

# **PROGRAM**

## **EIGHTY EIGHTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS**

**JUNE 21-24, 2012**

**THE PALMER HOUSE HILTON**

**CHICAGO, ILLINOIS**

*This activity is sponsored by the American Association of Neuropathologists*

*For additional information about the accreditation of this program, please contact the AANP office at 440-793-6565 or via email at [aanpoffice@gmail.com](mailto:aanpoffice@gmail.com)*

*Cover picture courtesy of Choose Chicago*



## CONTENTS

	Page
<i>AANP Organization</i>	
<i>Officers and Committees</i>	1-2
<i>CME Information</i>	3-4
<i>Disclosures</i>	4-8
<i>General Information – Hotel and Registration</i>	9
<i>Author/ Presenter Information</i>	
<i>Platform Presenters</i>	9-10
<i>Poster Presenters</i>	10
<i>Microscope Room</i>	11
<i>Business Meeting</i>	11
<i>Special Meetings</i>	11
<i>Published Abstracts</i>	12
<i>Annual Reception</i>	12
<i>Meeting Sponsors and Donors</i>	12
<i>Hotel Floor Plan</i>	13- 14
<i>Program and Scientific Sessions Overview</i>	15
<i>MEETING AT A GLANCE</i>	16-17
<i>Special Course</i>	18
<i>Trainee Lunch and Special Lecture</i>	19
<i>Presidential Symposium</i>	20
<i>Scientific Sessions</i>	
<i>Platform Presentations</i>	
<i>Friday Morning (Abstracts 1-16)</i>	21-22
<i>Friday Afternoon (Abstracts 17-32)</i>	23-24
<i>Saturday Morning (Abstracts 97-112)</i>	29-30
<i>Saturday Afternoon (Abstracts 113-128)</i>	31-32
<i>Poster Presentations</i>	
<i>Friday Poster Session I (Abstracts 33-96)</i>	25-28
<i>Saturday Poster Session II (Abstracts 129-192)</i>	33-37
<i>SPECIAL LECTURES</i>	38-45
<i>MERITORIOUS AWARDS</i>	46-50
<i>PRESIDENTIAL SYMPOSIUM</i>	51-55
<i>Author Index</i>	56-62



## **AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS**

Secretary-Treasurer  
C. Harker Rhodes, MD, PhD  
Pathology Department  
Dartmouth Hitchcock Medical Center  
Borwell 530W, DHMC  
1 Medical Drive  
Lebanon, NH 03756  
Phone: 603-650-7744

Administrative Assistant – Peggy Harris  
Phone: 440-793-6565  
Email: [aanpoffice@gmail.com](mailto:aanpoffice@gmail.com)  
Home page <http://www.neuropath.org>

### **OFFICERS**

Raymond A. Sobel, MD, *Stanford University School of Medicine*, President  
John M. Lee, MD, PhD, *Loyola University*, Vice-President  
Charles L. White III, MD, *University of Texas Southwestern Medical Center*, President-Elect  
Elizabeth J. Cochran, MD, *Medical College of Wisconsin*, Vice President-Elect  
Elizabeth J. Cochran, MD, *Medical College of Wisconsin*, VP for Professional Affairs  
C. Harker Rhodes, MD, PhD, *Dartmouth Hitchcock Medical Center*, Secretary-Treasurer  
Charles L. White III, MD, *University of Texas Southwestern Medical Center*, Assistant Secretary-Treasurer

### **OTHER EXECUTIVE COUNCIL MEMBERS**

Steven A. Moore, MD, PhD, *University of Iowa College of Medicine*, (Past President)  
David N. Louis, MD, *Massachusetts General Hospital* (Past President)  
George Perry, PhD, *University of Texas at San Antonio* (Past President)  
Robert F. Hevner, MD, PhD, *University of Washington* (Member-at-Large)  
Raymond A. Sobel, MD, *Stanford University School of Medicine* (JNEN)  
Karen M. Weidenheim, MD, *Montefiore Medical Center* (Member-at-Large)

### **ARCHIVIST**

Michael N. Hart, MD, *University of Wisconsin School of Medicine*

### **OFFICIAL JOURNAL**

Journal of Neuropathology and Experimental Neurology  
Raymond A. Sobel, Editor  
Barbara J. Crain, Associate Editor  
Jeffrey A. Golden, Associate Editor  
Eileen S. Healy, Managing Editor  
E-mail [jnen@pathology.wisc.edu](mailto:jnen@pathology.wisc.edu)  
Home page: <http://www.jneuropath.com>

### **DIAGNOSTIC SLIDE SESSION**

Anthony T. Yachnis, MD, *University of Florida Medical College*, Moderator  
Mark L. Cohen, MD, *University Hospitals Case Medical Center*, Manager

## **COMMITTEES**

### **AWARDS COMMITTEE**

*Maria Beatriz S. Lopes, MD, Chair*  
Adekunle M. Adesina, MD, PhD  
Ada Baisre, MD  
Rudy J. Castellani, MD  
Mark T. Curtis, MD, PhD  
Ivana Delalle, MD, PhD  
Marc R. Del Bigio, MD, PhD  
David W. Ellison, MD, PhD  
Matthew P. Frosch, MD, PhD  
Kymberly A. Gyure, MD  
Brent T. Harris, MD, PhD  
Craig Horbinski, MD, PhD  
Alexander Judkins, MD  
Bradley M. Miller, MD, PhD  
C. Ryan Miller, MD, PhD  
Peter Pytel, MD

### **MEMBERSHIP COMMITTEE**

*Leslie A. Bruch, MD, Chair*  
Christine E. Fuller, MD  
Murat Gokden, MD  
Rodney D. McComb, MD  
Cheryl A. Palmer, MD  
Peter Pytel, MD  
Naomi E. Rance, MD

### **NOMINATING COMMITTEE**

*Steven A. Moore, MD, PhD Chair*  
David N. Louis, MD  
Jeffrey A. Golden, MD  
George Perry, PhD

### **PROGRAM COMMITTEE**

*Anat Stemmer Rachamimov, MD, Chair*  
James Dollar, MD  
Murat Gokden, MD  
Kymberly A. Gyure, MD  
Marta Margeta, MD, PhD  
Aryn M. Rojiani, MD, PhD  
Shahriar M. Salamat, MD, PhD  
Julie Schneider, MD  
Suash Sharma, MD

### **PROFESSIONAL AFFAIRS**

*Elizabeth J. Cochran, MD, Chair*  
Eileen H. Bigio, MD  
Daniel J. Brat, MD, PhD  
William F. Hickey, MD  
John M. Lee, MD  
William C. McDonald, MD  
Brian E. Moore, MD  
Robert E. Mrak, MD, PhD  
Kathy L. Newell, MD  
William H. Yong, MD  
Marie Rivera Zengotita, MD

### **EDUCATION COMMITTEE**

*John M. Lee, MD, PhD, Chair*  
Mark Cohen, MD  
Kar-Ming Fung, MD, PhD  
William F. Hickey, MD  
Maria Martinez-Lage, MD  
Suzanne Z. Powell, MD  
C. Harker Rhodes, MD, PhD  
Tarik Tihan, MD, PhD  
Jane Uyehara-Lock, MD  
Charles L. White, III, MD

### **INTERNATIONAL SOCIETY OF NEUROPATHOLOGY COUNCILORS**

Joseph E. Parisi, MD  
Arie Perry, MD  
Clayton A. Wiley, MD, PhD  
Anthony T. Yachnis, MD

## **TARGET AUDIENCE**

The educational design of AANP's Annual Meeting addresses the needs of physicians and scientists in the field of neuropathology who are involved in the diagnosis and/or treatment of patients with neurological disorders.

## **STATEMENT OF NEED**

The purpose of this activity shall be to advance the knowledge of new techniques, scientific findings, treatments, and the practice and teaching of neuropathology. The practice of neuropathology is understood to include the diagnosis of diseases of the nervous system, and teaching and training in the science and practice of neuropathology.

## **LEARNING OBJECTIVES**

Upon completion of this activity, participants should be able to:

- Discuss recent technical advances that enhance the diagnostic accuracy of neuropathology
- Review new information on the pathogenesis of neurological diseases that can be incorporated into the teaching of neuropathology to trainees and colleagues
- Identify recent trends in the incidence and epidemiology of neurological diseases in which neuropathologists impact therapeutic decisions and public health

## **DISCLAIMER**

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed in this activity should not be used by clinicians without evaluation of patient conditions and possible contraindications or dangers in use, review of any applicable manufacturer's product information, and comparison with recommendations of other authorities.

## **CME CREDIT**

### Physician Accreditation Statement

The American Association of Neuropathologists is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

### Physician Credit Designations

The American Association of Neuropathologists designates this live educational activity for a maximum of 24.25 *AMA PRA Category 1 Credit(s)*<sup>TM</sup>. Physicians should only claim credit commensurate with the extent of their participation in the activity.

### Instructions to Receive Credit:

In order to receive credit for this activity, the participant must complete the CME credit application in the registration packet and return it to the American Association of Neuropathologists office at:

American Association of Neuropathologists  
C/o Peggy Harris  
25373 Tyndall Falls Drive  
Olmsted Falls, Ohio 44138

The chart below details the maximum number of credit hours a physician can earn for each educational activity being certified for *AMA PRA Category 1 Credit*<sup>TM</sup> at this year's Annual Conference.

<b>Activity</b>	<b>CME Credit Hours</b>
Special Course	7
Scientific Sessions	8
Korey Lecture	1
DeArmond Lecture	1
Parisi Lecture	1
Diagnostic Slide Session	3
Presidential Symposium	3.25
<b>Total</b>	<b>24.25</b>

**DISCLOSURE INFORMATION:**

Disclosure of Commercial Support:

This activity is supported educational grants from Teva Neurosciences and The National Multiple Sclerosis Society. "In-kind" support through the donation of microscopes is being provided by Olympus.

Disclosure of Unlabeled Use:

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. The American Association of Neuropathologists does not recommend the use of any agent outside of the labeled indications.

The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of any organization associated with this activity. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications and warnings.

Disclosure of Conflict of Interest:

The American Association of Neuropathologists requires instructors, planners, managers and other individuals who are in a position to control the content of this activity to disclose any real or apparent conflict of interest they may have as related to the content of this activity. All identified conflicts of interest are thoroughly vetted by AANP for fair balance, scientific objectivity of studies mentioned in the materials or used as the basis for content, and appropriateness of patient care recommendations. Complete disclosure information will be provided to learners on-site.

The **Planners and Managers** reported the following financial relationships or relationships to products or devices they or their spouse/life partner have with commercial interests related to the content of this CME activity:

<b>Name of Planner or Manager</b>	<b>Reported Financial Relationship</b>
Eileen H. <b>Bigio</b> , Northwestern University Feinberg School of Medicine	Nothing to Disclose
Daniel J. <b>Brat</b> , Emory University School of Medicine	Nothing to Disclose
Rudy J. <b>Castellani</b> , University of Maryland	Nothing to Disclose
Elizabeth J. <b>Cochran</b> , Medical College of Wisconsin	Nothing to Disclose
Mark L. <b>Cohen</b> , University Hospitals Case Medical Center	Nothing to Disclose
James D. <b>Dollar</b> , Carolinas Pathology Group	Nothing to Disclose
Kar-Ming <b>Fung</b> , University of Oklahoma	Nothing to Disclose
Murat <b>Gokden</b> , University of Arkansas	Nothing to Disclose
Kymberly A. <b>Gyure</b> , West Virginia University	Nothing to Disclose

The **Planners and Managers** reported the following financial relationships or relationships to products or devices they or their spouse/life partner have with commercial interests related to the content of this CME Activity

<b>Name of Planner or Manager</b>	<b>Reported Financial Relationship</b>
Robert F. <b>Hevner</b> , University of Washington	Consultant for the Allen Institute of Brain Science
William F. <b>Hickey</b> , Dartmouth Medical School	Nothing to Disclose
John M. <b>Lee</b> , Loyola University	Consultant/Reviewer For Up to Date on CJD articles; Holds group patents with Cornelli Consulting
David N. <b>Louis</b> , Massachusetts General Hospital	Nothing to Disclose
William C. <b>McDonald</b> , Abbott Northwestern Hospital	Nothing to Disclose
Marta <b>Margeta</b> , University of California San Francisco	Nothing to Disclose
Maria <b>Martinez-Lage</b> , University of Pennsylvania	Nothing to Disclose
Brian E. <b>Moore</b> , Memorial Medical Center	Nothing to Disclose
Steven A. <b>Moore</b> , University of Iowa	Nothing to Disclose
Robert E. <b>Mrak</b> , University of Toledo	Nothing to Disclose
Kathy L. <b>Newell</b> , University of Kansas Medical Center	Nothing to Disclose
George <b>Perry</b> , University of Texas at San Antonio	Consultant/Independent Contractor for Neurotez; Stock Shareholder with Curaxis
Suzanne <b>Powell</b> , The Methodist Hospital	Nothing to Disclose
C. Harker <b>Rhodes</b> , Dartmouth-Hitchcock Medical Center	Nothing to Disclose
Marie <b>Rivera-Zengotita</b> , University of Florida Medical College	Nothing to Disclose
Amyr <b>Rojiani</b> , Medical College of Georgia	Nothing to Disclose
Shahriar M. <b>Salamat</b> , University of Wisconsin Hospital	Nothing to Disclose
Julie <b>Schneider</b> , Rush University Medical Center	Consultant for Eli Lilly co. and Avid Radiopharmaceuticals
Suash <b>Sharma</b> , Medical College of Georgia	Nothing to Disclose
Raymond A. <b>Sobel</b> , Stanford University School of Medicine	Nothing to Disclose
Anat <b>Stemmer-Rachamimov</b> , Massachusetts General Hospital	Nothing to Disclose
Tarik <b>Tihan</b> , University California San Francisco	Nothing to Disclose
Jane <b>Uyehara-Lock</b> , Kaiser Foundation Hospital	Nothing to Disclose
Karen M. <b>Weidenheim</b> , Montefiore Medical Center	Nothing to Disclose
Charles L. <b>White III</b> , University of Texas Southwestern Medical Center	Nothing to Disclose
Anthony T. <b>Yachnis</b> , University of Florida Medical College	Nothing to Disclose
William H. <b>Yong</b> , University of California Los Angeles	Grant/Research Support for Genentech, Amgen, and Tocagen; Stock shareholder with Pfizer

The **faculty** reported the following financial relationships or relationships to products or devices they or their spouse/life partner have with commercial interests related to the content of this CME Activity

<b>Name of Faculty/Presenter</b>	<b>Reported Financial Relationship</b>
Adekunle <b>Adesina</b> , Baylor College of Medicine	Nothing to Disclose
Homa <b>Adle-Biassette</b> , INSERM	Nothing to Disclose
Safa <b>Al-Sarraj</b> , Kings College Hospital, London	Nothing to Disclose
Derick <b>Aranda</b> , University of California San Francisco	Nothing to Disclose
Leonidas <b>Arvanitis</b> , Rush University	Nothing to Disclose
Krystof <b>Bankiewicz</b> , University of California San Francisco	Nothing to Disclose
Thomas <b>Beach</b> , Banner Health	Nothing to Disclose
Joseph <b>Berger</b> , University of Kentucky	Consultant/Independent Contractor for Amgen, Bayer, Biogen Idec, Genentech, Millenium, Eisai, Genzyme, Novartis, and Pfizer; Grant/Research Support for PML Consortium; Honoraria from Bayer and Biogen Idec; Speaker's Bureau for Bayer and Biogen Idec
Juan M. <b>Bilbao</b> , Sunnybrook Hospital	Nothing to Disclose
T. <b>Bourne</b> , University of Virginia Health System	Nothing to Disclose
Robert H. <b>Brown, Jr.</b> University of Massachusetts	Consultant/Independent Contractor for Biogen Idec; Grant/Research Support for NINDS, PZALS, Project ALS; other Royalty from McGraw Hill
Nigel <b>Cairns</b> , Washington University School of Medicine	Nothing to Disclose
H. Brent <b>Clark</b> , University of Minnesota Medical School	Nothing to Disclose
Kenneth <b>Clark</b> , University of Pittsburgh Medical Center	Nothing to Disclose
Misti <b>Coronel</b> , Thomas Jefferson University Hospital	Nothing to Disclose
Stephen <b>DeArmond</b> , University of California San Francisco	Nothing to Disclose
Marc <b>Del Bigio</b> , University of Manitoba	Nothing to Disclose
Ivana <b>Delalle</b> , Boston University School of Medicine	Nothing to Disclose
Dennis <b>Dickson</b> , Mayo Clinic	Nothing to Disclose
Mohamed <b>EI-Hag</b> , University Case Medical Center	Nothing to Disclose
David <b>Ellison</b> , St. Jude Children's Research Hospital	Nothing to Disclose
Ferechte <b>Encha-Razavi</b> , Necker-Enfants Malades Hospital	Nothing to Disclose
Michelle Madden <b>Felicella</b> , University of California San Francisco	Nothing to Disclose
Amanda <b>Fisher-Hubbard</b> , University of Michigan	Nothing to Disclose
Bernardino <b>Ghetti</b> , Indiana University	Consultant with Bayer Pharma AG
Jeffrey <b>Golden</b> , Brigham and Women's Hospital	Nothing to Disclose
James <b>Hackney</b> , University of Alabama	Nothing to Disclose
Leslie <b>Hamilton</b> , University of Calgary	
May Htwe <b>Han</b> , Stanford University School of Medicine	Nothing to Disclose

The **faculty** reported the following financial relationships or relationships to products or devices they or their spouse/life partner have with commercial interests related to the content of this CME Activity

<b>Name of Faculty/Presenter</b>	<b>Reported Financial Relationship</b>
John <b>Hedreen</b> , Harvard Brain Tissue Resource Center	Nothing to Disclose
Annie <b>Hiniker</b> , University of California San Francisco	Nothing to Disclose
Cheng-Ying <b>Ho</b> , Johns Hopkins University	Nothing to Disclose
Thomas <b>Huebner</b> , University of Maryland	Nothing to Disclose
Jason <b>Huse</b> , Memorial Sloan-Kettering Cancer Center	Nothing to Disclose
Cristiane M. <b>Ida</b> , Mayo Clinic	Nothing to Disclose
Mark <b>Jentoft</b> , Mayo Clinic	Nothing to Disclose
Hannah <b>Kinney</b> , Children's Hospital Boston	Nothing to Disclose
Barry <b>Kosofsky</b> , Cornell University	Nothing to Disclose
Julia <b>Kofler</b> , University of Pittsburgh	Nothing to Disclose
Naomi <b>Kouri</b> , Mayo Clinic	Nothing to Disclose
Michael <b>Lawlor</b> , Medical College of Wisconsin/Children's Hospital of Wisconsin	Nothing to Disclose
Jian Yi <b>Li</b> , North Shore-LIJ Health System	Nothing to Disclose
Rong <b>Li</b> , University of Alabama at Birmingham	Nothing to Disclose
Seth <b>Love</b> , University of Bristol	Nothing to Disclose
Jian-Qiang <b>Lu</b> , University of Alberta	Nothing to Disclose
Claudia <b>Lucchinetti</b> , Mayo Clinic	Nothing to Disclose
Marta <b>Margeta</b> , University of California San Francisco	Nothing to Disclose
Ann <b>McKee</b> , Boston University School of Medicine	Nothing to Disclose
Joshua <b>Menke</b> , Mayo Clinic	Nothing to Disclose
C. <b>Miller</b> , University of North Carolina	Nothing to Disclose
Steven A. <b>Moore</b> , University of Iowa	Nothing to Disclose
David <b>Munoz</b> , St. Michael's Hospital, University of Toronto	Nothing to Disclose
Jill <b>Murrell</b> , Indiana University School of Medicine	Nothing to Disclose
Peter <b>Nelson</b> , University of Kentucky	Nothing to Disclose
Ho Keung <b>Ng</b> , The Chinese University of Hong Kong	Nothing to Disclose
Michael <b>Norenberg</b> , University of Miami School of Medicine	Nothing to Disclose
Adriana <b>Olar</b> , The Methodist Hospital	Nothing to Disclose
Brent <b>Orr</b> , The Johns Hopkins School of Medicine	Nothing to Disclose
Dan <b>Perl</b> , Uniformed Services Health Science Center	Nothing to Disclose
George <b>Perry</b> , The University of Texas at San Antonio	Consultant/Independent Contractor for Neurotez; Stock Shareholder with Curaxis
Tracie <b>Pham</b> , University of California Los Angeles	Nothing to Disclose
Joanna <b>Phillips</b> , University of California San Francisco	Nothing to Disclose
David <b>Pisapia</b> , Columbia University	Nothing to Disclose

The **faculty** reported the following financial relationships or relationships to products or devices they or their spouse/life partner have with commercial interests related to the content of this CME Activity

Phillip G. <b>Popovich</b> , Ohio State University Medical Center	Nothing to Disclose
Dushyant <b>Purohit</b> , Mount Sinai School of Medicine	Nothing to Disclose
Peter <b>Pytel</b> , University of Chicago	Nothing to Disclose
Jiang <b>Qian</b> , Albany Medical Center	Nothing to Disclose
Veena <b>Rajaram</b> , Children’s Memorial Hospital/Northwestern University	Nothing to Disclose
Shannon <b>Risacher</b> , Indiana University School of Medicine	Nothing to Disclose
Fausto <b>Rodriguez</b> , Johns Hopkins University	Nothing to Disclose
Amyr <b>Rojiani</b> , Georgia Health Sciences University, Medical College of Georgia	Nothing to Disclose
Kathryn <b>Saatman</b> , University of Kentucky	Nothing to Disclose
A. Dessa <b>Sadovnick</b> , VCHA-UBC Hospital	Nothing to Disclose
Walter <b>Schulz-Schaeffer</b> , University Medical Center Göttingen	Consultant with Bayer Healthcare
Leroy <b>Sharer</b> , New Jersey Medical School	Nothing to Disclose
Susan <b>Staugaitis</b> , Cleveland Clinic	Nothing to Disclose
Kimberly <b>Stogner-Underwood</b> , Virginia Commonwealth University	Nothing to Disclose
Mario <b>Suvà</b> Massachusetts General Hospital	Nothing to Disclose
Masaki <b>Takao</b> , Tokyo Metropolitan Geriatric Hospital	Nothing to Disclose
Bruce D. <b>Trapp</b> , The Cleveland Clinic Foundation	Consultant/Independent Contractor for Teva, Biogen Idec, and Renova Neural; Grant/Research support for NIH, MS Society , and Third Frontier; Honoraria from EMD Serono, Merck Serono, and Teva; Speakers Bureau for EMD Serono and Teva
Sriram <b>Venneti</b> , University of Pennsylvania	Nothing to Disclose
Ruben <b>Vidal</b> , Indiana Alzheimer Disease Center	Nothing to Disclose
Christopher <b>William</b> , Massachusetts General Hospital	Nothing to Disclose
Kum Thong <b>Wong</b> , University of Malaya	Nothing to Disclose
Xiongwei <b>Zhu</b> , Case Western Reserve University	Nothing to Disclose

## GENERAL INFORMATION

Hotel: The Palmer House Hilton  
17 East Monroe Street  
Chicago, IL 60603

Phone: 312-726-7500

### ***ALL MEETING SESSIONS WILL BE HELD AT THE PALMER HOUSE HILTON***

All platform presentations and general sessions (Special Lectures, Korey Lecture, DeArmond Lecture, Parisi Lecture, Business Meetings, Diagnostic Slide Session, and Presidential Symposium) will be held in the **Adams Ballroom** of the hotel on the sixth floor.

All poster sessions will be held in Exhibit Hall on the fourth floor.

