Fifth Annual

Selected Topics in Neuroplastic & Reconstructive Surgery:
An International Symposium on Cranioplasty and Implantable Neurotechnology with Cadaver Lab

Presented by:
Department of Plastic-Reconstructive Surgery & Department of Neurosurgery
Section of Neuroplastic & Reconstructive Surgery
Johns Hopkins University School of Medicine

Jointly Provided by:
Society of Neuroplastic Surgery

November 2-3, 2019

General Session – November 2
The Rotunda
Joseph B. Martin Conference Center
at Harvard Medical School
Boston, Massachusetts

Hands-on Lab – November 3
Boston Bioskills Lab
Boston, Massachusetts

NEW THIS YEAR!
Oral Abstract Session

This activity endorsed by:
American Society of Maxillofacial Surgeons
American Society of Plastic Surgeons
Congress of Neurological Surgeons
Global Neuro
Society of Neuroplastic Surgery

This activity has been approved for AMA PRA Category 1 Credits™.
Modern-day cranioplasty, along with the burgeoning field of Neuroplastic and Reconstructive Surgery, is undergoing a significant paradigm shift related to various techniques, surgical advancements, implantable neurotechnology, and improved biomaterials. These changes have stimulated us to assemble premier thought leaders in various specialties including neurosurgery, neuroplastic surgery, craniofacial surgery, and plastic surgery to meet for the FIFTH annual symposium dedicated to the subjects of “cranioplasty”, “implantable neurotechnology”, and “neuroplastic surgery”—to be hosted this year at the Joseph B. Martin Conference Center at Harvard Medical School in Boston, Massachusetts. The faculty will gather to present evidence-based data on surgical approaches and state-of-the-art materials, engage and network within a broad array of colleagues and experts, and share high-yield experiences to help attendees improve their patient outcomes. Interactive panel discussions following each lecture will offer the opportunity to debate the evidence, exchange ideas, and gain invaluable insight to assist with the most challenging cases. This year's symposium, along with an included abstract session, will engage an international faculty and audience consisting of neurosurgery, neuroplastic surgery, craniofacial surgery, plastic/reconstructive surgery, oral/maxillofacial surgery, biomedical engineering, neurology and neuro-oncology, to explore and elucidate the new insights and advances relative to skull reconstruction, cranial implants, and groundbreaking neurotechnologies.

WHO SHOULD ATTEND
This activity is intended for residents, fellows and physicians in Neurosurgery, Neuroplastic and Reconstructive Surgery, Craniofacial Surgery, Plastic and Reconstructive Surgery, Otolaryngology—Head and Neck Surgery, Oral Maxillofacial Surgery and Biomedical Engineering.

OBJECTIVES
After attending this activity, the participant will demonstrate the ability to:
• Create a cranioplasty reconstruction management plan with or without implants, from peri- to postprocedural care.
• Discuss recent advances in cranioplasty, implantable neurotechnology, and neuro-cranial reconstruction, and how you may incorporate them into your practice.
• Translate cranioplasty and implantable neurotechnology research findings to improved outcomes based on recent evidence based literature.
• Employ cooperative learning to analyze practice barriers and apply appropriate solutions.

ACCREDITATION STATEMENT
The Johns Hopkins University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

CREDIT DESIGNATION STATEMENT
The Johns Hopkins University School of Medicine designates this Live activity for a maximum of 13.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CREDITS
American Nurses Credentialing Center (ANCC) accepts AMA PRA Category 1 Credits™ from organizations accredited by the ACCME.
American Academy of Nurse Practitioners National Certification Program accepts AMA PRA Category 1 Credits™ from organizations accredited by the ACCME.
National Commission on Certification of Physician Assistants (NCCPA) PAs may claim a maximum of 13.50 Category 1 credits for completing this activity. NCCPA accepts AMA PRA Category 1 Credits™ from organizations accredited by ACCME or a recognized state medical society.

This activity endorsed by:
POLICY ON SPEAKER AND PROVIDER DISCLOSURE

It is the policy of the Johns Hopkins University School of Medicine that the speaker and provider globally disclose conflicts of interest. The Johns Hopkins University School of Medicine OCME has established policies that will identify and resolve conflicts of interest prior to this educational activity. Detailed disclosure will be made prior to presentation of the education.

