## PROGRAM

# EIGHTY SIXTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS

JUNE 10-13, 2010

## LOEWS PHILADELPHIA HOTEL

## PHILADELPHIA, PENNSYLVANIA

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 216-368-3671 or via email at aanp@case.edu

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## AMERICAN ASSOCIATION OF NEUROPATHOLOGISTS

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### **DIAGNOSTIC SLIDE SESSION**

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## TARGET AUDIENCE

The educational design of this activity addresses the needs of physicians and scientist in the field of neuropathology involved in the diagnosis and/or treatment of patients with neurological disorders.

## NEEDS STATEMENT

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

## **OVERALL EDUCATIONAL OBJECTIVES**

After completing this activity, the participant should be better able to:

- 1. Cite new information on the pathological basis of neurological diseases.
- 2. Explain new information on the practical laboratory diagnosis of neurological diseases.
- 3. Discuss the changing role neuropathologists play in the study and diagnosis of neurological diseases.

## DISCLAIMER

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented is 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 on 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 educational activity for a maximum of 24.5 *AMA PRA Category 1 Credits*<sup>TM</sup>. Physicians should only claim credit commensurate with the extent of their participation in the activity. 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.

Activity	CME Credit Hours
Special Course	6.5
Scientific Sessions	Platform=8; Posters = 2
Korey Lecture	1
DeArmond Lecture	1
Diagnostic Slide Session	3
Presidential Symposium	3
Total	24.5

## 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 do 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.

## Attendees should claim credit only for those activities attended:

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 Case Western Reserve University 2103 Cornell Road, WRB 5101 Cleveland, OH 44106

## **DISCLOSURE/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.

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General Hospital       Valentina Caracciolo, Temple University       None         Philadelphia       None       None         Rudy Castellani, University of Maryland       None       None         Karla Castellano, University of Illinois at Chicago       None       None         Giovanna Cenacchi, University of Illinois at Chicago       None       None         Stephen Coons, Barrow Neurological Institute       Advisory Board for Global Media       John Crary, Columbia University         John Crary, Columbia University of Toronto       None       None         Peter Cummings, Office of the Chief Medical Examiner, Boston, MA       None       None         Joseph Dalmau, University of Pennsylvania       Research support from Euroimmun, Inc.       Suzanne de la Monte, Rhode Island Hospital       None         Marc Del Bigio, University of Manitoba       None       None       None         John Donahue, Rhode Island Hospital       None       None       Sternline Therapeutics         David Ellison, St. Jude Children's Research       None       None       Phyllis Faust, Columbia University         None       Phyllis Faust, Columbia University       None       None       Phyllis Faust, Columbia University         David Ellison, St. Jude Children's Research       None       None       Phyllis Faust, Columbia University         Mic		
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Karla Castellanos, University of Illinois at ChicagoNoneGiovanna Cenacchi, University of BolognaNoneHoward Chang, Michigan State UniversityNoneStephen Coons, Barrow Neurological InstituteAdvisory Board for Global MediaJohn Crary, Columbia UniversityNoneSidney Croul, University of TorontoNonePeter Cummings, Office of the Chief MedicalNoneExaminer, Boston, MANoneJoseph Dalmau, University of PennsylvaniaResearch support from Euroimmun, Inc.Suzanne de la Monte, Rhode Island HospitalNoneJorn Denahue, Rhode Island HospitalNoneMarc Del Bigio, University of ManitobaNoneSteven Dubner, Northwestern Memorial HospitalNoneCharles Eberhart, John Hopkins UniversityConsultant and Licensing agreement with Stemline TherapeuticsDavid Ellison, St. Jude Children's Research HospitalNoneMichael Farrell, Beaumont HospitalNonePhyllis Faust, Columbia UniversityNoneYakov Fellig, Hadassah-Hebrew University Medical CenterNoneMacta CanterNoneRebecca Folkerth, Brigham and Woman'sNone	Rudy Castellani, University of Maryland	None
Giovanna Cenacchi, Universita' di BolognaNoneHoward Chang, Michigan State UniversityNoneStephen Coons, Barrow Neurological InstituteAdvisory Board for Global MediaJohn Crary, Columbia UniversityNoneSidney Croul, University of TorontoNonePeter Cummings, Office of the Chief MedicalNoneExaminer, Boston, MANoneJoseph Dalmau, University of PennsylvaniaResearch support from Euroimmun, Inc.Suzanne de la Monte, Rhode Island HospitalNoneMerc Del Bigio, University of ManitobaNoneMarc Del Bigio, University of ManitobaNoneJohn Donahue, Rhode Island HospitalNoneSteven Dubner, Northwestern Memorial HospitalNoneCharles Eberhart, John Hopkins UniversityConsultant and Licensing agreement with Stemline TherapeuticsDavid Ellison, St. Jude Children's Research HospitalNoneMichael Farrell, Beaumont HospitalNonePhyllis Faust, Columbia UniversityNoneYakov Fellig, Hadassah-Hebrew UniversityNoneYakov Fellig, Hadassah-Hebrew UniversityNoneAdam Fleming, British Columbia Children's HospitalNoneRebecca Folkerth, Brigham and Woman'sNone	Karla Castellanos, University of Illinois at	None
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Sayaka Funabe, Tokyo Metropolitan Geriatric       None         Hospital & Institute of Gerontology       None         Felix Geser, University of Pennsylvania       None         Bernardino Ghetti, Indiana University       None         Caterina Giannini, Mayo Clinic College of       None         Mark Gilbert, MD Anderson Cancer Center       Research support and honorariums from Merck and Genentech         Murat Godden, University of Arkansas       None         Todd Golde, Mayo Clinic       Consultant and Research Support: Satoris, Lundbeck.         Francoise Gray, Höpital Lariboisiére       None         Medical Center       None         Katarzyna Gustaw-Rothenberg, Case Western       None         Medical Center       None         Matthew Hagen, Indiana University St. Louis       None         Medicine       None         Bernardt, University of Texas       Consultant for Biosite         Southwestern Medical Center       Consultant for Biosite         Southwestern Medical School       None         Jina Hawkins, The Hospital for Sick Children       None         Jonathan Heath, University of Maryland       None         Jonathan Heath, University of Maryland       None         Mastering, Penn State – Hershey Medical       None         Kenneth Hutchins, Miami Dade Coun	Name of Faculty/Presenter	Reported Financial Relationship
Hospital & Institute of Gerontology         Felix Geser, University of Pennsylvania       None         Felice Giangaspero, University of Sapienza       None         Caterina Giannini, Mayo Clinic College of       None         Mark Gilbert, MD Anderson Cancer Center       Research support and honorariums from Merck and Genentech         Murat Gokden, University of Arkansas       None         Todd Golde, Mayo Clinic       Consultant and Research Support: Satoris, Lundbeck         Francoise Gray, Hôpital Lariboisiére       None         Reserve University of California Davis       None         Katarzyna Gustaw-Rothenberg, Case Western       None         Matthew Hagen, Indiana University School of       None         Metthey Hagen, Indiana University School of       None         Matthew Hagen, Indiana University School of       None         Jonathan Heath, University of Toronto       None         Jonathan Heath, University of Toronto       None         Jonathan Heath, Nurversity of Maryland       None         Kenneth Hutchins, Miami Dade County Medical       None         Kenneth Hutchins, Miami Dade County Medical		
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Matthew Hagen, Indiana University School of Medicine       None         Brent Harris, Dartmouth Medical School       Research support – Reata Pharmaceuticals Inc.         Kimmo Hatanpaa, University of Texas Southwestern Medical Center       Consultant for Biosite         Cynthia Hawkins, The Hospital for Sick Children       None         Lli-Naz Hazrati, University of Toronto       None         Jonathan Heath, University of Maryland       None         Jonathan Heath, University of Maryland       None         Hispital, Harvard Medical School       None         Mark Hiken, Oregon Health & Science University       None         Jason Huse, Memorial Sloan-Kettering Cancer Center       None         Kenneth Hutchins, Miami Dade County Medical Examiner Department       None         Boro Ilievski, New York State Psychiatric Institute       None         Michael Jansen, Massachusetts General Hospital       None         Kur Jang, Penn State – Hershey Medical Center       None         Karen Johnson, Indiana University School of Medicine       None         Alexander Judkins, Children's Hospital of Philadelphia       None         Christos Katsetos, Drexell University College of Medicine and St. Christopher's Hospital for Children       None         Syed Kazmi, University of Nebraska Medical       None		
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Cynthia Hawkins, The Hospital for Sick ChildrenNoneLili-Naz Hazrati, University of TorontoNoneJonathan Heath, University of MarylandNoneElizabeth Petri Henske, Brigham and Women's Hospital, Harvard Medical SchoolNoneMark Hiken, Oregon Health & Science UniversityNoneJason Huse, Memorial Sloan-Kettering Cancer CenterNoneKenneth Hutchins, Miami Dade County Medical Examiner DepartmentNoneBoro Ilievski, New York State Psychiatric InstituteNoneMichael Jansen, Massachusetts General HospitalNoneKaren Johnson, Indiana University School of MedicineNoneMahlon Johnson, University of Rochester School of MedicineNoneAlexander Judkins, Children's Hospital for Christos Katsetos, Drexell University College of Medicine and St. Christopher's Hospital for ChildrenNoneSyed Kazmi, University of Nebraska MedicalNone		
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Syed Kazmi, University of Nebraska Medical None		
	Syed Kazmi, University of Nebraska Medical	None

Name of Faculty/Presenter	Reported Financial Relationship
Keyla <b>Kleyser-Sugrue</b> , Hartford Hospital	None
Julia Kofler, University of Pittsburgh	None
Wataru <b>Kudo</b> , Case Western Reserve University	None
Sunhee Lee, Albert Einstein College of Medicine	None
Edward Lee, University of Pennsylvania	None
Hyunpil Lee, Case Western Reserve University	None
Katherine Lindstrom, University of Virginia	None
Jian-Qiang Lu, University of Alberta	None
Branavan Manoranjan, McMaster Unviersity	None
Sarah Martin, Indiana University School of Medicine	None
Ann <b>McKee</b> , Bedford VAMC/Boston University School of Medicine	None
Rupal <b>Mehta</b> , University of California Los Angeles	None
C. Miller, University of North Carolina	None
Carol <b>Miller</b> , University of Southern California School of Medicine	None
Douglas <b>Miller</b> , University of Missouri School of Medicine	None
Wael Milyani, West Virginia University	None
Manjari <b>Mishra</b> , Northwestrn Cognitive Neurology and Alzheimer Disease Center	None
Bret <b>Mobley</b> , Stanford Hospital Pathology	None
Patricia Moody, University of South Florida	None
Abir Mukherjee, The Methodist Hospital	None
Karra <b>Muller</b> , University of Kansas Medical Center	None
David <b>Munoz</b> , St. Michael's Hospital, University of Toronto	None
Peter <b>Nelson</b> , University of Kentucky	None
Kathy Newell, University of Kansas Medical Center	None
Hilary <b>Nickols</b> , Vanderbilt University	None
Angeliki <b>Nikolakopoulou</b> , Mount Sinai School of Medicine	None
Brent <b>Orr</b> , The Johns Hopkins Medical Institutions	None
Bogdan F. <b>Papescu</b> , Mayo Clinic	None
Wener <b>Paulus</b> , University Hospital Münster	None
Arie <b>Perry</b> , Washington University School of Medicine	None
Joanna <b>Phillips</b> , University of California San Francisco	None
Christopher <b>Pierson</b> , Nationwide Children's Hospital and Ohio State University	None
Scott <b>Plotkin</b> , Massachusetts General Hospital	Research Support from PTC Therapeutics
Gianfranco <b>Puoti</b> , Case Western Reserve University	None
Jiang <b>Qian</b> , Albany Medical College	None

