Acceptable Alternative for Newer B-Cell Therapies – Yes                                                                      | Michelle Cameron, MD, PT, MCR                                |
|                    |            |                            | » Rituximab is an Acceptable Alternative for Newer B-Cell Therapies – No                                                                       | Mitchell T. Wallin, MD, MPH                                  |
|                    |            |                            | » Therapies Approved for Active SPMS should also be Used in Inactive SPMS – Yes                                                                | Rebecca Spain, MD, MSPH                                      |
|                    |            |                            | » Therapies Approved for Active SPMS should also be Used in Inactive SPMS – No                                                                 | Natasha M. Antonovich                                        |
| 9:00 am - 10:30 pm | SYM3 PART1 | CME, PA, CNE, CPE          | » Discussion / Q & A                                                                                                                           | Panel                                                        |
|                    |            |                            | <a href="#">Basic and Advanced Immunology for the Non-Immunologist</a>                                                                         | Scott D. Newsome, DO, MSCS, FAAN, Chair                      |
|                    |            |                            | » How Does the Immune System Protect Us?                                                                                                       | Lisa Fox, PA                                                 |
|                    |            |                            | » What Causes CNS Inflammation in MS?                                                                                                          | Scott D. Newsome, DO, MSCS, FAAN                             |
|                    |            |                            | » How Do the Current DMTs Affect the Altered Immune Response in MS?                                                                            | Scott D. Newsome, DO, MSCS, FAAN                             |

## AGENDA

## TUESDAY, OCTOBER 26

|                     |                |                                     |                                                                                                                                 |                                         |
|---------------------|----------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 10:30 am - 12:00 pm | SYM3<br>PART 2 | CME, PA, CNE,<br>CPE                | <b>Advanced Immunology for the Non-Immunologist</b>                                                                             | Scott D. Newsome, DO, MSCS, FAAN, Chair |
|                     |                |                                     | » Metabolic Dysfunction in MS - At the Intersection of Genetics, Environment, and the Immune System                             | Pavan Bhargava, MD                      |
|                     |                |                                     | » Targeting Metabolic Dysfunction in MS - Prebiotics (diet), Probiotics or Postbiotics                                          | Pavan Bhargava, MD                      |
|                     |                |                                     | » Q & A                                                                                                                         |                                         |
| 9:00 am - 12:00 pm  | SYM4           | CME, PA, CNE,<br>CPE                | <b>Neuromyelitis Optica Spectrum Disorders: Current Issues in Diagnosis and Management</b>                                      | Brian Weinshenker, MD, Chair            |
|                     |                |                                     | » Overview                                                                                                                      | Brian Weinshenker, MD                   |
|                     |                |                                     | » Diagnosis                                                                                                                     |                                         |
|                     |                |                                     | • Prototypic Syndromes: Myelitis                                                                                                | Benjamin Greenberg, MD, MHS             |
|                     |                |                                     | • Prototypic Syndromes: Optic Neuritis                                                                                          | Brian Weinshenker, MD                   |
|                     |                |                                     | • Brain Syndromes in NMOSD                                                                                                      | Marcelo Matiello, MD                    |
|                     |                |                                     | • Overlap of MS and NMO                                                                                                         | Stacey Clardy, MD                       |
|                     |                |                                     | • NMO "Mimics"                                                                                                                  | Stacey Clardy, MD                       |
|                     |                |                                     | • Comorbidities: Autoimmunity (non-CNS, CNS)                                                                                    | Brian Weinshenker, MD                   |
|                     |                |                                     | • Paraneoplastic NMOSD                                                                                                          | Marcelo Matiello, MD                    |
|                     |                |                                     | » Serologic Diagnosis                                                                                                           |                                         |
|                     |                |                                     | • False Positives and False Negatives                                                                                           | Anu Jacob, MD, FRCP, DM                 |
|                     |                |                                     | » Management                                                                                                                    |                                         |
|                     |                |                                     | • Relapse Management: Consensus and Controversies                                                                               | Marcelo Matiello, MD                    |
|                     |                |                                     | • Indications for and Initial Treatment Choices for Long Term Therapy in the Era of New Treatments: Consensus and Controversies | Anu Jacob, MD, FRCP, DM                 |