GENERAL INFORMATION

REGISTRATION

Saturday, November 2, 2019 • 6:00 – 7:00 a.m.

LOCATION

The Rotunda
Joseph B. Martin Conference Center at Harvard Medical School
77 Avenue Louis Pasteur
Boston, Massachusetts 02115

Johns Hopkins University is not affiliated with Harvard University, nor is this CME course hosted as a Harvard University program or activity.

Boston Bioskills Lab
27 Drydock Avenue
Boston, Massachusetts 02110

FEES

REGISTRATION CUT-OFF DATE: October 27, 2019

Register Online at: hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=18099

Methods of Payment: We require full payment prior to the start of the activity. Payment by check or credit card must accompany the registration form prior to the activity. The registration fee includes instructional materials, continental breakfasts, refreshment breaks and lunches.

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*with verification of status

You will receive a confirmation by e-mail. If you have not received it by October 27, 2019, call (410) 502-9636 to confirm that you are registered. A transcript of attendance will be available upon attestation of your credit hours and submission of the post activity online evaluation.

The Johns Hopkins University reserves the right to cancel or postpone any activity due to unforeseen circumstances. In this event, the University will refund the registration fee but is not responsible for travel expenses. Additionally, we reserve the right to change the venue to a comparable venue. Under such circumstances registrants will be notified as soon as possible.

ABSTRACT SUBMISSION

Award presentation for best abstract.
LATE FEE AND REFUND POLICY
A $50 late fee applies to registrations received after 5:00 p.m. ET on October 27, 2019. A handling fee of $50 will be deducted for cancellation. An additional fee may apply for cancellation of other events, including workshops and social activities. Refund requests must be received by fax or mail by October 27, 2019. No refunds will be made thereafter. Transfer of registration to another Johns Hopkins activity in lieu of cancellation is not possible.

SYLLABUS
The syllabus will be accessible online and via your mobile device in the CloudCME App prior to the activity.

HOW TO OBTAIN CREDIT
Post activity, an online evaluation will be available to attendees to evaluate the activity and individual presentations and to identify future educational needs. Upon completion of the evaluation, the learner must attest to the number of hours in attendance. Credits earned will be added to the learner’s transcript and immediately available for print. The last day to access the evaluation and attest to your credits is December 17, 2019. An outcome survey will be sent to all physician attendees within two months post activity to assist us in determining what impact this activity had on the learner’s practice.

EMERGENCY CALLS
On November 2, 2019 direct emergency calls to the Hopkins registration desk, (617) 432-8990. On November 3, 2019 direct emergency calls to the Hopkins registration desk, (617) 409-7400. Messages will be posted for participants.

AMERICANS WITH DISABILITIES ACT
The Johns Hopkins University School of Medicine fully complies with the legal requirements of the ADA and the rules and regulations thereof. Please notify us if you have any special needs.

To Register or For Further Information
Register Online (credit card and eCheck)
hopkinscme.cloud-cme.com/aph.aspx?P=S&EID=18099
Register by Phone (credit card only)...............................(410) 502-9636
Register by Fax ..........................................................(866) 510-7088
Confirmation/Certificates ..............................................(410) 502-9636
General Information ......................................................(410) 955-2959
E-mail the Office of CME ..............................................cmenet@jhmi.edu

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**PROGRAM**

**SATURDAY, NOVEMBER 2, 2019**

6:00 – 7:00  Registration and Continental Breakfast

7:00 – 7:10  Welcome and Conference Goals
Chad Gordon, DO, FACS

7:10 – 7:20  Opening Remarks
Paul Manson, MD

7:20 – 7:30  Chairman’s Welcome
Henry Brem, MD and Bob Carter, MD, PhD

7:30 – 7:45  Patient Experience with Neuroplastic Surgery
*Five minutes for Q&A have been incorporated into the program*

**Session 1: Discovery and Innovation in Neurotechnology**
Moderators: Jaishri Blakeley, MD, William Curry, MD, and John Laterra, MD, PhD

7:45 – 7:55  Precision Medicine for Brain Tumors: Genomics as a Tool
Priscilla Brastianos, MD