Name of Faculty/Presenter	Reported Financial Relationship
Shakti Ramkissoon, Brigham and Women's	None
Hospital	
Tamas Revesz, University College of London	Consultant MerckSerono, Research Support
	Orion Pharma
Roy Rhodes, Robert Wood Johnson Medical	None
School	
Miguel Riudavets, FLENI	None
Fausto Rodriguez, Mayo Clinic	None
Amyn <b>Rojiani</b> , Medical College of Georgia	Advisory boards for Roche Diagnostics/Ventanna
	Medical Systems Inc. and Eisai Pharmaceuticals
Erin <b>Rowe</b> , University of Connecticut Health Center	None
Mariarita <b>Santi</b> , Children's Hospital of Philadelphia	None
Peter Saunders, Baystate Medical Center	None
Bernd W. Scheithauer, Mayo Clinic	None
Gustavo Sevlever, FLENI	None
Leroy Sharer, UMD-New Jersey Medical School	None
Suash Sharma, Medical College of Georgia	None
Julia Shields, University of Maryland	None
Namita Sinha, University of Toronto	None
Mark A. Smith, Case Western Reserve	Speakers Bureau Medivation/Pfizer; Consultant
University	Advana Science, Avanex Life Sciences and
	Medivation; Stockholder Neurotez, Panacea and
	Voyager; CSO Neurotez
Matija <b>Snuderl</b> , Massachusetts General Hospital	None
Xianyuan Song, Hartford Hospital	None
Virawudh <b>Soontornniyomkij</b> , University of California San Diego	None
Charles <b>Specht</b> , Penn State-Hershey Medical Center	None
Jennifer <b>Stall</b> , Indiana University School of Medicine	Speakers Bureau Eisai
Thor Stein, Massachusetts General Hospital	None
Anat Stemmer-Rachamimov, Massachusetts	None
General Hospital	
Kimberly Stogner-Underwood, Virginia	None
Commonwealth University Health System	
Jeremy Stone, Case Western Reserve University	None
Yasuo Sugita, Kurume University School of	None
Medicine	
Masaki Takao, Mihara Memorial Hospital	None
Ana Lia Taratuto, Institute for Neurological	None
Research, FLENI	
Dimitri Trembath, University of North Carolina	None
Spencer <b>Tung</b> , University of California Los	None
Angeles	
Tibor Valyi-Nagy, University of Illinois Medical	None
Center	

Scott R. VandenBerg, University of California	None
San Diego	
Sriram Venneti, University of Pennsylvania	None
Harry V. Vinters, University of California Los	None
Angeles	
Mark Vitucci, University of North Carolina	None
Fulin Wang, Chinese PLA General Hospital	None
Karen Weidenheim, Montefiore Medical Center	None
Cecilia Wu, University of New Mexico	None
Gang Xu, Children's Hospital of Boston and	None
Harvard Medical School	
David <b>Zagzag</b> , New York University	None

## **GENERAL INFORMATION**

Hotel: Loews Philadelphia Hotel 1200 Market Street Philadelphia, Pennsylvannia 19107

Phone: 215-627-1200

## ALL MEETING SESSIONS WILL BE HELD AT THE LOEWS PHILADELPHIA HOTEL

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

All poster sessions will be held in Regency C Ballroom on the second floor mezzanine.

## 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, reception ticket(s) and registration receipt ready for pickup at the AANP Registration Desk, located in the Regency Foyer of the hotel on the second floor mezzanine. On-site registration, additional tickets for the Annual Reception, and additional copies of the May 2010 JNEN will be available at the Desk.

## **REGISTRATION DESK**

Location	Regency Foyer	
Time	Thursday, June 10	6:30 am - 12 noon
		6:30 pm – 9:00 pm
	Friday, June 11	7:00 am - 12 noon
		5:30 pm – 6:00 pm
	Saturday, June 12	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 **Regency Ballroom A or B** of the hotel. *All* general sessions (Special Lecture, Korey Lecture, Business Meetings, Diagnostic Slide Session, and Presidential Symposium) will be held in the **Regency Ballroom B**.

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, Regency Ballroom A or B, 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. These will be the <u>only</u> times available to you to load and test your presentation.

Load show computer in Regency A or B	
Thursday, June 10	6:45 am - 7:45 am
	5:30 pm - 6:30 pm
Friday, June 11	6:45 am - 7:45 am
	6:00 pm - 7:00 pm
Saturday, June 12	6:45 am – 7:45 am
	6:30 pm – 7:45 pm (Congress Room, 4 <sup>th</sup> Floor)
Sunday, June 13	6:45 am - 7:45 am

## Schedule for Loading PowerPoint Presentations

- 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 Congress Room on the fourth floor 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

**All** poster sessions will be held in **Regency Ballroom C.** Posters will be displayed all day Friday (Poster Session I) and all day Saturday (Poster Session II). Posters should be up by 8:00 am and taken down by 6:30 pm the same day. The poster board size is 6 ft wide x 3 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 are asked to be present at their posters for discussion/questions during morning or afternoon refreshment breaks, at the following designated times:

	Fri June 11 Poster Session I Authors Present at:	Sat June 12 Poster Session II Authors Present at:
EVEN Numbered Poster	10:00 - 10:30 am	4:00 – 4:30 pm
ODD Numbered Poster	4:00 – 4:30 pm	10:00 - 10:30 am

## SPEAKER READY ROOM

Electronic preview equipment will be available in the *Tubman Room* on the third floor of the hotel.

Location	Tubman Room	
Time	Wednesday, June 9	7:00 pm - 9:00 pm
	Thursday, June 10	7:00 am - 5:30 pm
	Friday, June 11	7:00 am - 5:30 pm
	Saturday June 12	7:00 am - 5:30 pm

## **MICROSCOPE VIEWING ROOM**

Multi-headed microscopes will be available in the *Anthony Room* on the third floor of the hotel.

Location	Anthony Room	
Time	Thursday, June 10	7:00 am - 5:30 pm
	Friday, June 11	7:00 am - 5:30 pm
	Saturday June 12	7:00 am - 5:30 pm

## **BUSINESS MEETING**

Location	Regency Ballroom B	
Time	Friday, June 11	11:45 am - 12:45 pm
	Saturday June 12	11:45 am – 12:45 pm

The Award for *Meritorious Contributions to Neuropathology* will be presented on Friday, June 11.

## SPECIAL MEETINGS BY INVITATION ONLY

Date	Meeting	Time/Location
Thurs	Executive Council Meeting	6:00 pm
June 10		Lescaze Room, 33 <sup>rd</sup> floor of the hotel
Fri	Constitution Committee Meeting	7:00 am
June 11		Solefood restaurant
	JNEN Editorial Board Meeting	7:00 am
		Lescaze Room, 33 <sup>rd</sup> floor of the hotel
	Trainee Luncheon	12:45 pm – 2:00 pm
		Lescaze Room, 33 <sup>rd</sup> floor of the hotel
	Awards Committee Meeting	5:30 pm – 6:30 pm
		Solstice Private Dining Room
Saturday	NP Program Directors Meeting	1:00 pm – 2:00 pm
June 12		Roberts Boardroom
	Awards Committee Meeting	6:00 pm 7:30 pm
		Lescaze Room, 33 <sup>rd</sup> floor of the hotel
	Professional Affairs	6:00 pm – 8:00 pm
		Roberts Boardroom, 33 <sup>rd</sup> floor of the hotel
	Presidential Reception	6:30 pm – 8:00 pm
		Solstice Private Dining Room
Sun	Founders Breakfast	7:00 am – 8:00 am
June 13		Roberts Boardroom, 33 <sup>rd</sup> floor of the hotel

## ABSTRACTS

Abstracts of the papers presented in the program are published in the May 2010 issue of the *Journal* of *Neuropathology and Experimental Neurology*. Separate abstract books are not printed. Members should take their copy of the JNEN to the meeting. Non-member registrants will receive a copy at registration. A limited number of copies of the JNEN will be available for purchase at the Registration Desk for \$5 each.

## ANNUAL RECEPTION

The annual reception will be held 6:30 to 8:30 pm. Friday on the Thirty-Third floor of the hotel. Registrants and guests of the AANP are welcome to attend. There will be an open bar for the first 1.5 hours followed by a cash bar. Additional tickets are \$20 each for guests of AANP attendees, and may be purchased at the registration desk or at the door. Several "prizes" will be awarded to trainees.

Location	33 <sup>rd</sup> Floor	
Time	Friday, June 11	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 Regency Foyer

Location	Regency Foyer	
Time	Thursday, June 10	12:00 pm – 5:30 pm
	Friday, June 11	7:00 am - 5:30 pm
	Saturday June 12	7:00 am - 5:30 pm

## **MEETING EXHIBITORS**

- Eisai Corportation
- iKaryos Diagnostics
- Wolter Kluwers Health
- Optical Apparatus Co. Inc.

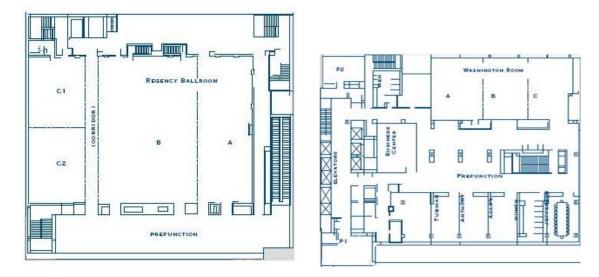
## **RECEPTION PRIZE CONTRIBUTORS**

- Mosby/Saunders/Elsevier
- Wiley-Blackwell

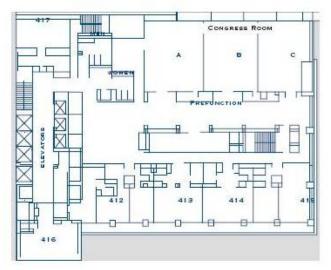
## Loews Philadelphia Hotel Floor Plan

## Second Floor





Fourth Floor



## **PROGRAM and SCIENTIFIC SESSIONS**

## SPECIAL COURSE:

Location	Regency Ballroom B	
Date/Time	Thursday, June 10	8:00 am - 5:15 pm
	Hereditary Tumor Syndromes of the Net Biological Updates.	rvous System: Clinical, Pathological and
		Directors: David N. Louis, MD
		and Anat Stemmer-Rachamimov, MD

## PLATFORM PRESENTATIONS

Location	Regency Ballroom A & B	
Date/Time	Friday, June 11	8:00 am – 4:30 pm
	Saturday, June 12	8:00 am – 4:30 pm

## POSTER PRESENTATIONS

Location	Regency Ballroom C	
Date/Time	Friday, June 11 (Poster Session I)	8:00 am – 6:30 pm
	Saturday, June 12 (Poster Session II)	8:00 am – 6:30 pm

## SAUL R. KOREY LECTURE

Location	Regency Ballroom B	
Date/Time	Friday, June 11	10:30 am - 11:30 am
	A Long Term Perspective on Pediatric CNS Tumors	
	Peter C. Burger, MD	
	John Hopkir	ns University, Baltimore, Maryland, USA

## DEARMOND LECTURE

Regency Ballroom B	
Saturday, June 12	4:30 pm – 5:30 pm
Alzheimer's Disease: Models and Therapeutics	
Todd Golde, MD	
	Mayo Clinic, Jacksonville, Florida, USA
	Saturday, June 12

## **DIAGNOSTIC SLIDE SESSION**

Location	Congress Room on the 4 <sup>th</sup> Floor	
Date/Time	Saturday, June 12	8:00 pm -11:00 pm

## PRESIDENTIAL SYMPOSIUM

Location	Regency Ballroom B	
Date/Time	Sunday, June 13	8:00 am – 12 noon
	"Big Science" And The Transition To P Neuropathologists Play Roles In Large Research?	ersonalized Medicine: How Can -Scale Clinical, Translational And Basic

## MEETING AT A GLANCE

THURSDAY June 10, 2010		
	Regency Ballroom B	
8:00 am - 5:15 pm	SPECIAL COURSE	
	Hereditary Tumor Syndromes of the Nervous System: Clinical, Pathological and Biological Updates.	