|                     |                |                                     | • Aggressive Disease/Treatment Failure                                                                                          | Benjamin Greenberg, MD, MHS             |
|                     |                |                                     | • Pregnancy                                                                                                                     | Brian Weinshenker, MD                   |
|                     |                |                                     | • Stopping Therapy                                                                                                              | Benjamin Greenberg, MD, MHS             |
|                     |                |                                     | » Conclusion                                                                                                                    | Brian Weinshenker, MD                   |
| 9:00 am - 12:00 pm  | SYM5           | CME, PA, CNE,<br>CPE, APA, SW       | <b>Pediatric MS</b>                                                                                                             | Brenda Banwell, MD, Chair               |
|                     |                |                                     | » Introduction                                                                                                                  | Brenda Banwell, MD                      |
|                     |                |                                     | » Impact of Pediatric MS on the Family                                                                                          | Julia O'Mahony, BSc                     |
|                     |                |                                     | » The Complex Interplay between Genetics and Environmental Risk Factors in Pediatric MS                                         | Jennifer Graves, MD, PhD, MAS           |
|                     |                |                                     | » MOG-related Demyelination- What We Know, What We Don't and What We Need to Learn                                              | Brenda Banwell, MD                      |
|                     |                |                                     | » Discussion / Q & A                                                                                                            |                                         |
| 9:00 am - 12:00 pm  | SYM6           | CME, PA, CNE,<br>APA, SW,<br>OT, PT | <b>The Importance of Assessing Nutritional Health in Patients with MS</b>                                                       | Mona Bostick, RDN, LDN, Chair           |
|                     |                |                                     | » How to Talk to your Patients about their Nutritional Health                                                                   | Emily Poole Pharr, MD, MS               |
|                     |                |                                     | » The Importance of Assessing Nutritional Health in Patients with Multiple Sclerosis                                            | Mona Bostick, RDN, LDN                  |
|                     |                |                                     | » Examining Psychological Aspects of Nutritional Wellbeing in People with Multiple Sclerosis                                    | Matthew Sacco, PhD                      |

|                    |       |                       |                                                                                                    |                                           |
|--------------------|-------|-----------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------|
| 11:30 am - 2:30 pm |       |                       | <b>EXHIBIT HALL OPEN</b>                                                                           |                                           |
| 12:00 pm - 2:00 pm |       |                       | <b>FCMSC SCHOLAR RECOGNITION LUNCHEON (BY INVITATION ONLY)</b>                                     |                                           |
| 12:15 pm - 1:15 pm | PROD2 |                       | <a href="#">Product Theater 2</a>                                                                  |                                           |
|                    |       |                       | <b>ROUNDTABLES</b>                                                                                 |                                           |
| 1:30 pm - 2:30 pm  | RT1   |                       | » Advocacy                                                                                         |                                           |
| 1:30 pm - 2:30 pm  | RT2   |                       | » Mental Health Professionals / MS-MHP                                                             |                                           |
| 1:30 pm - 2:30 pm  | RT3   |                       | » Nursing Professionals / IOMSN (Awards and Elections)                                             |                                           |
| 1:30 pm - 2:30 pm  | RT4   |                       | » PAs / MS-PA                                                                                      |                                           |
| 1:30 pm - 2:30 pm  | RT5   |                       | » Pharmacists / PharMS                                                                             |                                           |
| 1:30 pm - 2:30 pm  | RT6   |                       | » Physicians                                                                                       |                                           |
| 1:30 pm - 2:30 pm  | RT7   |                       | » Rehabilitation Specialists / IOMSRT                                                              |                                           |
| 1:30 pm - 2:30 pm  | RT8   |                       | » International Women in Multiple Sclerosis (iWiMS)                                                |                                           |
| 2:45 pm - 4:45 pm  | PLAT1 |                       | » Psychosocial Platforms                                                                           |                                           |
| 2:45 pm - 4:45 pm  | PLAT2 |                       | » DMT Platforms                                                                                    |                                           |
| 2:45 pm - 4:45 pm  | PLAT3 |                       | » Disease Assessment Platforms                                                                     |                                           |
| 2:45 pm - 4:45 pm  | PLAT4 |                       | » Rehab Platforms                                                                                  |                                           |
| 2:45 pm - 4:45 pm  | CC9   | CME, CNE, CPE, PA     | <a href="#">Optimizing MS Treatment: What your MS Clinic is Missing</a>                            | Lisa Aquillano, PharmD, BCPS, MSCS, Chair |
|                    |       |                       | » Emerging Role of Pharmacists in MS Centers                                                       | Lisa Aquillano, PharmD, BCPS, MSCS        |
|                    |       |                       | » Pharmacists' Role in the MS Clinic: Provider's Perspective                                       | Calli Cook, DNP                           |