### **PRE-REGISTRATION PICK-UP**

Attendees pre-registered and pre-paid for the Special Course and/or Meeting will have their name badge, course syllabus, program booklets, June 2012 issue of JNEN with abstracts, reception ticket(s) and registration receipt ready for pick-up at the AANP Registration Desk, located in the Adams Pre-function area of the hotel on the sixth floor. On-site registration and additional tickets for the Annual Reception will be available at the Desk.

### **REGISTRATION DESK**

Location	Adams Ballroom Pre-Function Area	
Time	Wednesday, June 20	6:30 pm – 9:00 pm
Time	Thursday, June 21	6:30 am - 12 noon 6:30 pm – 9:00 pm
	Friday, June 22	7:00 am - 12 noon 5:30 pm – 6:00 pm
	Saturday, June 23	7:00 am - 12 noon

### ***PLEASE, wear your name badge!***

Your name badge is *required for admittance* to any function of the Association, including the Special Course, all Friday, Saturday and Sunday sessions, and the Friday evening reception.

### **NOTES to PRESENTERS**

#### **Platform Presenters (PowerPoint)**

***Please include in your presentation a conflict of interest slide.***

All platform presentations will be held in either the **Adams or Monroe Ballrooms** of the hotel. All general sessions (Special Lectures, Korey Lecture, DeArmond Lecture, Parisi Lecture, Business Meetings, Diagnostic Slide Session, and Presidential Symposium) will be held in the **Adams Ballroom**.

Presenters should use PowerPoint for their presentation.

All PowerPoint presentations will be transferred onto a show computer prior to the start time of each session. Each room will be equipped with a lectern, audience microphones, central computer (loaded with MS Office XP), LCD/Data projector, screens and a laser pointer.

**Special Notes for PowerPoint presenters:**

- Each speaker must bring his/her PowerPoint presentation on a disc (CD-ROM) or USB memory stick.
- Please title the presentation with your name (name.ppt).
- Macintosh users, be sure to save your presentation as .ppt (*your name.ppt*). If the ".ppt" extension is not present in the file name, the file will not be recognized by the PC computer.
- Label your disc with your name, session name, time, and day of presentation. Your presentation will be transferred onto the show computer for each session by the technician. Please make sure your presentation is in its final form, since once loaded onto the show computer, no changes can be made.
- Please take your disc or memory stick to the room in which you will be presenting, Adams or Monroe Ballrooms, at one of the times indicated below. ***It is your responsibility to get your file to the AV staff prior to your presentation.***
- The AV staff will be available to load your file onto the computer during scheduled evening and morning times, or during session breaks. **These will be the only times available to you to load and test your presentation.**

**Schedule for Loading PowerPoint Presentations**

<b>Load show computer in Adams or Monroe Ballroom</b>	
Thursday, June 21	7:00 am - 7:45 am 10:30 am – 11:00 am 3:00 pm – 3:30 pm
Friday, June 22	7:00 am - 7:45 am 10:00 am – 10:30 am 4:00 pm – 4:30 pm
Saturday, June 23	7:00 am – 7:45 am 10:00 am – 10:30 am 4:00 pm – 4:30 pm
Sunday, June 24	7:00 am - 7:45 am

- **If you are presenting in a morning session, it is preferable to check in the previous day.** Same-day presentations may be loaded in the morning prior to session start time, but since this time necessarily is limited, you are encouraged to have your presentation loaded on the evening preceding your talk. Presenters at the evening Diagnostic Slide Session also will be able to submit their files on Saturday evening in the Adams Ballroom from 6:30-7:45 pm.
- To avoid time delays and potential problems with your presentation, you will ***not*** be allowed to use your own computer, although you may bring your laptop as a backup.

**Notes to Poster Presenters**

**Both** poster sessions will be held in **Exhibit Hall** on the fourth floor. Approximately half the posters will be displayed all day Friday and the remainder all day Saturday. Posters should be up by 8:00 am on the morning of your presentation and taken down by 6:30 pm the same day. The poster board size is 8 ft wide x 4 ft high. Please plan your poster to be at least a few inches smaller in each direction. The poster board surface and construction should accommodate either Velcro or push pins.

***To encourage interaction with interested attendees, authors must be present at their posters for discussion/questions during morning or afternoon refreshment breaks, at the following designated times:***

	<b>Fri June 22 Authors Present at:</b>	<b>Sat June 23 Authors Present at:</b>
<b><i>EVEN</i></b> Numbered Poster	10:00 - 10:30 am	4:00 – 4:30 pm
<b><i>ODD</i></b> Numbered Poster	4:00 – 4:30 pm	10:00 - 10:30 am

### MICROSCOPE VIEWING ROOM

Multi-headed microscopes will be available in the *Medinah Parlor* on the sixth floor of the hotel.

Location	Medinah Parlor	
Time	Thursday, June 21	7:00 am - 5:30 pm
	Friday, June 22	7:00 am - 5:30 pm
	Saturday June 23	7:00 am - 5:30 pm

### BUSINESS MEETING

Location	Adams Ballroom	
Time	Friday, June 22	11:45 am - 12:45 pm
	Saturday June 23	11:45 am – 12:45 pm

The awards for *Meritorious Contributions to Neuropathology* will be presented on Saturday, June 23

### SPECIAL MEETINGS BY INVITATION ONLY

Date	Meeting	Time/Location
Thurs June 21	Executive Council Meeting	6:00 pm Grant Park Parlor, Sixth Floor
Fri June 22	Education Committee Meeting	7:00 am Grant Park Parlor, Sixth Floor
	Trainee Luncheon	11:45 pm – 2:00 pm The Price Room, Fifth Floor
	Awards Committee Meeting	5:30 pm – 6:30 pm Grant Park Parlor, Third floor
Saturday June 23	JNEN Editorial Board Meeting	7:00 am – 8:00 am The Price Room, Fifth Floor
	NP Program Directors Meeting	1:00 pm – 2:00 pm Grant Park Parlor, Sixth Floor
	Awards Committee Meeting	6:00 pm 7:30 pm Grant Park Parlor, Sixth Floor
	Professional Affairs	6:00 pm – 8:00 pm The Spire Parlor, Sixth Floor
	Presidential Reception	6:30 pm – 8:00 pm The Price Room, Fifth Floor
Sun June 24	Founders Breakfast	7:00 am – 8:00 am Grant Park Parlor, Sixth Floor

## ABSTRACTS

Abstracts of the papers presented in the program are published in the June 2012 issue of the *Journal of Neuropathology and Experimental Neurology*.

## ANNUAL RECEPTION

The annual reception will be held 6:30 to 8:30 pm, Friday in the Mezzanine Lobby. Registrants and guests of the AANP are welcome to attend. There will be a cash bar. Additional tickets are \$20 each for guests of AANP attendees, and may be purchased at the time of registration or at the door. Several "prizes" will be awarded to trainees.

Location	Mezzanine Lobby	
Time	Friday, June 22	6:30 pm – 8:30 pm

## SPONSORS and DONORS

This meeting is sponsored in part by generous contributions from several sponsors and donors. Please visit their displays and exhibits in the Adams Ballroom Pre-Function area.

Location	Exhibit Hall, Fourth Floor	
Time	Thursday, June 23	12:00 pm – 5:30 pm
	Friday, June 24	7:00 am - 5:30 pm
	Saturday June 25	7:00 am - 5:30 pm

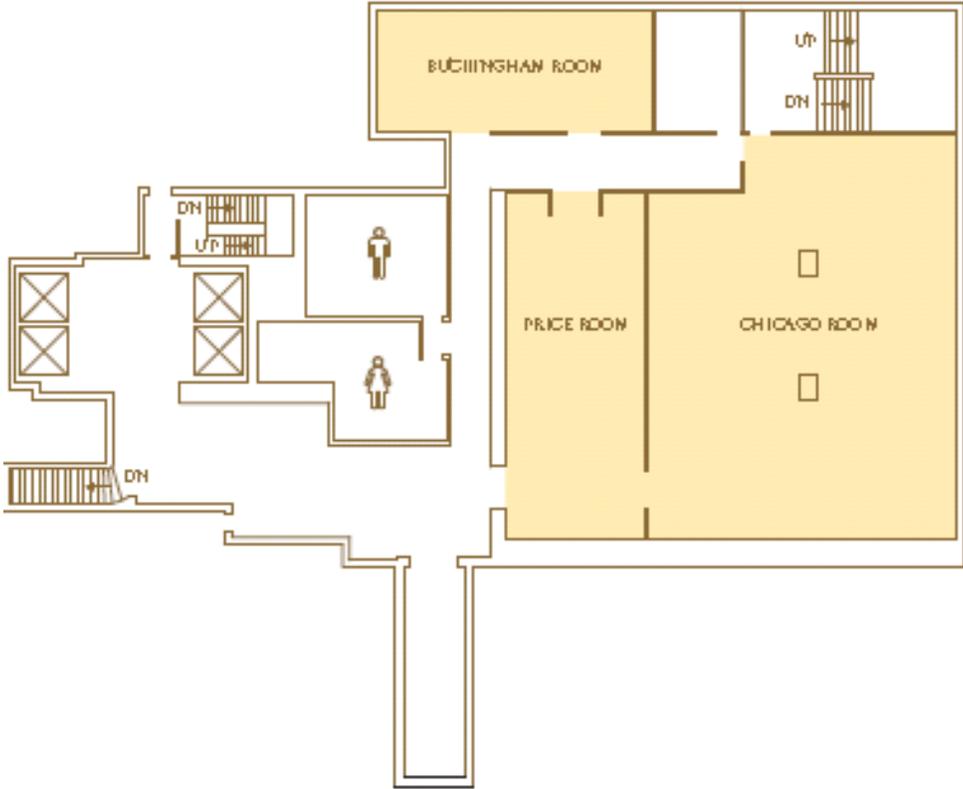
## MEETING EXHIBITORS

- Histobiotec LLC
- Olympus America, Inc.
- Wolters Kluwers Health

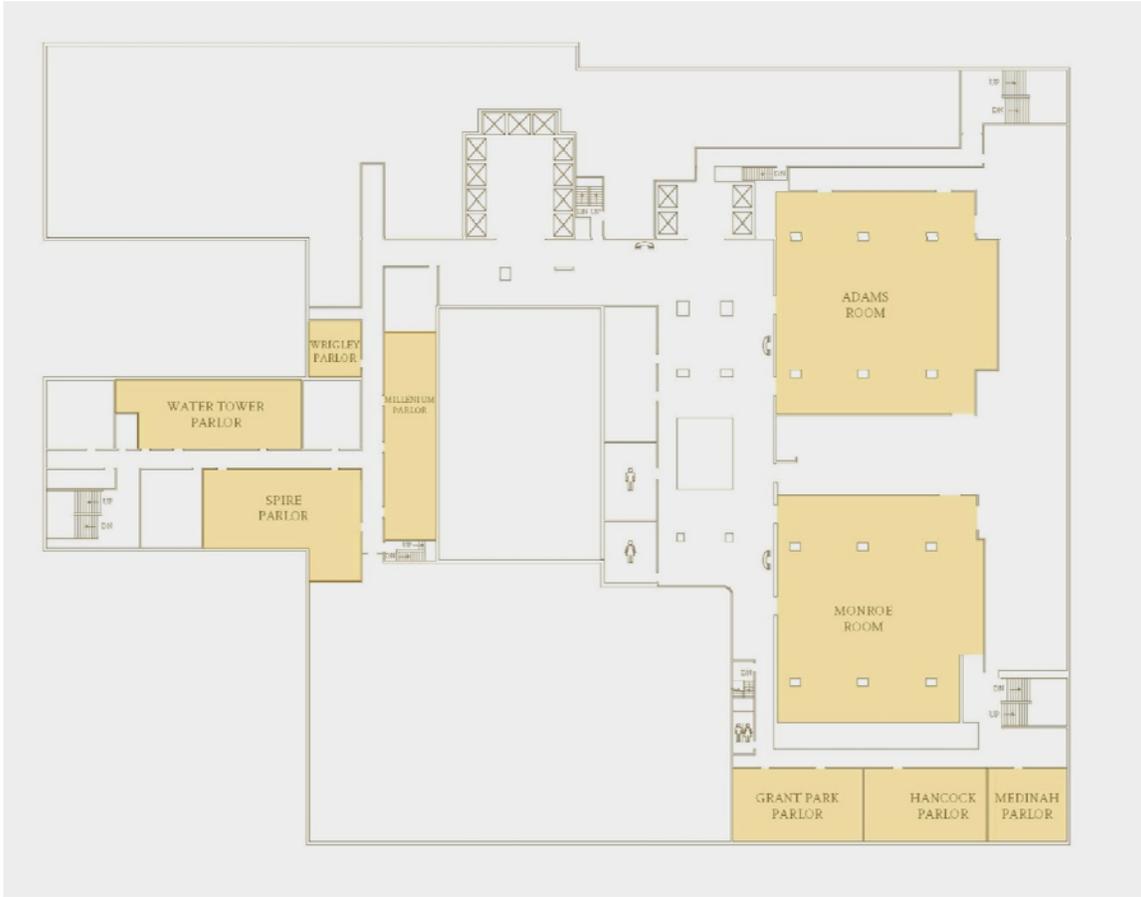
## RECEPTION PRIZE CONTRIBUTORS

- Wolters Kluwers Health
- Elsevier Inc.

**The Palmer House Hilton Floor Plan  
Fifth Floor**



**The Palmer House Hilton Floor Plan  
Sixth Floor**



## PROGRAM and SCIENTIFIC SESSIONS

### SPECIAL COURSE:

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Thursday, June 21	8:00 am - 5:00 pm
	<i>Acquired Neuropathology in a Changing World</i> Director: Raymond A. Sobel, MD	

### PLATFORM PRESENTATIONS

<b>Location</b>	<b>Adams Ballroom and Monroe Ballroom</b>	
Date/Time	Friday, June 22	8:00 am – 4:00 pm
	Saturday, June 23	8:00 am – 4:00 pm

### POSTER PRESENTATIONS

<b>Location</b>	<b>Exhibit Hall, Fourth Floor</b>	
Date/Time	Friday, June 22	8:00 am – 6:30 pm
	Saturday, June 23	8:00 am – 6:30 pm

### MATTHEW T. MOORE LECTURE

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Friday, June 22	10:30 am - 11:30 am
	<i>Pathogenesis of ALS</i> Robert H. Brown, Jr. MD University of Massachusetts, Worcester, MA	

### DEARMOND LECTURE

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Friday, June 22	4:30 pm – 5:30 pm
	<i>Novel MRI-based Platform for Efficient Gene Delivery to the Brain</i> Krystof Bankiewicz, MD, PhD University of California San Francisco, San Francisco, CA	

### SAUL R. KOREY LECTURE

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Saturday, June 23	10:30 am - 11:30 am
	<i>Why the Brain Fails when the Astrocyte Ails</i> Michael Norenberg, MD University of Miami School of Medicine	

### DIAGNOSTIC SLIDE SESSION

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Saturday, June 23	8:00 pm -11:00 pm

### PRESIDENTIAL SYMPOSIUM

<b>Location</b>	<b>Adams Ballroom</b>	
Date/Time	Sunday, June 24	8:00 am – 12 noon
	<i>Current Topics in Multiple Sclerosis</i>	

## MEETING AT A GLANCE

THURSDAY June 21, 2012	
	Adams Ballroom
8:00 am - 5:15 pm	<b>SPECIAL COURSE</b> <i>Acquired Neuropathology in a Changing World</i>

**(Abstract Numbers in Italics)**

FRIDAY June 22, 2012			
	Adams Ballroom	Monroe Ballroom	Exhibit Hall, Fourth Floor
8:00 - 10:00 am	Platform 1 Tumors- I  <i>#1 - 8</i>	Platform 2 Neurodegenerative – Alzheimer's Disease  <i>#9 - 16</i>	
10:00 - 10:30 am	<b>REFRESHMENT BREAK</b>		
10:30 - 11:30 am	<b>MATTHEW T. MOORE LECTURE</b> <i>Adams Ballroom</i>  <i>Pathogenesis of ALS</i>  Robert H. Brown, Jr. MD <i>University of Massachusetts, Worcester, MA</i>		
11:45 - 12:45 pm	<b>BUSINESS MEETING I</b> <i>Adams Ballroom</i>		
12:45 - 2:00 pm	<b>LUNCH</b>		
2:00 - 4:00 pm	Adams Ballroom Platform 3 Demyelinating/Pediatric Neuropathology/ Development  <i>#17-24</i>	Monroe Ballroom Platform 4 Neurodegenerative: Other  <i>#25 -32</i>	All Posters  Friday June 22 <sup>nd</sup> and Saturday June 23 <sup>rd</sup> 10:00 – 10:30 am 4:00 - 4:30 pm
4:00 – 4:30 pm	<b>REFRESHMENT BREAK</b>		
4:30 – 5:30 pm	<b>DEARMOND LECTURE</b> <i>Adams Ballroom</i>  <i>Novel MRI-based Platform for Efficient Gene Delivery to the Brain</i>  Krystof Bankiewicz, MD, PhD <i>University of California San Francisco, San Francisco, CA</i>		

6:30 - 8:30 pm      **ANNUAL RECEPTION:**  
*Mezzanine Lobby*

## MEETING AT A GLANCE

(Abstract Numbers in Italics)

SATURDAY June 23, 2012			
	Adams Ballroom	Monroe Ballroom	Exhibit Hall, Fourth Floor
8:00 - 10:00 am	Platform 5 Muscle/Nerve/Other  <i>#97 - 104</i>	Platform 6 Pediatric Pediatric Tumor/ Developmental and Pediatric Neuropathology  <i>#105-112</i>	
10:00 - 10:30 am	<i>REFRESHMENT BREAK</i>		
10:30 - 11:30 am	<p style="text-align: center;"><b>SAUL KOREY LECTURE</b> <i>Adams Ballroom</i></p> <p style="text-align: center;"><i>Why the Brain Fails when the Astrocyte Ails</i></p> <p style="text-align: center;">Michael Norenberg, MD <i>University of Miami School of Medicine, Miami, FL</i></p>		
11:45 - 12:45 pm	<b>BUSINESS MEETING II</b> <i>Adams Ballroom</i>		
12:45 - 2:00pm	<i>LUNCH</i>		
	Adams Ballroom	Monroe Ballroom	
2:00 - 4:00 pm	Platform 7 Tumors II  <i>#113-120</i>	Platform 8 Neurodegenerative – Other II  <i>#121-128</i>	<p style="text-align: center;">All Posters</p> <p style="text-align: center;">Friday June 22<sup>th</sup> and Saturday June 23<sup>th</sup> 10:00 – 10:30 am 4:00 - 4:30 pm</p>
4:00 - 4:30 pm	<i>REFRESHMENT BREAK</i>		
4:30 - 5:00 pm	<p style="text-align: center;"><b>Special Lecture</b> <i>Adams Ballroom</i></p> <p style="text-align: center;"><i>History of Chicago Neuropathology</i></p> <p style="text-align: center;">John M. Lee, MD, PhD <i>Loyola University, Maywood, IL</i></p>		
5:00 - 5:15 pm	<p style="text-align: center;"><i>What Every Neuropathologist Needs to Know: NIA-AA Revised Guidelines for the Diagnosis of Alzheimer's Disease</i></p> <p style="text-align: center;">Julie Schneider, MD <i>Rush University Medical Center</i></p>		
5:00 - 5:30 pm	<p style="text-align: center;"><i>What Every Neuropathologist Needs to Know: IDH1 and its Practical Utility in Glioma Diagnosis</i></p> <p style="text-align: center;">David N. Louis, MD <i>Massachusetts General Hospital</i></p>		
8:00 - 11:00 pm	<b>DIAGNOSTIC SLIDE SESSION</b> <i>Adams Ballroom</i>		

SUNDAY June 24, 2012	
	Adams Ballroom
8:00 am - 12:00 pm	<p style="text-align: center;"><b>PRESIDENTIAL SYMPOSIUM</b> <i>Current Topics in Multiple Sclerosis</i></p>

THURSDAY, June 21, 2012

**SPECIAL COURSE**

**Acquired Neuropathology in a Changing World**

*Director: Raymond A. Sobel, MD*

**Adams Ballroom**

8:00 am	Welcome and CME Pretest <i>Raymond A. Sobel, MD</i> <i>Stanford University School of Medicine, Stanford, CA</i>
8:15 am – 9:00 am	Emerging Epidemic Viral Encephalitides with a Special Focus on Henipaviruses <i>Kum Thong Wong, MBBS, MPath FRCPATH</i> <i>University at Malaya, Malaysia</i>
9:00 am – 9:45 am	Neuropathology in a Changing World: AIDS Neuropathology – 30 Year Perspective <i>Leroy Sharer, MD</i> <i>New Jersey Medical School, Newark, NJ</i>
9:45 am – 10:30 am	Progressive Multifocal Leukoencephalopathy in the Monoclonal Antibody Era <i>Joseph Berger, MD</i> <i>University of Kentucky Medical Center, Lexington, KY</i>
<i>10:30 am – 11:00 am</i>	<b>REFRESHMENT BREAK</b>
11:00 am – 11:45 am	Acquired Perinatal Brain Injury <i>Hannah Kinney, MD</i> <i>Children's Hospital, Boston, MA</i>
11:45 am – 12:30 pm	Neuropathological Effects of Perinatal Cocaine Exposure <i>Barry Kosofsky, MD, PhD</i> <i>Cornell University, New York, NY</i>
<i>12:30 pm - 1:30 pm</i>	<b>LUNCH</b>
1:30 pm – 2:15 pm	Immune Responses in Spinal Cord Injury <i>Phillip G. Popovich, PhD</i> <i>Ohio State University Medical Center, Columbus, OH</i>
2:15 pm – 3:00 pm	Experimental Traumatic Brain Injury <i>Kathryn Saatman, PhD</i> <i>University of Kentucky, Lexington, KY</i>
<i>3:00 pm - 3:30 pm</i>	<b>REFRESHMENT BREAK</b>
3:30 pm – 4:15 pm	Traumatic Brain Injury, Shell Shock, and Posttraumatic Stress Disorder in the Military – Past, Present, and Future <i>Daniel Perl, MD</i> <i>Uniformed Services Health Science Center, Bethesda, MD</i>
4:15 pm – 5:00 pm	Chronic Traumatic Encephalopathy <i>Ann McKee, MD</i> <i>Boston University School of Medicine, Bedford, MA</i>

**FRIDAY, JUNE 22, 2012**

**TRAINEE LUNCHEON: FORMULA FOR SUCCESS**

(Not Offered for CME Credit)

**11:45 pm – 2:00 pm - Price Room, Fifth Floor**

Introduction	Eileen Bigio, MD <i>Northwestern University Feinberg School of Medicine, Chicago, IL</i>
Academic Neuropathology	Matthew P. Frosch, MD, PhD <i>Massachusetts General Hospital, Boston, MA</i>
Academic NP to Big Pharma Employee to Consulting to Biotech	Meredith Halks-Miller, MD <i>Pathwork Diagnostics, Redwood City, CA</i>
Private Practice NP	Steve Dubner, MD <i>Midwest Pathology Associates, Leawood, KS</i>
SAMS and Re-certification	Daniel J. Brat, MD, PhD <i>Emory University School of Medicine, Atlanta, GA</i>
Job Fair	Michael Lawlor, MD, PhD <i>Medical College of Wisconsin, Milwaukee, WI</i>

**SATURDAY, JUNE 23, 2012**

**SPECIAL LECTURES**

(Not Offered for CME Credit)