## (Abstract Numbers in Italics)

		FRIDAY June 11	, 2010
	Regency Ballroom A	Regency Ballroom B	Regency Ballroom C
8:00 - 10:00 am	Platform 1 Tumors- Glial	Platform 2 Neurodegenerative – Alzheimer's Diease	
	#1 - 8	#9 - 16	
10:00 - 10:30 am		IMENT BREAK	
10:30 - 11:30 am		TBA	
	John Hopkins	Peter C. Burger, MD University, Baltimore MD, USA	
11:45 - 12:45 pm		<b>SS MEETING</b> I y Ballroom B	
12:45 - 2:00 pm		UNCH	
	Regency Ballroom A	Regency Ballroom B	
2:00 - 4:00 pm	Platform 3 Inflammatory/Infectious	Platform 4 Tumors- Pediatric	All Posters
	#17-24	#25 -32	CME Credit offered for participation at the following times:
4:00 – 4:30 pm	REFRESH	IMENT BREAK	Friday June 12 <sup>th</sup> and Saturday June 13 <sup>th</sup> 10:00 – 10:30 am
4:30 – 6:00 pm	(Not Offered (Not Offered The Origins of Neurology - States: A Philadelphia Sto <i>University of F</i> The Origins of Pathology - States: A Boston Story <i>Massachusett</i> History of the AANP <i>Unive</i>	europathology in the United Sates for CME Credit) Neuropathology in the United ry <i>Arthur K. Asbury, MD</i> Pennsylvania, Philadelphia, PA Neuropathology in the United David N. Louis, MD, PhD s General Hospital, Boston, MA Michael N. Hart, MD rsity of Wisconsin, Madison, WI	4:00 - 4:30 pm

6:30 - 8:30 pm ANNUAL RECEPTION: Thirty-Third Floor of the Hotel

## **MEETING AT A GLANCE**

## (Abstract Numbers in Italics)

		SATURDAY Jun	e 12, 2010
	Regency Ballroom A	Regency Ballroom B	Regency Ballroom C
8:00 -	Platform 5	Platform 6	
10:00 am	Neurodegenerative – Prions/Other	Pediatric Neuropathology	
	#81-88	#89-96	
10:00 -	REFRESH	IMENT BREAK	
<i>10:30 am</i>			
10:30 -			
11:30 am	DUCINE		
11:45 - 12:45 pm		S MEETING II	
12:45 pm 12:45 -	0 .	y Ballroom B UNCH	
12.45 - 2:00pm	L	DINCIT	All Posters
2.00pm	Regency Ballroom A	Regency Ballroom B	CME Credit offered for participation at the following times:
2:00 -	Platform 7	Platform 8	Friday June 12 <sup>th</sup> and Saturday June 13 <sup>th</sup>
4:00 pm	Neuropathology - Miscellaneous	Tumors - Nonglial	10:00 – 10:30 am 4:00 - 4:30 pm
	#97-104	#105-112	
4:00 - 4:30 pm	REFRESHMENT BREAK		
4:30 -	DEARMOND LECTURE		
5:30 pm	Alzheimer's Disease: Models and Therapeutics		
		Todd Golde, MD	
		yo Clinic, Jacksonville, FL, USA	
8:00 -		SLIDE SESSION	
11:00 pm	Congress Ro	oom, Fourth Floor	

SUNDAY June 13, 2010		
	Regency Ballroom B	
8:00 am - 12:00 pm	PRESIDENTIAL SYMPOSIUM	
	"Big Science" And The Transition To Personalized Medicine: How Can Neuropathologists Play	
	Roles In Large-Scale Clinical, Translational and Basic Research?	

## THURSDAY, June 10, 2010

## SPECIAL COURSE

## HEREDITARY TUMOR SYNDROMES OF THE NERVOUS SYSTEM: CLINICAL, PATHOLOGICAL, AND BIOLOGICAL UPDATES

## Director: David N. Louis, MD, and Anat Stemmer-Rachamimov, MD

**Regency Ballroom B** 

	Regency Bairoom B
8:00 - 8:30 am	Introduction
	David N. Louis, MD and Anat Stemmer-Rachamimov, MD
	Massachusetts General Hospital, Boston MA
8:30 am – 9:15 am	TSC: Clinical and Biological Aspects
	Elizabeth Petri Henske, MD
	Brigham and Women's Hospital, Harvard Medical School, Boston, MA
9:15 am – 10:00 am	TSC: Clinical-Pathologic and Molecular Aspects
	Harry V. Vinters, MD University of California Los Angeles, CA
10:00 am - 10:30 am	REFRESHMENT BREAK
10:30 am - 11:15	NF1: Clinical and Genetic Aspects
	David Gutman, MD, PhD
	Washington University, Saint Louis, MO
11:15 am – 12:00 pm	Common and Uncommon Peripheral Nerve Sheath Tumors: Pathological
	Features
	Bernd W. Scheithauer, M
	Mayo Clinic, Rochester, MN
12:00 pm - 1:30 pm	LUNCH
1:30 pm – 2:15 pm	NF2: Pathological and Molecular Features/Meningiomas
	Arie Perry, MD,
	Washington University, Saint Louis, MO
2:15 pm – 3:00 pm	Schwannomatosis: The New Kid on the Block
	Anat Stemmer-Rachamimov, MD
0.00	Massachusetts General Hospital, Boston MA
3:00 pm - 3:30 pm	REFRESHMENT BREAK
3:30 pm – 4:15 pm	INI1: Syndromes and Diagnostic Neuropathological Applications Alexander Judkins, MD
	Children's Hospital of Philadelphia, Philadelphia, PA
4:15 pm – 5:00 pm	The Next Step: Clinical Trials for NF2
	Scott Plotkin, MD
	Massachusetts General Hospital, Boston MA

## FRIDAY, JUNE 11, 2010

## TRAINEE LUNCHEON: "NEUROPATHOLOGY: HOW TO GET THERE, STAY THERE AND LOVE IT" (Not Offered for CME Credit)

## 12:45 pm - 2:00 pm - Lescaze Room, 33rd floor of the hotel

Neuropathology Training

Suzanne Z. Powell, MD The Methodist Hospital, Houston TX

Your First Job

Brian E. Moore, MD Pathology Associates of Central Illinois, Springfield, IL

Mentorship and Sustainability

Anthony T. Yachnis, MD University of Florida Medical College

## SPECIAL LECTURE

SELECTED HISTORIES OF NEUROPATHOLOGY IN THE UNITED STATES (Not Offered for CME Credit)

4:30 pm – 5:00 pm	The Origins of Neurology- Neuropathology in The United States: A	
	Philadelphia Story	
	Arthur K. Asbury, MD	
	University of Pennsylvania, Philadelphia, PA	
5:00 pm – 5:30 pm	The Origins of Pathology- Neuropathology in The United States: A Boston	
	Story	
	David N. Louis, MD, PhD	
	Massachusetts General Hospital, Boston, MA	
5:30 pm – 6:00 pm	History of the AANP	
	Michael N. Hart, MD	
	University of Wisconsin, Madison, WI	

## **SUNDAY, JUNE 13, 2010**

## PRESIDENTIAL SYMPOSIUM

## "BIG SCIENCE" AND THE TRANSITION TO PERSONALIZED MEDICINE: HOW CAN NEUROPATHOLOGISTS PLAY ROLES IN LARGE-SCALE CLINICAL, TRANSLATIONAL AND BASIC RESEARCH?

#### Regency Ballroom B

8:00 am – 8:45 am	The Neuropathologist Using "Big Science": An Introductory Example
	David N. Louis, MD, PhD
	Massachusetts General Hospital, Boston, MA
8:45 am - 9:30 am	TCGA: Basic Genomics Meets Neuropathology
	Kenneth D. Aldape, MD, PhD
	MD Anderson Cancer Center, Houston, TX
9:30 – 10:00 am	REFRESHMENT BREAK
10:00 am – 10:45 am	SPORE: Translational Research and the Requirement of Neuropathology
	Scott R. VandenBerg, MD, PhD
	University California, San Diego, CA
10:45 - 11:30 am	Matthew T. Moore Distinguished Lecture
	RTOG: Clinical Trials and the Increasing Role of Neuropathology
	Mark Gilbert, MD
	MD Anderson Cancer Center, Houston, TX
11:30-11:45 am	AWARDS CEREMONY
11:45 -12:00 pm	INSTALLATION OF NEW OFFICERS
12:00 pm	ADJOURNMENT

FRIDAY, JUNE 11, 2010 Regency Ballroom A 8:00 am – 2:00 pm

## Platform 1 Tumors - Glial Chairpersons: David Zagzag, MD, PhD, New York University New York, NY, and Craig Horbinski, MD, PhD, University of Kentucky, Lexington, KY

1	Notch3 Activation Promotes Site-Specific Invasive Glioma Formation
1'	
-	Charles Eberhart, Tarran Pierfelice, Karisa Schreck, Louis Dang, Nicholas Gaiano
2	Knock Down of HIF-1alpha in Glioma Cells Reduces Invasion and Impairs
	Tumor Sphere Formation
	David Zagzag, Olga Méndez, Jiri Zavadil, Yevgeniy Lukyanov, Daniel Santovasi, Shu-Chi
	Wang, Elizabeth Newcomb
3	Expression and Activation of CSF1R and Its Ligands in High Grade
	Astrocytoma
	Fausto Rodriguez, Aaron Bender, Gobinda Sarkar, Lara Collier, Bridget Hoesley, Mark
	Schroeder, Jann Sarkaria, David Largaespada, Robert Jenkins
4	Comprehensive Molecular Analysis of Oligodendroglial Tumors. Merging
	Genomic, Transcriptomic and Metabolomic Data
	Gustavo Sevlever, Ruben Ferrer-Luna, Lina Nuñez, Jorge Calvar, Bernardo Celda,
	Horacio Martinetto
5	A Useful Panel to Differentiate Astrocytoma From Astrocytosis
	Sandra Camelo-Piragua, Department Michael Jansen, Aniruddha Ganguly, J. ChulMin
	Kim, Arjola Cosper, Dora Dias-Santagata, John Iafrate, Catherine Nutt, David Louis
6	A Genetically-Defined, Orthotopic Allograft Model System of Glioblastoma:
	Pathological Features and Experimental Therapeutics
	C. Miller, Ryan Bash, Mark Vitucci, Kristen White
7	Pharmacological Manipulation of the PI3 Kinase Pathway in a Genetically-
	Defined, PTEN-Deficient Model of Glioblastoma
	Mark Vitucci, Ryan Bash, Kristen White, C. Miller
8	Increasing YAP1 Expression In Malignant Gliomas
1	Brent Orr, Haibo Bai, Robert Anders, Charles Eberhart
	4 5 6 7

10:00 - 10:30 am REFRESHMENT BREAK

- 10:30 11:30 am Saul R. Korey Lecture A Long-Term Perspective on Pediatric CNS Tumors Peter C. Burger, MD; John Hopkins University, Baltimore MD,
- 11:45 am Business Meeting I 12:45 pm
- 12:45 2:00 pm Lunch

Platform 2Neurodegenerative – Alzheimers DiseaseChairpersons:Nigel J. Cairns, PhD, MRC Path, Washington University St. LouisSchool of Medicine, St. Louis, MO, and Eileen H. Bigio, MD,<br/>Northwestern University Feinberg School of Medicine, Chicago,<br/>IL

8:00- 8:15	9	Phosphorylated Ribosomal Protein S6 is Greatly Increased in Alzheimer
0.00 0.10	Ĭ	Disease
		Rudy Castellani, Mark Smith, Yashi Gupta, Sandra Siedlak, Peggy Harris, Jeffrey Coller, George Perry, Xiongwei Zhu
8:15- 8:30	10	
0.15-0.50	10	Prediction of Alzheimer's Disease by $\beta$ -amyloid Plaques and Tau Protein in
		Frontal Cortical Biopsy
		Ville Leinonen, Anne Koivisto, Tomi Tillgren, Sannakaisa Vainikka, Sakari Savolainen,
		Mikael Fraunberg, Tuula Pirttilä, Juha Jääskeläinen, Hilkka Soininen, Jaakko Rinne, Irina
		Alafuzoff
8:30- 8:45	11	TDP-43 Pathology in AD: Limbic vs. Diffuse, and the Association with HS
		Steven Dubner, E Bigio, Manjari Mishra, Katherine Gasho, James Stinson
8:45- 9:00	12	Gray and White Matter Pathology Associated With the F105L Mutation in the
		Presenilin 1 Gene
		Matthew Hagen, Jill Murrell, Gregory Balko, Masaki Takao, Pedro Piccardo, Ruben Vidal,
		Francine Epperson, Salvatore Spina, Bernardino Ghetti, Clarissa Rentz
9:00- 9:15	13	Simultaneous Onset of Alzheimer's Disease in a Husband and Wife in Their
		Mid Fifties: What Do We Really Know?
		Jonathan Heath, Lindsay Goicochea, Mark Smith, Rudy Castellani
9:15- 9:30	14	Alzheimer's Disease – Type Pathology in the Non-Demented Elderly
		Peter Nelson
9:30- 9:45	15	Comparison of GluR2 Regulation in 3xTg-AD Mice and Incipient AD patients
		Carol Miller
9:45- 10:00	16	Oxidative Stress Parameters in Newly Diagnosed Alzheimer's Disease
		Patients: A Population-Based Study
	1	Katarzyna Gustaw-Rothenberg, Alan Lerner, Sandra Siedlak, Xiongwei Zhu, George
	1	Perry, Mark Smith

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

- 10:30 11:30 amSaul R. Korey Lecture<br/>A Long-Term Perspective on Pediatric CNS Tumors<br/>Peter C. Burger, MD; John Hopkins University, Baltimore MD,
- 11:45 am Business Meeting I

12:45 pm

12:45 – 2:00 pm Lunch

FRIDAY, JUNE 11, 2010 Regency Ballroom A 2:00 pm – 6:30 pm

## Platform 3: Inflammatory - Infectious Chairpersons: Leroy R. Sharer, MD, New Jersey Medical School, Newark, NJ, and Carol K. Petito, MD, University of Miami, Coral Gables, FL