|                    |       |                       | » Practical Considerations for Clinical Pharmacist Implementation                                  | Jenelle Hall, PharmD, BCACP, CPP          |
|                    |       |                       | » Q & A                                                                                            | Panel                                     |
| 2:45 pm - 4:45 pm  | CC10  | CME, PA, CNE          | <a href="#">Teleneurology and Digital Phenotyping in Multiple Sclerosis</a>                        | Marcelo Matiello, MD, Chair               |
|                    |       |                       | » Introduction                                                                                     | Marcelo Matiello, MD                      |
|                    |       |                       | » Virtual MS Clinics and Hospital Consultations                                                    | Marcelo Matiello, MD                      |
|                    |       |                       | » MS Progression Measured by Smart Home Technologies                                               | Eric Klawiter MD                          |
|                    |       |                       | » Electronic Motor Testing in the MS Clinic                                                        | Brian Weinshenker, MD                     |
| 2:45 pm - 4:45 pm  | CC11  | CME, PA, CNE, SW, APA | <a href="#">Addressing Diversity in the MS Caseload</a>                                            | Allison Fine, MSW, LICSW, Chair           |
|                    |       |                       | » Introduction to Health Equity, Cultural Competency, and Prevalence of Minority Populations in MS | Allison Fine, MSW, LICSW                  |
|                    |       |                       | » Working with African American Patients with MS                                                   | Mitzi Joi Williams, MD                    |
|                    |       |                       | » Working with Hispanic Patients with MS                                                           | Elida De Greinel, RN, MSCN                |
|                    |       |                       | » Working with Asian Patients with MS                                                              | Lily Jung, MD                             |
|                    |       |                       | » Improving Cultural Competency of MS Healthcare Professionals                                     | Alicia Sloan, MSW, LICSW, MPH             |
|                    |       |                       | » Discussion and Q & A                                                                             | Panel                                     |
| 2:45 pm - 4:45 pm  | CC12  | CME, CNE, PA          | <a href="#">The Eyes Have It</a>                                                                   | Robert Shin, MD, Chair                    |
| 4:45 pm - 6:00 pm  |       |                       | <b>VAMSCOE BUSINESS MEETING</b>                                                                    |                                           |
| 4:30 pm - 7:00 pm  |       |                       | <b>EXHIBIT HALL OPEN</b>                                                                           |                                           |
| 5:00 pm - 7:00 pm  |       |                       | <b>POSTER SESSION – AUTHORS REQUIRED TO STAND BY THEIR WORK FROM 6-7</b>                           |                                           |
| 5:00 pm - 6:00 pm  | PROD3 |                       | <a href="#">Product Theater 3</a>                                                                  |                                           |

| TIME               | ID     | CREDITS                    | TITLE                                                                                                                                                                                 | CHAIR / SPEAKER                                                                        |
|--------------------|--------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 6:00 am - 7:00 am  |        |                            | <b>SUNRISE YOGA</b>                                                                                                                                                                   |                                                                                        |
| 7:00 am - 8:00 am  | ISS4   |                            | <a href="#">Independently Supported Symposium 4</a>                                                                                                                                   |                                                                                        |
| 8:00 am - 8:45 am  | LEC3   | CME, CNE, PA               | <a href="#">Whitaker Lecture</a>                                                                                                                                                      | Amit Bar-Or, MD                                                                        |
| 9:00 am - 12:00 pm | WHIT   | CME, CNE, PA               | <a href="#">Whitaker Track Invited Lectures</a>                                                                                                                                       | Amy Lovett-Racke, PhD, Chair                                                           |
|                    |        |                            | » TBA                                                                                                                                                                                 | Nitin Karandikar                                                                       |
|                    |        |                            | » TBA                                                                                                                                                                                 | Rebecca Spain                                                                          |
| 9:00 am - 12:00 pm | FUND2  | CME, CNE, CPE, PA, APA, SW | <a href="#">Fundamentals of MS Care – Part 2</a><br><a href="#">Diagnosing the Disease and Managing Specific Populations</a>                                                          | Constance B. Easterling, RN, MSN, APRN, MSCN, Chair                                    |
|                    |        |                            | » Primary Progressive MS: Diagnosis, Clinical Course, and Long-term Management                                                                                                        | Patricia K. Coyle, MD                                                                  |
|                    |        |                            | » New MRI Guidelines in Diagnosis and Management of MS                                                                                                                                | David Li, MD                                                                           |
|                    |        |                            | » Break                                                                                                                                                                               |                                                                                        |