**Adams Ballroom**

4:30 pm – 5:00 pm	History of Chicago Neuropathology  John M. Lee, MD, PhD <i>Loyola University, Maywood, IL</i>
5:00 pm – 5:15 pm	What Every Neuropathologist Needs to Know: NIA-AA Revised Guidelines for the Diagnosis of Alzheimer's Disease  Julie Schneider, MD <i>Rush University Medical Center</i>
5:15 pm – 5:30 pm	What Every Neuropathologist Needs to Know: IDH1 and its Practical Utility in Glioma Diagnosis  David N. Louis, MD <i>Massachusetts General Hospital</i>

SUNDAY, JUNE 24, 2012

**PRESIDENTIAL SYMPOSIUM**

**Current Topics in Multiple Sclerosis**

**Adams Ballroom**

8:00 am – 8:05 am	Introduction <i>Raymond A. Sobel, MD</i> <i>Stanford University School of Medicine, Stanford, CA</i>
8:05 am - 9:00 am	<b>Parisi Lecture</b> Neuronal Damage in Multiple Sclerosis <i>Bruce D. Trapp, PhD</i> <i>The Cleveland Clinic Foundation, Cleveland, OH</i>
9:00 – 9:45 am	Sphingosine-1-phosphate signaling in MS "Oriental Medicine to Immune Modulation" <i>May Htwe Han, MD, PhD</i> <i>Stanford University School of Medicine, Stanford, CA</i>
9:45 am – 10:30 am	AANP Award Presentations and Refreshment Break
10:30 am – 11:15 am	The Changing Epidemiology of MS <i>A. Dessa Sadovnick, PhD</i> <i>VCHA-UBC Hospital, Vancouver, BC</i>
11:15 am – 12:00 pm	How MS could be an Acquired Disease <i>Raymond A. Sobel, MD</i> <i>Stanford University School of Medicine, Stanford, CA</i>
12:00 pm	<b>INSTALLATION OF NEW OFFICERS AND ADJOURNMENT</b>

FRIDAY, JUNE 22, 2012  
 Adams Ballroom  
 8:00 am – 2:00 pm

**Platform 1: Tumors I**

**Chairpersons: David Louis, MD and Craig Horbinski, MD, PhD**

8:00- 8:15	1	<b>Gene Expression Profiling on Matched Neurofibroma / MPNST Pairs</b> Peter Pytel, Kammi Henriksen, Thomas Krausz, Thomas Stricker
8:15- 8:30	2	<b>Decreased 5hmC is Associated with Neural Progenitor Phenotype in Normal Brain and Shorter Survival in Malignant Glioma</b> Brent Orr, Sidney Kimmel, Charles Eberhart, Jessica Hicks, William Nelson, Srinivasan Yegnashubramanian
8:30- 8:45	3	<b>Patterns of PDGFRA Copy Number Gain in High-Grade Adult and Pediatric Astrocytomas</b> Derick Aranda, David Ellison, Alexander Judkins, Sidney Croul, Gelareh Zadeh, Sabine Mueller, Shengmei Zhou, Roxanne Marshall, Daphne Haas-Kogen, Joanna Phillips, Arie Perry
8:45- 9:00	4	<b>GBM with Oligodendroglial Differentiation has Better Clinical Outcome but Similar Biological Markers Compared with other GBMs</b> Safa Al-Sarraj, Ross Laxton, Lawrence Doey, Sergey Popov, Alexa Jury, Chris Jones, Lucy Brazil, Gill Sadler, Ronald Beaney, Ranj Bhangoo, Richard Gullan, Chris Chandler, Naomi Sibtain, Istvan Bodi, Andrew King, Keyoumars Ashkan
9:00- 9:15	5	<b>Histology Trumps Apparent 1p/19q Codeletion in Glioblastomas</b> Kenneth Clark, Marina Nikiforova, Ronald Hamilton, Craig Horbinski
9:15- 9:30	6	<b>Unique Subset of Adult and Pediatric Astrocytoma Exhibit Increased Expression of Microglia/Macrophage Genes</b> Jane Engler, Aaron Robinson, Ivan Smirnov, J. Graeme Hodgson, Nalin Gupta, C. James, Annette Molinaro, Joanna Phillips
9:30- 9:45	7	<b>Biology, Immunophenotype, and Molecular Genetics of Central Nervous System Lymphomas</b> Amanda Fisher-Hubbard, Catherine Dixon, Lili Zhao, Bryan Betz, Megan Lim, Sandra Camelo-Piragua
9:45- 10:00	8	<b>Primary Central Nervous System Lymphomas in Immunocompetent Patients- North Shore-Long Island Jewish Health System Experience</b> Jian Yi Li, Xinmin Zhang, Hua Qiang Chen, Peter Farmer, Mansoor Nasim, Alexis Demopoulos, Craig Devoe, Tulika Ranjan, Mark Eisenberg, Michael Schulder, Chengpeng Bi

**10:00 - 10:30 am REFRESHMENT BREAK**

**10:30 – 11:30 am Matthew T. Moore Lecture**  
 Pathogenesis of ALS  
 Robert H. Brown, Jr., MD  
 University of Massachusetts, Worcester, MA

**11:45 am – 12:45 pm Business Meeting I (Adams Ballroom)**

**12:45 – 2:00 pm Lunch**

**FRIDAY, JUNE 22, 2012**  
**Monroe Ballroom**  
**8:00 am – 2:00 pm**

**Platform 2: Neurodegenerative - Alzheimer Disease**  
**Chairpersons: Kathy Newell, MD and Tessa E. Hedley -Whyte, MD**

8:00- 8:15	9	<b>Review and Diagnostic Application of the NIA-AA Guidelines for Neuropathological Assessment of Alzheimer's Disease</b> Dushyant Purohit, Nirmala Batheja, Mona Lisa Thybulle, Maria Maroukian, Mary Sano
8:15- 8:30	10	<b>Alzheimer's disease associated Genes MS4A4A and MS4A6A are Expressed in Microglia and Downregulated by Classical activation</b> Julia Kofler, Stephanie Bissel, Mark Stauffer, Clayton Wiley, Geoffrey Murdoch
8:30- 8:45	11	<b>Impaired Mitochondrial Biogenesis Contributes to Mitochondrial Dysfunction in Alzheimer's Disease</b> Xiongwei Zhu, Baiyang Shen, Hyoung-gon Lee, Gemma Casadesus, George Perry, Xinglong Wang
8:45- 9:00	12	<b>Endothelin-1, Oxidative Stress and Vascular Dysfunction in Alzheimer's Disease</b> Seth Love and Jen Palmer
9:00- 9:15	13	<b>Ultrastructure of Ubiquitin-positive, TDP-43-negative Neuronal Inclusions in C9ORF72-linked FTD/AL</b> Wen-Lang Lin, Dennis Dickson, Kevin Bieniek, Mariely DeJesus-Hernandez, Nicola Rutherford, Matthew Baker, Neill Graff-Radford, Kevin Boylan, Rosa Rademakers
9:15- 9:30	14	<b>Early Visual System Synaptic Plasticity Defects in Alzheimer Disease Model Transgenic Mice</b> Christopher William, Mark Andermann, Glenn Goldey, Demetris Roumis, R Clay Reid, Carla Shatz, Mark Albers, Matthew Frosch, Bradley Hyman
9:30- 9:45	15	<b>Increased Expression of Synaptic Regulators Accompanies Preserved Cognitive Status in Early Alzheimer's Disease Pathology</b> Ivana Delalle, Patricia Kao, Meredith Banigan, Charles Vanderburg, Ann McKee, Peter Polgar, Sudha Seshadri
9:45- 10:00	16	<b>Hypertrophy of Hippocampal CA1 Neurons in Asymptomatic Alzheimer's Disease in the Oldest Old 90+ Study</b> Zhihong Guo, Maria Corrada, Gay Rudow, Alena Savonenko, Diego Iacono, Claudia Kawas, Juan Troncoso

**10:00 - 10:30 am REFRESHMENT BREAK**

**10:30 – 11:30 am Matthew T. Moore Lecture (Adams Ballroom)**  
 Pathogenesis of ALS  
*Robert H. Brown, Jr., MD*  
*University of Massachusetts, Worcester, MA*

**11:45 am – 12:45 pm Business Meeting I (Adams Ballroom)**

**12:45 – 2:00 pm Lunch**

FRIDAY, JUNE 22, 2012  
 Adams Ballroom  
 2:00 pm – 5:30 pm

**Platform 3: Demyelinating/Pediatric Neuropathology/Development**  
**Chairpersons: Marc Del Bigio, MD, PhD and Joseph Parisi, MD**

2:00- 2:15	17	<b>X-Linked Hydrocephalus Spectrum: Evidence for Related Clinical Entities with Unknown Molecular Bases. Review of 140 Cases</b> Homa Adle-Biassette, Catherine Fallet-Bianco, Anne-Lise Delezoide, INSERM U676; Nicole Drouot, Pascale Marcocelles, Pascale Saugier-veber, Annie Laquerriere
2:15- 2:30	18	<b>Differential Effects of a Polyalanine Tract Expansion in Arx on Neural Development and Gene Expression</b> Jeffrey Golden, MacLean Nasrallah, Ginam Cho, Jacqueline Simonet, Mary Putt, Kunio Kitamura
2:30- 2:45	19	<b>Retrospective Review of Autopsies on Persons with Known <i>in utero</i> Alcohol Exposure</b> Marc Del Bigio and Payam Pahlavan
2:45- 3:00	20	<b>Rosenthal Fibers in Neuromyelitis Optica</b> Yong Guo, James Goldman, Bogdan Popescu, Charles Howe, Joseph Parisi, Vanda Lennon, Claudia Lucchinetti
3:00- 3:15	21	<b>Aquaporin-4 Immunohistochemistry Aids Pathological Diagnosis of Neuromyelitis Optica Spectrum Disorder</b> Mark Jentoft, Yong Guo, Joseph Parisi, Bogdan Popescu, Vanda Lennon, Sean Pittock, Caterina Giannini, Lucchinetti Claudia
3:15-3:30	22	<b>Atrophy of Fornix is Associated with Hippocampal Demyelination in Multiple Sclerosis Patients</b> Susan Staugaitis, Elizabeth Fisher, Kathryn Easley, Ansi Chang, Robert Fox, Ranjan Dutta, Bruce Trapp
3:30- 3:45	23	<b>Apoptotic Profiles Correlate With GFAP Loss and Microglial Activation in Electrolyte-Induced-Demyelination</b> Amyn Rojiani, Kimberly Smith, Robert Kersting, Mumtaz Rojiani
3:45- 4:00	24	<b>pStat3 Immunoreactivity Surrounding Multiple Sclerosis Lesions</b> Jian-Qiang Lu, Fabrizio Giuliani, Gregg Blevins, Christopher Power, V. Wee Yong

**4:00 - 4:30 pm REFRESHMENT BREAK**

**4:30 – 5:30 pm DeArmond Lecture**  
 Novel MRI-based Platform for Efficient Gene Delivery to the Brain  
*Krystof Bankiewicz, MD, PhD*  
*University of California San Francisco, San Francisco, CA*

**6:30 – 8:30 pm Annual Reception**  
**Mezzanine Lobby**

**FRIDAY, JUNE 22, 2012**  
**Monroe Ballroom**  
**2:00 pm – 5:30 pm**

**Platform 4: Neurodegenerative: Other**

**Chairpersons: Mathew Frosch, MD, PhD and Bernardino Ghetti, MD**

2:00- 2:15	25	<b>Neocortical Amyloid-<math>\beta</math> and Tau Pathology in Patients with Cerebral Amyloid Angiopathy</b> Thomas Huebner, Justin Slavin, Rupal Mehta, Rudy Castellani
2:15- 2:30	26	<b>Amyloid Deposition in Human Wild-type Amyloid Precursor Protein YAC Transgenic Mice with the Psen1-L166P Knock-in Mutation</b> Ruben Vidal, Neeraja Sammeta, Holly Garringer, Kumar Sambamurti, Leticia Miravalle, Bruce Lamb, Bernardino Ghetti
2:30- 2:45	26	<b>Detection of <math>\beta</math>-Amyloid by Florbetaben PET: Histopathological Verification in a Global Phase 3 Clinical Trial</b> Walter Schulz-Schaeffer, Anja Hoffmann, Osama Sabri, John Seibyl, Hiroyasu Akatsu, Masaki Takao, Thomas Beach, Shigeo Murayama, Bernardino Ghetti, James Ironside, James Leverenz, Katrin Roth, Cornelia Reininger, Marwan Sabbagh
2:45- 3:00	28	<b>In Alzheimer's Disease, Braak Stages V and VI Differ Considerably from Each Other</b> Peter Nelson and Janna Neltner
3:00- 3:15	29	<b>Mutations in FTL Lead to Neurodegeneration by Causing a Gain-of-toxic Function and a Loss-of-normal Function of Ferritin</b> Ruben Vidal, Martin Baraibar, Ana Barbeito, Holly Garringer, Thomas Hurley, Barry Muhoberac, Bernardino Ghetti
3:15-3:30	30	<b>Preventing PrPC Synthesis in Mice with Adeno-Associated Viral Vectors AAV2, AAV6 and AAV9</b> Stephen DeArmond, Misol Ahn, Krystyna Bajsarowicz, Abby Oehler, Krystof Bankiewicz
3:30- 3:45	31	<b>New Observations in Gerstmann-Sträussler-Scheinker Disease Associated with the PRNP A117V Mutation</b> Masaki Takao, Salvatore Spina, Jill Murrell, Francine Epperson, Bradley Glazier, Martin Farlow, Frederick Unverzagt, Andrew Saykin, Karmen Yoder, Shannon Risacher, Vladimir Kepe, Jorge Barrio, Bernardino Ghetti
3:45- 4:00	32	<b>Spinocerebellar Ataxia 26: Neuropathological Findings and an Association with a Mutation in Eukaryotic Elongation Factor 2</b> H Brent Clark, Katherine Hekman, Guo-Yun Yu, Christopher Gomez

**4:00 - 4:30 pm                    REFRESHMENT BREAK**

**4:30 – 5:30 pm                    DeArmond Lecture (Adams Ballroom)**  
 Novel MRI-based Platform for Efficient Gene Delivery to the Brain  
*Krystof Bankiewicz, MD, PhD*  
*University of California San Francisco, San Francisco, CA*

**6:30 – 8:30 pm                    Annual Reception**  
**Mezzanine Lobby**

**Poster Session I:**

(Not Offered for CME Credit)

33	<b>Autopsy Findings in a Case of Langerhans Cell Histiocytosis-associated Neurodegeneration</b> Randall Woltjer, and Garth Warren
34	<b>Extensive Pontine and Extrapontine Myelinolysis in a Patient with X-linked Myopathy with Excessive Autophagy</b> Bojana Mitrovic, Amer Ghavanini, Berge Minassian, David Munoz
35	<b>Fatal Bactrim-Associated Hypersensitivity In A Patient With Auto-Immune Neuro-Vasculitis</b> Anne Lee, Alexander Diaz de Villalvilla, Nicole Alexander, Deena Kuruvilla, Mohammad Mahboob, Jeffrey Rogg, Molly Tracy, Shamlal Mangray, Suzanne DeLa Monte
36	<b>Graft Versus Host Disease of the Brain Following Allogeneic Stem Cell Transplant for Myelodysplastic Syndrome</b> Janet Yoo, Lindsay Simon, Zoe Wang, Lawrence Kenyon
37	<b>Lymphoplasmacytic Hypophysitis: An IgG4-related Disease?</b> Declan McGuone, Anat Stemmer-Rachamimov, John Stone, Vikram Deshpande
38	<b>MS with Abundant Spinal Cord and Cortical Demyelination, but Rare Cerebral White Matter Demyelination</b> Megan Hendrickson, Ansi Chang, Susan Staugaitis, Kathryn Easley, Lidia Sviderskaya, Robert Fox, Bruce Trapp
39	<b>Neuromyelitis Optica Spectrum Disorder (NMOSD) with Predominant Active Cerebral Involvement: A Case Report</b> Patrick Malafronte, Nicole DeSimone, Donna Graves, Charles White, Dennis Burns
40	<b>Necrotizing Myelopathy in a Young Subject. Neuromyelitis Optica Variant? Case Report</b> Miguel Riudavets, Naomi Arakaki, Correale Jorge, Fernanda Diaz, Gustavo Sevlever
41	<b>Association between Cortical Malformation and Medically Intractable Epilepsy in Children with Sturge-Weber Syndrome</b> Li Chen, Anna Pinto, Annapurna Poduri, Mustafa Sahin, Sanjav Prabhu, Masanori Takeoka, Hart Lidov
42	<b>Meningioangiomas: Review of Five Cases</b> Tracie Pham, Kristina Takahashi, Jason De Jesus, William Yong, Gary Mathern, Harry Vinters
43	<b>Neuropathologic Findings in the Fetal Alcohol Syndrome (FAS): A Rare Case Study of an Adult Brain</b> Catherine Stoos, Laura Nelsen, Amy Elliot, Kathryn Schissler, Hannah Kinney
44	<b>Neuropathologic Insights into the X-Linked Leukodystrophy Pelizaeus-Merzbacher Disease</b> Jeremy Laukka, Kathryn Lovell, Anders Sima, Skoff Robert, John Kamholz
45	<b>Neuropathology of 22q11 Deletion Syndrome (22q11DS) in an Infant</b> Kathryn McFadden, Peter Wu, Geoffrey Murdoch
46	<b>Orbitocranial Intravascular Papillary Endothelial Hyperplasia and Microphthalmia: A Case Report</b> Jose Bonnin, Chie-Schin Shih, Richard Burgett, Joel Boaz, Chang Yueh Ho
47	<b>Revisiting the Neuropathology of Late Infantile Neuronal Ceroid Lipofuscinosis in the Molecular Age</b> Leslie Hamilton, Aneal Khan, Ismail Mohamed, Jeffrey Joseph
48	<b>Searching for a Possible CSF Biomarker of Sudden and Unexpected Infant Death</b> Ingvar Rognum, Elisabeth Haas, Keith Hyland, David Paterson, Robin Haynes, Kevin Broadbelt, Brian Harty, Henry Krous, Hannah Kinney
49	<b>Sensory Ganglion Cells in the Third Nerve: An Anatomical Curiosity</b> Douglas Miller

FRIDAY, JUNE 22, 2012  
Exhibit Hall, Fourth Floor

**Poster Session I Continued:**  
(Not Offered for CME Credit)

50	<b>Peters' Anomaly with Multiple Congenital Malformations: Light and Electron Microscopic Study of a Case</b> Jason Wells, Cathy Housman, Joel Weinstein, David Liang, Charles Specht
51	<b>Cerebral Vascular Abnormalities in Signal Transducer and Activator of Transcription 3 (STAT3) Deficiency: A Neuropathological</b> Francoise Gray, Marie-Olivia Chandesris, Capucine Picard, Soraya Taleb, Kim-Thanh Ong, Arshid Azarine, Alain Fischer
52	<b>Eclampsia-Associated Double-Simultaneous Supra- and Infratentorial Fatal Hypertensive Intracerebral Hemorrhages</b> Mohammad Mahboob, Sonja Chen, Anne Lee, Daniel Aghion, Adetokunbo Oyelese, William Martland, Suzanne de la Monte
53	<b>Intraventricular Cavernous Angioma With Superficial Siderosis</b> James Hackney, Cheryl Palmer, James Markert, L. Nabors
54	<b>SUR1 Protein Expression in Human Stroke</b> Rupal Mehta, Svetlana Ivanova, Cigdem Tosun, Rudy Castellani, Volodymyr Gerzanich, J Simard
55	<b>Alzheimer Disease Associated with the I229F PSEN1 Mutation: PiB and Neuropathologic Studies</b> Bernardino Ghetti, Jill Murrell, Karmen Yoder, Shannon Risacher, Bradley Glazier, Martin Farlow, Frederick Unvezagt, Kathy Newell, Andrew Saykin
56	<b>Clinical and Neuropathologic Heterogeneity in PSEN1 A431E</b> Jill Murrell, Rupal Mehta, Eileen Bigio, Nigel Cairns, Elizabeth Cochran, Darren Gitelman, Elizabeth Head, James Leverenz, Wayne Poon, Masaki Takao, Sandra Weintraub, John Ringman, Bernardino Ghetti
57	<b>Early-Onset Alzheimer Disease with the G209E PSEN1 Mutation: A Neuropathologic Study</b> Jose Bonnin, Jill Murrell, Martin Farlow, Bradley Glazier, Tatiana Foroud, Bernardino Ghetti
58	<b>Eliminating Background Signal with ELISA Analysis of Murine Beta-Amyloid</b> Mitesh Patel, Ottavio Arancio, Andrew Teich
59	<b>Neuropathologic Assessment of ADNI Participants: the Essential Role of the Neuropathology Core</b> Nigel Cairns, Lisa Taylor-Reinwald, John Morris
60	<b>Neuropathological Expression of the PSEN1 I229F Mutation in 2 Family Members</b> Kathy Newell, Jill Murrell, Cynthia Gouvion, Francine Epperson, Bernardino Ghetti
61	<b>Neuropathology of Early-Onset Familial Alzheimer Disease Associated with PSEN1 Y115C Mutation</b> Andrea Wiens, Salvatore Spina, Jill Murrell, Martin Farlow, Ann Hake, Francine Epperson, Rose Richardson, Brenda Dupree, Jose Bonnin, Bernardino Ghetti
62	<b>oA<math>\beta</math> Induces mRNA Dysregulation in the 5XFAD Mouse Model of Alzheimer's Disease and Rat Frontal Cortex Organotypic Cultures</b> Celia Williams, Chiara Ferrari, Sarah Herrman, Anu Ramachandran, Amit Rajaram, Carol Miller
63	<b>Poly(ADP-ribose) Polymerase-1 Expression in Alzheimer's Disease</b> Jianying Zeng, Jenny Libien, Fatima Shaik, Olga Krasnozhen, A. Iván Hernández
64	<b>Reclassification of "Not Classifiable" Cases with AD Pathology According to NIA-AA Guidelines for ADNC</b> Kyung-Hwa Lee, Qinwen Mao, Rakhee Ganti, Eileen Bigio
65	<b>The Neuropathology of Alzheimer Disease in the Setting of Chronic Traumatic Encephalopathy</b> Thor Stein, Victor Alvarez, Ann McKee
66	<b>The Use of Digital Pathology and Image Analysis to Rapidly Quantitate Alzheimer's Disease Neuropathologic Changes</b> Janna Neltner, Stephanie Denison, Ela Patel, Sonya Anderson, Peter Nelson

