

The UCLA Stroke Center and Neurovascular Program present:

# UCLA BRAIN ATTACK! '09

A State-of-the-Art Symposium on Stroke Management



Ronald Reagan UCLA Medical Center

**Tour the World's Most Comprehensive Stroke Center**

**Saturday, May 30, 2009**

◆ **Tom Bradley International Hall Gallery & Conference Center**  
UCLA campus in Los Angeles, California

UCLA Faculty Course Directors:

**David Alexander, MD**

Director, Neurological Rehabilitation and Research Unit, Department of Neurology

**Neil Martin, MD**

Chair, Department of Neurosurgery

**Jeffrey Saver, MD**

Director, Stroke Neurology, Department of Neurology

**Sid Starkman, MD**

Director, Emergency Neurology, Departments of Emergency Medicine and Neurology

**Paul Vespa, MD, FCCM**

Director, Neurocritical Care, Departments of Neurosurgery and Neurology

**Fernando Viñuela, MD**

Director, Division of Interventional Neuroradiology

Sponsored by:



In association with:



## BRAIN ATTACK! '09

Saturday, May 30

7:15 Registration and Continental Breakfast

### STROKE PREVENTION

8:00	Opening remarks	<i>J. Mazziota, MD</i>
	How to Prevent 2/3rds of All Strokes	<i>B. Ovbiagele, MD</i>
8:30	Neurovascular Angioplasty and Stenting: When and How	<i>G. Duckwiler, MD</i>
8:55	Bypass Surgery for Occluded Carotids: The 21st Century Approach	<i>N. Martin, MD</i>
9:20	Closing PFOs for Stroke and Migraines: The Data So Far	<i>J. Tobis, MD</i>
9:45	<i>Break</i>	

### ACUTE ISCHEMIC STROKE

10:05	TIAs: New Approaches to a Neurovascular Emergency	<i>D. Kim, MD</i>
10:30	Collateral Therapeutics and Aqueous Oxygen	<i>D. S. Liebeskind, MD</i>
10:55	New Practice Guidelines for tPA and Medical Stroke Care	<i>L. Restrepo, MD</i>
11:20	The Device Era in Acute Brain Ischemia	<i>R. Jahan, MD</i>

### INNOVATIVE TECHNOLOGY

11:45	Telestroke: Emergency Stroke Consultations by Telemedicine and Telerobotics	<i>L. Ali, MD</i>
12:10	<i>Lunch</i>	

### NEUROCRITICAL CARE

1:10	Hemicraniectomy and Hypothermia for Brain Edema	<i>P. Vespa, MD</i>
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### HEMORRHAGIC STROKE

1:35	Cerebral Aneurysms: New Approaches	<i>F. Viñuela, MD</i>
2:00	Keyhole and Endoscopic Surgery for Intracerebral Hemorrhage	<i>J. Frazee, MD</i>
2:25	<i>Break</i>	

### STROKE IMAGING

2:45	CT and MRI in Acute Stroke: When and How	<i>P. Villablanca, MD</i>
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### NEUROREHABILITATION

3:10	Neuroplasticity and Brain Repair in Stroke Recovery	<i>D. Alexander, MD</i>
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### STROKE SYSTEMS

3:35	Building Stroke Centers: A Practical Approach	<i>J. Saver, MD</i>
4:00	<i>Closing</i>	

Tour of the Ronald Reagan UCLA Medical Center - *Pre-registration required*

# COURSE OBJECTIVES

At the conclusion of this program participants should be able to:

- *Discuss available and emerging treatment options for cerebrovascular diseases*
- *State the utility of evolving imaging techniques in the diagnosis, treatment, and management of cerebrovascular diseases*
- *Describe recent developments in stroke prevention strategies*

# TARGET AUDIENCE

*Neurologists, Neurosurgeons, Interventional Neuroradiologists, Emergency Physicians, Family Practice Physicians, Internists, and other health care professionals who want to enhance their knowledge of the management of patients with cerebrovascular diseases.*

# UCLA FACULTY

**David Alexander, MD**

Director, Rehabilitation Neurology  
Neurology

**Latisha Katie Ali, MD**

Assistant Professor  
Neurology

**Gary Duckwiler, MD**

Professor  
Division of Interventional Neuroradiology

**John Frazee, MD**

Clinical Professor  
Department of Neurosurgery  
Chief, Neurosurgery Section  
West Los Angeles VA Medical Center