|                    |        |                            | » Women's Issues in MS: Pregnancy, Sexual Function, Menopause                                                                                                                         | Mitzi Joi Williams, MD                                                                 |
|                    |        |                            | » Research Update in Use of Marijuana                                                                                                                                                 | Anthony Feinstein, MPhil, PhD, FRCP                                                    |
| 9:00 am - 12:00 pm | REHAB2 | CME, CNE, OT               | <a href="#">Current Topics and Trends in MS Rehab – Part 2</a><br><a href="#">Exercise Effects and Prescription Across the Disability Spectrum: Optimizing Outcomes and Adherence</a> | Patricia Bobryk, MHS, PT, MSCS, ATP, Moderator                                         |
|                    |        |                            | » Frontierland: An Update on Exercise Effects in Persons with Mild-to-moderate MS                                                                                                     | Brian Sandroff, PhD, Chair                                                             |
|                    |        |                            | » It's a Small World: Exercise in Persons with Severe MS                                                                                                                              | Brian Sandroff, PhD                                                                    |
|                    |        |                            | » The People-mover: Improving Adherence to Exercise Prescription in Persons with MS across the Disability Spectrum                                                                    | Lara Pilutti, PhD                                                                      |
|                    |        |                            | » Q & A                                                                                                                                                                               | Robert Motl, PhD                                                                       |
| 9:00 am - 12:00 pm | SYM7   | CME, PA, CNE, SW, APA      | <a href="#">Science, Art, and Practice of Behavioral Medicine</a>                                                                                                                     | Amy Sullivan, PsyD, ABPP, Chair                                                        |
|                    |        |                            | » Intro and In Vivo Patient Experience                                                                                                                                                | Amy Sullivan, PsyD, ABPP, Jessica Parsons                                              |
|                    |        |                            | » Building the Patient Case                                                                                                                                                           | Jessica Parsons                                                                        |
|                    |        |                            | » Integrated Mental Health Treatment Models                                                                                                                                           | Morgan Faeder, MD, PhD                                                                 |
|                    |        |                            | » MS and Stress-Clinical and Radiographic Perspectives                                                                                                                                | Mary Rensel, MD, FAAN                                                                  |
|                    |        |                            | » Panel and Questions                                                                                                                                                                 |                                                                                        |
|                    |        |                            | » Stress Management Theory/Skills                                                                                                                                                     | Amy Sullivan, PsyD, ABPP                                                               |
|                    |        |                            | » Brief Motivational Interventions to Increase Efficacy of Referrals                                                                                                                  | Morgan Faeder, MD, PhD                                                                 |
|                    |        |                            | » Teach Start Up Plan for Shared Medical Appointment                                                                                                                                  | Mary Rensel, MD, FAAN                                                                  |
|                    |        |                            | » Questions                                                                                                                                                                           |                                                                                        |
| 9:00 am - 12:00 pm | SYM8   | CME, PA, CNE, CPE          | <a href="#">Practical Considerations in Relapse Management and Disease Modifying Therapy (DMT) Applications.</a>                                                                      | Bryan Walker, MHS, PA-C, MSCS, Co-Chair<br>Stephanie Agrella, PhDc, NP, MSCN, Co-Chair |
|                    |        |                            | » Introduction                                                                                                                                                                        | Bryan Walker, MHS, PA-C, MSCS                                                          |
|                    |        |                            | » Acute Relapse Versus Pseudo-Relapse and Options for Treating Acute Phase.                                                                                                           | Bryan Walker, PA                                                                       |
|                    |        |                            | » Overview of Currently Available Disease Modifying Therapies                                                                                                                         | Jenelle Hall, PharmD                                                                   |
|                    |        |                            | » Decision Making in DMT's, Initial Versus Switch Considerations                                                                                                                      | Stephanie Agrella, PhDc, NP, MSCN                                                      |
|                    |        |                            | » Discussion/Q & A                                                                                                                                                                    | Panel                                                                                  |