**Poster Session I Continued:**  
(Not Offered for CME Credit)

67	<b>Characterization of Perivascular ABeta and Tau Immunoreactivity in Association with Cerebral Amyloid Angiopathy</b> Tracie Pham, Emad Farag, Spencer Tung, Kristina Takahashi, Eric Chu, Harry Vinters
68	<b>C9ORF72 Expansion in Hippocampal Sclerosis Reaffirms its Classification Within the Spectrum of Frontotemporal Dementias</b> Olga Pletnikova, Kelly Sloane, Bryan Traynor, Barbara Crain, Juan Troncoso, Peter Rabins, Chiadi Onyike
69	<b>Case Report: Novel Gly141X SOD1 Mutation in Familial Frontotemporal Dementia and Amyotrophic Lateral Sclerosis</b> Masataka Nakamura, Melissa Murray, Wen-Lang Lin, Monica Castanedes-Casey, Neill Graff-Radford, Kevin Boylan, Mariely DeJesus-Hernandez, Nicola Rutherford, Rosa Rademakers, Dennis Dickson
70	<b>Cytoprotective Chemical Screens in a Yeast Model for <math>\alpha</math>-synucleinopathies</b> Pavan Auluck and Susan Lindquist
71	<b>Disease-specific Neuronal inclusions in c9FTD/ALS with the Ubiquitin-binding Proteins Ubiquilin 2 and P62/Sequestosome-1</b> Kevin Bieniek, Melissa Murray, Wen-Lang Lin, Mariely DeJesus-Hernandez, Nicola Rutherford, Matthew Baker, Monica Castanedes-Casey, Neill Graff-Radford, Kevin Boylan, Rosa Rademakers, Dennis Dickson
72	<b>Frontotemporal Dementia And Motor Neuron Disease Associated With C9ORF72 Mutation: A New Family</b> Salvatore Spina, Martin Farlow, Frederick Unverzagt, Jill Murrell, Bernardino Ghetti
73	<b>Hereditary Diffuse Leukoencephalopathy With Spheroids: Clinicopathologic Study Of Three Cases</b> Salvatore Spina, Jill Murrell, Frederick Unverzagt, Martin Farlow, Bernardino Ghetti
74	<b>Retrograde Trafficking Defects Enhance <math>\alpha</math>-Synuclein Toxicity in a Yeast Model</b> Pavan Auluck and Susan Lindquist,
75	<b>A Rare Case of Secondary Gliosarcoma with Extracranial Metastases</b> Richa Dawar, Nikhil Khushalani, Andrew Fabiano, Jingxin Qiu
76	<b>Aggressive Histologic Features in Angiocentric Glioma: Clinical Correlation</b> Sakir Gultekin and Mark Hiken
77	<b>Assessment of RNA Extraction Methods for the Real-Time PCR Analysis of the BRAF:KIAA1549 Fusion Gene in Pilocytic Astrocytoma</b> Francesca Brett, Patrick Buckley, Joanne O'Sullivan
78	<b>BMP Signaling Reduces Proliferation and Upregulates p57 mRNA in Oncogenic Murine Neural Stem Progenitor Cells</b> Laura Hover, Philip Owens, Alex Munden, Ty Abel
79	<b>Differential Expression of Ketone Metabolizing Enzymes in Malignant Gliomas: Implication for Ketogenic Diet Therapy</b> Howard Chang, Lawrence Olson, Kenneth Schwartz
80	<b>Ganglion Cells in Low-Grade Circumscribed/Cystic Astrocytic Tumors: Possible Implication in Classification and Prognosis</b> L. Chimelli, VG Moreira, N Canedo
81	<b>Genetic and Pathologic Evolution of Secondary Gliosarcoma</b> Kari-Elise Codispoti, Stacy Mosier, Ming-Tseh Lin, Robert Ramsey, Fausto Rodriguez
82	<b>Metabotropic Glutamate Receptor Type 5 in Human Glioma</b> Hilary Nickols, Jerri Rook, Nellie Byun, P. Conn
83	<b>Multiply Recurrent Glioblastoma in a Young Woman with Lynch Syndrome: Complete Autopsy Examination with Clinical Correlation</b> Hidehiro Takei, Nitin Tandon, Clark Sitton, Jay-Jiguang Zhu, Meenakshi Bhattacharjee

FRIDAY, JUNE 22, 2012  
Exhibit Hall, Fourth Floor

**Poster Session I Continued:**  
(Not Offered for CME Credit)

84	<b>Mutated Isocitrate Dehydrogenase-1 (IDH-1) Immunoreactive Glioblastoma with IDH-1 Negative 'PNET- like' Elements</b> Marie Rivera-Zengotita, Kelly Devers, Anthony Yachnis
85	<b>Oligosarcoma: Further Evidence for Mesenchymal Metaplastic Change in Neoplastic Oligodendrocytes</b> Michal Raz, Deborah Blumenthal, Zvi Ram, Dov Soffer
86	<b>Oncocytic Ependymoma: A Case Report</b> Veena Rajaram, Corey Bregman, Wendy Stellpflug, Tomita Tadanori, Jason Fangusaro
87	<b>Pilot Study of Digital Image Analysis as a Way to Predict Likelihood of 1p/19q Codeletion in Diffuse Gliomas</b> Meggen Walsh, Fuyong Xing, Janna Neltner, Lin Yang, Craig Horbinski
88	<b>Pituicytoma With Gelsolin Amyloid Deposition</b> Cristiane Ida, Mark Jentoft, Xiaoling Yan, Joseph Parisi, Ahmet Dogan, Kalman Kovacs, Bernd Scheithauer
89	<b>TGF<math>\beta</math> Signaling in Glioma Microenvironment Inhibits Engraftment and Differentiation of Oncogenic Neural Stem/Progenitor Cells</b> Sabah Ghazi, Alex Munden, Laura Hover, Ty Abel
90	<b>TGF-<math>\beta</math> Signaling Promotes Astrocytic Differentiation in Normal and Oncogenic Neural Stem/Progenitor Cells</b> Sabah Ghazi, Alex Munden, Laura Hover, Ty Abel
91	<b>Recurrent Desmoplastic Non-infantile Ganglioglioma in Late Adulthood</b> Jo Elle Peterson, Andreana Rivera, Hidehiro Takei, Suzanne Powell
92	<b>Synchronous Dysembryoplastic Neuroepithelial Tumor and Extraventricular Neurocytoma in a 14-year-old with Epilepsy</b> Ian White, Sarah Martin, Jody Smith, Eyas Hattab
93	<b>Aggressive Cerebellar Neuroepithelial Tumor in a 10 Year Old Boy</b> Hannes Vogel, Michael Edwards, Paul Fisher, Sonia Partap, Yoon-Jae Cho
94	<b>Anaplastic Meningioma with Single Cell Infiltration and Loss of E-Cadherin Immunoreactivity</b> Brett Danielson, David Munoz, Jason Karamchandani
95	<b>Are NF2-Associated Meningiomas Morphologically or Immunohistochemically Distinguishable from Sporadic Ones?</b> Andrea Wiens and Eyas Hattab
96	<b>Arrest Defect 1 (ARD1) Protein Expression in Primary Central Nervous System Lymphomas (PCNSLs)</b> Jessica Levesque, Christine Sheehan, Jeffrey Ross, Jiang Qian
97	<b>Atypical Teratoid Rhabdoid Tumor of the Pineal Region in an Eleven-week Old Infant with a Germline INI1 Mutation</b> Leili Mirsadraei, Tom Davidson, Whitney Pope, Kristanapol Boon-Unge, Jason Hauptman, Jorge Lazareff, Harry Vinters, Negar Khanlou, William Yong

**SATURDAY, JUNE 23, 2012**  
**Adams Ballroom**  
**8:00 am – 2:00 pm**

**Platform 5: Muscle/Nerve/Other**

**Chairpersons: Juan Bilbao, MD and Michael Lawlor, MD, PhD**

8:00- 8:15	98	<b>Clinical Utility of LC3 and p62 Immunohistochemistry in Diagnosis of Drug-induced Autophagic Vacuolar Cardiomyopathy</b> Brianne Daniels, Rodney McComb, Bret Mobley, S. Gultekin, Han Lee, Marta Margeta
8:15- 8:30	99	<b>Satellite Cell Depletion and Dysfunction Correlates with Disease Progression in Severe Murine Myotubularin Deficiency</b> Michael Lawlor, Matthew Alexander, Marissa Viola, Hui Meng, Vandana Gupta, Norio Motohashi, Richard Manfready, Cynthia Hsu, Ping Huang, Romaine Joubert, Anna Buj-Bello, Louis Kunkel, Alan Beggs, Emanuela Gussoni
8:30- 8:45	100	<b>Evaluation of Calpain-3 In Patients with Limb-Girdle Muscular Dystrophy</b> Steven McGaughey, Terese Nelson, Mary Cox, Steven Moore
8:45- 9:00	101	<b>Diagnosis of Mitochondrial Disorders Using a Tissue-based Mitochondrial Immunofluorescence Assay - A Five Case Illustration</b> Adekunle Adesina, Vidya Mehta, Benjamin Ellezam, Dmitriy Niyazov, Tim Lotze, Lee-Jun Wong, Fernando Scaglia
9:00- 9:15	102	<b>Ultrastructural Pathology and Functional Deficits Can Be Reversed Following Enzyme-Replacement in Myotubularin Deficient Mice</b> Michael Lawlor, Dustin Armstrong, Marissa Viola, Hui Meng, Anna Buj-Bello, Cynthia Hsu, Christopher Pierson, Martin Childers, Robert Grange, Jeffrey Widrick, Alan Beggs
9:15- 9:30	103	<b>Novel Beta-Tropomyosin Mutation (TPM2) Causes Distal Core-Rod Myopathy And Trismus-Pseudocamptodactyly With Nematine Rods</b> Steven Moore, Brian Moore, Seth Love, Jun Li, Michael Lopez, Maja von der Hagen, Angela Huebner, Thomas Winder, Thomas Cullup, Hossam Abdel-Salam, Fazeel Siddiqui, Anirban Majumdar, Peter Lunt, James Dowling
9:30- 9:45	104	<b>Clinical Utility of LC3 and p62 Immunohistochemistry in Diagnosing the Spectrum of T-cell Mediated Inflammatory Myopathies</b> Annie Hiniker, Brianne Daniels, Han Lee, Marta Margeta
9:45- 10:00	105	<b>Cross-sectional Versus Flat-mount DSAEK Specimen Preparations: Quantitative Differences and Association with Visual Acuity</b> T. Bourne, David Shiple, Leslie Olsakovsky

**10:00 - 10:30 am      REFRESHMENT BREAK**

**10:30 – 11:30 am      Saul Korey Lecture**  
 Why the Brain Fails when the Astrocyte Ails  
*Michael Norenberg, MD*  
*University of Miami School of Medicine, Miami, FL*

**11:45 am – 12:45 pm      Business Meeting II (Adams Ballroom)**

**12:45 – 2:00 pm      Lunch**

**SATURDAY, JUNE 23, 2012**  
**Monroe Ballroom**  
**8:00 am – 2:00 pm**

**Platform 6: Pediatric Tumor/Developmental and Pediatric Neuropathology**  
**Chairpersons: Harry Vinters, MD and David Ellison, MD, PhD**

8:00- 8:15	106	<b>Cobblestone-Lissencephaly Encompasses 3 Subtypes Correlated to Genes of Alpha-dystroglycanopathies</b> Louise Devisme, Céline Bouchet, Marie Gonzalès, Sandrine Vuillaumier, Tania Attié-Bitach, Nathalie Seta, Ferechte Encha-Razavi
8:15- 8:30	107	<b>Low Density of Layer IV Neurons in Prefrontal Cortex in Autism</b> John Hedreen
8:30- 8:45	108	<b>Splice Site GFAP Mutation in Alexander Disease</b> Rong Li, Cheryl Palmer, Michael Brenner
8:45- 9:00	109	<b>Diffuse Leptomeningeal Glioneurinal Tumor, a Newly Recognized Pediatric Neoplasm</b> Veena Rajaram, Jessica Stern, Maura Ryan, Tord Alden, Stewart Goldman, Rishi Lulla
9:00- 9:15	110	<b>Disseminated Oligodendroglial-like Leptomeningeal Tumor of Childhood - A Distinctive Indolent Neoplasm</b> Fausto Rodriguez, Arie Perry, Marc Rosenblum, Sherry Krawitz, Charles Eberhart, Peter Burger
9:15- 9:30	111	<b>RAF Gene Abnormalities Define Subsets of Pediatric Low-grade Gliomas and Glioneuronal Tumors</b> David Ellison, Ruth Tatevossian, Ibrahim Qaddoumi, Bo Tang, James Dalton, Sheila Shurtleff, Chandanamali Punchihewa, Wilda Orisme, Geoffrey Neale, Amar Gajjar, Suzanne Baker, Denise Sheer
9:30- 9:45	112	<b>Identification of Biologically Relevant Targets in Pilocytic Astrocytoma by MicroRNA Profiling</b> Cheng-Ying Ho, Eli Bar, Caterina Giannini, Matthias Karajannis, David Zagzag, Charles Eberhart, Fausto Rodriguez
9:45- 10:00	113	<b>Deregulation of PI3K/AKT Pathway Is Frequent in Pilocytic Astrocytoma with Anaplastic Features</b> Adriana Olar, Diep Tran, Vidya Mehta, Benjamin Ellezam, Carrie Mohila, Gerald Campbell, Suzanne Powell, Gregory Fuller, Kenneth Aldape, Adekunle Adesina

**10:00 - 10:30 am REFRESHMENT BREAK**

**10:30 – 11:30 am Saul Korey Lecture**  
 Why the Brain Fails when the Astrocyte Ails  
*Michael Norenberg, MD*  
*University of Miami School of Medicine, Miami, FL*

**11:45 am – 12:45 pm Business Meeting II (Adams Ballroom)**

**12:45 – 2:00 pm Lunch**

**SATURDAY, JUNE 23, 2012**  
**Adams Ballroom**  
**2:00 pm – 5:30 pm**

**Platform 7: Tumors II**

**Chairpersons: Catherina Giannini, MD, PhD and Ryan Miller, MD, PhD**

2:00- 2:15	114	<b>Genomic Gains Acquired During Glioblastoma Progression Obscure Driver-Specific Signatures Present in Low-grade Astrocytomas</b> C. Miller, Mark Vitucci, Ryan Bash, Ralf Schmid
2:15- 2:30	115	<b>Chromatin Landscape Analysis to Identify the Core Transcriptional Regulatory Network of Glioblastoma Cancer Stem Cells</b> Mario Suvà, Esther Rheinbay, Andrew Chi, David Louis, Bradley Bernstein
2:30- 2:45	116	<b>Study of Genetic and Epigenetic Alterations in Paediatric Glioblastomas</b> Chitra Sarkar, Prerana Jha, Irene Pia Patrick, Kumaravel Somasundaram, Pankaj Pathak, Mehar Sharma, Vaishali Suri, Ashish Suri
2:45- 3:00	117	<b>IDH Mutation and Neuroglial Developmental Features Define Distinct Subclasses of Lower-Grade Diffuse Astrocytic Glioma</b> Daniel Gorovets, Kasthuri Kannan, Ronglai Shen, Edward Kastenhuber, Timothy Chan, Jason Huse
3:00- 3:15	118	<b>Patterns of Repressive Histone 3 Lysine 9 Trimethylation (H3K9me3) in Isocitrate Dehydrogenase Mutant and Wild Type Gliomas</b> Sriram Veneti, Michelle Madden, Thomas Coyne, Joanna Phillips, Jason Huse, Chao Lu, Tarik Tihan, Lisa Sullivan, Mariarita Santi, Alexander Judkins, Craig Thompson, Arie Perry
3:15-3:30	119	<b>Ki-67 on the Web: A Browser-Based Biomarker Web Application for Analysis of the Ki-67 Proliferation Index</b> James Hackney, Jonas Almeida, Sean Wilkerson, Benjamin Hill
3:30- 3:45	120	<b>Genetic Profiling of Orbital and Optic Nerve Meningiomas by Single-Nucleotide Polymorphism-Based Array Analysis</b> Cheng-Ying Ho, Stacy Mosier, Charles Eberhart, Denise Batista, Fausto Rodriguez
3:45- 4:00	121	<b>Hsa-miR-383 and its Target Peroxiredoxin 3 (PRDX3) Have Major Roles Controlling Cell Growth in Medulloblastoma</b> Ho Keung Ng

**4:00 - 4:30 pm            REFRESHMENT BREAK**

**4:30 – 5:00 pm        Special Lecture**  
 History of Chicago Neuropathology  
*John M. Lee, MD, PhD*  
*Loyola University, Maywood, IL*

**5:00 – 5:15 pm        What Every Neuropathologist Needs to Needs to Know**  
 NIA-AA Revised Guidelines for the Diagnosis of Alzheimer’s Disease  
*Julie Schneider, MD*  
*Rush University Medical Center, Chicago, IL*

**5:15 – 5:30 pm        What Every Neuropathologist Needs to Needs to Know**  
 IDH1 and its Practical Utility in Glioma Diagnosis  
*David N. Louis, MD*  
*Massachusetts General Hospital, Boston, MA*

**SATURDAY, JUNE 23, 2012**  
**Monroe Ballroom**  
**2:00 pm – 5:30 pm**

**Platform 8: Neurodegenerative: Other II**

**Chairpersons: Nigel Cairns, PhD and Eileen Bigio, MD**

2:00- 2:15	122	<b>Latent Trait Analysis Identifies Genetic Determinants of Glial Tau Pathology in Progressive Supranuclear Palsy</b> Dennis Dickson, Daniel Serie, Melissa Murray, Mariet Allen, Nilufer Ertekin-Taner, Julia Crook
2:15- 2:30	123	<b>Parkinson-Related LRRK2 Mutations Result in Impaired Mitochondrial Dynamics and Function via Direct Interaction with DLP1</b> George Perry, Michael Yan, Hisashi Fujioka, Jun Liu, Amy Wilson-Delfosse, Shu Chen, Gemma Casadesus, Xiongwei Zhu, Xinglong Wang
2:30- 2:45	124	<b>Amyloid Imaging with [11C] PiB PET in Gerstmann-Sträussler-Scheinker Disease</b> Shannon Risacher, Karmen Yoder, Andrew Saykin, Gary Hutchins, Qi-Huang Zheng, Jill Murrell, Bradley Glazier, Francine Epperson, Martin Farlow, Bernardino Ghetti
2:45- 3:00	125	<b>Poly(ADP-ribose) Accumulates in FTLT-DTP and a Cuprizone-treated GRN-/- Mouse</b> Mingqiang Xie, Hua Shen, Sheng-Kwei Song, Nigel Cairns
3:00- 3:15	126	<b>Genetic, Clinical, And Pathological Associations Of TDP43pathy With Cerebellar P62 Inclusions (TDP43 Plus)</b> David Munoz, Ekaterina Rogaeva, Lorne Zinman, Beverly Young, Mario Masellis, Sandra Black, Janice Robertson, Julia Keith, Juan Bilbao
3:15-3:30	127	<b>Analyses of the c9ORF72 Expanded Repeat in a Series of Autopsy Cases</b> Jill Murrell, Bernardino Ghetti, Martin Farlow, Francine Epperson, Edward Huey, Jordan Grafman, Gregory Jicha, Salvatore Spina
3:30- 3:45	128	<b>Feasibility Study of Needle Core Biopsy of the Submandibular Gland for the Diagnosis of Parkinson's Disease</b> Thomas Beach, Jose Hidalgo, Jonette Henry-Watson, Geidy Serrano, Monica Mariner, Lucia Sue, Marwan Sabbagh, Holly Shill, Charles Adler
3:45- 4:00	129	<b>FTDP-17 with MAPT Exon 13 mutations: Comparison of Neuropathologic Features of Gly389Arg to a Novel mutation, Glu372Gly</b> Naomi Kouri, Joseph Parisi, Ronald Petersen, Matthew Baker, Rosa Rademakers, Dennis Dickson

**4:00 - 4:30 pm REFRESHMENT BREAK**

**4:30 – 5:00 pm Special Lecture**  
 History of Chicago Neuropathology  
*John M. Lee, MD, PhD*  
*Loyola University, Maywood, IL*

**5:00 – 5:15 pm What Every Neuropathologist Needs to Needs to Know**  
 NIA-AA Revised Guidelines for the Diagnosis of Alzheimer's Disease  
*Julie Schneider, MD*  
*Rush University Medical Center, Chicago, IL*

**5:15 – 5:30 pm What Every Neuropathologist Needs to Needs to Know**  
 IDH1 and its Practical Utility in Glioma Diagnosis  
*David N. Louis, MD*  
*Massachusetts General Hospital, Boston, MA*

**Poster Session II:**

(Not Offered for CME Credit)

130	<b>Biopsy Pathology of HIV-2 Encephalitis: Case Report</b> Pedro Ciarlini, Brian Wood, Joshua Klein, Jennifer Lyons, Danny Milner, Richard Philips, Martin Schutten, Timothy Henrich, Jennifer Johnson, Dana Gabuzda, Umberto De Girolami, Rebecca Folkerth
131	<b>Cerebral Phaeohyphomycosis: A Report of Two Cases</b> Fahad Bafakih, Cara Sedney, P. Lasala, Kymberly Gyure
132	<b>Immunohistochemistry Using IDH1 Mutant-specific Antibody in Progressive Multifocal Leukoencephalopathy - Report of a Case</b> Kimberly Stogner-Underwood, Knarik Arkun, Christine Fuller
133	<b>Oncogenic Brain Metazoan Parasitic Infection</b> Douglas Miller, Angela Spurgeon, Gabor Oroszi, Qing-Qing Ding, Marshall Cress, Tomoko Tanaka
134	<b>Progressive Neuronal Pathology Associated with Latent Herpes Simplex Virus Infection in Mice</b> Tibor Valyi-Nagy, Sandor Dosa, Karla Castellanos, Sarolta Bacsa, Eva Gagy, Krisztian Kovacs, Bernadett Kormos, Klara Valyi-Nagy
135	<b>Rabies Encephalitis of Bat-Strain Type in a 63 Year Old Man: Failure of the Milwaukee Protocol</b> Declan McGuone, Eyal Kimchi, Anne Neilan, Gregory Robbins, Matthew Frosch, E. Tessa Hedley-Whyte
136	<b>Hypopituitarism and Diabetes Insipidus in a Patient with Wegener Granulomatosis</b> Pedro Ciarlini, Garni Barkhoudarian, Edward Laws, Li Chen, Umberto De Girolami
137	<b>Whipple's Disease Masquerades as Dementia with Lewy Bodies: A Case Report</b> Kyle Hurth, Robert Schmidt, Rawan Tarawneh, Nupur Ghoshal, Tammie Benzinger, David Clifford, Michael Geschwind, John Morris, James Galvin, Nigel Cairns
138	<b>A Rare Case Of Monocular Visual Loss Caused By An Isolated Neurosarcoidosis</b> Rocky Adams and Jeffrey Sosnowski
139	<b>ECRG4 and its Product Augurin in Human Choroid Plexus and Hypothalamus: Implications for CSF Homeostasis and Fluid Balance</b> Edward Stopa, Miles Miller, Ryan Rossi, Jasmine Chukwueke, Ibrahim Salloum, Sonia Podvin, John Donahue, Xitong Dang, Ana Gonzalez, Brian Eliceiri, Conrad Johanson, Andrew Baird
140	<b>Immunoglobulin Lambda Light Chain Deposition Disease Presenting as a Periventricular White Matter Lesion</b> Joshua Menke, Mark Jentoft, Ahmet Dogen, James Avent, Dylan Miller, Caterina Giannini
141	<b>Lyophilization of Brain Tumor Biospecimens Significantly Limits DNA and RNA Degradation from Freeze-thaw Cycles</b> Sergey Mareninov, Linda Liau, Desiree Sanchez, Ryan Wilson, Harry Vinters, Negar Khanlou, Tracie Pham, Paul Mischel, Timothy Cloughesy, William Yong
142	<b>Point by Point Histopathological Correlation of Subfield Hippocampus in Identical Planes From high Field 7T MRI</b> Kant Matsuda, William Wu, Ke Zhang, David Zagzag, Odet Gonen
143	<b>National Brain and Tissue Resource for Parkinson's Disease and Related Disorders</b> Thomas Beach, Charles Adler, Holly Shill, John Caviness, Marwan Sabbagh, Lucia Sue, Douglas Walker, LihFen Lue, Geidy Serrano, Alex Roher, Joseph Hentz, Brittany Dugger
144	<b>Danon disease in a Chinese Family with Atypical Presentation</b> Amanda Kan and Sophelia Chan
145	<b>Histopathological Abnormalities are Progressive in Myotonic Dystrophy Type 2</b> Sijie Wang, Kevin Felice, Qian Wu
146	<b>In-Frame Mutation in the WW-CR Dystrophin Domain: Case with DMD Phenotype and Relatively Preserved Dystrophin Expression</b> Divisha Raheja, Cathy Housman, Anthony Giordano, Matthew Wicklund, Charles Specht
147	<b>Myofibrillar Myopathy with Large Cores: A Case Report</b> Sarah Martin, Steven Moore, Cynthia Bodkin, Eyas Hattab