2:00 - 2:15	17	Central Nervous System Pathology in Fatal Novel Human Influenza A (H1N1)
		Infection
		A Mukherjee, JoElle Peterson, H Takei, S D Sandberg, M B Bhattacharjee, A M Adesina, J
		C Goodman, S Powell
2:15- 2:30	18	Classical and Alternative Activation States of Human Adult Microglia
		Julia Kofler, Stephanie Bissel, Mark Stauffer, Adam Starkey, Clayton Wiley
2:30- 2:45	19	Increased Axonal Expression of Nectin-1 in Multiple Sclerosis Plaques
		Karla Castellanos, Szatmar Horvath, Deepak Shukla, Howard Lipton, Tibor Valyi-Nagy
2:45- 3:00	20	Avitene-Induced Necrotizing Granulomatous Inflammation Developing Post-
		Craniotomy: A Pediatric Case Series
		liat apel-sarid, Doug Cochrane, Paul Steinbok, Angela Byrne, Christopher Dunham
3:00- 3:15	21	Synthetic Triterpenoids Induce Cytoprotective Enzymes in Astrocytic and
		Neuronal Cells and Attenuate Microglial Activation
		Brent Harris, David Graber, William Hickey
3:15- 3:30	22	Three-Dimensional Cultures for the Identification of Tumor Cell
		Subpopulations Resistant to HSV-1 Mediated Oncolytic Therapy
		Tibor Valyi-Nagy, Sandor Dosa, Krisztian Kovacs, Sarolta Bacsa, Andras Voros, Deepak
		Shukla, Klara Valyi-Nagy
3:30- 3:45	23	Induction of Neuropathology After Intracranial Inoculation of Mouse-Tropic
		HIV
		Leroy Sharer, Hongxia He, Alejandra Borjabad, Jennifer Kelschenbach, Chao Jiang Gu,
		Meilan Do, Mary Jane Potash, David Volsky
3:45- 4:00	24	IgG4-Related Pachymeningitis: Five Additional Cases of a Recently
		Described Entity
		Katherine Lindstrom, John Cousar, M. Beatriz Lopes

4:00 - 4:30 pm REFRESHMENT BREAK

# 4:30 – 6:00 pm Selected Histories of Neuropathology in the United States (Not Offered for CME Credit)

Regency Ballroom B		
4:30 pm – 5:00 pm	The Origins of Neurology - Neuropathology in the United States:	
	A Philadelphia Story	
	Arthur K. Asbury, MD	
	University of Pennsylvania, Philadelphia, PA	
5:00 pm – 5:30 pm	The Origins of Pathology - Neuropathology in the United States: A	
	Boston Story	
	David N. Louis, MD, PhD	
	Massachusetts General Hospital, Boston, MA	
5:30 pm – 6:00 pm	History of the AANP	
	Michael N. Hart, MD	
	University of Wisconsin, Madison, WI	

6:30 – 8:30 pm Annual Reception

Thirty-Third Floor of the Hotel

# Platform 4:Tumors - PediatricChairpersons:David W. Ellison, MD, PhD, St. Judes Children's Research<br/>Hospital, Memphis, TN and Murat Gokden, MD, University of<br/>Arkansas, Little Rock, AR

2:00 – 2:15	25	MGMT Promoter Methylation Status Predicts Survival in Pediatric
		Glioblastoma
		Adekunle Adesina, Wenyong Zhang, Vidya Mehta, Girard Courteau, Jack Su, Ching Lau,
		Renee Webb
2:15- 2:30	26	Integrated Analysis of Copy Number Alteration and RNA Expression Profile
		in Pediatric Diffuse Intrinsic Pontine Glioma (DIPG)
		Cynthia Hawkins, Maryam Zarghooni, Pawel Buczkowicz, Ute Bartels, Iris Fried, Uri Tabori,
		Eric Bouffet
2:30- 2:45	27	Is Claudin6 a Useful Diagnostic Marker for Atypical Teratoid/Rhabdoid
		Tumor?
		Felice Giangaspero, Manila Antonelli, Vittoria Donofrio, Paolo Nozza, Ospedale Gaslini,
		Libero Lauriola
2:45- 3:00	28	BRG1 & CRINET: Two Exceptions to the Equation AT/RT = Inactivation of
		INI1
		Martin Hasselblatt, Michael Frühwald, Reinhard Schneppenheim, Florian Oyen, Uwe
		Kordes, Stefan Gesk, Reiner Siebert, Werner Paulus
3:00- 3:15	29	Wnt/beta-catenin and Radio-Response in Medulloblastoma Cell Lines
		Giovanna Cenacchi, Alice Ronchi, Roberta Salaroli, Valeria Marchese, Elena Della Bella,
		Claudio Ceccarelli, Enza Barbieri, Felice Giangaspero
3:15- 3:30	30	Comparative Pathology of Medulloblastoma in F-344 Rats and Humans
		Dimitri Trembath, Deepa Rao, James Morrison, David Malarkey
3:30- 3:45	31	Pathologic and Radiologic Features of an Unusual Congenital/Infantile
		Variant of Astrocytoma
		Mariarita Santi, Tamara Feygin, Hayden Head, Brian Harding
3:45- 4:00	32	Clinical, Pathological, and Molecular Variables Define Risk-Stratification
		Groups in Childhood Medulloblastoma
		David Ellison, Mehmet Kocak, James Dalton, Hisham Megahed, Sarra Ryan, Meryl Lusher,
		Sarah Nicholson, Simon Bailey, Roger Taylor, Wei Zhao, Steven Clifford

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

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	Massachusetts General Hospital, Boston, MA
5:30 pm – 6:00 pm	History of the AANP
	Michael N. Hart, MD
	University of Wisconsin, Madison, WI

6:30 – 8:30 pm

Annual Reception

## Poster Session I:

(CME Credit is offered only during scheduled times that authors are present for discussion)

00	
33	Neuronal Cell Cycle Re-Entry as a Neurotoxic Mechanism of Soluble
	Amyloid Oligomers in Hippocampal Slice Cultures
	Wataru Kudo, Xiongwei Zhu, Vladan Bajic, Hyoung-gon Lee, Mark Smith
34	PKR Induces Glycogen Synthase Kinase 3ß (GSK3ß) Activation and Tau
	Phosphorylation
	Claire Paquet, François Mouton-Liger, Anindita Bose, Pierre Mazot, Jacques Hugon, Francoise Gray
35	Neurodegenerative Changes in the Middle Aged: More Evidence of a Tau and
	Amyloid-Beta Disconnect
	Jonathan Heath, Sandra Richardson, Mark Smith, Rudy Castellani
36	Age-Old Questions: The Associative Impact of Neuropathological Lesions and
	Clinical Parameters in Advanced Aging
	Peter Nelson
37	Pathological Implication of Protein Kinase C Theta in Alzheimer Disease
57	Hyunpil Lee, Sandra Siedlak, Mark Smith, Hyoung-gon Lee
38	Familial Dementia with Frontotemporal Features Associated with Met146Val
50	Presenilin-1 Mutation
	Miguel Riudavets, Leonardo Bartoloni, Naomi Arakaki, Juan Troncoso, Ana Lia Taratuto, Peter St
	George-Hyslop, Ricardo Allegri, Gustavo Sevlever
39	Association of Leptin Receptor with Neurofibrillary Tangles of Alzheimer Disease
39	Jeremy Stone, David Bonda, Hyoung-gon Lee, Sandy Richardson, George Perry, Gemma
	Casadesus, Mark Smith
40	Diet-Induced Obesity Does not Alter Cerebral Amyloidosis in Aged Tg2576 Mice
40	Edward Lee, Virginia Lee, John Trojanowski, Rexford Ahima
41	A Case of Variant of Alzheimer's Disease with Spastic Paraparesis Due to Missense
41	Mutaion of Exon 8 of Presenilin 1
	Namita Sinha, David Grimes, Ekaterina Rogaeva, John Woulfe
42	Alzheimer Neuropathological Changes in Brains from Subjects with Diabetes
42	Mellitus: A Clinicopathological Study
12	Karra Muller, Christopher Liverman, Kathy Newell Pathological TDP-13 in Older Adults With and Without Severe Mental Illness
43	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness
43	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,
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44 45 46 47	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report
44 45 46 47 48	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report         Erin Rowe, Beverly Greenspan, Douglas Fellows, Faripour Forouhar, Qian Wu
44 45 46 47	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report         Erin Rowe, Beverly Greenspan, Douglas Fellows, Faripour Forouhar, Qian Wu         CNS Mycobacterium Haemophilum Infection Manifested as a Pontine Mass in an HIV-
44 45 46 47 48	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report         Erin Rowe, Beverly Greenspan, Douglas Fellows, Faripour Forouhar, Qian Wu         CNS Mycobacterium Haemophilum Infection Manifested as a Pontine Mass in an HIV-Positive Patient. A Case Report
44 45 46 47 48 49	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report         Erin Rowe, Beverly Greenspan, Douglas Fellows, Faripour Forouhar, Qian Wu         CNS Mycobacterium Haemophilum Infection Manifested as a Pontine Mass in an HIV-         Positive Patient. A Case Report         Li Li, Kelly-Ann Kim, Arnulf Koeppen, Jiang Qian
44 45 46 47 48	Pathological TDP-43 in Older Adults With and Without Severe Mental Illness         Felix Geser, John Robinson, Sharon Xie, Chris Clark, Linda Kwong, Paul Moberg, Erika Moore,         Vivianna Van Deerlin, Virginia Lee, Steven Arnold, John Trojanowski         Systemic Organ Tissue Pathology in Premutation Carriers of the FMR1 Mutation         Claudia Greco, Randi Hagerman, Flora Tassone, Celestine Navarro, Marian Spath, Renate Hukema,         Johan Kros, Rob Willemsen         Fixationtime and Outcome the of Immunohistochemical Staining         Maria Pikkarainen, Paula Martikainen, Irina Alafuzoff         Encephalopathy with Neuroserpin Inclusion Bodies due to a Novel Mutation in the         Proteinase Inhibitor 12 Gene         Matthew Hagen, Jill Murrell, Marie-Bernadette Delisle, Eva Andermann, Frederick Andermann, Marie         Christine Guiot, Bernardino Ghetti         Pathologic Findings in Rapidly Progressive Dementia in the Absence of Prion         Disease         Julia Shields, Emily Maambo, Rudy Castellani, Pierluigi Gambetti         Limbic Encephalitis as the Initial Manifestation of Low Grade Lymphoma-A Case         Report         Erin Rowe, Beverly Greenspan, Douglas Fellows, Faripour Forouhar, Qian Wu         CNS Mycobacterium Haemophilum Infection Manifested as a Pontine Mass in an HIV-Positive Patient. A Case Report

# **Poster Session I Continued:** (CMF Credit is offered only durin

a schodulod timos that authors are present for discussion)