|                    |        |                            |                                                                                                                                                   |                                                                 |
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| 9:00 am - 12:00 pm | SYM9   | CME, PA                    | <b>Cross Talk Between the Immune and the Central Nervous System- Part 1</b>                                                                       | Ari Waisman, PhD, Co-Chair<br>Francisco Quintana, PhD, Co-Chair |
|                    |        |                            | » Introduction                                                                                                                                    | Francisco Quintana, PhD                                         |
|                    |        |                            | » Linking the Microbiota to CNS Inflammation via IL-17                                                                                            | Ari Waisman, PhD                                                |
|                    |        |                            | » Altered Cytokine Responses in MS Patients' T Cells                                                                                              | Nathalie Arbour, PhD                                            |
|                    |        |                            | » Macrophages in Healthy and Disease CNS                                                                                                          | Florent Ginhoux, PhD                                            |
|                    |        |                            | » Novel Crosstalk of the Immune and the Nervous System                                                                                            | Frauke Zipp, MD                                                 |
|                    |        |                            | » Q & A                                                                                                                                           | Panel                                                           |
| 9:00 am - 12:00 pm | SYM10  | CME, PA, CNE, CPE, APA, SW | <b>Psychopharmacology and MS: A Review for Clinicians</b>                                                                                         | Laura Safar, MD, Chair                                          |
|                    |        |                            | » Psychopharmacology Review: Antidepressants and Mood Stabilizers                                                                                 | Jane Erb, MD                                                    |
|                    |        |                            | » Psychopharmacology Review: Antipsychotics, Anxiolytics, Hypnotics, Cognitive Enhancers, and Cannabis                                            | Jane Erb, MD                                                    |
|                    |        |                            | » Break                                                                                                                                           |                                                                 |
|                    |        |                            | » Use of Psychotropics in MS: Antidepressants, Antianxiety Agents, Mood Stabilizers, Hypnotics, Antipsychotics, Cognitive Enhancers, and Cannabis | Laura Safar, MD                                                 |
|                    |        |                            | » Psychotropics Algorithm Selection Based on Clinical Scenario - Clinical Vignettes Discussion with Audience Participation                        | Laura Safar, MD<br>Jane Erb, MD                                 |
| 9:00 am - 12:00 pm | SYM11  |                            | <b>Recovery and Repair: Remyelination and Clinical Trials</b>                                                                                     | Robert Zivadinov, MD, PhD                                       |
| 11:00 am - 5:00 pm |        |                            | <b>More About MS (Patient Program)</b>                                                                                                            |                                                                 |
| 12:00 pm - 2:00 pm |        |                            | <b>EXHIBIT HALL OPEN</b>                                                                                                                          |                                                                 |
| 12:30 pm - 1:30 pm | PROD4  |                            | <b>Product Theater 4</b>                                                                                                                          |                                                                 |
| 2:00 pm - 5:00 pm  | FUND3  | CME, CNE, CPE, PA, APA, SW | <b>Fundamentals of MS Care – Part 3</b>                                                                                                           | Beverly Layton, RN, BSN, CCRC, MSCN, Chair                      |
|                    |        |                            | <b>Current and Emerging Therapies and Symptom Management</b>                                                                                      |                                                                 |
|                    |        |                            | » Welcome and Overview of Program                                                                                                                 | Beverly Layton, RN, BSN, CCRC, MSCN                             |
|                    |        |                            | » Current Treatments                                                                                                                              | John Rinker, II, MD                                             |
|                    |        |                            | » Ask the Infusion Nurse                                                                                                                          | Marie Moore, MSN, FNP, MSCN                                     |
|                    |        |                            | » MS Medication Side Effect Management                                                                                                            | Erica Goff, PharmD                                              |
| 2:00 pm - 5:00 pm  | REHAB3 | CME, CNE, OT               | <b>Current Topics and Trends in MS Rehab – Part 3</b>                                                                                             | Patricia Bobryk, MHS, PT, MSCS, ATP, Moderator                  |
|                    |        |                            | <b>Occupational Therapy and Sleep Interventions for MS</b>                                                                                        |                                                                 |
|                    |        |                            | » Occupational Therapy and Sleep Interventions for MS                                                                                             | Rebecca Cunningham, OTD, OTR/L, MSCS                            |