8:00 – 8:10  Ultrasound Modulation of Blood-Brain Barrier
Chetan Bettegodwad, MD, PhD

8:15 – 8:25  Neuromodulation for Stroke Recovery
Andre Machado, MD, PhD

8:30 – 8:40  Sonolucent Cranial Implants
Andrea Machnitz, MD

8:45 – 8:55  Intracranial Ultrasound (IUS)
Netanel Ben-Shalom, MD

9:00 – 9:15  Refreshment Break

9:15 – 9:25  Targeting Brain Cancer Stem Cells with mRNA Therapeutics
Hernando Lopez-Bartoni, MD

9:30 – 9:40  Nanoparticles for CNS Therapeutics
Jordan Green, PhD

9:45 – 9:55  Local Therapeutic Delivery in Brain Tumor Management
Jon Weingart, MD

10:00 – 10:10  Functional Cranial Implants with Power
Chad Gordon, DO, FACS

10:15 – 10:45  Fifth Annual Keynote Lectureship: Current Developments and Future Options for State-of-the-Art Brain Tumor Management
Bob Carter, MD, PhD

**Session 2: Functional Neurosurgery and Cranial Implants**
Moderators: Gregory Bergey, MD, Pablo Celnik, MD, and Michael Yaremchuk, MD

10:45 – 10:55  Brain-Computer Interfacing
Nathan Crone, MD

11:00 – 11:10  Braingate Neural Interface System
Leigh Hochberg, MD, PhD

11:15 – 11:25  Bilateral Neurostimulation for Quadriplegia
William S. Anderson, MD, PhD

11:30 – 11:40  Advances in Intracranial Technology for Epilepsy
Dennis Spencer, MD

11:45 – 11:55  Neuromodulation for Epilepsy
Ziv Williams, MD

12:00 – 12:10  Laser Thermal Ablation for Epilepsy
Mark Richardson, MD

12:15 – 12:25  Focused Ultrasound for Movement Disorders
Graeme Woodworth, MD, FACS

12:30 – 1:00  Lunch

**Session 3: Neurotechnology and Hydrocephalus**
Moderators: Eric Arnaud, MD, Jay Loeffler, MD, and Paul Manson, MD

1:00 – 1:10  Neural Interfacing via Transparent Polymer Skulls
Suhasa Kodandaramaiah, PhD

1:15 – 1:25  Skin Sensing for Hydrocephalus Management
Matthew Potts, MD

1:30 – 1:40  Improving Outcomes with Hydrocephalus Shunts
Mark Luciano, MD, PhD

1:45 – 1:55  Updates in Optogenetics for Neuromodulation
Ed Boyden, PhD
2:00 – 2:10 How to Integrate Neurotechnology Development with Neuroscience Delivery  
Erol Veznedaroğlu, MD

2:15 – 2:30 Refreshment Break

Session 4: Pediatric Neurocranial Reconstruction and Neurotrauma  
Moderators: Richard Redett, III, MD, Jesse Taylor, MD, and Nicholas Theodore, MD

2:30 – 2:40 Monobloc and LeFort Advancements  
Anand Kumar, MD, FA CS, FAAP

2:45 – 2:55 Craniosynostosis and Pediatric Cranioplasty   
Peter Taub, MD

3:00 – 3:10 Management of Civilian Neurotrauma  
Bizhan Aarabi, MD

3:15 – 3:25 Managing Neurotrauma on the Battlefield  
Albert Schuette, MD

3:30 – 3:40 Considerations in the Military Cranioplasty  
Gabriel Santiago, MD

3:45 – 3:55 Scalp Expansion for Burn Patients  
Matthias Donelan, MD

Session 5: Neuroplastic Surgery and Cranial Implants  
Moderators: Branko Bojovic, MD, Kevin Emerick, MD, and Mutaz Habal, MD

4:00 – 4:10 Migraine Surgery for Neuropathic Pain  
William Austen, Jr., MD

4:15 – 4:25 3D Printing of Cranial Implants  
Peter Llacouras, PhD

4:30 – 4:40 The Cranium and its Golden Rule  
Rafael Tamargo, MD

4:45 – 5:15 Oral Abstract Presentations  
Moderator: Judy Huang, MD and William Hoffman, MD