(CME	Credit is offered only during scheduled times that authors are present for discussion)
51	Phenotypic Heterogeneity and Type-1/2 PrPSc Co-Occurrence in Creutzfeldt-Jakob
	Disease Associated with a New Mutation of PRNP
	Gianfranco Puoti, Massimiliano Nigro, Shu Chen, Ignazio Cali, Laura Cracco, Janis Blevins, Souhel
	Najjar, Ronald L. Hamilton, Pierluigi Gambetti
52	Autopsy Findings in a Case of Neurodegeneration with Brain Iron Accumulation
	Caused by PANK2 Mutations
	Mark Hiken, Marjorie Grafe, Randall Woltjer, Penelope Hogarth, Michael Kreuer, Susan Hayflick
53	Acute Disseminated Encephalomyelitis in a 16-Year Old Patient After Receiving HPV-
	Vaccination: A Case Report
	Xianyuan Song, Francis DiMario Jr., Thomas Ciesielski, Dean Uphoff
54	Biopsy Findings Suggestive of Spongiform Change in 2 Cases of Neuromyelitis
	Optica Spectrum Disorder
	Kathy Newell, Catherine Lewis, Cynthia Gouvion, Eugenio Taboada, Sharon Lynch
55	Neuropathologic Features of the Area Postrema and the Floor of the Fourth Ventricle
	in Neuromyelitis Optica
	Bogdan F. Popescu, Joseph E. Parisi, Jose A. Cabrera-Gómez, Sean J. Pittock, Vanda A. Lennon,
50	Brian G. Weinshenker, Claudia F. Lucchinetti
56	Fetal "Acrania/Exencephaly": Report of 2 Complete Autopsy Cases
57	Mirna Lechpammer, Adriana Florez-Vargas, C Buritica-Cifuentes, Rebecca Folkerth Hyperglycemia Following Pediatric Head Trauma as a Predictor of Injury Severity
57	Peter Cummings, Henry Nields
58	Forensic Pediatric Neuropathology in a Two Year Period in Central Missouri
50	Douglas Miller, Carl Stacy
59	Central Liponeurocytoma: A Case Report
39	Xianyuan Song, Srinivas Mandavilli
60	Two Cases of Pediatric Spinal Cord Glioblastoma Multiforme
00	Dana Altenburger, Gary Pearl
61	Expression and Distribution of Spastin and Spliced Variants in Glioblastomas and
•	Human Glioblastoma Cell Lines
	Christos Katsetos, Eduarda Draberova, Simon Pei Liu, Vladimira Sladkova, Joanna Solowska, Jean-
	Pierre de Chadarevian, Agustin Legido, Sverre Mork, Peter Baas, Pavel Draber
62	Imaging Proteostasis in Pathological Conditions
	Sidney Croul, Kevin Hadley, Michael Borrelli, Armen Manoukian, JoAnne McLaurin, James Lepock,
	Abhijit Guha, Avijit Chakrabartty
63	ECRG-4 Expression in Normal and Neoplastic Choroid Plexus
	John Donahue, Miles Miller, Sonia Podvin, Cynthia Jackson, Conrad Johanson, Edward Stopa,
0.4	Andrew Baird
64	An Analysis of the Role of microRNAs in the Phenotypic Expression of Oncogenic
	PDGF Signaling in Malignant Glioma
05	Joachim Silber, Tatsuya Ozawa, Hakim Djaballah, Eric Holland, Jason Huse
65	Withdrawn
66	Beta-Catenin and Nestin: Patterns of Expression in Human Brain Tumors
07	Branavan Manoranjan, John Provias
67	An Extracellular Endosulfatase that Accelerates High-Grade Gliomagenesis
<u> </u>	Joanna Phillips, Anna Ward, Emmanuelle Huillard, Steven Rosen, David Rowitch, Zena Werb
68	Group II Metabotropic Glutamate Receptor Allosteric Agents as Potential Tools in the
	Investigation and Treatment of Gliomas Hilary Nickols, Douglas Sheffler, Shyama Sidique, Dhanya Panickar, Russell Dahl, Li Yang, Ananda
	Hilary Nickols, Douglas Sheller, Shyama Sidique, Dhanya Panickar, Russell Dani, Li Yang, Ananda Herath, Robert Ardecky, Nicholas Cosford, P. Conn

FRIDAY, JUNE 11, 2010 Regency Ballroom C

Poster Session I Continued:

	Credit is offered only during scheduled times that authors are present for discussion)
69	Multiplex Ligation Probe Amplification (MLPA) Detects Multiple Amplified Genes in
	Glioblastomas and Brain Metastases
	Marie Beckner, Shashikant Patil, Long Truong, Sherry Martin, Jay LeBlanc, Kristopher Katira, Anil
	Nanda, Mary Nordberg
70	Overexpression of Gamma-Tubulin Transcripts in Human Glioblastoma Cell Lines
	Christos Katsetos, Eduarda Draberova, Vladimira Sladkova, Barbora Horejsi, Pavel Draber
71	Utility of Alpha-Internexin Immunostaining to Identify 1p/19q Co-deleted
	Oligodendrogliomas
	Abir Mukherjee, H Takei, S Powell
72	Gliosarcoma – An Immunohistochemical Profile Including Matrix Metalloproteinase 2
	Expression
70	Amyn Rojiani, Mumtaz Rojiani, Fiona McPherson
73	The Noncoding Oncofetal H19 Gene in Brain Tumors
74	Yakov Fellig, Doron Amit, Imad Matouk, Iris Lavon, Tali Siegal, Abraham Hochberg
74	<b>Pilomyxoid Astrocytoma of the Foramen of Monro: A Case Report</b> Karen Johnson, Laurie Ackerman, Annette Douglas-Akinwande, Eyas Hattab
75	Oligodendroglioma Arising in a 7 Month Old Infant
75	Kimberly Stogner-Underwood, Gary Tye, Christine Fuller
76	Astroblastoma: An Uncommon CNS Tumor Presenting as a Cyst with a Mural Nodule
10	Kimberly Stogner-Underwood, William Broaddus, Christine Fuller, Nitya Ghatak
77	Directed Pten Loss in Olig2+ Stem Cells Results in Massive Myelination and
	Neurodegeneration in The Absence of Neoplasia
	Shakti Ramkissoon, Cecile Maire, Keith Ligon
78	Malignant Ependymoma with Cartilage Formation in an Adult: Can Glial Cells Form
-	Mesenchymal Tissue?
	Knarik Arkun, Patrick LaSala, Yvonne Lui, Karen Weidenheim
79	Rosette-Forming Glioneuronal Tumor of the 4th Ventricle: A Pineal Region Mass with
	IDH1 and IDH2 Mutation Analyses
	Rupal Mehta, Orestes Solis, Albert Lai, Rashi Mehta, Lama Farchoukh, Richard Green, Jerry Cheng,
	Sathima Natarajan, Harry Vinters, Timothy Cloughesy, William Yong
80	Anaplastic Astroblastoma Presenting With Massive, Sudden-Onset,
	Intraparenchymal Hemorrhage: A Case Report
	Karen Johnson, Joel Boaz, Annette Douglas-Akinwande, Jose Bonnin, Eyas Hattab

## Platform 5: Neurodegenerative – Prions/Other Chairpersons: Bernardino Ghetti, MD, Indiana University, Indianapolis, IN and Kathy L. Newell, MD, University Kansas, Kansas City, KS

8:00 –8:15	81	Expression Analysis of Metallothionein le and lla in FTLD-TDP with ALS, FTLD-TDP, and Alzheimer Disease
		Manjari Mishra, Timothy Scarella, Eileen Bigio
8:15 –8:30	82	Regulation of Progranulin Expression in Human Microglia and Astrocytes:
		Implications for Neuroinflammatory Diseases
		Hyeon-Sook Suh, Namjong Choi, Sunhee Lee
8:30 –8:45	83	Hyaline Protoplasmic Astrocytopathy of Neocortex in a Case of Tangle-
		Predominant Dementia
		John Crary, Jean Paul Vonsattel, Michael Shelanski, James Goldman
8:45 –9:00	84	Pathologic Basis of Hyperintensities of Diffusion-Weighted Imaging in
		Creutzfeldt-Jakob Disease Using Autopsy Images of MRI
		Masaki Takao, Ban Mihara, Shinichi Aoyagi, Mitsutoshi Tano, Katsura Suwabe, Go Yasui,
		Yoji Yoshida
9:00 –9:15	85	TDP-43 Proteinopathy in Cognitively Normal (CDR 0) Individuals
		Lisa Taylor-Reinwald, Elizabeth Grant, John Morris, Nigel Cairns
9:15 –9:30	86	Protease-Sensitive Prionopathy in a Cognitively Normal 93 Year Old
		Nupur Ghoshal, G Puoti, Pierluigi Gambetti, John Morris, Nigel Cairns
9:15 –9:30	87	Creutzfeldt-Jakob Disease E200K in Argentina
		Christian Begue, Carlos Romero, Horacio Martinetto, Marcelo Schultz, Estefania Rojas,
		Oscar Meichtry, Gustavo Sevlever, Manuel Somoza, Ana Lia Taratuto
9:30 –9:45	88	Heidenhain Variant of Sporadic Creutzfeldt-Jakob Disease with the Co-
		occurrence of Two Different Types of Prion Protein
		Ignazio Cali, Gianfranco Puoti, Janis Blevins, Adeela Alizai, Pierluigi Gambetti

9:45 - 10:30 am REFRESHMENT BREAK

11:45 am – Business Meeting II 12:45 pm

12:45 – 2:00 pm Lunch

## SATURDAY, JUNE 12, 2010 Regency Ballroom B 8:00 am – 2:00 pm

# Platform 6:Pediatric NeuropathologyChairpersons:Brian N. Harding, DPh, FRCPath, Children's Hospital of<br/>Philadelphia, Philadelphia, PA and Rebecca D. Folkerth, MD,<br/>Brigham & Women's Hospital, Boston, MA

8:00 –8:15	89	<b>The Development of GABAergic Neurons in the Human Cerebral Cortex</b> Gang Xu, Kevin Broadbelt, Robin Haynes, Natalia Borenstein, Rebecca Folkerth, Felicia
		Trachtenberg, Joseph Volpe, Hannah Kinney
8:15 –8:30	90	Id Proteins are Differentially Expressed in Medulloblastoma Tumor Cells and
		Endothelia
		Christopher Pierson, Andrew Snyder, Ronald Houston, Jordan Marshall, Basil Kahwash, Ashley Dulin-Smith
8:30 - 8:45	91	Cerebral White Matter Hypoxia and Antioxidant Therapy in Rats with
		Hydrocephalus
		Marc Del Bigio, Osaama Khan, Terry Enno, Luiza da Silva Lopes
8:45 –9:00	92	Cerebellar Hemorrhagic Injury in Premature Infants and its Associated
		Neuropathology: A Clinicopathologic Study of 18 Cases
		Krista Smith, Carl Boesel, Anna Hughes, Christopher Pierson
9:00 -9:15	93	Ectopic Cerebellar Neurons in a Novel Tuberous Sclerosis Mouse Model
		June Goto, Spencer Tung, David Kwiatkowski, Harry Vinters
9:15 –9:30	94	Atypical Teratoid Rhabdoid Tumours at British Columbia Children's
		Hospital: "Cryptic Cases" and Long-Term Survivors
		Adam Fleming, Diane Birks, Stephen Yip, Michael Handler, B.K. Kleinschmidt-DeMasters,
		Christopher Dunham
9:15 –9:30	95	Moderate Intermittent Hypoxia Protects Neurodevelopment in Newborn Mice
		Homa Adle-Biassette, Myriam Bouslama, Boris Matrot, Geraldine Favrais, Pierre Gressens,
		Jorge Gallego
9:30 -9:45	96	Distribution of Beta 4 Tubulin-Positive Cells During Human Brain
		Development
		Angeliki Nikolakopoulou, Susan Staugaitis, Ansi Chang, Bruce Trapp

9:45 - 10:30 am REFRESHMENT BREAK

11:45 am – Business Meeting II 12:45 pm

12:45 – 2:00 pm Lunch

## Platform 7: Neuropathology - Miscellaneous Chairpersons: Hannes Vogel, MD, Stanford University Medical Center, Palo Alto, CA, and Mark L. Cohen, MD, Unviersity Hospitals Case Medical Center, Cleveland, OH

2:00 - 2:15	97	Polymyositis Associated with Metastatic Thymomas: Report of Two Cases
		Jodi Carter, Zaeem Siddiqi, Jian-Qiang Lu
2:15- 2:30	98	Alcohol-Related Peripheral Neuropathy-Characterization in an Experimental
		Animal Model
		VanAnh Nguyen, Michelle Mellion, Ming Tong, James Gilchrist, Suzanne de la Monte
2:30- 2:45	99	Glial-Vascular Degeneration in CADASIL
		Thea Brennan-Krohn, Stephen Salloway, Stephen Correia, Matthew Dong, Suzanne de la
		Monte
2:45- 3:00	100	Degos Disease Involving the CNS: Report of a Case and Review of the
		Literature
		Stephen Coons, Sandipan Pati
3:00- 3:15	101	A 20 year Retrospective Review of Traumatic Spinal Cord Injuries at a
		Statewide Medical Examiner's Office
		Cecilia Wu, Sarah Lathrop, R. Ross Reichard
3:15- 3:30	102	Causes of Death And Neuropathology in Autism Spectrum Disorder: A
		Medical Examiner Perspective
		Kenneth Hutchins, Mariana Nunez, Carol Petito
3:30- 3:45	103	The Mtm1C205T Knock-in Mouse: A New Model of Myotubular Myopathy
		with a Mild Phenotype
		Christopher Pierson, Ashley Dulin-Smith, Kristen Roth, Morgan Marshall, Nada Naiyer,
		Jordan Marshall, Andrew Snyder, Jordan Gladman, Dawn Chandler, Alan Beggs
3:45- 4:00	104	Choroidal Findings in Neurofibromatosis Type 1 (NF1)
		Caterina Giannini, Fausto Rodriguez, Charles Eberhart, Diva Salomão

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

4:30 – 5:30 pm DEARMOND LECTURE Alzheimer's Disease: Models and Therapeutics Todd Golde, MD, Mayo Clinic, Jacksonville, FL, USA

8:00 – 11:00 pm Diagnostic Slide Session Congress Room, 4<sup>th</sup> Floor

## Platform 8: Tumors - Nonglial

## Chairpersons: Stephen W. Coons, MD, St. Joseph's Hospital and Medical Center, Phoenix, AZ, and Sidney E. Croul, MD, University of Toronto, Toronto, Canada