**SATURDAY, JUNE 23, 2012**  
**Exhibit Hall, Fourth Floor**

**Poster Session II Continued:**  
 (Not Offered for CME Credit)

148	<b>Novel Homozygous Stop Mutation in AlphaB Crystallin (CRYAB:p.Ser135*) Causes Fatal Congenital Form of Myofibrillar Myopathy</b> Steven Moore, Thomas Winder, Terese Nelson, Mary Cox, Christine Reyes, Caroline Tesi-Rocha, Taeun Chang
149	<b>Significance of Negative Sural Nerve Biopsy in Neurolymphomatosis</b> Kritsanapol Boon-Unge, Anthony Verity, Perry Shieh, Nader Pouratian, Negar Khanlou
150	<b>Trabecular Myopathy: Clinical-Pathologic Correlation and Ultrastructural Analysis in Five Cases</b> Tracie Pham, M. Verity, Jennifer Yi, Kritsanapol Boon-Unge, William Yong, Perry Shieh, Harry Vinters, Jason Peragallo, Joseph Demer, Negar Khanlou
151	<b>Tau Phosphorylation and Truncation at D421 Precedes Danish Amyloid Deposition in Mice Expressing Mutant BRI2 and TauP301S</b> Holly Garringer, Jill Murrell, Neeraja Sammeta, Leticia Miravalle, Bernardino Ghetti, Ruben Vidal
152	<b>A Case of Globular Glial Tauopathy Presenting Clinically as Alzheimer's Disease</b> Karen SantaCruz, Susan Rottunda, Joyce Meints, Eileen Bigio, J. McCarten
153	<b>Abundant Tau Accumulation in Gerstmann-Sträussler-Scheinker Disease Associated with the PRNP P102L-129M Mutation</b> Masaki Takao, Mariko Takada, Katsuhisa Ogata, Mikiya Suzuki, Yoji Yoshida, Ban Mihara, Shinji Ito, Akane Nogami, Sayaka Funabe, Hiroyuki Hatsuta, Mitsuru Kawai, Shigeo Murayama, Takayuki Haga, Tetsuyuki Kitamoto
154	<b>Brown-Vialetto-Van Laere Syndrome: A Case Report with Immunohistochemistry for C20orf54</b> Patrick Malafrente, Irene Castaneda-Sanchez, H Clark, Charles White, Kimmo Hatanpaa
155	<b>Disruption of the Cerebellar Module Causes the Main Clinical Phenotype in Hereditary Ataxia</b> Arnulf Koeppen, Sarah Collins, R Ramirez, Peter Bauer
156	<b>Immunohistochemical Study and Western blotting of Tauopathy in ALS/ Parkinson Dementia Complex(PDC), Kii, Japan</b> Satoru Morimoto, Yasumasa Kokubo, Masato Hasegawa, Shigeki Kuzuhara, Shigeo Murayama
157	<b>Juvenile-onset Tauopathy with Parkinsonism and Chronic Pancreatitis in Two Brothers: A Clinical, Genetic, and Autopsy Study</b> Leonidas Arvanitis, Elizabeth Berry-Kravis, Christopher Goetz, Jamie Jacobsohn, Christian Kubisch, Elizabeth Cochran
158	<b>Neuronal TDP-43-Positive Inclusions in the Spinal Cord Distinguish ALS from FTLD-TDP</b> Marla Gearing, Deborah Cooper, Jonathan Glass
159	<b>Neuropathologic Findings in Myotonic Dystrophy Type 2</b> Marie Rivera-Zengotita, Guang-bin Xia, Kelly Devers, Burt Martha, Tetsuo Ashizawa, Anthony Yachnis
160	<b>Neuropathology of Rapidly Progressing Parkinsonism and Dystonia in a P102L PRNP Mutation Carrier</b> Bernardino Ghetti, Chizoba Umeh, Piyush Kalakoti, Michael Greenburg, Pierluigi Gambetti, Zoltan Mari
161	<b>Niemann-Pick Disease Type C Associated with 2 Mutations in the NPC1 Gene</b> Kathy Newell, Russell Swerdlow, Bernardino Ghetti
162	<b>Pick disease with Severe Involvement of the Brainstem and Glia</b> Jose Bonnin, Andrea Wiens, Jill Murrell, Martin Farlow, Bernardino Ghetti, Frederick Unverzagt
163	<b>Prion Disease in Virginia: A Demographic and Phenotypic Analysis of Cases from 2003 to 2012</b> Heather Sumner, Ignazio Cali, Janis Blevins, M. Beatriz Lopes
164	<b>Prion Protein Deposition in the Outer Plexiform Layer of the Retina in Gerstmann-Sträussler-Scheinker Disease</b> Andrea Wiens, Martin Farlow, Jill Murrell, Francine Epperson, Rose Richardson, Pedro Piccardo, Jose Bonnin, Bernardino Ghetti

**SATURDAY, JUNE 23, 2012**  
**Exhibit Hall, Fourth Floor**

**Poster Session II Continued:**  
 (Not Offered for CME Credit)

165	<b>Progressive Supranuclear Palsy-like Tauopathy in Gerstmann-Straussler-Scheinker Syndrome: Report of a Case</b> Thomas Huebner, Marian Lamonte, Rupal Mehta, Rudy Castellani
166	<b>Rapid Onset Dystonia-Parkinsonism Associated with the I758S ATP1A3 Mutation: A Neuropathologic Study of Two Affected Siblings</b> Bernardino Ghetti, Allison Brashear, Matthew Hagen, Kathleen Sweadner
167	<b>Bilateral Cranial Nerve VII-VIII Malignant Peripheral Nerve Sheath Tumors Mimicking Neurofibromatosis Type 2</b> Kathy Newell and Ania Pollack
168	<b>Case Report: Solitary Intracranial Plasmacytoma Comprised of Atypical Plasma Cells: A Diagnostic Challenge on Frozen Sections</b> Yunguang Liu and Jingxin Qiu,
169	<b>Central Nervous System Desmoplastic Small Round Cell Tumor. Case Report</b> Miguel Riudavets, Naomi Arakaki, Elisabeth Rushing, Ana Lia Taratuto, Gustavo Sevlever
170	<b>Choristoma of the Trochlear Nerve in a 5-Month-Old Child: Clinical Features and Light Microscopic Study of a Case</b> Meghan Riley, Karmaine Millington, Mark Dias, Arabinda Choudhary, Charles Specht
171	<b>EBV-associated Lymphoproliferative Disorder in a Dermatomyositis Patient with Clinicoradiological Follow-up at 15 months</b> Matthew Cykowski, Kar-Ming Fung, Eduardo De Sousa, David Parham, Lichao Zhao, Ethan Stolzenberg
172	<b>FOXP1 Modulation Suggests Possible Role in Deregulation of Neuronal Differentiation and Poor Survival in Medulloblastoma Model</b> Adekunle Adesina, Girarrd Courteau, Vidya Mehta, Xiao-Nan Li
173	<b>Further Evidence of the Non Germinal Center Phenotype and Likely Origin of Primary Central Nervous System Lymphoma</b> Alicia Hirzel, Cristina Vincentelli, Diana Morlote, Amilcar Castellanos-Sanchez
174	<b>Germinoma with Anaplastic Features and Atypical Presentation as a Large Cerebral Hemispheric Mass</b> Jennifer Ross and Adekunle Adesina
175	<b>Giant Cells Tumor Presenting as a Sellar Mass Mimicking a Pituitary Macroadenoma</b> Monica Gadelha, Leonardo Vieira Neto, Juliana Malheiros Giorgetta, Paulo Jose da Mata Pereira, Paulo Niemeyer Filho, Leila Chimelli
176	<b>Histiocytic Meningioma: Case Report and Literature Review</b> Liqiong Liu, Joan Hoffpauir, Jonathan Stone, Zhenggang Xiong
177	<b>Immunohistochemical Diagnosis of Silent Subtype III Pituitary Adenoma</b> Derek Mathis, Aaron Tauer, Charles White, Kimmo Hatanpaa
178	<b>Incidental Dural-based Marginal Zone B-cell Lymphoma in a Fibrous Meningioma</b> Sarah Martin, Hasan Khalidi, Eyas Hattab
179	<b>Light Microscopic and Ultrastructural Findings in a Case of Intraventricular Schwannoma</b> Jason Wells, Omar Zalatimo, Cathy Housman, Mark Iantosca, Charles Specht
180	<b>Loss of Expression of Dendritic Cell-Specific Transcript (DC-SCRIPT) in Brain Metastatic Melanomas</b> Jessica Levesque, Li Li, Christine Sheehan, Jeffrey Ross, Jiang Qian
181	<b>Low Grade Malignant Peripheral Nerve Sheath Tumor in Cervical Spine with Mature Skeletal Muscle Differentiation</b> Ming Zhang, Michael Weaver, Jasvir Khurana, Abir Mukherjee
182	<b>Malignant Rhabdoid Tumors Express the Germ Cell Specific Markers VASA and Nanos</b> Sriram Venneti, Paul Le, Daniel Martinez, Bruce Pawel, Alexander Judkins

**Poster Session II Continued:**  
(Not Offered for CME Credit)

183	<b>Multinodular and Vacuolating Neuronal Neoplasm: A Gangliocytoma Variant?</b> Jason Huse, Mark Edgar, Irina Mikolaenko, Marc Rosenblum
184	<b>Mutation-Specific IDH-1 Antibody Is Consistently Negative In Dysembryoplastic Neuroepithelial Tumors</b> Knarik Arkun and Christine Fuller
185	<b>Neurocytoma and Intraventricular Haemorrhage</b> Francesca Brett
186	<b>Neuroendocrine Carcinoma of the Pineal Parenchyma: The First Reported Case</b> Qinwen Mao, Kyung-Hwa Lee, James Chandler, Eileen Bigio
187	<b>Paraganglioma Arising in a Mature Teratoma of the Ovary</b> Leili Mirsadraei, Yuki Takasumi, Nora Ostrzega, Tracie Pham, Jian Yu Rao, William Yong
188	<b>Pediatric Malignant Mixed Glial / Primitive Neuroectodermal Tumor. The Importance of Molecular Analysis</b> Christine Fuller, Kimberly Stogner-Underwood, Asadullah Khan, R. Graham, Knarik Arkun
189	<b>Perineural Spread of Squamous Cell Carcinoma to the Brainstem: A Complex Clinical Presentation and Delayed Diagnosis</b> Sarah Martin, Aaron Kamer, Todd Vogel, Troy Payner, Jose Bonnin
190	<b>Plasmablastic Lymphoma with MYC Rearrangement Involving the CNS: A Case Report</b> Adriana Doldan, Carlos Acevedo, Xianyuan Song, Peter Shen
191	<b>Primary Histiocytic Sarcoma of the Brain: A Case Report and Review of the Literature</b> Tammy Tyree, Peter Nakaji, Stephen Coons
192	<b>Solid CNS Metastases in the Pediatric Population: 30-year Experience at a Large Regional Children's Hospital</b> Andrea Wiens and Eyas Hattab
193	<b>Strong Desmin Expression in a Congenital Desmoplastic Infantile Astrocytoma Mimicking Pleomorphic Rhabdomyosarcoma</b> Sarah Alghamdi, Amilcar Castellano-Sanchez, Carole Brathwaite, Taiyo Shimizu, Ziad Khatib, Sanjiv Bhatia
194	<b>Tumoral Bing-Neel Syndrome Presenting as a Cerebellar Mass</b> Jingxin Qiu, Robert Fenstermaker, Andrew Fabiano

American Association of  
Neuropathologists

Endowed Lectureships  
Meritorious Awards  
Presidential Symposium

## The Parisi Lecture

The *Parisi Lecture* was established with a generous endowment from Teva Pharmaceuticals in 2007. Teva Neuroscience, a subsidiary of Teva Pharmaceuticals, is devoted to the study and development of products and services that address the health management needs of people in the field of neurology. One of the focal points of their efforts is multiple sclerosis.

The lecture was named the Parisi Lectureship in honor of one of the American Association of Neuropathologists' exceptional members, Dr. Joseph E. Parisi. He has published seminal neuropathological studies on a wide range of diseases affecting the nervous system, with particular focus on neurodegenerative diseases and multiple sclerosis. He has held virtually every office of the Society, including President, and has served on several AANP committees. In 2006, his dedication and generosity were recognized with the Award for Meritorious Contributions to Neuropathology. He is considered by many the heart and soul of the association and a man worth emulating.

We are pleased to have Bruce D. Trapp, PhD join our list of distinguished speakers.

2008	Claudia Lucchinetti	The Spectrum of CNS Inflammatory Demyelinating Diseases: <i>From Pathology to Pathogenesis</i>
2009	Hans Lassmann	Inflammation Induced Mitochondrial Injury: A Major Mechanism of Neurodegeneration
2010	Joseph Dalmau	Autoimmune Synaptic Encephalitis
2011	Steven S. Scherer	Molecular Pathologies at the Nodes of Ranvier
2012	Bruce D. Trapp	Neuronal Damage in Multiple Sclerosis

### 2012 PARISI LECTURE

#### Neuronal Damage in Multiple Sclerosis

*Bruce D. Trapp, PhD*



**Dr. Bruce D. Trapp** is Chairman of the Department of Neurosciences at the Lerner Research Institute, Cleveland Clinic and Professor of Neurosciences at Case Western Reserve University.

Dr. Trapp received his Ph.D. from Loyola University Stritch School of Medicine in Chicago, IL. He received postdoctoral training at the National Institutes of Health (NIH), Bethesda, MD and then was appointed Assistant and subsequently Associate Professor of Neurology at the Johns Hopkins University School of Medicine in Baltimore. He joined the Cleveland Clinic as Chairman of the Department of Neurosciences in 1994.

He is the recipient of the Jordi Folch-Pi Award from the American Society of Neurochemistry, The Weil Award from the American Association of Neuropathologists, the Harry Weaver Neuroscience Scholar Award from the National Multiple Sclerosis Society (NMSS), the Jacob Javits Award in Neuroscience from the National Institute of Neurological Disorders and Stroke, the John Dystel Prize for MS Research from the American Academy of Neurology and the National Multiple Sclerosis Society, the Stephen C. Reingold award from the NMSS, the Scientific Achievement Award in Basic Science and the Award for Excellence in Science from the Cleveland Clinic and Dr Trapp is a Fellow of the AAAS.

Dr. Trapp's research investigates the cause of neurological disability in multiple sclerosis patients, cellular mechanism of brain repair in neurodegenerative diseases, and the molecular biology of myelination in the

central and peripheral nervous systems. He is internationally known for his work on mechanisms of neurodegeneration and repair in multiple sclerosis and has published over 200 peer-reviewed articles and over 35 book chapters

## **Abstract**

Multiple Sclerosis (MS), an inflammatory-mediated demyelinating disease of the central nervous system (CNS), affects more than 2.5 million people worldwide. Although traditionally considered a white matter disease, grey matter demyelination and associated neuronal pathology play significant roles in the pathogenesis of permanent neurological disability in MS patients and may cause the cognitive dysfunction found in over 50% of MS patients. Brain imaging studies have correlated white matter lesion load and brain atrophy with cognitive dysfunction in MS patients. A subgroup of cognitively impaired MS patients, however, have low white matter lesion load and minimal physical disability, raising the possibility that hippocampal demyelination may cause memory dysfunction in MS patients. Recent imaging studies have correlated altered hippocampal magnetic resonance imaging (MRI) measures and increased hippocampal atrophy with memory dysfunction in MS patients. Demyelination has been detected in 53% to 79% of postmortem MS hippocampi. This presentation will summarize cellular and molecular changes in demyelinated hippocampi from postmortem MS brains. Compared to hippocampi from control brains or myelinated hippocampi from MS brains, demyelinated hippocampi had minimal neuronal loss but significant decreases in synaptic density. Hippocampal demyelination negatively impacts the expression of neuronal molecules involved in axonal transport, synaptic integrity, glutamate homeostasis, synaptic plasticity and memory/learning. The molecular changes observed in demyelinated hippocampi were not detected in demyelinated MS motor cortex or in hippocampi from Alzheimer's disease (AD) brains. These data support the concept that myelin is essential for normal hippocampal function and that the neuronal genes regulated by myelination reflect the specialized functions of different neuronal subpopulations.

## **Learning Objectives**

- Explain the role of grey matter demyelination in the pathogenesis of MS.
- Describe how myelination helps regulate neuronal gene expression and synaptic connectivity.
- Review the pathogenesis of cognitive dysfunction in individuals with MS.

## The DeArmond Lecture

The DeArmond lecture was established in recognition of Stephen J. DeArmond's excellent leadership and organization of the scientific program for the 2006 International Congress of Neuropathology. This successful meeting garnered significant support intended for the future advancement of the mission of the American Association of Neuropathologists. To continue these intended goals and recognize Dr. DeArmond's contributions, the American Association of Neuropathologists has honored him by establishing the *DeArmond Lecture*. Dr. DeArmond is a leading authority on prion disease, where his work has been fundamental in demonstrating mechanisms of transmission and routes to therapeutics. The DeArmond Lecture focuses on honoring those making major advances in the field of neurodegeneration and aging with a particular emphasis on translating these findings to patient care.

We are pleased to have Krystof Bankiewicz, MD, PhD join our list of distinguished speakers.

2008	Virginia M. -Y. Lee	TDP-43, A New Class of Proteinopathies in Neurodegenerative Diseases
2009	Rudy Tanzi	Decoding Alzheimer's Disease Gene by Gene
2010	Todd Golde	Alzheimer's Disease: Models and Therapeutics
2011	Beverly L. Davidson	Emerging Therapies for Neurogenetic Diseases
2012	Krystof Bankiewicz	New Therapies for Parkinson Disease

### 2012 DEARMOND LECTURE

#### Novel MRI-based Platform for Efficient Gene Delivery to the Brain

*Krystof Bankiewicz, MD, PhD*



**Dr. Krystof Bankiewicz** holds position of the Kinetics Foundation Endowed Chair in Translational Research, Professor in Residence in Neurosurgery and Neurology at University of California San Francisco. Dr. Bankiewicz is also Vice Chair for Research in the Department of Neurosurgery and Director of Translational NeuroTherapy Center at UCSF. Dr. Bankiewicz is an inventor of numerous patents, and has published more than 160 peer-reviewed research articles. Dr. Bankiewicz has considerable experience in supervising multi-investigator translational programs. He is a Principal Investigator on several multi-center, multi-investigator grants. He has supervised a total of 30 post-doctoral fellows, and manages a core research group of 20 individuals including technicians, post-doctoral fellows, and a senior scientists.

Dr. Bankiewicz received his MD degree from Jagiellonian University in Crakow and his PhD and DSc degrees from the Institute of Neurology and Psychiatry in Warsaw, Poland. After his residency and an appointment as Assistant Professor with the Post-graduate Medical Center in Warsaw, he received a Fogarty Fellowship and became a Visiting Fellow and then Visiting Associate Scientist with the Surgical Neurology Branch of the NINDS at the NIH in Bethesda, Maryland. There, he became Chief of the Central Nervous System (CNS) Implantation Unit in 1991. Shortly afterward, he came to California to serve successively as Chief of Preclinical Studies with the Somatix Therapy Corporation in Alameda, the Director of the Division of CNS Implantation and Regeneration with The Parkinson's Institute in Sunnyvale, and from 1994-1998 a Visiting Scientist with the Laboratory for Functional Imaging of the Lawrence Berkeley National Laboratory. From 1997-2001 he returned to the NIH as Acting Chief of the Molecular Therapeutics Section of NINDS. Since 1998 he has been a Professor in Residence of Neurosurgery and Neurology, Principal Investigator with the Movement Disorders Research Program and the Brain Tumor Research Center at the University of California San Francisco.

Throughout his career, Dr. Bankiewicz has maintained a strong focus on the development of translational approaches to gene and cell replacement therapies, and has displayed a remarkable ability to synthesize several individual technologies into powerful new approaches to the treatment of such serious diseases as brain cancer and neurodegenerative disorders of the brain, including Parkinson's, Huntington's, Alzheimer's diseases and pediatric neurotransmitter deficiency and lysosomal storage disorders. Dr. Bankiewicz was instrumental at every

stage of the Phase-1 clinical trials for AAV2-hAADC and AAV2-hGDNF gene therapy, resolving technical and scientific issues with respect to filing an IND applications with the FDA, and also in recruiting a clinical team to undertake the clinical trials. He continues to champion the development of novel therapeutic strategies to treat these important diseases. The recently established Translational NeuroTherapy Center at UCSF, of which he is the first Director, is a logical extension of Dr. Bankiewicz's efforts to close the gap between bench and bed side by engaging academia, industry, NIH and non-for profit organizations in a joint effort in the clinical development of novel therapeutics for brain disorders.

### **Abstract:**

Gene transfer technology can correct genetic mutations in the brain. Neuro gene delivery via direct intrapranchymal injections of adeno-associated viral (AAV) vectors is a locally administered treatment that requires accurate delivery to maximize safety and efficacy. The large volume and convoluted architecture of the human brain is a considerable barrier to translating small animal findings into efficacious clinical procedures. Too little target coverage and the treatment risks being ineffective. Conversely, excessive distribution or off-target gene delivery increases the possibility for unexpected adverse effects. Optimal viral vector delivery into the brain is challenging and brain distribution of viral vectors is uncertain. To address this issue we developed viral vector delivery system that permits direct MRI monitoring of vector distribution within the brain in real-time. This significant advance allows for the first time to adjust parameters of vector infusion while delivering gene therapy, giving surgeon full control over gene transfer technology.

To allow for precise intracerebral delivery of biologics for therapy of neurological disease we also developed a skull-mounted aiming device (SmartFrame) and integrated software platform (ClearPoint) for interventional MRI guided placement of deep brain stimulators. In anticipation of upcoming gene therapy clinical trials in brain disorders we adapted this device for real-time convection enhanced delivery (RCD) of therapeutics via a custom designed infusion cannula. Based on real-time MRI data, this system allows selection of brain targets, provides instructions for cannula insertion along a chosen trajectory, and permits visual monitoring of infusions.

Subsequent to our discovery that AAV2 vectors undergo anterograde transport along thalamocortical projections resulting in transduction of cortical neurons, we analyzed properties of several AAV serotypes and evaluated their potential for correcting genetic deficit in the brain via axonal transport. Combination of RCD and axonal transport may allow for predictable gene transfer over large cortical and sub-cortical regions of a human brain.

Our advanced gene delivery system is currently tested for delivery of therapeutic genes in Parkinson's (PD), Huntington's (HD) and Nieman-Pick, AADC deficiency in children and brain tumors. Data will be provided to demonstrate promises and challenges in successful clinical translation of gene transfer technology for CNS disorders.