**Reza Jahan, MD**

Assistant Professor  
Division of Interventional Neuroradiology

**Doojin Kim, MD**

Assistant Professor  
Division of Interventional Neuroradiology

**David S. Liebeskind, MD**

Associate Professor  
Neurology Director, Stroke Imaging  
Director, UCLA Vascular Neurology Residency Program  
Associate Neurology Director, UCLA Stroke Center

**Neil Martin, MD**

Professor  
Chairman, Department of Neurosurgery

**Bruce Ovbiagele, MD**

Associate Professor of Neurology  
Director, Olive View-UCLA Stroke Program Unit

**Lucas Restrepo, MD**

Clinical Instructor  
Neurology

**Jeffrey Saver, MD**

Professor of Neurology  
Director of Stroke Neurology  
Director of UCLA Stroke Unit

**Jonathan Tobis, MD**

Professor of Medicine  
Director, Interventional Cardiology Research

**Paul Vespa, MD, FCCM**

Associate Professor of Neurosurgery and Neurology  
Director, Neurocritical Care

**J. Pablo Villablanca, MD**

Professor of Radiology  
Chief, Diagnostic Neuroradiology  
Medical Director of MRI  
Director, Clinical Image Processing Laboratory

**Fernando Viñuela, MD**

Professor  
Department of Radiological Services  
Director, Division of Interventional Neuroradiology

# BRAIN ATTACK! '09

## ISCHEMIC STROKE:

### Thrombolysis and Emergency Treatment, Prevention and Rehabilitation

*The UCLA Stroke Center presents its annual Brain Attack symposium to review the practical, clinical aspects of stroke prevention, diagnosis, and treatment. The course will cover stroke risk factors, diagnostic testing, and medical and interventional therapy.*

*Intravenous tPA is currently the only approved therapy for treatment of acute ischemic stroke. The results of recent studies suggest that neurointerventional techniques of intra-arterial mechanical and/or pharmacologic thrombolysis can be beneficial up to 6 hours after symptom onset in most patients, and beyond 6 hours in select patients. A highly coordinated team approach is required to provide these treatments safely and effectively.*

*Neuroimaging techniques are playing an increasingly important role in the evaluation of stroke patients. Faculty will provide an in-depth discussion of innovative MR and CT techniques.*

## The UCLA Stroke Center

The UCLA Stroke Center has launched a comprehensive treatment and clinical trials program for patients with cerebrovascular disorders. The UCLA Stroke Center, the first Joint Commission certified primary stroke center in Los Angeles County, provides multidisciplinary care for patients with stroke and kindred disorders including prevention, acute brain rescue, interventional neuroradiological and surgical therapy, and multimodal rehabilitation. The UCLA Stroke Center's treatment approach includes emergency physicians, stroke neurologists, vascular neurosurgeons, vascular surgeons, diagnostic and interventional neuroradiologists, and rehabilitation physicians.

**Acute Treatment:** For patients with new onset stroke symptoms, a "Brain Attack" rapid care program provides:

- immediate evaluation by emergency physicians and neurologists
- CT / MRI scan within minutes of emergency department arrival
- prompt neurovascular intensive/intermediate level care
- trials of novel therapies for ischemic and hemorrhagic stroke, and acute interventional and surgical therapies.

**Stroke in Children and Young Adults:** Experts in pediatric neurology, neurosurgery, interventional and diagnostic neuroradiology and stroke neurology work together at the UCLA Stroke Center to provide comprehensive evaluation and treatment for pediatric and young adult patients with cerebrovascular disorders including moyamoya syndrome, sickle cell anemia, hyper-coagulable states, cardioembolic stroke, arteriovenous malformations and aneurysms.

**Prevention:** The Stroke Clinic provides comprehensive evaluation and treatment recommendations for individuals at increased risk for ischemic and hemorrhagic stroke, including those with atrial fibrillation, carotid artery stenosis, transient ischemic attacks and newly diagnosed unruptured aneurysms or vascular malformations.

**Carotid Endarterectomy:** Microneurosurgical endarterectomy, with intraoperative brain monitoring, is available for asymptomatic and symptomatic carotid artery stenosis.

**Cerebral and Carotid Angioplasty:** UCLA provides angioplasty for selected patients with intracranial and extracranial carotid or vertebrobasilar stenoses. To 'UCLA is a center for the SAPHIRE WW trial.