2:00 – 2:15	105	MicroRNA-9 and MicroRNA-200a Differentiate CNS Hemangioblastomas
		from CNS Metastatic Clear Cell Renal Cell Carcinomas
		Sriram Venneti, Aihua Liu, John Tobias, Donald Baldwin, Alexander Judkins, Zissimos
0.45.0.00	400	Mourelatos, Priti Lal
2:15- 2:30	106	BCL-6 Gene Abnormalities are Common in Primary Central Nervous System
		Diffuse Large B-cell Lymphoma
		Sarah Martin, Magdalena Czader, Mousa Al-Abbadi, Ryan Stohler, Gail Vance, Eyas
		Hattab
2:30- 2:45	107	Epstein-Barr Virus-Associated Primary Central Nervous System
		Lymphomas in Immunocompetent Elderly Patients
		Yasuo Sugita, Daisuke Niino, Fumiko Arakawa, Koichi Ohshima
2:45- 3:00	108	Expression of SALL4 and LIN28 by Malignant Rhabdoid Tumors of the
		Central Nervous System
		Jeremy Deisch, Dinesh Rakheja, Kimmo Hatanpaa, Christa Hladik, Emily Herndon, Dennis
		Burns, Charles White, Jack Raisanen
3:00- 3:15	109	Prox1 Protein of Prospero-Related Homeobox Gene In Meningiomas And
		Adult CNS
		Roy Rhodes, Eric Richfield
3:15- 3:30	110	Transforming Growth Factor B Receptor Expression in Higher Grade
		Meningiomas
		Mahlon Johnson, Aubie Shaw, Mary O'Connell, Fraser Sim, Harold Moses
3:30- 3:45	111	Malignant Transformation of Intracranial Meningeal Melanocytoma. Case
		Report and Review of the Literature
		Fulin Wang, Xin Lou, Guangyu Qiao, Xin Song
3:45- 4:00	112	Carcinoma, Metastatic to Intracranial Meningioma – Unusual Pattern of
		Metastasis
		Patricia Moody, Kevin Murtagh, Sarat Piduru, Steven Brem, Reed Murtagh, Amyn Rojiani

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

- 4:30 5:30 pm DEARMOND LECTURE Alzheimer's Disease: Models and Therapeutics Todd Golde, MD, Mayo Clinic, Jacksonville, FL, USA
- 8:00 11:00 pm Diagnostic Slide Session Congress Room, 4<sup>th</sup> Floor

# Poster Session II:

(CME C	credit is offered only during scheduled times that authors are present for discussion)
113	Synaptic Plasticity in Parkinson's Disease as Revealed by the Study of Trans-
	synaptic cell Adhesion Molecules
444	Lili-Naz Hazrati
114	GRN/PGRN Gene Expression Regulation via a microRNA, Studied Using in vitro and
	in vivo Experiments Wang-Xia Wang, Kathryn Saatman, Sindhu Madathil, Bernard Rajeev, Peter Nelson
115	Cognitive Improvement After Ventriculoperitoneal Shunt Placement in Alzheimer
115	Disease and Non-Alzheimer Dementias
	John Donahue, Conrad Johanson, Petra Klinge, Edward Stopa, Stephen Salloway, Brian Ott,
	Stephen Mernoff, John Stoukides, Suzanne de la Monte, Miles Miller, Gerald Silverberg
116	Clinicopathologic Characterization of Frontotemporal Dementia Associated with the
	IVS10-10G>T MAPT Gene Mutation
	Bernardino Ghetti, Jill Murrell, Matthew Hagen, David Geldmacher, Tatiana Foroud, Michel Goedert,
	Salvatore Spina
117	Bridge Cases Between the Classical Variants of FUSopathies
110	David Munoz, Lorne Zinman, Ekaterina Rogaeva, Beverly Young, Ian Mackenzie, Juan Bilbao
118	Neurites Containing C-Terminally Truncated $\alpha$ -Synuclein in Alzheimer's Disease without Conventional Lewy body Pathology
	Karen Lewis, Yang Su, Olina Jou, Caroline Ritchie, Chan Foong, Linda Hynan, Charles White, Philip
	Thomas, Kimmo Hatanpaa
119	The Spectrum of FUS-positive Pathology in Frontotemporal Lobar Degenerations
	Tamas Revesz, Tammaryn Lashley, Zashen Ahmed, Jonathan Rohrer, Jason Warren, Safa Al-Saraj,
	Nick Fox, Hans Braendgaard, Martin Rossor, Andrew Lees, Janice Holton
120	TDP-43 Proteinopathy in Chronic Traumatic Encephalopathy
	Ann McKee, Brandon Gavett, Robert Stern, Christopher Nowinski, Robert Cantu, Chris Sullivan,
404	Daniel Perl, E. Tessa Hedley-Whyte, Daniel Daneshvar, Neil Kowall, Andrew Budson
121	Distribution of Phosphorylated Alpha-Synuclein Histopathology in the Bodily Organs of Subjects with Lewy Body Disorders
	Thomas Beach, Charles Adler, Lucia Sue, Charles White, Haru Akiyama, John Caviness, Holly Shill,
	Marwan Sabbagh, LihFen Lue, Douglas Walker
122	Incidence and Extent of Alpha-Synucleinopathy in the Human Aging Peripheral and
	Central Nervous System
	Sayaka Funabe, Hiroyuki Hatsuta, Tadashi Adachi, Mikiko Sugiyama, Yuko Saito, Tomio Arai, Motoji
	Sawabe, Nobutaka Hattori, Shigeo Murayama
123	Isolation of Spiroplasma from the Eyes of Sheep Infected with Scrapie Reveals a
	New Direction for TSE Research
	Frank Bastian, Charles Boudreaux, Sue Hagius, Marie Bulgin, Sharon Sorensen-Melson, Frederick Enright, Philip Elzer
124	Whipple's Disease: An Endless Infection Forty Four Years of Disease and 15 Years
127	of Brain Involvement, Report of a Case
	Ana Lia Taratuto, Graciela Zuccaro, Eugenia Arias, Pieter Mac Keith, Clara Muller, Raul Dominguez
125	Fatal Case of Deer Tick Virus Encephalitis
	Phyllis Faust, Heng Wang, Michelle Dupuis, Rene Hull, Gregory Ebel, Emily Gilmore, Norma Tavakoli
126	Ribonucleic Acids Co-localize to Prion Protein Aggregates in Sporadic and Variant
	CJD
4.0=	Brent Harris, Pablo Valdes, Colin Smith, Surachai Supattapone
127	Cerebral &-Amyloid Deposition in HIV Infection
	Virawudh Soontornniyomkij, Schafer Boeder, David Moore, Ben Gouaux, Cristian Achim

#### **Poster Session II Continued:**

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(CME Credit is offered only during scheduled times that authors are present for discussion)

	Credit is offered only during scheduled times that authors are present for discussion)
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American Association of Neuropathologists

Endowed Lectureships Meritorious Awards Presidential Symposium

# 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 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."

<u>Year</u> 1989	<u>Lecturer</u> Nicholas K.	<u>Title</u> MG-60, a Novel	<u>Year</u> 2000	<u>Lecturer</u> Mary E. Case	<u>Title</u> Neuropathology and Forensic
	Gonatas	Sialoglycoprotein of Medial			Pathology: A Natural
		Cisternae of the Neuronal	2001	D 111	Synergism
		Golgi Apparatus:	2001	Paul H.	Molecular Biology of Brain
		Implications and	2002	Kleihues	Tumors
1990	Henry M.	Applications Amyloidosis in Alzheimer's	2002	James E. Goldman	Astrocytes, Intermediate Filaments, Cellular Stress
1990	Wisniewski	Disease and the Spongiform		Oolulliali	and Neuropathology
	W ISHIC W SKI	Encephalopathies	2003	Samuel K.	Pathology and Pathogenesis
1991	Robert D.	Alzheimer's Disease as Seen	2005	Ludwin	in Multiple Sclerosis
1771	Terry	by a Lucky Morphologist	2004	James M.	The Road Not Taken
1992	Henry deF	Formation and Regeneration		Powers	
	Webster	of Myelin	2005	Bernardino	Deciphering Hereditary
1993	Kunihiko	Molecular Genetics of Tay-		Ghetti	Presenile Dementias:
	Suzuki	Sachs and Related Disorders:			Neuropathology at the
		The Legacy of Saul Korey			Crossroads of
1994	No Lecture	XIIth International Congress			Neuropsychiatry and
		(Toronto)			Molecular Genetics
1995	Blas	Amyloid Genes and	2006	Donna M.	Molecular Mechanisms of
	Frangione	Chaperones in Alzheimer		Ferriero	Hypoxic-Ischemic Injury in
1000		Disease			the Developing Nervous
1996	Floyd Gilles	The 3R's of Neuro-oncology	2007		System
		– Recording, Reliability and	2007	Dennis W.	Neuropathology and
1997	Donald L.	Reporting The Role of	2008	Dickson David N.	Genetics of Parkinsonism Brain Tumor Classification:
1997	Price	Neuropathologists in the	2008	Louis	Little Steps and Big Jumps
	rnce	Analyses of Models of	2009	Stephen J.	Mechanisms of
		Neurodegenerative Disease	2009	DeArmond	Neurodegeneration in Prion
1998	Sandra H.	Molecular Genetics of		Der uniona	Disease Orgininating from
1770	Bigner	Medulloblastoma			the Neuronal Plasma
1999	William F.	Key Participants in the			Membrane
	Hickey	Initiation of Inflammation in	2010	Peter C.	A Long-Term Perspective on
	2	the Central Nervous System		Burger	Pediatric CNS Tumors

We are pleased to have Dr. Peter C. Burger join our list of distinguished speakers.

#### 2010 SAUL R. KOREY LECTURE A Long-Term Perspective on Pediatric CNS Tumors *Peter C. Burger, MD*



Within the span of one career, diagnostic techniques and scientific understanding of CNS tumors have changed drastically, with many advances yet to come. In the context of the then state-of-the-art techniques, H&E sections and a battery of histochemical stains, immunohistochemistry was a major innovation, and defied some predictions by refining, rather than replacing, histopathology. Metaphase cvtogenetics intimated at the coming molecular era in the form of isodicentric chromosome 17g, later determined to be less favorable prognostic indicator in classic а meduloblastomas. About the same time, monosomy 22 first contributed to the diagnosis of atypical teratoid/rhabdoid tumor, and provided a clue to the location of the responsible gene, INI1. Working backward from the genetics of tumor

syndromes, molecular features of sporadic medulloblastomas were discovered in a flurry of activity in the late 1990s and early 2000s. Delineation of the two critical signaling pathways. in concert with the influence of age and histological tumor type, helped formulate of prognostically and therapeutically important subcategories that minimize the chance that individual patients are either over- or undertreated. Animal models and specific small molecule tumor inhibitors of the sonic hedgehog pathway appeared. Contention about nomenclature for embryonal tumors/PNETs peaked, but then subsided as molecular features increasingly defined subgroups. In regard to gliomas, a long awaited genetic signature of pilocytic astrocytoma, a tandom duplication/fusion (KIAA1549-BRAF), was elucidated in 2008. Laboratories worldwide are evaluating its potential as a diagnostic maker. Tumors with ependymal differentiation became more complicated as "splitters" freely described new categories, while "lumpers" remain skeptical that these are entities distinct from ependymoma. Molecular features may help resolve this issue. The "cells of origin" of ependymomas at various sites may well have proven to be regional radial glia. Much has thus changed, but techniques and approaches will evolve even more rapidly and fundamentally. Neuroimagers are working day and night to replace tissue-based diagnosis. Molecular characterization of tumor DNA fragments in serum and CSF is being pursued as a minimally invasive technique with great specificity. Real-time whole genome sequencing may be as routine as blood chemistries. The cause of CNS tumors may even be found.

#### **Objectives:**

At the end of the Lecture attendees should be able to:

- Cite the historical context in which our understanding of pediatric CNS tumors has evolved
- Review salient pathological features of new and/or controversial entities
- List mechanisms by which new entities are certified

# **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 Dr. Todd Golde 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

#### 2010 DEARMOND LECTURE

Alzheimer's Disease: Models and Therapeutics *Todd Golde, MD* 



The amyloid  $\beta$  (A $\beta$ ) and tau proteins, which accumulate in the Alzheimer's disease (AD) brain, are implicated as central factors in a complex neurodegenerative cascade. Studies of mutations that cause AD and promote A $\beta$  accumulation in the brain strongly support the notion that inhibiting A $\beta$  aggregation will prevent AD. Similarly, genetic studies of frontotemporal dementia with parkinsonism linked to chromosome 17 show that mutations in the *MAPT* gene encoding tau lead to abnormal tau accumulation and neurodegeneration. Additional pathologic, biochemical and modeling studies further support the concept that misfolded and aggregated A $\beta$  and tau are prime targets for disease modifying therapies. Treatment strategies aimed at preventing the aggregation and accumulation of A $\beta$ , tau, or both proteins should therefore be theoretically possible, assuming that treatment can be initiated before either irreversible damage is present or downstream, self-

sustaining, pathological cascades have been initiated. Herein, I will discuss the challenges that face the field as we attempt to translate an enhanced understanding of disease pathogenesis into effective therapies.