### **Learning Objectives:**

- Describe technological innovations that permit monitoring of drug delivery to the brain in real time
- Describe axonal transport pathways of viral vectors that will facilitate gene therapy of brain diseases

## The Saul R. Korey Lectureship—a Brief History

The *Korey Lectureship* was established by Dr. Robert D. Terry in honor of Dr. Saul R. Korey, the founder and first Chair of the Department of Neurology at Albert Einstein College of Medicine. Dr. Korey’s vision of an interdisciplinary approach to the study of neurological diseases by basic and clinical scientists has inspired generations of colleagues and trainees. Dr. Terry, a close collaborator and colleague of Dr. Korey, was the first recipient of the prestigious *Potamkin Prize for Pick’s and Alzheimer’s Disease* in 1988, in recognition of his seminal observations of the pathological changes in Alzheimer disease. Dr. Terry generously contributed a portion of the prize funds to endow the *Korey Lectureship*, to be administered by the American Association of Neuropathologists, with the lecturer to be chosen annually by the president.

Dr. Terry has summarized the qualities of the Korey lecturer as someone who has “... been an active member of the Association...a working MD or MD/PhD neuropathologist...responsible for diagnostic work as well as teaching and research. The lecture should be aimed at the members of the Association, and the lecturer might well serve as a role model for younger members.”

We are pleased to have Michael Norenberg, MD, join our list of distinguished speakers.

<u>Year</u>	<u>Lecturer</u>	<u>Title</u>	<u>Year</u>	<u>Lecturer</u>	<u>Title</u>
1989	Nicholas K. Gonatas	MG-60, a Novel Sialoglycoprotein of Medial Cisternae of the Neuronal Golgi Apparatus: Implications and Applications	1998	Sandra H. Bigner	Molecular Genetics of Medulloblastoma
			1999	William F. Hickey	Key Participants in the Initiation of Inflammation in the Central Nervous System
1990	Henry M. Wisniewski	Amyloidosis in Alzheimer’s Disease and the Spongiform Encephalopathies	2000	Mary E. Case	Neuropathology and Forensic Pathology: A Natural Synergism
1991	Robert D. Terry	Alzheimer’s Disease as Seen by a Lucky Morphologist	2001	Paul H. Kleihues	Molecular Biology of Brain Tumors
1992	Henry deF Webster	Formation and Regeneration of Myelin	2002	James E. Goldman	Astrocytes, Intermediate Filaments, Cellular Stress and Neuropathology
1993	Kunihiko Suzuki	Molecular Genetics of Tay-Sachs and Related Disorders: The Legacy of Saul Korey	2003	Samuel K. Ludwin	Pathology and Pathogenesis in Multiple Sclerosis
1994	<i>No Lecture</i>	<i>XIIIth International Congress (Toronto)</i>	2004	James M. Powers	The Road Not Taken
1995	Blas Frangione	Amyloid Genes and Chaperones in Alzheimer Disease	2005	Bernardino Ghetti	Deciphering Hereditary Presenile Dementias: Neuropathology at the Crossroads of Neuropsychiatry and Molecular Genetics
1996	Floyd Gilles	The 3R’s of Neuro-oncology – Recording, Reliability and Reporting	2006	Donna M. Ferriero	Molecular Mechanisms of Hypoxic-Ischemic Injury in the Developing Nervous System
1997	Donald L. Price	The Role of Neuropathologists in the Analyses of Models of Neurodegenerative Disease			

<u>Year</u>	<u>Lecturer</u>	<u>Title</u>	<u>Year</u>	<u>Lecturer</u>	<u>Title</u>
2007	Dennis W. Dickson	Neuropathology and Genetics of Parkinsonism	2010	Peter C. Burger	A Long-Term Perspective on Pediatric CNS Tumors
2008	David N. Louis	Brain Tumor Classification: Little Steps and Big Jumps	2011	Hans H. Goebel	Protein Aggregate Myopathies
2009	Stephen J. DeArmond	Mechanisms of Neurodegeneration in Prion Disease Originating from the Neuronal Plasma Membrane	2012	Michael Norenberg	Astrocyte Pathobiology

## **2012 SAUL R. KOREY LECTURE**

### **Why the Brain Fails when the Astrocyte Ails**

*Michael D. Norenberg, MD*



**Michael D. Norenberg** obtained his undergraduate degree from Trinity College and his medical degree from the University of Rochester. He served in the military as a general medical officer (US Air Force) before completing his Anatomic Pathology training and Neuropathology Fellowship (under Lowell W. Lapham) at the University of Rochester. He then joined the medical faculty at the University of Colorado and subsequently took an academic position at the University of Miami where he currently serves as Director of Neuropathology. He holds appointments in the Departments of Pathology and Biochemistry and Molecular Biology. Throughout his academic career Dr. Norenberg has been associated with the Veterans Administration where he has carried out his research activities. His research work has focused on the normal function of astrocytes and their role in CNS disorders, particularly in hepatic encephalopathy. He has also investigated factors involved in the pathogenesis of central pontine myelinolysis, and in mechanisms involved in the brain edema/astrocyte swelling following neurotrauma. In 2010 Dr. Norenberg received the William S. Middleton Award from the

Department of Veterans Affairs, the highest honor presented by the VA Research and Development Office in recognition of outstanding scientific contribution and achievement in the areas of biomedical and bio-behavioral research related to the health care of veterans. In 2012 he was inducted into the prestigious Association of American Physicians.

### **Abstract**

Astrocytes are the most common cell constituents in the CNS, making up approximately 50% of the volume of human brain. They traditionally have been known as supportive cells that respond to destructive injuries (reactive gliosis) and form most of the primary neoplasms of the CNS. Among their well accepted functions include the regulation of extracellular levels of  $K^+$ , pH, glutamate, water transport, involvement in the glutamate-glutamine cycle, maintenance of the blood-brain barrier, regulation of cerebral blood flow, production of growth/trophic factors, energy metabolism, and antioxidant properties, among others. As astrocytes are electrically “silent” or “inactive”, the notion that they may play a key role in neurotransmission had never been seriously considered. It was not until the 1990's when investigators began to explore the possibility that astrocytes could indeed be activated and could communicate with neurons through elevations in intracellular calcium and the subsequent release of gliotransmitters, leading to the concept of the tripartite synapse. These new findings have resulted in a major paradigm shift whereby astrocytes now are believed to play crucial roles in the modulation of neurotransmission and synaptic plasticity. In parallel with these developments, a view has evolved that in many neurological conditions astrocytes are injured during the very early phase of the disease process, and that failure

of astrocytes to carry out their critical functions results detrimental effects on other neural cells. In other words, rather than simply “reacting” to neuronal or oligodendroglial injury, it is very likely that “ailing” astrocytes resulting from the initial insult, cause or contribute to the disease process itself. A major focus of this presentation will be to review the role of astrocytes in the pathogenesis of major neurological disorders.

### **Learning objectives**

- Review newer aspects of structure and functions of astrocytes
- Discuss the various means by which astrocytes may contribute to CNS dysfunction
- Explain the research that supports that astroglial dysfunction is at the core of many/most neurological disorders

***Matthew T. Moore Distinguished Lecture***

**Pathogenesis of ALS**

*Robert H. Brown, Jr., MD*

*University of Massachusetts, Worcester, MA*

[Materials to be distributed at the Meeting]

## Awards for Meritorious Contributions to Neuropathology

The *Award for Meritorious Contributions to Neuropathology* recognizes a member who has made significant contributions to the advancement of knowledge in neuropathology and provided service to the American Association of Neuropathologists. Each recipient of the award is nominated by the president, in conjunction with the nominating committee and with the approval of the executive council.

The qualities of outstanding scientific achievement and service are embodied in this year's recipients, Drs. William W. Schlaepfer and Leroy R. Sharer. They join the rich roster of distinguished former award recipients.

<b>Year</b>	<b>Recipient</b>	<b>Year</b>	<b>Recipient</b>
1959	Armando Ferraro Arthur Weil	1995	Amico Bignami Asao Hirano
1960	Joseph H. Globus George B. Hassin	1996	Pasquale A. Cancilla Franz Seitelberger
1968	Abner Wolf Paul I. Yakovlev Harry M. Zimmerman	1997	Henryk M. Wisniewski
1970	Webb E. Haymaker	1998	Richard L. Davis Wolfgang Zeman
1971	James W. Kernohan	1999	Lucy B. Rorke
1972	George A. Jervis	2000	William R. Markesbery
1979	Raymond D. Adams David Cowen Matthew T. Moore	2001	John J. Kepes Henry de Forest Webster
1981	Richard Lindenberg	2002	Dikran S. Horoupian Fusahiro Ikuta Kurt A. Jellinger
1983	Orville T. Bailey	2003	Bernardino F. Ghetti
1984	Margaret Murray	2004	Michael N. Hart
1985	Kenneth M. Earle Nathan Malamud Leon Roizin	2005	E. Tessa Hedley-Whyte Suzanne S. Mirra
1986	Martin G. Netsky	2006	Joseph E. Parisi Jeannette J. Townsend
1987	<i>No Award Presented</i>	2007	James M. Powers Cedric S. Raine
1988	Edward P. Richardson, Jr. F. Stephen Vogel	2008	Kinuko Suzuki Margaret G. Norman
1989	Lucien J. Rubinstein Robert D. Terry	2009	Peter C. Burger Pierluigi Gambetti Nicholas K. Gonatas
1991	Lysia K. S. Forno	2010	Stephen J. DeArmond Samuel K. Ludwin
1992	John Moossy Gabriele M. ZuRhein	2011	William W. Schlaepfer Leroy R. Sharer
1993	Peter W. Lampert Elias E. Manuelidis	2012	
1994	Murray B. Bornstein Samuel P. Hicks Lowell W. Lapham		

## Awards for Meritorious Contributions to Neuropathology

### 2011 AWARD RECIPIENTS

*Bernd W. Scheithauer, MD and Donald L. Price, MD*



**Bernd Walter Scheithauer** was one of those robust positive professional and personal constants in the field of neuropathology for several decades during which he made meritorious contributions to the field. He was a member of our Association for over 34 years and was also a senior and dedicated charter member of the Association's Diagnostic Slide Session. He was known personally by numerous members of the Association and, by the vast majority of pathologists, neurosurgeons, and neurologists for his significant and diverse contributions to surgical neuropathology. However, his impact goes far beyond the incredibly impressive number and extensive diversity of his published work, including approximately 700 peer-reviewed publications and nearly 90 book chapters and books over a 35 year career. Dr.

Scheithauer was a spirited icon of surgical neuropathology as an international luminary whose passionate affection of neuropathology was a legendary inspiration to both colleagues and trainees. For Dr. Scheithauer, there was never a conflict between work and pleasure time, because he derived so much pleasure from his work.

Dr. Scheithauer graduated from Humboldt State University in Arcata, CA in 1969. He then headed south to Loma Linda University School of Medicine where his prodigious talent for pathology was already becoming evident. Following graduation, he headed north in 1974 to Stanford University for the next five years where he completed for his post-graduate studies in Anatomic Pathology, Neuropathology, and Surgical Pathology at a time when the Pathology Department was experiencing an exciting and golden era. Drs. Richard Kempson and Ronald Dorfman were setting new standards for the practice of surgical pathology and Lucien Rubinstein was energetically applying his superb talents to teaching innovative diagnostic neuropathology with a combination of superbly performed histochemistry in the British tradition and pioneering state-of-the-art immunohistochemistry. It was during this time that GFAP immunohistochemistry was first used for systematically analyzing surgical pathology specimens. The breadth of the Rubinstein training program also included hallmark *in vitro* studies of brain stromal-glia tumor interactions using long-term primary organotypic cultures. Dr. Scheithauer energetically embraced these intellectual riches of the neuropathology training program with the distinguished visiting neuropathologists, numerous talented trainees, and the incredible array of the consultation cases that were the bases of subsequent hallmark clinicopathologic correlations. Even during his training, he published studies which advanced our understanding of subependymomas, the complex cerebral medulloepitheliomas, and meningeal mesenchymal chondrosarcomas. It was during these formative years that he developed his keen attention to both histopathologic and relevant clinical details, while embracing and respecting how basic research, enhanced current methods and the application of new techniques could enhance his studies.

Dr. Scheithauer joined the faculty in the Department of Laboratory Medicine and Pathology at the Mayo Clinic and College of Medicine as an instructor in 1979. His entire professional career ensued at the Mayo Clinic and College of Medicine where he held the positions of Section Head of Surgical Pathology and Professor with Master's Faculty Privileges in Neuroscience. He described both new clinicopathologic entities and refined criteria for established tumor types, ranging glioneuronal neoplasms, unusual gliomas, subependymal giant cell tumors, and solitary fibrous tumors and mesenchymal tumors arising within neuraxis to a variety of tumors arising from cells of the peripheral nerve sheath. He was a principal investigator on 1 and a co-investigator on 10 extramurally funded research grants. In this perspective, Dr. Scheithauer took the traditions of Lucien Rubinstein and advanced the field of modern surgical neuropathology both in the breadth of study and the application of novel biomarkers in collaboration with numerous neuroscientists. He effectively bridged diagnostic surgical pathology and neuropathology and, in this way, created an important legacy for future neuropathology trainees.

The field of pituitary pathology was remarkably enhanced by Dr. Scheithauer. He made hallmark contributions with his strong and long-standing collaborators and friends, Drs. Kalman Kovacs, Eva Horvath and Ricardo Lloyd. His work led to the better characterization of pituitary adenomas by meticulous morphological, immunohistochemical and ultrastructural studies of these tumors with correlation to the clinical behavior and biological features. These included pituitary adenomas producing GH, PRL and glycoprotein hormones, silent subtype 3 adenomas, Crooke's cell adenoma, Spindle-cell oncocytoma of the adenohypophysis, and pituitary blastomas. He contributed to the fundamental understanding of the pathogenesis and biological behavior of several pituitary tumors, and proposed biomarkers that may serve as prognostic factors of biologic behavior. Finally, he was one of the initial proponents of a new classification of pituitary tumors based on the morpho-functional features of these tumors.

Dr. Scheithauer truly enjoyed teaching neuropathology to fellows and visiting scholars and used his extensive case files to produce exciting projects for them. He mentored over 100 visiting clinical scholars and 6 fellows over a period of 19 years. Through his dedication to teaching, he has provided the future of neuropathology with talented trainees, the majority of whom are now highly productive members of our Association. In addition, Dr. Scheithauer was well-known to practicing surgical pathologists and neuropathologists as an articulate and informative speaker. He delivered over 90 invited lectures, including named lectureships, gave over 70 presentations at international meetings, and over 50 presentations and slide conferences at national meetings. He was especially proud of his award of the Lucien J. Rubinstein Visiting Lectureship in Neuropathology at the University of Virginia. In addition to a meritorious record of publications, Dr. Scheithauer contributed to our field by his review board membership and ad hoc reviewing activities for 17 journals, including our Association journal. In addition to our Association, he was an active member of over ten professional societies, including the Arthur Purdy Stout Society of Surgical Pathologists, the Canadian Association of Neuropathologists, the United States and Canadian Academy of Pathology (and the Paleopathology Club), the Pituitary Pathology Group, the Schwann Society, and the Society for Ultrastructural Pathology.

The world community of neuropathology lost an extraordinary contributor, energetic personality, and devoted friend with the death of Bernd Walter Scheithauer. His meritorious contributions live on to enrich the field of neuropathology and our Association.



**Donald Lowell Price** was born in Stamford, Connecticut. He began his academic career at Wesleyan University in Connecticut where he studied English literature and received a Bachelor of Arts. Then, he entered the Albany Medical School from where he graduated in 1961. After two years of internal medicine training at the New England Medical Center, he became a neurology resident at the Massachusetts General Hospital. Following two years as Staff Neurologist at the National Naval Medical Center in Bethesda, Dr. Price returned to Boston as a Fellow in Neuropathology under the mentorship of Dr. E. P. Richardson at the Massachusetts General Hospital. Subsequently, he worked in cell and molecular biology in the laboratory of Dr. Keith Porter at Harvard. In 1970, Dr. Price became an Assistant Professor of Neuropathology at the Harvard Medical School and Director of Neuropathology at the Boston

City Hospital. The next year, Dr. Price moved to Baltimore to join the faculty of the Johns Hopkins University School of Medicine as Associate Professor and become the Founding Director of the Neuropathology Laboratory, where he would continue his work until retiring in 2010. After retiring, Dr. Price became Emeritus Professor of Pathology. His successful career at Hopkins was extremely productive, both in research, as well as in teaching and mentoring of several generations of neuropathologists and neurobiologists. He made major contributions to the understanding of a variety of human diseases, including peripheral neuropathies and several neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis. At Hopkins, Dr. Price's talent, energy, and scientific contributions were recognized with a Professorship in 1978. His achievements were also internationally recognized by the scientific community and received multiple honors. He became President of the American Association of Neuropathologists in 1989 and of the Society for Neuroscience in 2000. In 1998, he was elected to the Institute of Medicine. The author of more than 500 research publications, during the "Decade of the Brain" (1990-2000), he was ranked among the top ten neuroscientists as authors of high-impact papers by Science Watch.

Dr. Price's initial research work focused on the biology and pathobiology of motor neurons, in particular the mechanisms of degeneration and regeneration following axotomy. Subsequently, his research interest expanded to include age-associated neurodegenerative diseases, especially Alzheimer's disease. This endeavor required not only observations of human brains, but also the study of animal models that would allow a more direct insight into pathogenesis. In the early 80s, the Price laboratory made seminal contributions to the understanding of Alzheimer's, including the identification of lesions of cholinergic neurons in the basal forebrain. In 1984, Johns Hopkins was awarded one of the original NIH-funded Alzheimer's Disease Research Centers under the direction of Dr. Price. His research of naturally occurring animal diseases, in parallel to human neuropathologic studies, yielded important information on motor neuron diseases. Equally important were the studies of aged Rhesus monkeys with memory deficits and AD-like neuropathology which paved the way for the approaches to be used later on the analyses of transgenic models. In the 1990s, the Price laboratory embraced the development of genetically-engineered mouse models of disease. These animal models allowed Hopkins' researchers to make seminal observations on the cell and molecular biology of APP and amyloidogenesis, SOD mutations and motor neuron diseases, as well as the mechanism of trinucleotide expanded repeats in Huntington's disease. These animal models, which were made available to the research community and became the standard models in many laboratories nationwide and abroad, are now being used in experimental therapeutic studies. Over the past several decades, the work of Dr. Price has been well recognized and supported by program projects, R01s (LEAD award) and training grants from the NIH, as well as grants from the Adler Foundation, Metropolitan Life Foundation, BMS Foundation and other private sources

The combined backgrounds in medicine, neurology, neuropathology, and cell biology gave Dr. Price a fairly unique perspective on research that, in addition to propelling him into an outstanding scientific career, made him a most sought after advisor to scientific societies, research foundations, the National Institutes of Health, U.S. Congress panels, and the scientific boards of pharmaceutical and biotechnology companies.

As impressive as his research work is, a major legacy of Dr. Price is his contribution to training and mentoring innumerable neuropathologists, neurologists, and basic neuroscientists who have become leaders at academic institutions throughout the country. After retirement, Dr. Price has continued mentoring and guiding graduate

students and neuropathology trainees with great devotion, and keeps coming to the lab regularly to stay abreast of current studies and to stimulate us all into new research endeavors.

It is impossible to talk with Dr. Price for more than few minutes and not notice his deep interest in and love of classic literature and music. Many scientific conversations with him easily stray into Shakespeare or Dante; paper and grant reviews have often in the background the music of Wagner or Puccini. But there is more to Dr. Price than science, writing, and music. He is an avid swimmer and his competitive spirit also took him into running and triathlons.

These remarks would be incomplete without mentioning the immense devotion of Dr. Price for his family, including Helen his wife, their three children, all of them in medical practice including one neuropathologist, and seven grandchildren.

Donald L. Price, M.D., has been a leader and major force in contemporary neuropathology and a tireless advocate of amalgamating basic neurobiology with pathology and neurology. He is a most worthy recipient of the Award for Meritorious Contributions to Neuropathology of the American Association of Neuropathologists 2012.

**AANP PRESIDENTIAL SYMPOSIUM**  
**Sunday, 24 June 2011**

**Current Topics in Multiple Sclerosis**

8:00 am – 8:05 am	<p>Introduction</p> <p style="text-align: right;"><i>Raymond A. Sobel, MD</i>  <i>Stanford University School of Medicine, Stanford, CA</i></p>
8:05 am - 9:00 am	<p><b><i>Parisi Lecture</i></b>          Neuronal Damage in Multiple Sclerosis</p> <p style="text-align: right;"><i>Bruce D. Trapp, PhD</i>  <i>The Cleveland Clinic Foundation, Cleveland, OH</i></p>
9:00 – 9:45 am	<p>Sphingosine-1-phosphate signaling in MS "Oriental Medicine to Immune Modulation"</p> <p style="text-align: right;"><i>May Htwe Han, MD, PhD</i>  <i>Stanford University School of Medicine, Stanford, CA</i></p>
9:45 am – 10:30 am	AANP Award Presentations and Refreshment Break
10:30 am – 11:15 am	<p>The Changing Epidemiology of MS</p> <p style="text-align: right;"><i>A. Dessa Sadovnick, PhD</i>  <i>VCHA-UBC Hospital, Vancouver, BC</i></p>
11:15 am – 12:00 pm	<p>How MS could be an Acquired Disease</p> <p style="text-align: right;"><i>Raymond A. Sobel, MD</i>  <i>Stanford University School of Medicine, Stanford, CA</i></p>
12:00 pm	<b><i>INSTALLATION OF NEW OFFICERS AND ADJOURNMENT</i></b>

## 2012 PRESIDENTIAL SYMPOSIUM

### Sphingosine-1-phosphate Signaling in MS "Oriental Medicine to Immune Modulation"

May Htwe Han, MD, PhD

Stanford University School of Medicine, Stanford, CA



**May H. Han** is an Assistant Professor and a clinician-Scientist in the Department of Neurology and Neurological Sciences at Stanford University School of Medicine. She received her medical degree in Myanmar and completed her Neurology residency at the University of Washington in Seattle. She did a translational Fellowship in Neuroimmunology at Stanford University with Dr. Lawrence Steinman. In 2009, she joined the Stanford University School of Medicine's Neurology and Neurological Sciences Department and the Stanford Hospital and Clinic's Multiple Sclerosis Center.

Dr. Han's research focuses on identification of biomarkers and therapeutic targets in multiple sclerosis and other demyelinating diseases of the central nervous system. She utilizes a systems biology approach, using proteomics and transcriptomics, with the goal of identifying biomarkers to monitor disease activity and to understand protective molecules that are present during neuroinflammation. Her lab studies patient samples and tests their hypotheses in animal models and cellular and biochemical assays, with the ultimate goal of applying the knowledge directly to patient care.

#### Abstract

Multiple sclerosis (MS) is an autoimmune de-myelinating disease that damages the central nervous system, affecting over one million young adults worldwide<sup>1</sup>. FTY-720 (Fingolimod) was recently approved by the FDA as the first orally bio-available, first-line therapy for treatment of relapsing remitting MS<sup>2</sup>. FTY-720 is a bio-mimetic of the endogenous, bioactive signaling lipid sphingosine-1-phosphate (S1P). S1P signals extracellularly through five G-protein coupled receptors (S1P<sub>1-5</sub>), and FTY-720 treatment modifies this pathway. FTY-720's mechanism of action currently centers around the concept of "functional antagonism" where agonist-like binding of drug to receptor leads to internalization and degradation of the signaling complex. This internalization event is viewed as critical in the "functional antagonism" paradigm<sup>3</sup>, and previous studies have shown that C-terminal mutation/deletion of S1P<sub>1</sub> inhibits receptor internalization<sup>3</sup>. Proteomic analysis of active MS brain lesions identified C-terminal peptides of S1P<sub>1</sub> found to be phosphorylated on serine 351. To understand the function of S1P<sub>1</sub> signaling by means of post-translational modifications, we utilized the S1P<sub>1</sub><sup>SSA/SSA</sup> mouse, which is phosphorylation defective on its C-terminal tail and has altered S1P<sub>1</sub> signaling kinetics as a consequence<sup>4</sup>. We induced experimental autoimmune encephalomyelitis (EAE) in these mice and found that S1P<sub>1</sub><sup>SSA/SSA</sup> mice experienced more severe disease, higher titers of inflammatory cytokines, and greater numbers of CNS infiltrating immune cells compared to wild type. Administration of FTY-720 to S1P<sub>1</sub><sup>SSA/SSA</sup> mice induced within pre-symptomatic EAE demonstrated that S1P<sub>1</sub><sup>SSA/SSA</sup> were refractory to treatment as evidenced by inflammatory cytokine production. Our studies demonstrate the importance of C-terminal S1P<sub>1</sub> phosphorylation in the context of neuroinflammation and FTY-720 treatment. These investigations hold the potential to elucidate the mechanism of action of FTY-720 and stratification for potential side effects resulting from therapy.