**Thrombolysis:** For patients eligible to receive intravenous tPA, thrombolysis is rapidly administered. In addition, interventional neuroradiologic teams are available around the clock to deliver, for selected patients, endovascular or intra-arterial pharmacologic and mechanical thrombolysis.

**NIH Studies:** The UCLA Stroke Center is an NIH-designated Specialized Program of Translational Research in Acute Stroke (SPOTRIAS), one of only eight such designated Centers in the country. NIH-funded trials for which UCLA is currently recruiting patients include studies of EC-IC bypass in carotid occlusion (COSS), mechanical embolectomy in acute stroke (MR RESCUE), paramedic-initiated magnesium neuroprotection for acute stroke (FAST-MAG), and IV t-PA compared to IVt-PA plus IA therapy (IMS III).

**Rehabilitation:** The inpatient Neurologic Rehabilitation and Research Unit and complementary outpatient rehabilitation facilities provide state-of-the-art care to maximize recovery for patients with stroke.

**UCLA Stroke Hotline for Acute Cases: 1-877-DrStroke (1-877-377-8765)**

**Stroke Neurology:** jsaver@ucla.edu or 310-794-6379

**Vascular Neurosurgery:** neilmartin@mednet.ucla.edu or 310-267-9449

**Inpatient Rehabilitation and Research Unit:** 310-794-6556

**Neurosurgery Clinic:** 310-794-1195 (outpatient)

**Emergency Neurology:** starkman@ucla.edu or 310-794-0594

UCLA Stroke Center: [www.stroke.ucla.edu](http://www.stroke.ucla.edu)

UCLA Stroke Protect: [www.strokeprotect.mednet.ucla.edu](http://www.strokeprotect.mednet.ucla.edu)

# BRAIN ATTACK! '09

## Atherosclerosis, Aneurysms, and Cerebrovascular Malformations

*Tremendous strides have been made in the management of complex vascular lesions of the brain and spinal cord. This symposium will provide a review of the basic principles of clinical and radiologic management of carotid and intracranial stenoses, subarachnoid hemorrhage and aneurysms, and vascular malformations. Developments in microsurgical and endovascular techniques as well as critical care neurology will be discussed.*

## The UCLA Neurovascular Program

The UCLA Neurovascular Program has developed management protocols for the diagnosis and treatment of cerebrovascular disorders which incorporate recent developments in stroke neurology, microneurosurgery, diagnostic and interventional neuroradiology, stereotactic radiosurgery, neuroanesthesiology, and critical care. The members of the UCLA Neurovascular team have worked cooperatively since 1986 with all of the management components available on-site at UCLA, allowing for efficient coordination of the various techniques.

### Neurovascular Disorders Treated at UCLA:

#### **Intracranial Aneurysms**

Ruptured intracranial aneurysms may be treated either surgically or by endovascular technique. Postoperatively, transcranial Doppler and cerebral blood flow studies are available to assess for the development of vasospasm. Severe, medically refractory vasospasm is treated using balloon dilation angioplasty and/or pharmacologic intra-arterial infusion, performed by the interventional neuroradiology team.

Giant and complex aneurysms often require combined treatment using endovascular techniques in conjunction with extracranial-intracranial arterial bypass, or surgery under hypothermic circulatory arrest.

#### **Arteriovenous Malformations (AVMs)**

The Neurovascular Program has extensive experience in the management of large AVMs in children and adults, which are generally treated with embolization followed by microneurosurgical resection. Functional brain mapping for surgical planning is a critical component of management of AVMs. Deep and critically located AVMs are treated with stereotactic radiosurgery which is combined with embolization in larger lesions. Dural arteriovenous malformations are usually treated definitively by embolization alone, but in some complex cases, surgery or combined techniques are necessary. Spinal AVMs are treated by microsurgical excision, endovascular therapy, or most commonly, a combination of the two techniques.

#### **Cavernous Angiomas of the Brain, Brain Stem and Spinal Cord**

Cavernous angiomas are generally treated by microsurgical excision when they have caused significant symptoms. Lesions of the brain stem and spinal cord can now be treated successfully using microneurosurgical techniques, usually in combination with intraoperative electrophysiologic monitoring.

#### **Vein of Galen Malformations**

Transarterial and transvenous endovascular approaches are employed to reduce flow through the fistula, combined in some cases with neurosurgical treatment.