#### **Objectives:**

At the end of the Lecture attendees should be able to:

- Cite the role of various Abeta and tau aggregates in Alzheimer's Disease
- Compare the link between AD neurodegeneration and the senescence associated secretory phenotype
- Identify new insights into the role of inflammatory factors in AD and other neurodegenerative disorders.
- Describe current therapeutic strategies targeting  $A\beta$  and tau
- Recall the treatment versus prevention paradox
- Explain the role of Neuropathology in therapeutic development

# Awards for Meritorious Contributions to Neuropathology

he 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. Stephen J. DeArmond and Samuel K. Ludwin. They join the rich roster of distinguished former award recipients.

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

## Awards for Meritorious Contributions to Neuropathology

#### 2010 AWARD RECIPIENTS Stephen J. DeArmond, MD, PhD and Samuel K. Ludwin, MBBCh, FRCPC



**Stephen J. DeArmond, M.D., Ph.D.** attended the Medical College of Pennsylvania in Philadelphia and received a PhD in Physiology and an MD. While a graduate student he taught Neuroanatomy to medical students and developed a teaching atlas for neuroanatomy that was published by Oxford University Press, has undergone three editiions and is still in use at many medical schools. After medical school he was elected to the Alpha Omega Alpha Medical Honor Society. He completed his internship and residency in Pathology at Stanford and then completed his Fellowship in Neuropathogy under the celebrated Dr. Lucien Rubinstein. He remained on as a junior faculty member at Stanford and received a career development award at the Palo Alto VA Hospital from 1980-1983. During these years at

Stanford he studied neurochemistry and immunohistochemistry under the tutelage of Dr. Lawrence Eng, who discovered the Glial fibrillary acidic protein (GFAP). Dr. DeArmond's research emphasized the metabolism of GFAP.

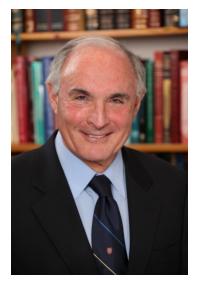
In 1983 Dr. DeArmond obtained an Assistant Professorship in the Neuropathology Unit of the Department of Pathology at the University of California San Francisco (UCSF). For almost 10 years he and Dr. Richard Davis provided all the clinical neuropathology services for Neurosurgery, provided neuropathology diagnosis for neuro-muscular diseases for the Department of Neurology, and conducted all of the brain autopsies for UCSF, the San Francisco Veteran's Administration Hospital, and San Francisco General Hospital. During this time Dr. DeArmond also had a very active research program, which started with GFAP studies and transitioned to prion diseases in 1884 when Dr. Stanley Prusiner approached him for assistance. Dr. Pruisner's group had just developed antibodies to the prion protein and he needed a Neuropathologist. The Neuropathology Fellow working with Dr. DeArmond at this time was Dr. Hans Kretzschmar, who is now Director of the German Institute for Neurodegenerative Diseases in Munich. Dr. DeArmond obtained the materials and stained slides of Syrian hamster scrapie with the PrP specific antibodies. When he and Hans looked at the slides and found the amyloid plaques in them were strongly stained with the antibodies, Steve turned to Hans and said, "We're stopping all GFAP studies and will focus only on prion diseases." That was 25 years ago. Both Dr. DeArmond and Dr. Kretzschmar have spent the last 25 years studying prion and other neurodegenerative diseases.

Dr. DeArmond's research has led to an understanding of the cellular pathogenic mechanisms leading to early synapse degeneration and late occurring nerve cell death in prion diseases and to a new *exvivo* model for prion disease using embryonic neural cells organized into brain aggregates. His work demonstrated that the  $\gamma$ -secretase system is directly related to the formation of PrP<sup>Sc</sup> and neurodegeneration in prion diseases and showed that treatment of scrapie-infected mice with a  $\gamma$ -secretase inhibitor plus quinacrine stopped PrP<sup>Sc</sup> formation and prevented dendritic degeneration. Other laboratories have also reported that the  $\gamma$ -secretase system is directly related to the formation of PrP<sup>C</sup>, and therefore to PrP<sup>Sc</sup>, just as it is with the formation of pathogenic A $\beta$ -42 and neurodegeneration in Alzheimer's disease (AD). In reviewing a large number of brains from patients with prion disease over the past 25 years, Dr. DeArmond noted that many of these patients also showed the neuropathologic changes of Alzheimer's disease. His lab is now using its expertise in

molecular pathology to explore similarities between Creutzfeldt-Jakob disease (CJD) and AD, which suggest that overlap between the two is not coincidental.

Dr. DeArmond is a former President of the American Association of Neuropathologists (AANP) from 1999-2000, President of the 16<sup>th</sup> International Congress of Neuropathology from 2003-2006 and Vice-President of the International Society of Neuropathology from 2003-2006. In 2007 he was honored by the AANP Executive Council and Members at Large, with an Annual Endowed Lectureship on Neurodegenerative Diseases for outstanding translational research in neurodegenerative diseases. He was the Saul Korey Lecturer at the 2009 Annual AANP meeting and his laboratory received the Weil Award for the "Programmed Dendritic Atrophy in Prion Diseases" at the 2004 Annual Meeting.

Currently Dr. DeArmond is a Professor of Pathology and Neuropathology at the UCSF Medical School. He continues to study the pathogenesis of prion diseases, to explore treatments for prion diseases, and to study the interaction of prion diseases with AD.



**Samuel K. Ludwin, M.B., B.Ch.** attended medical school at the University of Witwatersrand, Johannesburg, South Africa, and followed this with residency and fellowship training in Pathology and Neuropathology at Stanford University in California from 1970-1975, under the legendary Lucien Rubinstein. He moved to Queen's University and Kingston General Hospital in Kingston, Canada in 1975 where he is now a Professor of Pathology (Neuropathology). He served as Chairman of the Department of Pathology at the University of Western Ontario in London, Ontario from 1991-1992. His clinical practice covers neuropathology, his primary specialty, as well as anatomic pathology. He teaches undergraduate medical and life sciences students, as well as Residents and Interns. He received the Queens Faculty of Medicine Aesculapean Education Award for medical students, and the 3M Award for Teaching Excellence.

He has served on numerous committees both in the Faculty and the Hospital and was President of the Medical Staff and Medical Director at Kingston General and Hotel Dieu hospitals. From 2002-2006 he served as Associate Dean (Research) in the Faculty of Health Sciences, Queen's University and Vice-President (Research Development) Kingston General and Hotel Dieu Hospitals.

He is a Past-President of both the International Society of Neuropathology and of the Canadian Association of Neuropathologists.

Dr. Ludwin's research has centered on mechanisms of remyelination and demyelination, particularly oligodendrocyte and astrocyte behaviour in relationship to Multiple Sclerosis, and clinical and experimental studies on the pathology of MS. He has received many years of research funding from the MRC (CIHR precursor) and the MS Society of Canada. He has lectured extensively at national and international meetings and institutions. He has been and remains on the Editorial Board of numerous journals. He has also had a long interest and has published in neuro-oncology. He is responsible for well over one hundred publications related to his diverse research interests.

Dr. Ludwin is a Past-Chairman of the Medical Advisory Board of the Multiple Sclerosis Society of Canada and has served on the Research Development Committee of the National Multiple Sclerosis Society of the United States. He is also currently a member of the National Board of Directors of the MS Society of Canada, and of the MAB of the International Federation of MS Societies. He headed the formation of the endMS Canadian National Research Training Network in Multiple Sclerosis. He was awarded the Queen Elizabeth II Golden Jubilee Medal for services to Multiple Sclerosis.

Dr. Ludwin was a founding member of the Myelin Project, an international venture promoting research into myelin repair, and has currently been appointed to the Scientific Advisory Board of the Myelin Repair Foundation in San Francisco.

He is currently the incoming Chair of the Federal Tri-Agency (CIHR, SSHERC, NSERC) Panel on Research Ethics in Canada, responsible for developing the Tri-Council Policy Statement; this Policy guides the conduct of all human research ethics in Canada. Dr. Ludwin is also the President of the Maurice Price Foundation, a private Ottawa-based charitable organization.

The American Association of Neuropathologists annually recognizes outstanding neuropathologists who have contributed significantly to our field, as well as to our association. Dr. Ludwin's scientific and biomedical credentials are impeccable, and our neighbor-to-the-North has participated in our

annual meeting throughout his career. He has twice won the Weil Award of the AANP for experimental neuropathology in 1974 and 1979, and was the Saul Korey Lecturer in 2003. He also was a member of the editorial board of the Journal of Neuropathology and Experimental Neurology from 1997-2005. Dr. Ludwin was Chair of the Committee on Congresses for the AANP from 1990-1994, and a member of the Diagnostic Slide Session Committee for a decade.

Even though the AANP, the JNEN and our annual meetings have benefitted immensely and regularly from our foreign membership, rarely has the AANP awarded its lifetime achievement award to one of these members. Sam Ludwin is one of these select few. L'Chaim!

# AANP PRESIDENTIAL SYMPOSIUM Sunday, 13 June 2010

# "Big Science" and the Transition to Personalized Medicine: How can Neuropathologists Play Roles in Large-Scale Clinical, Translational and Basic Research?

8:00 am – 8:30 am	Introduction
	David N. Louis, MD, PhD
	Massachusetts General Hospital, Boston, MA
8:30 am - 9:15 am	TCGA: Basic Genomics Meets Neuropathology
	Kenneth D. Aldape, MD, PhD
	MD Anderson Cancer Center, Houston, TX
9:15 am – 10:00 am	SPORE: Translational Research and the Requirement of Neuropathology
	Scott R. VandenBerg, MD, PhD
	University California, San Diego, CA
10:00 – 10:30 am	REFRESHMENT BREAK
10:30 - 11:15 am	Matthew T. Moore Distinguished Lecture
	RTOG: Clinical Trials and the Increasing Role of Neuropathology Mark Gilbert, MD
	MD Anderson Cancer Center, Houston, TX
11:15-11:45 am	AWARDS CEREMONY
11:45 -12:00 pm	INSTALLATION OF NEW OFFICERS
12:00 pm	ADJOURNMENT

#### **Overall Objectives:**

Upon completion of this activity, the attendee should be able to:

- 1. Describe the Utility of translational Science Large-Scale Resources for the field of Neuropathology
- 2. Describe the utility of basic scientific large-scale resources for the field of neuropathology
- 3. Define how neuropathologists can participate in these resources

#### 2010 PRESIDENTIAL SYMPOSIUM

#### The Neuropathologist using "Big Science": An Introductory Example

David N. Louis

Massachusetts General Hospital and Harvard Medical School, Boston, MA



Dr. David N. Louis is the Benjamin Castleman Professor of Pathology at HMS and Pathologist-in-Chief at MGH. Dr. Louis' own clinical neuropathology practice and research focuses on brain tumors, with an emphasis on the molecular basis of malignant gliomas and the application of molecular diagnostics to glioma classification. He has contributed over 300 original articles, reviews and chapters to the literature. His laboratory was the first to demonstrate that molecular approaches could be used to subdivide malignant gliomas in a biologically relevant manner, and that molecular approaches could be used to predict the response of particular malignant gliomas to specific therapies. Dr. Louis has received a number of prestigious awards for his work, including the 2008 Zülch Prize of the Max Planck Society. Dr. Louis served on the 2000 WHO Committee on the Classification of Tumours of Nervous System and co-chaired the 2007 WHO Classification

of Tumours of the Central Nervous System. He has served as chair of the Scientific Advisory Panel of the Brain Tumor Society, on the Board of Directors of the Society for Neuro-Oncology, and on editorial boards of more than 10 national and international journals. Dr. Louis is one of three editors for the 8<sup>th</sup> edition of *Greenfield's Neuropathology* and author of the AFIP Fascicle on Non-neoplastic Disease of the Central Nervous System. He was also co-chair of the Brain Tumor Progress Review Group sponsored by the NIH, and was the founding chair of the Cancer Biomarkers Study Section at NIH.