#### Learning Objectives

- Describe how systems biology is elucidating the pathology and pathogenesis of MS
- Explain the bases for new therapies in MS
- Explain the role of lipid second messenger signaling in MS

## 2012 PRESIDENTIAL SYMPOSIUM

### The Changing Epidemiology of MS

A. Dessa Sadovnick, PhD

VCHA-UBC Hospital, Vancouver, BC



**Dr. Sadovnick** was born in Montreal and obtained degrees from McGill University (B.Sc., Honors Genetics; M.Sc., Human Genetics) and the University of British Columbia (Ph.D., Genetics).

Dr. Sadovnick is a Professor in the Department of Medical Genetics and the Faculty of Medicine, Division of Neurology, UBC. She is the Director of the Western Pacific Regional Research and Training Center for Multiple Sclerosis, established by the MS Society of Canada.

Dr. Sadovnick is the Principal Investigator of several multicenter Canadian and International collaborative research projects on Multiple Sclerosis, pediatric Multiple Sclerosis and Dementia.

Dr. Sadovnick was one of the developers of the M.Sc. Genetic Counseling Training Program at UBC, has served as co-director and is now on the advisory board. She has published extensively (over 280 articles in peer-review journals) and serves as a reviewer for a wide variety of medical journals and grant review panels. She is often an invited speaker at Canadian, American and International (Europe, Asia, South America, Russia, Asia) scientific meetings. Dr. Sadovnick is a member of several National and International advisory groups and task forces for both MS and dementia. She is currently involved in Canadian-China initiatives in both MS and AD, the Canada-wide monitoring system for MS and the BC outcomes registry for MS therapeutics outcomes.

### Abstract

The exact etiology of multiple sclerosis (MS) remains unclear but genes, environment and the interactions thereof are critical to disease susceptibility in both adults and children. Genetic epidemiological studies have clearly shown that the excess of MS among biological relatives, i.e. familial aggregation, is due to DNA sharing rather than a common intrafamilial environment. However, even among identical (monozygotic) twins who share virtually 100% of their DNA, the MS recurrence risk is only about 35%. Thus, environment and epigenetics cannot be ignored. Further complicating the transmission of MS susceptibility within families is the observed gender effect which has been replicated in many studies. There appears to be a maternal effect through both unaffected mothers and relatives of unaffected mothers. Furthermore, migration and mixed mating studies have been shown to alter an individual's risk to develop MS.

Genome-wide association studies (GWAS) have identified many potential susceptibility genes for MS but to date, none have surpassed the magnitude of the influence of HLA. Nevertheless, even the function of the HLA genotype is not straight-forward and can be influenced in many ways.

This talk will update our 2012 knowledge on the genetics and epidemiology of MS and will also identify future directions of research that are needed.

### Learning Objectives

- Describe the relative roles of genes & environment & the interactions thereof in the pathogenesis of MS
- Identify possible “windows of opportunity” for intervention aimed to prevent the Clinical onset or alter the course of MS
- Review how these findings can answer questions raised by patients and family members in the clinical setting

## 2012 PRESIDENTIAL SYMPOSIUM

### “How MS Could be an Acquired Disease”

Raymond A. Sobel, MD

Palo Alto VA Health Care System and Stanford University School of Medicine, Stanford, CA



**Raymond Sobel, MD** is a graduate of Stanford University and received his MD from the University of California San Francisco. He received Anatomic and Neuropathology residency training at UC Davis, UCSF and Stanford. He then did a fellowship in Immunopathology and subsequently stayed on the faculty at the Massachusetts General Hospital, Harvard Medical School. In 1992, he returned to California where he is a neuropathologist at the Palo Alto VA Health Care System and Professor of Pathology (Neuropathology) at Stanford. He has authored or co-authored 183 peer-reviewed articles in national and international journals and 6 book chapters, including the Demyelinating Diseases chapter in the 8<sup>th</sup> edition of *Greenfield's Neuropathology*. He is currently on the Editorial Boards of the *Journal of Neuroimmunology*, *Brain Pathology*, and has been the Editor-in-Chief of *The Journal of Neuropathology and Experimental Neurology* since 2007.

Dr. Sobel's research has primarily addressed inflammatory responses in the CNS, particularly as they relate to CNS infections, multiple sclerosis (MS) and the MS animal model, experimental autoimmune encephalomyelitis.

#### Abstract

The causes and fundamental nature of MS are not understood; it likely has autoimmune as well as neurodegenerative components. Edward Rubenstein, MD, Professor Emeritus, Department of Medicine, Stanford University School of Medicine has advanced the hypothesis that the naturally-occurring non-protein imino acid proline homologue Azetidine-2-carboxylic acid (Aze) is an environmental agent that contributes to MS pathogenesis. Aze is abundant in sugar beets and other edible plants. Sugar from beets is not a source of Aze consumption by humans, but after the sucrose is extracted from sugar beets, the molasses residue, which is rich in Aze, is commonly fed to livestock as a sweetener to entice them to eat their requisite grasses and grains. Over the past 200 years, (i.e. since sugar beet agriculture, which originated in Europe, became widespread), Aze entered the human food chain in milk, dairy products and meat in large amounts. The dietary misincorporation of Aze in place of proline into myelin proteins in utero or in early postnatal life, (i.e. during the period of major brain and spinal cord myelination), could contribute to unstable myelin and/or oligodendrocyte (OGC) injury. Additionally, Aze-containing proteins might affect the development of the immune repertoire and be viewed by the immune system as, “altered” or “non-self”, thereby provoking autoimmune responses. This presentation will highlight the possible relationships of dietary Aze to MS history, dynamic epidemiology, pathogenesis and neuropathology. Results of ongoing studies on the effects of Aze in the induction of proteotoxic stress in OGC precursor cells (OPC) in vitro and effects of Aze feeding in mice will be presented.

The Aze hypothesis confronts numerous disparate and mysterious features of MS, including its history, epidemiology, and cellular and molecular pathogenetic mechanisms. It raises the possibility that this acquired environmental agent might enhance MS risk or lesion progression in genetically prone individuals. If it is validated, it could have major effects on the diagnosis, treatment and ultimately, the prevention of MS.

#### Learning Objectives

- Describe the Aze Hypothesis
- Identify the historical and epidemiological features of MS that the Aze Hypothesis addresses
- Explain how Aze has entered the human food chain
- Describe how Aze may affect mechanisms of immunity and myelin injury in MS patients

## Author Index

<b>Abdel-Salam</b> , Hossam	103	<b>Beggs</b> , Alan H.	99, 102
<b>Abel</b> , Ty W.	78, 89, 90	<b>Benzinger</b> , Tammie	137
<b>Acevedo</b> , Carlos R.	190	<b>Bernstein</b> , Bradley E.	115
<b>Adams</b> , Rocky	138	<b>Berry-Kravis</b> , Elizabeth	157
<b>Adesina</b> , Adekunle M.	101, 113, 172, 174	<b>Betz</b> , Bryan L.	7
<b>Adle-Biassette</b> , Homa	17	<b>Bhangoo</b> , Ranj	4
<b>Adler</b> , Charles H	128, 143	<b>Bhatia</b> , Sanjiv	93
<b>Aghion</b> , Daniel	52	<b>Bhattacharjee</b> , Meenakshi B.	83
<b>Ahn</b> , Misol	30	<b>Bi</b> , Chengpeng	8
<b>Akatsu</b> , Hiroyasu	27	<b>Bieniek</b> , Kevin F.	13, 71
<b>Albers</b> , Mark W.	14	<b>Bigio</b> , Eileen H	56, 64, 152, 186
<b>Aldape</b> , Kenneth D.	113	<b>Bilbao</b> , Juan M	126
<b>Alden</b> , Tord	109	<b>Bissel</b> , Stephanie J	10
<b>Alexander</b> , Nicole	35	<b>Black</b> , Sandra	126
<b>Alexander</b> , Matthew S	99	<b>Blevins</b> , Gregg	24
<b>Alghamdi</b> , Sarah	193	<b>Blevins</b> , Janis	163
<b>Allen</b> , Mariet	122	<b>Blumenthal</b> , Deborah T.	85
<b>Almeida</b> , Jonas S.	119	<b>Boaz</b> , Joel C.	46
<b>Al-Sarraj</b> , Safa T.	4	<b>Bodi</b> , Istvan	4
<b>Alvarez</b> , Victor	65	<b>Bodkin</b> , Cynthia L.	147
<b>Andermann</b> , Mark L.	14	<b>Bonnin</b> , Jose M.	46, 57,61, 162,164, 189
<b>Anderson</b> , Sonya	66	<b>Boon-Unge</b> , Kritsanapol	97, 149, 150
<b>Arakaki</b> , Naomi	40, 169	<b>Bouchet</b> , Céline	106
<b>Arancio</b> , Ottavio	58	<b>Bourne</b> , T. David	105
<b>Aranda</b> , Derick	3	<b>Boylan</b> , Kevin B	13, 69,71
<b>Arkun</b> , Knarik	132,184, 188	<b>Brashear</b> , Allison	166
<b>Armstrong</b> , Dustin	102	<b>Brathwaite</b> , Carole	193
<b>Arvanitis</b> , Leonidas D	157	<b>Brazil</b> , Lucy	4
<b>Ashizawa</b> , Tetsuo	159	<b>Bregman</b> , Corey	86
<b>Ashkan</b> , Keyoumars	4	<b>Brenner</b> , Michael	108
<b>Attíe-Bitach</b> , Tania	106	<b>Brett</b> , Francesca Mary	77, 185
<b>Auluck</b> , Pavan K.	70, 74	<b>Broadbelt</b> , Kevin G.	48
<b>Avent</b> , James	140	<b>Buckley</b> , Dr. Patrick	77
<b>Azarine</b> , Arshid	51	<b>Buj-Bello</b> , Anna	99, 102
<b>Bacsa</b> , Sarolta	134	<b>Burger</b> , Peter C.	110
<b>Bafakih</b> , Fahad F.	131	<b>Burgett</b> , Richard A.	46
<b>Baird</b> , Andrew	139	<b>Burns</b> , Dennis K.	39
<b>Bajsarowicz</b> , Krystyna	30	<b>Byun</b> , Nellie	82
<b>Baker</b> , Matthew C.	13, 71, 129	<b>Cairns</b> , Nigel J.	56, 59, 125, 137
<b>Baker</b> , Suzanne J.	111	<b>Cali</b> , Ignazio	163
<b>Banigan</b> , Meredith	15	<b>Camelo-Piragua</b> , Sandra	7
<b>Bankiewicz</b> , Krystof	30	<b>Campbell</b> , Gerald A.	113
<b>Bar</b> , Eli	112	<b>Canedo</b> , N.	80
<b>Baraibar</b> , Martin A.	29	<b>Casadesus</b> , Gemma	11, 123
<b>Barbeito</b> , Ana G.	29	<b>Castaneda-Sanchez</b> , Irene	154
<b>Barkhoudarian</b> , Garni	136	<b>Castanedes-Casey</b> , Monica	69, 71
<b>Barrio</b> , Jorge R.	31	<b>Castellani</b> , Rudy J.	25, 54, 165
<b>Bash</b> , Ryan	114	<b>Castellanos</b> , Karla	134
<b>Batheja</b> , Nirmala O.	9	<b>Castellano-Sanchez</b> , Amilcar	173, 193
<b>Batista</b> , Denise A. S.	120	<b>Caviness</b> , John	143
<b>Bauer</b> , Peter	155	<b>Chan</b> , Sophelia	144
<b>Beach</b> , Thomas G.	27, 128,143	<b>Chan</b> , Timothy A.	117
<b>Beaney</b> , Ronald	4	<b>Chandesris</b> , Marie-Olivia	51

<b>Chandler, Chris</b>	4	<b>Demer, Joseph</b>	150
<b>Chandler, James</b>	186	<b>Demopoulos, Alexis</b>	8
<b>Chang, Howard T.</b>	79	<b>Denison, Stephanie K</b>	66
<b>Chang, Ansi</b>	38, 22	<b>Deshpande, Vikram</b>	37
<b>Chang, Taeun</b>	148	<b>DeSimone, Nicole</b>	39
<b>Chen, Hua Qiang</b>	8	<b>Devers, Kelly</b>	84, 159
<b>Chen, Sonja</b>	52	<b>Devisme, Louise</b>	106
<b>Chen, Li</b>	41,136	<b>Devoe, Craig</b>	8
<b>Chen, Shu G.</b>	123	<b>Dias, Mark</b>	170
<b>Chi, Andrew</b>	115	<b>Diaz, Fernanda</b>	40
<b>Childers, Martin K.</b>	102	<b>Diaz de Villalvilla, Alexander</b>	35
<b>Chimelli, Leila</b>	80, 175	<b>Dickson, Dennis W.</b>	13, 69,71, 122, 129
<b>Cho, Ginam</b>	18		133
<b>Cho, Yoon-Jae</b>	93	<b>Ding, Qing-Qing</b>	7
<b>Choudhary, Arabinda</b>	170	<b>Dixon, Catherine A.</b>	4
<b>Chu, Eric</b>	67	<b>Doey, Lawrence</b>	88, 140
<b>Chukwueke, Jasmine</b>	139	<b>Dogen, Ahmet</b>	190
<b>Ciarlini, Pedro DSC</b>	130, 136	<b>Doldan, Adriana M.</b>	139
<b>Clark, Kenneth Howard</b>	5	<b>Donahue, John E.</b>	134
<b>Clark, H. Brent</b>	32, 154	<b>Dosa, Sandor</b>	103
<b>Claudia, Lucchinetti F.</b>	21	<b>Dowling, James J.</b>	17
<b>Cifford, David B.</b>	137	<b>Drouot, Nicole</b>	143
<b>Cloughesy, Timothy F.</b>	141	<b>Dugger, Brittany N.</b>	61
<b>Cochran, Elizabeth</b>	56, 157	<b>Dupree, Brenda</b>	22
<b>Codispoti, Kari-Elise T.</b>	81	<b>Dutta, Ranjan</b>	22, 38
<b>Collins, Sarah E.</b>	155	<b>Easley, Kathryn E.</b>	2, 110, 112,120
<b>Conn, P. Jeffrey</b>	82	<b>Eberhart, Charles G.</b>	183
<b>Coons, Stephen W.</b>	191	<b>Edgar, Mark A</b>	93
<b>Cooper, Deborah S.</b>	158	<b>Edwards, Michael S.</b>	8
<b>Corrada, Maria</b>	16	<b>Eisenberg, Mark B.</b>	139
<b>Courteau, Girarrd</b>	172	<b>Eliceiri, Brian P.</b>	101, 113
<b>Cox, Mary O.</b>	100, 148	<b>Ellezam, Benjamin</b>	43
<b>Coyne, Thomas</b>	118	<b>Elliot, Amy J.</b>	3, 111
<b>Crain, Barbara J.</b>	68	<b>Ellison, David W.</b>	106
<b>Cress, Marshall</b>	133	<b>Encha-Razavi, Ferechte</b>	6
<b>Crook, Julia</b>	122	<b>Engler, Jane R.</b>	31, 60, 61, 124, 127, 164,
<b>Croul, Sidney</b>	3	<b>Epperson, Francine</b>	122
<b>Cullup, Thomas</b>	103		75, 194
<b>Cykowski, Matthew</b>	171	<b>Ertekin-Taner, Nilufer</b>	17
<b>da Mata Pereira, Paulo Jose</b>	175	<b>Fabiano, Andrew</b>	86
<b>Dalton, James</b>	111	<b>Fallet-Bianco, Catherine</b>	67
<b>Dang, Xitong</b>	139	<b>Fangusaro, Jason</b>	31, 55, 57, 61, 67, 72,124, 127, 162, 164, 173
<b>Daniels, Brianne H.</b>	98, 104	<b>Farag, Emad</b>	8
<b>Danielson, Brett</b>	94	<b>Farlow, Martin R.</b>	145
<b>Davidson, Tom</b>	97		194
<b>Dawar, Richa</b>	75	<b>Ferrari, Chiara</b>	62
<b>De Girolami, Umberto</b>	130, 136	<b>Fischer, Alain</b>	51
<b>De Jesus, Jason</b>	42	<b>Fisher, Elizabeth</b>	22
<b>de la Monte, Suzanne M.</b>	52	<b>Fisher, Paul</b>	93
<b>De Sousa, Eduardo</b>	171	<b>Fisher-Hubbard, Amanda O.</b>	7
<b>DeArmond, Stephen</b>	30	<b>Folkerth, Rebecca D.</b>	130
<b>De Jesus-Hernandez, Mariely</b>	13, 69, 71		
<b>Del Bigio, Marc R.</b>	19		
<b>DeLa Monte, Suzanne</b>	35		
<b>Delalle, Ivana</b>	15		
<b>Delezoide, Anne-Lise</b>	17		

<b>Foroud</b> , Tatiana	57	<b>Guo</b> , Zhihong	16
<b>Fox</b> , Robert J.	22, 38	<b>Gupta</b> , Nalin	6
<b>Frosch</b> , Matthew P.	14, 135	<b>Gupta</b> , Vandana	99
<b>Fujioka</b> , Hisashi	123	<b>Gussoni</b> , Emanuela	99
<b>Fuller</b> , Christine E.	132, 184, 188	<b>Gyure</b> , Kymberly A.	131
<b>Fuller</b> , Gregory N.	113	<b>Haas</b> , Elisabeth A.	48
<b>Funabe</b> , Sayaka	153	<b>Haas-Kogen</b> , Daphne A.	3
<b>Fung</b> , Kar-Ming	171	<b>Hackney</b> , James R.	53, 119
<b>Gabuzda</b> , Dana H.	130	<b>Haffner</b> , Michael C.	2
<b>Gadelha</b> , Monica R.	175	<b>Haga</b> , Takayuki	153
<b>Gagyi</b> , Eva	134	<b>Hagen</b> , Matthew C.	166
<b>Gajjar</b> , Amar	111	<b>Hake</b> , Ann M.	61
<b>Galvin</b> , James	137	<b>Hamilton</b> , Ronald	5
<b>Gambetti</b> , Pierluigi	160	<b>Hamilton</b> , Leslie	47
<b>Ganti</b> , Rakhee A.	64	<b>Harty</b> , Brian	48
<b>Garringer</b> , Holly J.	26, 29,75, 151	<b>Hasegawa</b> , Masato	156
<b>Gearing</b> , Marla	158	<b>Hatanpaa</b> , Kimmo J.	154, 177
<b>Gerzanich</b> , Volodymyr	54	<b>Hatsuta</b> , Hiroyuki	153
<b>Geschwind</b> , Michael	137	<b>Hattab</b> , Eyas M.	92, 95, 147, 178, 192
<b>Ghavanini</b> , Amer	34	<b>Hauptman</b> , Jason S.	97
<b>Ghazi</b> , Sabah O.	89, 90	<b>Haynes</b> , Robin L.	48
<b>Ghetti</b> , Bernardino	26, 27, 29, 31, 55, 56, 57, 60, 61, 72, 73, 124, 127, 151, 160, 161, 162, 164,166	<b>Head</b> , Elizabeth	56
<b>Ghoshal</b> , Nupur	137:	<b>Hedley-Whyte</b> , E. Tessa	135
<b>Giannini</b> , Caterina	21, 112,140	<b>Hedreen</b> , John C.	107
<b>Giordano</b> , Anthony	146	<b>Hekman</b> , Katherine E	32
<b>Gitelman</b> , Darren	56	<b>Hendrickson</b> , Megan C.	38
<b>Giuliani</b> , Fabrizio	24	<b>Henrich</b> , Timothy J.	130
<b>Glass</b> , Jonathan D.	158	<b>Henriksen</b> , Kammi	1
<b>Glazier</b> , Bradley S.	31, 55, 57, 124	<b>Henry-Watson</b> , Jonette	128
<b>Goetz</b> , Christopher	157	<b>Hentz</b> , Joseph	143
<b>Golden</b> , Jeffrey	18	<b>Hernández</b> , A. Iván	63
<b>Goldey</b> , Glenn J.	14	<b>Herrman</b> , Sarah L.	62
<b>Goldman</b> , James	20	<b>Hicks</b> , Jessica	2
<b>Goldman</b> , Stewart	109	<b>Hidalgo</b> , Jose	128
<b>Gomez</b> , Christopher M.	32	<b>Hiken</b> , Mark	76
<b>Gonen</b> , Odet	142	<b>Hill</b> , Benjamin C.	119
<b>Gonzalès</b> , Marie	106	<b>Hiniker</b> , Annie	104
<b>Gonzalez</b> , Ana Maria	139	<b>Hirzel</b> , Alicia C.	173
<b>Gorovets</b> , Daniel	117	<b>Ho</b> , Cheng-Ying	112, 120
<b>Gouvion</b> , Cynthia M.	60	<b>Ho</b> , Chang Yueh	46
<b>Graff-Radford</b> , Neill	13, 69, 71	<b>Hodgson</b> , J. Graeme	6
<b>Grafman</b> , Jordan	127	<b>Hoffmann</b> , Anja	27
<b>Graham</b> , R. Scott	188	<b>Hoffpauir</b> , Joan T.	176
<b>Grange</b> , Robert W.	102	<b>Horbinski</b> , Craig	5, 87
<b>Graves</b> , Donna	39	<b>Housman</b> , Cathy	50,146,179
<b>Gray</b> , Francoise	51	<b>Hover</b> , Laura D.	78, 89, 90
<b>Greenburg</b> , Michael K.	160	<b>Howe</b> , Charles	20
<b>Gullan</b> , Richard	4	<b>Hsu</b> , Cynthia P.	99, 102
<b>Gultekin</b> , S. Humayun	76, 98	<b>Huang</b> , Ping	99
<b>Guo</b> , Yong	20, 21	<b>Huebner</b> , Angela	103
		<b>Huebner</b> , Thomas	25, 165
		<b>Huey</b> , Edward D.	127
		<b>Hurley</b> , Thomas D.	29
		<b>Hurth</b> , Kyle M.	137