UCLA Stroke Center website <http://www.stroke.ucla.edu>

Vascular Neurosurgery 310-267-9449

Stroke Neurology 310-794-6379

Interventional Neuroradiology 310-267-8761 or 310-267-8762

### UCLA Medical Center Facilities:

#### **Stroke Unit**

UCLA Medical Center is one of the first dedicated Stroke Treatment Units in the nation that offers intermediate care designed for patients suffering from cerebral infarction, hemorrhage or other cerebrovascular diseases.

#### **UCLA Neurocritical Care**

The advanced 24-bed NeuroICU is a leader in its field for brain monitoring which includes continuous computerized EEG, microdialysis, tissue oxygenation, and blood flow monitoring. The unit features the Singleton Center for Neuroimaging with 3 Tesla MRI and CT/PET imaging. Advanced treatment protocols for stroke, intracerebral and subarachnoid hemorrhage include image guided stereotactic surgery (among other treatments).

#### **Neurologic Rehabilitation and Research Unit**

The NRRU provides acute rehabilitation during the initial time of complex medical and neurological recovery post-stroke with the goal of reducing the impairments and disability associated with stroke and maximizing recovery.

#### **UCLA Clinical Image Processing Laboratory:**

The laboratory is equipped with a full spectrum of 3D, image fusion, and post processing software for cerebrovascular structural and perfusion study analysis.

#### **Neurosurgical Operating Rooms**

The neurosurgical operating rooms at UCLA, which accommodate more than 1200 cases annually, include video systems for viewing microsurgical procedures, electrophysiologic equipment for brain monitoring, intraoperative angiography, and a frameless stereotactic imaging workstation (BrainLAB).

#### **UCLA Cerebral Blood Flow Laboratory (Clinical)**

This facility provides comprehensive transcranial Doppler evaluations and cerebral blood flow testing on inpatients and outpatients.

#### **Interventional Neuroradiology Suites**

The interventional angiography suites are equipped with the latest digital equipment, including 3-D rotational angiography designated for the performance of endovascular procedures. More than 400 such procedures are performed annually at UCLA.

#### **Stereotactic Radiosurgery**

The stereotactic radiosurgery section at UCLA utilizes state-of-the-art instrumentation for the treatment of vascular malformations of the brain. This multidisciplinary effort of neurosurgeons, physicists, radiologists, and radiation oncologists is planned on a three-dimensional and multiplanar computerized model using high resolution brain mapping imaging techniques.

# Selected Advances in Stroke Care and Research from the UCLA Stroke Center

- **First validated instrument for paramedic recognition of stroke**
  - Los Angeles Prehospital Stroke Screen (LAPSS)
- **First prehospital neuroprotective treatment of stroke trial**
  - Field Administration of Stroke Therapy - Magnesium (FAST-MAG)
- **First MRI demonstration of successful reversal of advanced stroke injury in humans**
- **First device therapy for acute ischemic stroke**
  - MERCI Retriever
  - Invented at UCLA
  - First stroke device studied utilizing FDA approved exception from informed consent under emergency circumstances
- **Leading device therapies for cerebral aneurysms**
  - Guglielmi detachable coil, Matrix coil
  - Invented at UCLA
- **Onyx as liquid embolic agent for intracranial arteriovenous malformations and fistulae**
  - Developed at UCLA
- **First clinical cellphone PACS system for remote review of CT and MRI scans in acute stroke**
  - Developed at UCLA
- **First US multicenter trial of endoscopic treatment for acute intracerebral hemorrhage**
- **First routine use of intraoperative digital subtraction for evaluation after surgical aneurysm and AVM treatment**
- **First Neuro ICU-adjacent comprehensive stroke imaging center with CT, PET, 3T MRI**
- **First ICU and ED robot for remote monitoring of stroke patients**
- **First cerebral blood flow laboratory to use bedside xenon CBF studies and TCD for stroke critical care and research**
- **First clinical information system with acute stroke management dashboard**
- **First to deploy write-once, write-everywhere stroke note for clinical documentation and automated quality and research database completion**
- **First center with automated clinical stroke rounding list, for rounds, sign-out, and handoffs**
- **First systematic secondary prevention program for cerebral atherosclerosis**
  - Preventing Recurrence of Thrombo-embolic Events through Co-ordinated Treatment (Stroke PROTECT Program)
- **First accredited undergraduate program for Student Stroke Research**
  - UCLA Student Stroke Team
- **First accredited undergraduate program for Stroke Community Education and Research**
  - UCLA Stroke Force

# SYMPOSIUM INFORMATION

## ENROLLMENT - *Extremely Limited.*

**\*\*EARLY ENROLLMENT IS ADVISED\*\***

We accept MasterCard, Visa, or Discover.