| 2:00 pm - 5:00 pm  | SYM12  | CME, PA, CNE, CPE          | <b>Observational Studies are in the Eye of the Beholder</b>                                                                                       | Scott D. Newsome, DO, MSCS, FAAN, Chair                         |
|                    |        |                            | » Introduction                                                                                                                                    | Scott D. Newsome, DO, MSCS, FAAN                                |
|                    |        |                            | » Birds Eye View on Observational Studies                                                                                                         | Ellen Mowry, MD, MCR                                            |
|                    |        |                            | » Leveraging Real World Studies: Pros of Observational Studies                                                                                    | Tomas Kalincik, MD, PhD, FRACP                                  |
|                    |        |                            | » Leveraging Real World Studies: Cons of Observational Studies                                                                                    | Daniel Ontaneda, MD                                             |
|                    |        |                            | » Q & A                                                                                                                                           | Panel                                                           |

|                   |       |                       |                                                                                                                                 |                                                                 |
|-------------------|-------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 2:00 pm - 5:00 pm | SYM13 | CME, PA, CNE, CPE     | <b>Genetics in MS</b>                                                                                                           | Sergio E. Baranzini, PhD, Chair                                 |
|                   |       |                       | » Introduction                                                                                                                  | Sergio E. Baranzini, PhD                                        |
|                   |       |                       | » How Genes and Microbes Shape MS Risk                                                                                          | Sergio E. Baranzini, PhD                                        |
|                   |       |                       | » Genomics of MS                                                                                                                | Nikolaos Patsopoulos, MD, PhD                                   |
|                   |       |                       | » Mendelian Randomization as an Approach to Examine Causality in MS                                                             | Adil Harroud, MD, FRCP                                          |
|                   |       |                       | » MS Genetics in Admix US Minority Populations                                                                                  | Lilyana Amezcua, MD                                             |
| 2:00 pm - 5:00 pm | SYM14 | CME, PA               | <b>Cross Talk Between the Immune and the Central Nervous System- Part 2</b>                                                     | Ari Waisman, PhD, Co-Chair<br>Francisco Quintana, PhD, Co-Chair |
|                   |       |                       | » Introduction                                                                                                                  | Ari Waisman, PhD                                                |
|                   |       |                       | » Control of CNS Inflammation by Local Cell Interactions                                                                        | Francisco Quintana, PhD                                         |
|                   |       |                       | » Ribosome-targeting Antibiotics Impair T Cell Effector Function and Ameliorate EAE by Blocking Mitochondrial Protein Synthesis | Tim Sparwasser, MD, PhD                                         |
|                   |       |                       | » Metabolic Regulation of T Cells for Autoimmune Therapy                                                                        | Luciana Berod, PhD                                              |
|                   |       |                       | » Transcriptional Regulation of Neuroinflammation                                                                               | Vanja Lazarevic, PhD                                            |
|                   |       |                       | » Q & A                                                                                                                         | Panel                                                           |
| 2:00 pm - 5:00 pm | SYM15 | CME, PA, CNE, APA, SW | <b>Multiple Sclerosis and Depression</b>                                                                                        | Anthony Feinstein, MPhil, PhD, FRCP, Chair                      |
|                   |       |                       | » Assessing Depression in People with MS                                                                                        | Peter Arnett, PhD                                               |
|                   |       |                       | » The Effects of Depression and Anxiety on Cognition in People with MS                                                          | Sarah Morrow, MD, MS, FRCP(C)                                   |
|                   |       |                       | » Neuroimaging and Non-pharmacologic Treatment of Depression in People with MS                                                  | Anthony Feinstein, MPhil, PhD, FRCP                             |
|                   |       |                       | » Antidepressant Treatment of Depression in People with MS                                                                      | Aaron Mackie, MD                                                |
| 2:00 pm - 5:00 pm | SYM16 | CME, PA, CNE, CPE     | <b>Role of Biological Aging in MS Progression</b>                                                                               | Jennifer Graves, MD, PhD, MAS, Chair                            |
|                   |       |                       | » Welcome and Introduction                                                                                                      | Jennifer Graves, MD, PhD, MAS                                   |
|                   |       |                       | » Association of Chronological Age with Progressive MS                                                                          | Jennifer Graves, MD, PhD, MAS                                   |
|                   |       |                       | » Comorbidities                                                                                                                 | Ruth Ann Marrie, MD, PhD                                        |