<b>Huse</b> , Jason T.	117, 118, 183	<b>Kormos</b> , Bernadett	134
<b>Hutchins</b> , Gary D.	124	<b>Kouri</b> , Naomi	129
<b>Hyland</b> , Keith	48	<b>Kovacs</b> , Kalman	88
<b>Hyman</b> , Bradley T.	14	<b>Kovacs</b> , Krisztian	134
<b>Iacono</b> , Diego	16	<b>Krasnozhen</b> , Olga	63
<b>Iantosca</b> , Mark	179	<b>Krausz</b> , Thomas	1
<b>Ida</b> , Cristiane M.	88	<b>Krawitz</b> , Sherry	110
<b>Ironside</b> , James	27	<b>Krous</b> , Henry F.	48
<b>Ito</b> , Shinji	153	<b>Kubisch</b> , Christian	157
<b>Ivanova</b> , Svetlana	54	<b>Kunkel</b> , Louis M.	99
<b>Jacobsohn</b> , Jamie	157	<b>Kuruvilla</b> , Deena	35
<b>James</b> , C. David	6	<b>Kuzuhara</b> , Shigeki	156
<b>Jentoft</b> , Mark E.	21, 88, 140	<b>Lamb</b> , Bruce T.	26
<b>Jha</b> , Prerana	116	<b>Lamonte</b> , Marian	165
<b>Jicha</b> , Gregory A.	127	<b>Laquerriere</b> , Annie	17
<b>Johanson</b> , Conrad E.	139	<b>Lasala</b> , P. Rocco	131
<b>Johnson</b> , Jennifer A.	130	<b>Laukka</b> , Jeremy Jerome	44
<b>Jones</b> , Chris	4	<b>Lawlor</b> , Michael W.	99, 102
<b>Jorge</b> , Correale	40	<b>Laws</b> , Edward R.	136
<b>Joseph</b> , Jeffrey	47	<b>Laxton</b> , Ross	4
<b>Joubert</b> , Romaine	99	<b>Lazareff</b> , Jorge A.	97
<b>Judkins</b> , Alexander R	3, 118, 182	<b>Le</b> , Paul	182
<b>Jury</b> , Alexa	4	<b>Lee</b> , Anne H.	35, 52
<b>Kalakoti</b> , Piyush	160	<b>Lee</b> , Han S.	98, 104
<b>Kamer</b> , Aaron P.	189	<b>Lee</b> , Kyung-Hwa	64, 186
<b>Kamholz</b> , John	44	<b>Lee</b> , Hyoung-gon	11
<b>Kan</b> , Amanda	144	<b>Lee</b> , Kyung-Hwa	64
<b>Kannan</b> , Kasthuri	117	<b>Lennon</b> , Vanda A.	20, 21
<b>Kao</b> , Patricia	15	<b>Leverenz</b> , James B.	27, 56
<b>Karajannis</b> , Matthias A.	112	<b>Levesque</b> , Jessica	96, 180
<b>Karamchandani</b> , Jason	94	<b>Li</b> , Jian Yi	8
<b>Kastenhuber</b> , Edward R.	117	<b>Li</b> , Rong	108
<b>Kawai</b> , Mitsuru	153	<b>Li</b> , Jun Z.	103
<b>Kawas</b> , Claudia	16	<b>Li</b> , Li	180
<b>Keith</b> , Julia	126	<b>Li</b> , Xiao-Nan	172
<b>Kenyon</b> , Lawrence C.	36	<b>Liang</b> , David	50
<b>Kepe</b> , Vladimir	31	<b>Liau</b> , Linda M.	141
<b>Kersting</b> , Robert	23	<b>Libien</b> , Jenny	63
<b>Khalidi</b> , Hasan S.	178	<b>Lidov</b> , Hart	41
<b>Khan</b> , Aneal	47	<b>Lim</b> , Megan S.	7
<b>Khan</b> , Asadullah	188	<b>Lin</b> , Wen-Lang	13, 69, 71
<b>Khanlou</b> , Negar	97, 141, 149,	<b>Lin</b> , Ming-Tseh	81
	150	<b>Lindquist</b> , Susan	70, 74
<b>Khatib</b> , Ziad	193	<b>Liu</b> , Liqiong	176
<b>Khurana</b> , Jasvir	181	<b>Liu</b> , Jun	123
<b>Khushalani</b> , Nikhil	75	<b>Liu</b> , Yunguang	168
<b>Kimchi</b> , Eyal	135	<b>Lopes</b> , M. Beatriz	163
<b>Kimmel</b> , Sidney	2	<b>Lopez</b> , Michael	103
<b>King</b> , Andrew	4	<b>Lotze</b> , Tim	101
<b>Kinney</b> , Hannah C.	43, 48	<b>Louis</b> , David N.	115
<b>Kitamoto</b> , Tetsuyuki	153	<b>Love</b> , Seth	12, 103
<b>Kitamura</b> , Kunio	18	<b>Lovell</b> , Kathryn L.	44
<b>Klein</b> , Joshua P.	130	<b>Lu</b> , Jian-Qiang	24
<b>Koeppen</b> , Arnulf H.	155	<b>Lu</b> , Chao	118
<b>Kofler</b> , Julia	10	<b>Lucchinetti</b> , Claudia F.	21, 20
<b>Kokubo</b> , Yasumasa	156	<b>Lue</b> , LihFen	143

<b>Lulla</b> , Rishi	109	<b>Molinaro</b> , Annette	6
<b>Lunt</b> , Peter	103	<b>Moore</b> , Steven A.	100, 103, 147, 148
<b>Lyons</b> , Jennifer L.	130	<b>Moore</b> , Brian E.	103
<b>Madden</b> , Michelle E.	118	<b>Moreira</b> , V.G.	80
<b>Mahboob</b> , Mohammad	35, 52	<b>Morimoto</b> , Satoru	156
<b>Majumdar</b> , Anirban	103	<b>Morlote</b> , Diana	173
<b>Malafronte</b> , Patrick J.	39, 154	<b>Morris</b> , John C.	59
<b>Malheiros Giorgetta</b> , Juliana	175	<b>Mosier</b> , Stacy	81, 120
<b>Manfready</b> , Richard A.	99	<b>Motohashi</b> , Norio	99
<b>Mangray</b> , Shamlal	35	<b>Mueller</b> , Sabine	3
<b>Mao</b> , Qinwen	64, 186	<b>Muhoberac</b> , Barry B.	29
<b>Marcorelles</b> , Pascale	17	<b>Mukherjee</b> , Abir	181
<b>Mareninov</b> , Sergey	141	<b>Munden</b> , Alex	78, 89, 90
<b>Margeta</b> , Marta	98, 104	<b>Munoz</b> , David G.	34, 94, 126
<b>Mari</b> , Zoltan	160	<b>Murayama</b> , Shigeo	27, 153, 156
<b>Mariner</b> , Monica	128	<b>Murdoch</b> , Geoffrey	10, 45
<b>Markert</b> , James M.	53	<b>Murray</b> , Melissa E.	69, 71, 122
<b>Maroukian</b> , Maria	9	<b>Murrell</b> , Jill R.	31, 55, 56, 57, 60, 61, 72, 73, 124, 127, 151, 162, 164
<b>Marshall</b> , Roxanne	3		
<b>Martha</b> , Burt	159	<b>Nabors</b> , L. Burt	53
<b>Martin</b> , Sarah E.	92, 147, 178, 189	<b>Nakaji</b> , Peter	191
		<b>Nakamura</b> , Masataka	69
<b>Martinez</b> , Daniel	182	<b>Nasim</b> , Mansoor	8
<b>Martland</b> , William	52	<b>Nasrallah</b> , MacLean P.	18
<b>Masellis</b> , Mario	126	<b>Neale</b> , Geoffrey	111
<b>Mathern</b> , Gary W.	42	<b>Neilan</b> , Anne	135
<b>Mathis</b> , Derek A.	177	<b>Nelsen</b> , Laura L.	43
<b>Matsuda</b> , Kant Michael	142	<b>Nelson</b> , Peter T.	28, 66
<b>McCarten</b> , J. Riley	152	<b>Nelson</b> , Terese	100, 148
<b>McComb</b> , Rodney D.	98	<b>Nelson</b> , William G.	2
<b>McFadden</b> , Kathryn A.	45	<b>Neltner</b> , Janna H.	28, 66, 87
<b>McGaughey</b> , Steven D.	100	<b>Newell</b> , Kathy	55, 60, 161, 167
<b>McGuone</b> , Declan	37, 135		
<b>McKee</b> , Ann	15, 65	<b>Ng</b> , Ho Keung	121
<b>Mehta</b> , Rupal I.	25, 54, 56, 165	<b>Nickols</b> , Hilary Highfield	82
<b>Mehta</b> , Vidya	101, 113, 172	<b>Niemeyer Filho</b> , Paulo	175
<b>Meints</b> , Joyce P.	152	<b>Nikiforova</b> , Marina	5
<b>Meng</b> , Hui	99, 102	<b>Niyazov</b> , Dmitriy M.	101
<b>Menke</b> , Joshua	140	<b>Nogami</b> , Akane	153
<b>Mihara</b> , Ban	153	<b>Oehler</b> , Abby	30
<b>Mikolaenko</b> , Irina	183	<b>Ogata</b> , Katsuhisa	153
<b>Miller</b> , Douglas C.	49, 133	<b>Olar</b> , Adriana	113
<b>Miller</b> , Carol A.	62	<b>Olsakovsky</b> , Leslie A.	105
<b>Miller</b> , Miles C.	139	<b>Olson</b> , Lawrence Karl	79
<b>Miller</b> , Dylan	140	<b>Ong</b> , Kim-Thanh	51
<b>Miller</b> , C. Ryan	114	<b>Onyike</b> , Chiadi U.	68
<b>Millington</b> , Karmaine	170	<b>Orisme</b> , Wilda	111
<b>Milner</b> , Danny A.	130	<b>Oroszi</b> , Gabor	133
<b>Minassian</b> , Berge	34	<b>Orr</b> , Brent A.	2
<b>Miravalle</b> , Leticia	26, 75, 151	<b>Ostrzega</b> , Nora	187
<b>Mirsadraei</b> , Leili	97, 187	<b>O'Sullivan</b> , Joanne	77
<b>Mischel</b> , Paul	141	<b>Owens</b> , Philip	78
<b>Mitrovic</b> , Bojana	34	<b>Oyelese</b> , Adetokunbo	52
<b>Mobley</b> , Bret	98		
<b>Mohamed</b> , Ismail	47		
<b>Mohila</b> , Carrie A.	113		

<b>Pahlavan</b> , Payam	19	<b>Ranjan</b> , Tulika	8
<b>Palmer</b> , Cheryl A.	53, 108	<b>Rao</b> , Jian Yu	187
<b>Palmer</b> , Jen	12	<b>Raz</b> , Michal	85
<b>Parham</b> , David	171	<b>Reid</b> , R Clay	14
<b>Parisi</b> , Joseph E.	20, 21, 88, 129	<b>Reininger</b> , Cornelia	27
<b>Partap</b> , Sonia	93	<b>Reyes</b> , Christine	148
<b>Patel</b> , Mitesh V.	58	<b>Rheinbay</b> , Esther	115
<b>Patel</b> , Ela	66	<b>Richardson</b> , Rose M.	61, 164
<b>Paterson</b> , David S.	48	<b>Riley</b> , Meghan	170
<b>Pathak</b> , Pankaj	116	<b>Ringman</b> , John M.	56
<b>Pawel</b> , Bruce	182	<b>Risacher</b> , Shannon	31,55, 124
<b>Payner</b> , Troy D.	189	<b>Riudavets</b> , Miguel A.	40, 91, 169
<b>Peragallo</b> , Jason	150	<b>Rivera</b> , Andreana	91
<b>Perry</b> , George	11, 123	<b>Rivera-Zengotita</b> , Marie	84, 159
<b>Perry</b> , Arie	3, 110, 118	<b>Robbins</b> , Gregory K.	135
<b>Petersen</b> , Ronald C.	129	<b>Robert</b> , Skoff	44
<b>Peterson</b> , Jo Elle G.	91	<b>Robertson</b> , Janice	126
<b>Pham</b> , Tracie	42, 67,141, 150, 187	<b>Robinson</b> , Aaron	6
<b>Philips</b> , Richard E.	130	<b>Rodriguez</b> , Fausto J.	81, 110, 112, 120
<b>Phillips</b> , Joanna J.	3, 6, 118	<b>Rogaeva</b> , Ekaterina	126
<b>Pia Patrick</b> , Irene Rosita	116	<b>Rogg</b> , Jeffrey	35
<b>Picard</b> , Capucine	51	<b>Rognum</b> , Ingvar J.	48
<b>Piccardo</b> , Pedro	164	<b>Roher</b> , Alex E.	143
<b>Pierson</b> , Christopher R.	102	<b>Rojiani</b> , Aryn M.	23
<b>Pinto</b> , Anna	41	<b>Rojiani</b> , Mumtaz V.	23
<b>Pittock</b> , Sean J.	21	<b>Rook</b> , Jerri M.	82
<b>Pletnikova</b> , Olga	68	<b>Rosenblum</b> , Marc K.	110, 183
<b>Poduri</b> , Annapurna	41	<b>Ross</b> , Jennifer L.	174
<b>Podvin</b> , Sonia	139	<b>Ross</b> , Jeffrey	96, 180
<b>Polgar</b> , Peter	15	<b>Rossi</b> , Ryan	139
<b>Pollack</b> , Ania G.	167	<b>Roth</b> , Katrin	27
<b>Poon</b> , Wayne	56	<b>Rottunda</b> , Susan J.	152
<b>Pope</b> , Whitney B.	97	<b>Roumis</b> , Demetris K.	14
<b>Popescu</b> , Bogdan	20, 21	<b>Rudow</b> , Gay	16
<b>Popov</b> , Sergey	4	<b>Rushing</b> , Elisabeth	169
<b>Pouratian</b> , Nader	149	<b>Rutherford</b> , Nicola J.	13, 69, 71
<b>Powell</b> , Suzanne Z.	91, 113	<b>Ryan</b> , Maura	109
<b>Power</b> , Christopher	24	<b>Sabbagh</b> , Marwan	27, 128, 143
<b>Prabhu</b> , Sanjav	41	<b>Sabri</b> , Osama	27
<b>Punchihewa</b> , Chandanamali	111	<b>Sadler</b> , Gill	4
<b>Purohit</b> , Dushyant P.	9	<b>Sahin</b> , Mustafa	41
<b>Putt</b> , Mary E.	18	<b>Salloum</b> , Ibrahim	139
<b>Pytel</b> , Peter	1	<b>Sambamurti</b> , Kumar	26
<b>Qaddoumi</b> , Ibrahim	111	<b>Sammata</b> , Neeraja	26, 75, 151
<b>Qian</b> , Jiang	96, 180	<b>Sanchez</b> , Desiree	141
<b>Qiu</b> , Jingxin	75, 168, 194	<b>Sano</b> , Mary	9
<b>Rabins</b> , Peter V.	68	<b>SantaCruz</b> , Karen S.	152
<b>Rademakers</b> , Rosa	13, 69, 71,129	<b>Santi</b> , Mariarita	118
<b>Raheja</b> , Divisha	146	<b>Sarkar</b> , Chitra	116
<b>Rajaram</b> , Amit	62	<b>Saugier-veber</b> , Pascale	17
<b>Rajaram</b> , Veena	86, 109	<b>Savonenko</b> , Alena	16
<b>Ram</b> , Zvi	85	<b>Saykin</b> , Andrew J.	31, 55, 124
<b>Ramachandran</b> , Anu	62	<b>Scaglia</b> , Fernando	101
<b>Ramirez</b> , R Liane	155	<b>Scheithauer</b> , Bernd W.	88
<b>Ramsey</b> , Robert	81	<b>Schissler</b> , Kathryn C.	43

<b>Schmid</b> , Ralf S.	114		<b>Stogner-Underwood</b> ,	
<b>Schmidt</b> , Robert E.	137		Kimberly A.	132, 188
<b>Schulder</b> , Michael	8		<b>Stolzenberg</b> , Ethan	171
<b>Schulz-Schaeffer</b> , Walter J.	27		<b>Stone</b> , John H.	37, 176
<b>Schutten</b> , Martin	130		<b>Stoos</b> , Catherine T.	43
<b>Schwartz</b> , Kenneth A.	79		<b>Stopa</b> , Edward G.	139
<b>Sedney</b> , Cara L.	131		<b>Stricker</b> , Thomas	1
<b>Seibyl</b> , John	27		<b>Sue</b> , Lucia I.	128, 143
<b>Serie</b> , Daniel	122		<b>Sullivan</b> , Lisa M.	118
<b>Serrano</b> , Geidy	128		<b>Sumner</b> , Heather M.	163
<b>Seshadri</b> , Sudha	15		<b>Suri</b> , Vaishali	116
<b>Seta</b> , Nathalie	106		<b>Suri</b> , Ashish	116
<b>Sevlever</b> , Gustavo	40, 169		<b>Suvà</b> , Mario L.	115
<b>Shaik</b> , Fatima	63		<b>Suzuki</b> , Mikiya	153
<b>Sharma</b> , Mehar Chand	116		<b>Sviderskaya</b> , Lidia	38
<b>Shatz</b> , Carla J.	14		<b>Sweadner</b> , Kathleen J.	166
<b>Sheehan</b> , Christine	96, 180		<b>Swerdlow</b> , Russell	161
<b>Sheer</b> , Denise	111		<b>Tadanori</b> , Tomita	86
<b>Shen</b> , Peter U	190		<b>Takada</b> , Mariko	153
<b>Shen</b> , Ronglai	117		<b>Takahashi</b> , Kristina	42, 67
<b>Shen</b> , Hua	125		<b>Takao</b> , Masaki	27, 31, 56, 153
<b>Shen</b> , Baiyang	11		<b>Takasumi</b> , Yuki	187
<b>Shieh</b> , Perry	149, 150		<b>Takei</b> , Hidehiro	83, 91
<b>Shih</b> , Chie-Schin	46		<b>Takeoka</b> , Masanori	41
<b>Shill</b> , Holly A.	128, 143		<b>Taleb</b> , Soraya	51
<b>Shimizu</b> , Taiyo	193		<b>Tanaka</b> , Tomoko	133
<b>Shiple</b> , David A.	105		<b>Tandon</b> , Nitin	83
<b>Shurtleff</b> , Sheila	111		<b>Tang</b> , Bo	111
<b>Sibtain</b> , Naomi	4		<b>Taratuto</b> , Ana Lia	169
<b>Siddiqui</b> , Fazeel M.	103		<b>Tarawneh</b> , Rawan M.	137
<b>Sima</b> , Anders	44		<b>Tatevossian</b> , Ruth G.	111
<b>Simard</b> , J Marc	54		<b>Tauer</b> , Aaron	177
<b>Simon</b> , Lindsay	36		<b>Taylor-Reinwald</b> , Lisa	59
<b>Simonet</b> , Jacqueline C	18		<b>Teich</b> , Andrew Franklin	58
<b>Sitton</b> , Clark	83		<b>Tesi-Rocha</b> , Caroline	148
<b>Slavin</b> , Justin	25		<b>Thompson</b> , Craig B	118
<b>Sloane</b> , Kelly L.	68		<b>Thybulle</b> , Mona Lisa	9
<b>Smirnov</b> , Ivan	6		<b>Tihan</b> , Tarik	118
<b>Smith</b> , Jody L.	92		<b>Tosun</b> , Cigdem	54
<b>Smith</b> , Kimberly	23		<b>Tracy</b> , Molly	35
<b>Soffer</b> , Dov	85		<b>Tran</b> , Diep	113
<b>Somasundaram</b> , Kumaravel	116		<b>Trapp</b> , Bruce D.	22, 38
<b>Song</b> , Xianyuan		190	<b>Traynor</b> , Bryan J	68
<b>Song</b> , Sheng-Kwei	125		<b>Troncoso</b> , Juan C.	16, 68
<b>Sosnowski</b> , Jeffrey	138		<b>Tung</b> , Spencer	67
<b>Specht</b> , Charles	50, 146, 170,179		<b>Tyree</b> , Tammy L.	191
<b>Spina</b> , Salvatore	31, 72, 73, 61,127		<b>Umeh</b> , Chizoba C.	160
<b>Spurgeon</b> , Angela	133		<b>Unverzagt</b> , Frederick W.	31, 55, 72, 73, 162
<b>Stauffer</b> , Mark	10		<b>Valyi-Nagy</b> , Tibor	134
<b>Staugaitis</b> , Susan M.	22, 38		<b>Valyi-Nagy</b> , Klara	134
<b>Stein</b> , Thor D.	65		<b>Vanderburg</b> , Charles	15
<b>Stellpflug</b> , Wendy	86		<b>Venneti</b> , Sriram	118, 182
<b>Stemmer-Rachamimov</b> , Anat	37		<b>Verity</b> , Anthony M.	149, 150
<b>Stern</b> , Jessica	109		<b>Vidal</b> , Ruben	26, 29, 75, 151
			<b>Vieira Neto</b> , Leonardo	175

<b>Vincentelli, Cristina</b>	173	<b>Yu, Guo-Yun</b>	32
<b>Vinters, Harry V.</b>	42, 67, 97, 141, 150	<b>Zadeh, Gelareh</b>	3
<b>Viola, Marissa G.</b>	99, 102	<b>Zagzag, David</b>	112, 142
<b>Vitucci, Mark</b>	114	<b>Zalatimo, Omar</b>	179
<b>Vogel, Todd D.</b>	189	<b>Zeng, Jianying</b>	63
<b>Vogel, Hannes</b>	93	<b>Zhang, Ming</b>	181
<b>von der Hagen, Maja</b>	103	<b>Zhang, Xinmin</b>	8
<b>Vuillaumier, Sandrine</b>	106	<b>Zhang, Ke</b>	142
<b>Walker, Douglas G.</b>	143	<b>Zhao, Lili</b>	7
<b>Walsh, Meggen</b>	87	<b>Zhao, Lichao</b>	171
<b>Wang, Sijie J</b>	145	<b>Zheng, Qi-Huang</b>	124
<b>Wang, Zoe</b>	36	<b>Zhou, Shengmei</b>	3
<b>Wang, Xinglong</b>	11, 123	<b>Zhu, Xiongwei</b>	11, 123
<b>Warren, Garth</b>	33	<b>Zhu, Jay-Jiguang</b>	83
<b>Weaver, Michael</b>	181	<b>Zinman, Lorne</b>	126
<b>Weinstein, Joel</b>	50		
<b>Weintraub, Sandra</b>	56		
<b>Wells, Jason</b>	50, 179		
<b>White, Charles L.</b>	39, 154, 177		
<b>White, Ian K.</b>	92		
<b>Wicklund, Matthew</b>	146		
<b>Widrick, Jeffrey J.</b>	102		
<b>Wiens, Andrea L.</b>	61, 95, 162, 164, 192		
<b>Wiley, Clayton A.</b>	10		
<b>Wilkerson, Sean</b>	119		
<b>William, Christopher M.</b>	14		
<b>Williams, Celia</b>	62		
<b>Wilson, Ryan W.</b>	141		
<b>Wilson-Delfosse, Amy</b>	123		
<b>Winder, Thomas L.</b>	103, 148		
<b>Woltjer, Randall</b>	33		
<b>Wong, Lee-Jun</b>	101		
<b>Wood, Brian R.</b>	130		
<b>Wu, Qian</b>	145		
<b>Wu, William</b>	142		
<b>Wu, Peter</b>	45		
<b>Xia, Guang-bin</b>	159		
<b>Xie, Mingqiang</b>	125		
<b>Xing, Fuyong</b>	87		
<b>Xiong, Zhenggang</b>	176		
<b>Yachnis, Anthony T.</b>	84, 159		
<b>Yan, Xiaoling</b>	88		
<b>Yan, Michael H.</b>	123		
<b>Yang, Lin</b>	87		
<b>Yegnasubramanian, Srinivasan</b>	2		
<b>Yi, Jennifer S.</b>	150		
<b>Yoder, Karmen K.</b>	31, 55, 124		
<b>Yong, V. Wee</b>	24		
<b>Yong, William H.</b>	42, 97, 141, 150, 187		
<b>Yoo, Janet</b>	36		
<b>Yoshida, Yoji</b>	153		
<b>Young, Beverly</b>	126		