## Online Registration

Please follow registration procedures located at [www.cme.ucla.edu](http://www.cme.ucla.edu) - Click on "Courses" on the left side of the page. Then click on "UCLA Brain Attack! '09".

### **FAST-MAG Investigators and UCLA Stroke Center Family:**

Visit our website for special instructions. Do not complete the online registration process. Please print and complete the corresponding form.

By Phone

Call **(310) 794-2620**.

## TUITION

Includes course registration, syllabus, continental breakfast, break refreshments, and a box lunch.

**\$150** Registration

**\$110** UC Faculty/Staff

**Free** Los Angeles County FAST-MAG Investigators  
(Tuition is covered by FAST-MAG Grant.)

## LOCATION

### **Tom Bradley International Hall Gallery & Conference Center**

417 Charles E. Young Drive  
Los Angeles, CA, 90095

*(see next page for map, directions, and parking information)*

## MEDICAL CENTER TOUR INFORMATION

The Ronald Reagan UCLA Medical Center tour will begin at 4:00 pm.

**Capacity is limited.**

During the registration process you will be asked if you are interested in participating in the tour.

We will email you regarding tour availability after registration.

## ACCOMMODATIONS

A list of hotels near UCLA is available on the **UCLA Brain Attack! '09** registration website.

Please visit [www.cme.ucla.edu](http://www.cme.ucla.edu) - Click on "Courses" on the left side of the page. Then click on "UCLA Brain Attack! '09". Scroll down for Hotel information.

## ACCREDITATION

The Office of Continuing Medical Education, David Geffen School of Medicine at UCLA is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Office of Continuing Medical Education, David Geffen School of Medicine at UCLA designates this educational activity for a maximum of 6.25 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

### Disclosure

The FDA has issued a concept paper which classifies commercial support of scientific and educational programs as promotional unless it can be affirmed that the program is "truly independent" and free of commercial influence. In addition to independence, the FDA requires that non-promotional, commercially supported education be objective, balanced, and scientifically rigorous. The policy further states that all potential conflicts of interest of the CME staff and faculty be fully disclosed to the program's participants. In addition, Accreditation Council for Continuing Medical Education policy now mandates that the provider adequately manages all identified potential conflicts of interest prior to the program. We, at UCLA fully endorse the letter and spirit of these concepts.