|                   |       |                       | » Role of Disease Modifying Therapies                                                                                           | Le Hua, MD                                                      |
|                   |       |                       | » Aging and Remyelination                                                                                                       | Bjorn Neumann, PhD                                              |
| 2:00 pm - 5:00 pm | SYM17 | CME, PA, CNE, SW, APA | <b>Beyond the Clinic-Advances in Accessibility and Targets of MS-focused Behavioral Interventions</b>                           | Kevin N. Alschuler, PhD, Chair                                  |
|                   |       |                       | » Introduction to Advances in Accessibility and Targets of MS-focused Behavioral Interventions                                  | Kevin N. Alschuler, PhD                                         |
|                   |       |                       | » Telephone and Videoconference-delivered Psychotherapies for MS Symptom Management                                             | Kevin N. Alschuler, PhD                                         |
|                   |       |                       | » Web-based Symptom Self-management in MS                                                                                       | Anna L. Kratz, PhD                                              |
|                   |       |                       | » Telephone-delivered Psychotherapies for Mood and Physical Activity in MS                                                      | Aaron Turner, PhD                                               |
|                   |       |                       | » Internet-delivered Cognitive-behavioral Therapy for Insomnia in MS                                                            | Abbey J. Hughes, PhD                                            |
|                   |       |                       | » Q & A                                                                                                                         |                                                                 |
| 5:15 pm           |       |                       | <b>Closing Ceremony / Awards</b>                                                                                                |                                                                 |



| TIME               | ID     | CREDITS                            | TITLE                                                                                                                     | CHAIR / SPEAKER                                |
|--------------------|--------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 7:00 am - 8:00 am  | ISS5   |                                    | <a href="#">Independently Supported Symposium 5</a>                                                                       |                                                |
| 8:00 am - 8:45 am  | LEC4   | CME, CNE, PA                       | <a href="#">Donald Paty Lecture: Microbiome in Adults and Pediatrics</a>                                                  | Emmanuelle Waubant, MD, PhD                    |
| 9:00 am - 12:00 pm | FUND4  | CME, CNE, CPE, PA, APA, SW         | <a href="#">Fundamentals of MS Care – Part 4</a><br><a href="#">Current and Emerging Therapies and Symptom Management</a> | Beverly Layton, RN, BSN, CCRC, MSCN, Chair     |
|                    |        |                                    | » Welcome and Overview                                                                                                    | Beverly Layton, RN, BSN, CCRC, MSCN            |
|                    |        |                                    | » Healing MS: Helping Patients Realize Wellness                                                                           | Megan Weigel, DNP, ARNP-c, MSCN                |
|                    |        |                                    | » Fatigue                                                                                                                 | Patricia Pagnotta, ANP-C, MSCN                 |
|                    |        |                                    | » Assessment and Management of Bowel, Bladder and Sexual Function in MS                                                   | Marie Namey, APRN, MSN, MSCN                   |
|                    |        |                                    | » Sleep Disorders                                                                                                         | David Brandes, MS, MD, FAAN, MSC               |
| 9:00 am - 12:00 pm | REHAB4 | CME, CNE, OT                       | <a href="#">Current Topics and Trends in MS Rehab – Part 4</a>                                                            | Patricia Bobryk, MHS, PT, MSCS, ATP, Moderator |
|                    |        |                                    | » Pelvic Floor Rehab Interventions for MS                                                                                 | Carina Siracusa, PT, DPT, WCS                  |
|                    |        |                                    | » Dance in MS: How the Art of Structured Dance is Transforming the Management of MS                                       | Tirisham Gyang MD, Chair                       |
|                    |        |                                    | » Dance and MS: A Unique Opportunity for Neuroplasticity in Multiple Sclerosis                                            | Tirisham Gyang, MD                             |
|                    |        |                                    | » Targeted Ballet Program for MS Improves Balance and Mitigates Ataxia: What are the Neural Mechanisms?                   | Citlali Lopez-Ortiz, PhD, MA                   |
|                    |        |                                    | » Recreational Ballroom Dance for Persons with MS: Physiological and Psychosocial Consequences                            | Alexander Ng, PhD                              |
|                    |        |                                    | » Neuromuscular Re-Patterning in Dance for MS Classes: Therapeutic and Poetic Re-membering Through Developmental Movement | Elizabeth Johnson, MFA, GL-CMA, M.AmSAT        |
|                    |        |                                    | » Q & A                                                                                                                   | Panel                                          |
| 9:00 am - 12:00 pm | SYM18  | CME, PA, CNE, CPE, APA, SW, OT, PT | <a href="#">Women in Multiple Sclerosis: Building Skills for Thriving in Your Career</a>                                  | Carrie M. Hersh, DO, MSc, Chair                |
|                    |        |                                    | » Introductions                                                                                                           | Panel                                          |
|                    |        |                                    | » Post-It Ice Breaker Session: Sharing Ideas and Knowledge Gaps                                                           | Panel                                          |
|                    |        |                                    | » 5 Minute Elevator Pitch                                                                                                 | Mary Rensel, MD                                |