5:15 – 5:30 Closing Remarks  
Chad Gordon, DO, FACS

SUNDAY, NOVEMBER 3, 2019

LAB

7:00 – 7:45 Registration and Continental Breakfast

7:45 – 7:55 Welcome and Faculty Overview  
Chad Gordon, DO, FACS

8:00 – 9:45 Session I: Neurosurgical Approaches to the Craniofacial Skeleton  
1. Burr hole for Ventriculostomy Placement  
2. Pterional Craniotomy for Trauma  
3. Parasagittal Craniotomy  
4. Bifrontal Cranioptomy for Frontal Sinus Trauma  
5. Orbito-zygomatic Osteotomy  
6. Occipital Craniotomy  
7. Posterior Fossa Craniotomy

9:45 – 10:00 Refreshment Break

10:00 – 11:45 Session II: Neurocranial Reconstruction and Cranioplasty Technique  
1. Bifrontal Cranioptomy for Frontal Bone/Frontal Sinus Trauma  
2. Pterional Cranioptomy Reconstruction with Customized Cranial Implant  
3. Hemicraniectomy Cranioptomy Reconstruction with Customized Cranial Implant  
4. Single-stage Cranioptomy with Alloplastic Implant  
5. Temporal Hollowing Correction with Methyl Methacrylate  
6. Complex Scalp Reconstruction for Large Defects

11:45 – 12:00 Closing Remarks

12:00 Adjourn

The Johns Hopkins University School of Medicine takes responsibility for the content, quality and scientific integrity of this CME activity. The schedule is subject to change.
REGISTRATION FORM

COURSE NUMBER 80048823/18099

Fifth Annual Selected Topics in Neuroplastic & Reconstructive Surgery: An International Symposium on Cranioplasty and Future Neurotechnology with Cadaver Lab
November 2-3, 2019

To Register:
Online: hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=18099
FAX: (866) 510-7088 Phone: (410) 502-9636
Or mail this form to the Johns Hopkins University, Office of Continuing Medical Education, P.O. Box 64128, Baltimore, Maryland 21264-4128.
Include e-check or credit card information below.

FULL PAYMENT IS REQUIRED PRIOR TO THE START OF ACTIVITY.

☐ I am a Johns Hopkins speaker for this activity.

Please type or print clearly

Last Name
First Name
M.I.

Highest Degree
Primary Specialty
Hopkins Faculty/Staff Only: JHED ID

For Physicians Only – NPI 10 Digits:
State License #
State Of License:

Mailing Address
City
State
Zip + 4 Code
Country

Daytime Telephone
Fax Number

Email (Required Field)

☐ Check here if you wish to receive e-mail notices about upcoming CME activities.

What do you hope to learn by attending this activity?

________________________________________________________________________

Please notify us if you have any special needs.

________________________________________________________________________

REGISTRATION FEES

Before September 1
After September 1

Physician – Saturday, November 2nd only $420 $495
Physician – Sunday, November 3rd only $645 $750
Physician – Saturday and Sunday $1,075 $1,200
Residents*/Fellows*/Allied Health Professionals– Saturday, November 2nd only $85 $95
Residents*/Fellows*/Allied Health Professionals– Sunday, November 3rd only $90 $100
Residents*/Fellows*/Allied Health Professionals– Saturday and Sunday $170 $190

*with verification of status

Total amount enclosed $ __________

The registration fee includes instructional materials and food and beverage. For registrations received after 5:00 p.m. ET on October 27, 2019, include a $50 late fee. On-site registrations are payable only by credit card.

PAYMENT TYPE

JHU Faculty/Staff Only: If you are using your Tuition Remission Benefit or an ION budget, please upload your fully completed and approved form in the payment section of the online activity link above.

☐ TR Form: benefits.jhu.edu/documents/trf incorrectly staff.pdf
☐ ION Form: hopkinscme.edu/migration/IonRequest.pdf

☐ e-Check Routing # __________ Account # __________

☐ Credit Card: ☐ VISA ☐ MASTERCARD ☐ DISCOVER ☐ AMEX

Card # __________ __________ __________ __________ Exp. Date __________

Billing Zip Code __________ __________ Security Code __________

Name on Card __________________ Signature and Date __________
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