### Refunds

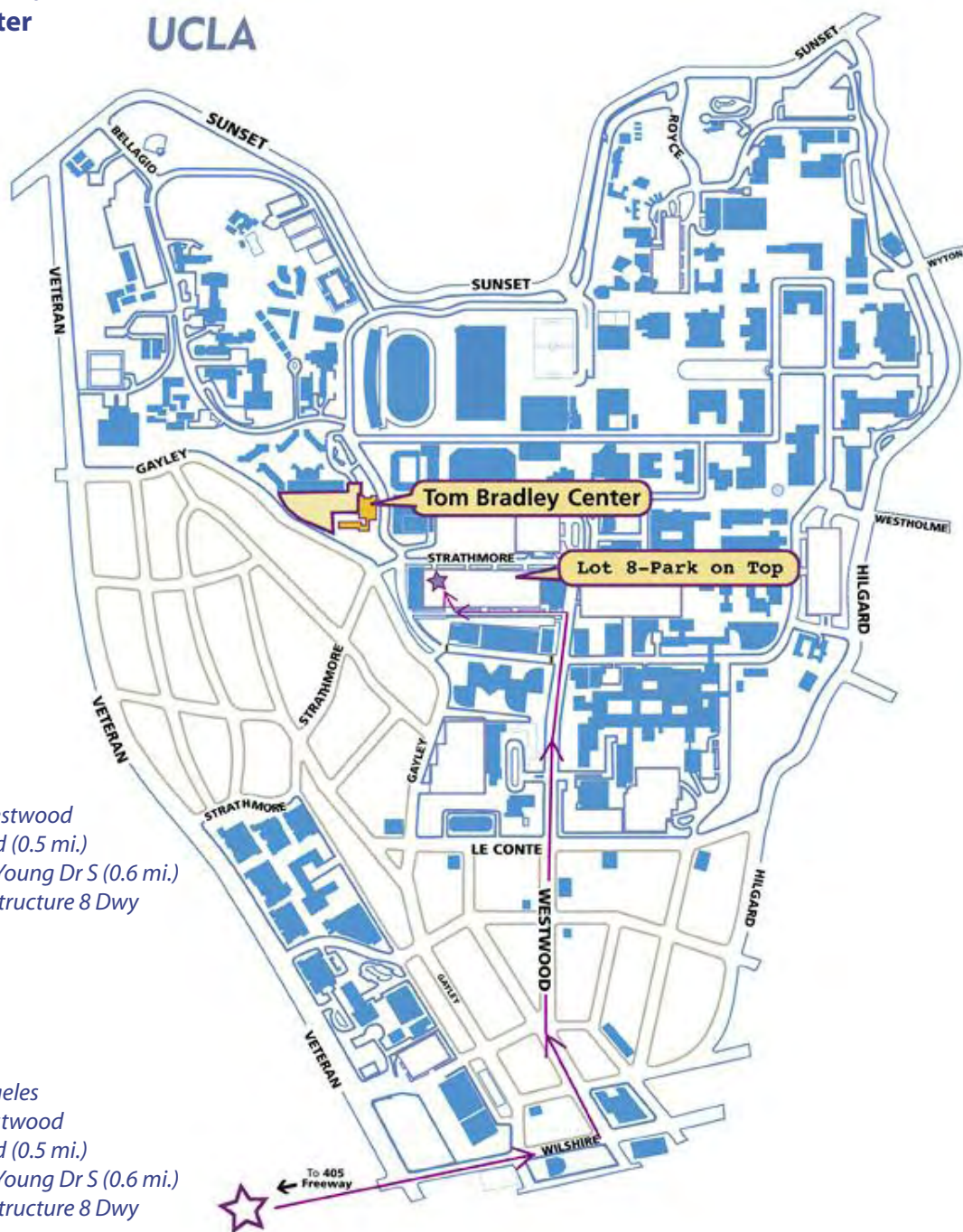
Cancellations must be received in writing by May 8, 2009, and will be subject to a \$50 processing fee. No refunds will be given after that date. If, for any reason, the course must be canceled, discontinued, or rescheduled by the Office of Continuing Medical Education, a full refund will be provided. You may fax your refund request to 310-794-2624.

## FOR ADDITIONAL INFORMATION

Contact the Office of Continuing Medical Education, David Geffen School of Medicine at UCLA, Brain Attack! '09, 10920 Wilshire Boulevard, Suite 1060, Los Angeles, CA 90024-6512 Telephone: 310-794-2620 E-Mail: [eayala@mednet.ucla.edu](mailto:eayala@mednet.ucla.edu).

## Tom Bradley International Hall Gallery & Conference Center

417 Charles E. Young Drive  
Los Angeles, CA, 90095



### DIRECTIONS

#### From LAX

Take 405 North  
Exit Wilshire Blvd. East towards Westwood  
Make a left turn on Westwood Blvd (0.5 mi.)  
Pass the intersection of Charles E. Young Dr S (0.6 mi.)  
Turn left at the next stoplight for Structure 8 Dwy  
Continue to the top level of Lot 8.

#### From Ventura County

Take 101 South  
Merge onto the 405 South Los Angeles  
Exit Wilshire Blvd. East toward Westwood  
Make a left turn on Westwood Blvd (0.5 mi.)  
Pass the intersection of Charles E. Young Dr S (0.6 mi.)  
Turn left at the next stoplight for Structure 8 Dwy  
Continue to the top level of Lot 8.

**\*\*\* Please park on the top level of parking Lot 8.**

The top of parking Lot 8 is best approached from Westwood Blvd. heading north from Wilshire Blvd.

### PARKING DETAILS

UCLA Employees with a UCLA Parking Pass can park for free on the top of Lot 8 if their parking pass is displayed clearly.

Guests must "self-serve" their parking by using the pay stations on the top level of Lot 8.  
The machines take both cash and credit (Visa & Mastercard). **All day parking is \$9.**

There will be a guide to direct you from Lot 8 to the Symposium.

For disabled parking, there are special arrangements. Please call 310-794-0374