#### **Objectives:**

At the end of the lecture, the attendee should be able to:

- Describe some examples of "big science" (i.e., large collaborative, multi-institutional) initiatives.
- Describe the role of MSH6 inactivation in mediating alkylator agent chemoresistance in glioblastoma.
- Describe the putative relationship between MGMT inactivation and MSH6 inactivation in mediating alkylator agent chemoresistance in glioblastoma.

#### Abstract:

"Big science" initiatives are large, collaborative, multi-institutional projects that provide many opportunities to benefit the biomedical community. They span from more basic scientific undertakings (such as the Human Genome Project and The Cancer Genome Atlas [TCGA]), to translational endeavors (such as Specialized Programs of Research Excellence [SPOREs]), and to more clinically applicable efforts (such as large clinical trial organizations, e.g., the Radiation Therapy Oncology Group [RTOG]). All of these "big science" projects present important opportunities for neuropathologists. The present lecture provides an example of the interplay between neuropathology translational research and "big science" by illustrating the discovery and clarification of the role of MSH6 inactivation in mediating alkylator agent chemoresistance in glioblastoma-largely through interactions between the Louis laboratory and the Wellcome Trust-Sanger Institute, TCGA and the Zinc Finger Consortium. The interplay between MGMT inactivation and MSH6 (a mismatch repair protein) inactivation appears to account for glioblastoma resistance to temozolomide

in many patients, as evidenced by both *in vivo* and *in vitro* observations. The following Presidential Symposium follows this introductory talk with examples of how neuropathologists can benefit from "big science" initiatives such as TCGA, brain tumor SPOREs and the RTOG.

**Disclosures:** Dr. Louis has nothing to disclose.

#### 2010 PRESIDENTIAL SYMPOSIUM

**TCGA: Basic Genomics Meets Neuropathology** *Kenneth D. Aldape, MD, PhD MD Anderson Cancer Center, Houston, TX* 



**Dr. Kenneth Aldape** is a Professor of Pathology at UT MD Anderson Cancer Center. He received his medical degree from The University of California, San Francisco in 1991. Following residency in pathology and fellowship in neuropathology at UCSF he joined the faculty there in 1995. In 2001, he moved to MD Anderson as an Associate Professor. In 2008 he was promoted to the rank of Professor. His work is focused on basic and translational aspects of brain tumors especially gliomas. Over the past 10 years, he has conducted a series of high-throughput microarray screens to identify molecular subtypes of gliomas. Robust markers have been identified from these screens and are currently being tested for their applicability to routinely process formalin-fixed paraffin embedded tissue with the goal of identifying clinical tests which could be used to personalize therapy for patients with glioma. Most recently he has been involved

with The Cancer Genome Atlas (TCGA) where along with colleagues; he identified a subset of glioma that shows the CpG Island Methylator Phenotype (CIMP). It was found that CIMP-positive gliomas have distinct molecular and clinical characteristics and were also highly positively associated with the presence of IDH1 mutations. Future work will integrate data from multiple platforms to refine our classification of glioma based on clinically relevant molecular signatures. Dr. Aldape is a member of Board of Directors of the Society of Neuro Oncology and serves on the External Advisory Board for several academic institutions as well as the Sontag Foundation and the American Brain Tumor Association.

#### **Objectives:**

At the end of the lecture, the attendee should be able to:

- Describe current methodologies used for molecular classification of glioma.
- Describe existence of the CpG island methylator phenotype in glioma.
- Discuss methodologies that translate data obtained from high-throughput screens to routinely available clinical samples.

#### Abstract:

The Cancer Genome Atlas (TCGA) chose glioblastoma as the initial tumor type for study. A unique feature about TCGA was the use of a multidimensional profiling approach to identify clinically relevant molecular signatures. We have focused on two platforms profiled by TCGA: expression microarray analysis and CpG island methylation analysis. Using expression microarray data from TCGA and other sources, we have identified a survival prediction model and have validated this model in independent microarray datasets. Current work involves translating these data into assay amenable to routinely available formalin-fixed paraffin embedded specimens for future clinical applicability. In addition, we have examined epigenetics data from TCGA. Analysis of these data indicated concordant methylation of a cassette of genes that occurred in approximately 10% of the GBM samples. This pattern is similar to the CpG island methylator phenotype (CIMP) found in other tumor types. Clinical correlation showed that CIMP-positive tumors were from younger patients with a significantly improved outcome. Since CIMP-positive tumors had characteristics of secondary GBM, we investigated this phenotype in low-intermediate grade glioma. Approximately 80% of grade II gliomas and 50% of grade III gliomas were found to be CIMP positive. CIMP was also positively correlated with the presence of IDH1 mutation. Current work involves the integration of

CIMP status with molecular subsets defined by expression microarray data to further refine molecular classification of gliomas. Application of these technologies to paraffin tissues, especially from clinical trial samples, are underway to validate them as clinically relevant.

**Disclosures:** Dr. Aldape has nothing to disclose.

#### SPORE: Translational Research and the Requirement of Neuropathology

Scott R. VandenBerg, MD, PhD University California, San Diego, CA



**Scott R. VandenBerg** is a Professor of Pathology and Chief of the Neuropathology Division at the University of California, San Diego. He was awarded an M.D. and Ph.D. in Neurosciences at Stanford University, and received training in Anatomic Pathology at the University of Colorado Health Sciences Center and at the University of Virginia Health System. He completed his Neuropathology Fellowship with Lucien J. Rubinstein and also received postdoctoral training in the Laboratory of Developmental Neurochemistry with Roland Ciaranello at Stanford University. In 1984 he joined the Division of Neuropathology at the University of Virginia as an Assistant Professor of Pathology and rose to the rank of Professor and Chief of the Division of Neuropathology. In 1998 he was named as the John T. and Louise Nerancy Professor of Neurosciences at the

University of Virginia. In 2003, he moved to UCSF to become Professor of Pathology and Neurological Surgery, and Director of the Tissue Core of the Brain Tumor Research Center Tissue Core and UCSF Neuropathology Biomarkers Laboratory. In this capacity, he also served as the Director of the UCSF Brain SPORE Tissue Core and in 2007, became a member of the GBM Working Group of the Cancer Genome Atlas Project to establish consensus histopathologic features for the TCGA data base. In 2008, he became Co-Director of RTOG Biospecimen Resource for neurological pathology. In 2009, he transferred to the University of California San Diego and now heads the newly established Human Tissue Technology Center, a campus-wide biospecimen repository and tissue translational research laboratory.

#### **Objectives:**

At the end of the lecture, the attendees should be able to:

- Describe how the NIH Brain SPORE Program contributes to the translational brain tumor research.
- Delineate the fundamental collaborative functions of the neuropathologist in the Brain SPORE Program.
- Describe the key roles of the neuropathologist for ensuring the quality of bio-specimens in the post-genomics era of biomedical science.

#### Abstract:

Neuropathologists have key roles in the discovery of the morphologic, cell biological, and molecular basis of neurological diseases. This presentation will review the spectrum of essential and collaborative functions of the neuropathologists in the Brain Tumor SPORE Program. This Program was initiated by the National Cancer Institute with co-sponsorship of the National Institute of Neurological Disorders and Stroke in the year 2002 with the funding of two P50 SPOREs. The Program has grown into four fully funded SPOREs and throughout its history, tissue cores have been an essential and highly valuable resource. Neuropathologists have played a central and highly collaborative role in the function of these cores. The presentation will highlight the variety of scientific collaborations facilitated by neuropathologist as a part of SPORE research in addition to an essential role for safeguarding the quality of brain bio-specimens available for translational research.

Disclosures: Dr. VandenBerg has nothing to disclose.

# Matthew T. Moore Distinguished Lecture

#### **RTOG:** Clinical Trials and the Increasing Role of Neuropathology

Mark Gilbert, MD MD Anderson Cancer Center, Houston, TX



**Dr. Mark Gilbert** is Professor and Deputy Chair at the Department of Neuro-Oncology at The University of Texas M.D. Anderson Cancer Center, Houston, Texas, USA. Dr. Gilbert received his MD from the Johns Hopkins University School of Medicine, Baltimore. He completed Residences and Fellowships in the Departments of Internal Medicine and Neurology at Johns Hopkins Hospital, and was appointed Keck Foundation Fellow in Neuro-Oncology, at Johns Hopkins Hospital from 1986 to 1987. Dr. Gilbert is current board certified in Internal Medicine and Neurology and Psychiatry. Dr. Gilbert has also been awarded the Blanche Bender Professorship in Cancer Research Endowment.

Dr. Gilbert is a member of various societies and organizations including the American Association for Cancer Research, the

American Academy of Neurology, the American Society of Clinical Oncology, and the Society for Neuro-Oncology.

Dr. Gilbert's current research focuses on the development of new chemotherapy agents, phase I testing, pharmacology, and drug resistance modulation. As well as participating in trials developed locally at MD Anderson Cancer Center. Dr. Gilbert takes part in clinical studies conducted in conjunction with the Radiation Therapy Oncology Group and the Adult Brain Tumor Consortium, for which he serves as Principal Investigator for the UT M. D. Anderson clinical site.

**Objectives:** At the end of the lecture, the attendees should be able to:

- Describe how the Radiation Therapy Oncology Group contributes to the clinical brain tumor research.
- Delineate the key roles of the neuropathologist in large cooperative trial organizations such as RTOG.
- Describe some of the molecular markers being employed in large clinical trials of malignant gliomas.

#### Abstract:

The prognosis for patients with malignant gliomas remains quite poor. As often stated, there have been advances in each of the clinical disciplines, neurosurgery, radiation oncology and medical oncology. However, until 5 years ago, there were no substantive data that confirmed that these advances translated into improved patient outcomes. In 2005, a seminal paper was published in the New England Journal of Medicine, reporting the results of a randomized, phase III trial in patients with newly diagnosed glioblastoma. This study, performed by the EORTC and the NCI-Canada, compared the standard of care of external beam radiation with a novel concurrent chemotherapy and radiation treatment followed by 6 months of chemotherapy alone. This effort provided level 1 evidence that the combination led to improved median survival, 2-year and 5-year survival rate. Furthermore, tumor tissue was available from a subset of patients. A methylation-specific PCR system was used to look at the methylation status of the promoter region of the MGMT, a likely mechanism of temozolomide resistance in gliomas. The tumors were characterized as either with methylated promoter (decreased expression) or unmethylated (higher levels of expression). As

predicted, outcomes were markedly better for patients with methylated tumors. However, importantly, these data with additional information, confirmed the prognostic, but not full predictive ability of this test. Importantly, this study and additional correlative investigations confirmed the pivotal role of the cooperative group mechanism in establishing new standards of care and the importance of correlative studies in better understanding the apparent variability of response and benefit of treatment. These would be important steps towards personalizing treatment for patients.

The Radiation Therapy Oncology Group (RTOG) has the largest US-based cooperative group effort studying new treatments for brain tumors. The RTOG developed the successor trial for newly diagnosed glioblastoma that builds on the EROTC-NCIC-Canada trial, examining the potential therapeutic benefit of intensifying temozolomide treatment to modulate MGMT activity. In the RTOG 0525 trial, patients with glioblastoma were required to have tumor tissue blocks submitted at the time of entry so that the diagnosis can be confirmed (central neuropathology review) and tumor MGMT gene promoter methylation status can be determined. This latter component is critical as it is a stratification factor. RTOG 0525 accrued 1173 patients and tissue blocks received from 1168. Study accrual was rapid, requiring only 26 months for study completion. Although results are expected by early 2011, there already have been important implications of this success. RTOG 0525 represents the largest brain tumor clinical trial ever completed and the mandatory tumor tissue requirement and real-time central review and molecular (MGMT) analysis, represents a landmark study.

More recently, the RTOG launched a large, phase III trial designed to determine the role of the antiangiogenic agent, bevacizumab, in patients with newly diagnosed glioblastoma. For this study, the tissue requirement remained, but with an accelerated timeline. Tumor tissue must undergo central review and real-time determination of MGMT methylation status and a 9-gene prognostic marker (developed by K. Aldape and colleagues) that are both incorporated into the stratification schema. This rapid tumor analysis has been successfully implemented into the ongoing trial.

These clinical trials with integrated correlative studies underscore the role of neuropathology in the most highly productive clinical trials in neuro-oncology. At the broadest scope, provision of optimal tumor tissue blocks is a critical step in successful completion of these seminal clinical trials. Moving forward, it is likely that neuropathologists will provide critical information beyond the traditional histologic designation and grading. In addition to providing tumor material for the study, this may include performance and interpretation of molecular profiling so that optimal patient selection can occur both efficiently and ultimately, as a routine component of care. Currently, the collaborative efforts of neuropathologists both as a part of the multidisciplinary care of individual patients who participate on clinical trials and as lead investigators on the studies that are leading to even more precise characterization of tumors and more specific, personalized treatment for patients.

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