|                    |        |                                    | » Self-Promotion                                                                                                          | Mary Alissa Willis, MD                         |
|                    |        |                                    | » Preparing for Difficult Situations                                                                                      | Mary Alissa Willis, MD                         |
|                    |        |                                    | » Having a Voice in the Board Room                                                                                        | Carrie M. Hersh, DO, MSc                       |
|                    |        |                                    | » Success Stories                                                                                                         | Amy Sullivan, PsyD                             |
|                    |        |                                    | » Negotiation Tactics                                                                                                     | Mary Rensel, MD                                |
|                    |        |                                    | » Networking/Speed Mentoring                                                                                              | Panel                                          |

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|--------------------|-------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00 am - 12:00 pm | SYM19 | CME, PA, CNE, CPE, APA, SW, OT, PT | <b>The Whole Health Model: Paradigm Shift in MS Care</b><br>This session was developed with support from the VAMSCoE.                                        | Jodie K. Haselkorn, MD, MPH, Co-Chair<br>Heidi Maloni, PhD, ANP-BC, CNRN, MSCN, Co-Chair                                                                          |
|                    |       |                                    | » Introduction                                                                                                                                               | Jodie K. Haselkorn, MD, MPH<br>Heidi Maloni, PhD, ANP-BC, CNRN, MSCN                                                                                              |
|                    |       |                                    | » The Whole Health Model and Personal Health Planning Tool                                                                                                   | Kavitha P. Reddy, MD, ABoIM                                                                                                                                       |
|                    |       |                                    | » Case Study 1: A young man recently diagnosed<br>» Case Study 2: A middle aged lawyer with invisible symptoms                                               | Panel:<br>Jodie Haselkorn, MD, MPH, MRM<br>Heidi Maloni, PhD, ANP-BC, CNRN, MSCN<br>Kavitha P. Reddy, MD, ABoIM<br>Jan Spencer, MSW, LCSW<br>Aaron P. Turner, PhD |
|                    |       |                                    | » Case Study 3: An older adult transitioning from relapsing MS to progressive MS and DMT decision making<br>» Case Study 4: A woman with advanced MS         | Panel                                                                                                                                                             |
|                    |       |                                    | » Practical Strategies for Implementing Whole Health and Discussion                                                                                          | Kavitha P. Reddy, MD, ABoIM<br>Panel                                                                                                                              |
|                    |       |                                    |                                                                                                                                                              |                                                                                                                                                                   |
| 9:00 am - 12:00 pm | SYM20 | CME, CNE, PA                       | <b>Late Breaking Science</b>                                                                                                                                 | Corey C. Ford, MD, PhD, Chair                                                                                                                                     |
| 9:00 am - 12:00 pm | SYM21 | CME, PA, CNE, APA, SW              | <b>Navigating the Biopsychosocial Complexities of Pediatric Onset MS (POMS): Diagnostic Issues, Current Treatments, Wellness and Ethical Decision Making</b> | Matthew Sacco, PhD, Chair                                                                                                                                         |
|                    |       |                                    | » Introduction to Psychosocial Complexities of Working within Pediatric Population                                                                           | Matthew Sacco, PhD                                                                                                                                                |
|                    |       |                                    | » Current MS Treatments within Pediatric Population and Special Considerations                                                                               | Ian Rossman, MD, PhD                                                                                                                                              |
|                    |       |                                    | » Social Challenges with Pediatric Population                                                                                                                | Sarah-Maria Riffle, MSW, LISW                                                                                                                                     |
|                    |       |                                    | » Ethical Decision Making in Pediatric Patient Population                                                                                                    | Kate Eshleman, PsyD                                                                                                                                               |
|                    |       |                                    | » Complex Cases and Panel Discussion                                                                                                                         | Matthew Sacco, PhD                                                                                                                                                |
| 12:00 0pm          |       |                                    | <b>ADJOURN</b><br><br><b>SEE YOU IN 2022 IN<br/>NATIONAL HARBOR, MARYLAND!</b>                                                                               |                                                                                                                                                                   |