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Presented by
Department of Plastic and Reconstructive Surgery
& Department of Neurosurgery

Fourth Annual
Selected Topics in Neuroplastic
& Reconstructive Surgery:
An International Symposium on Cranioplasty
and Implantable Neurotechnology

November 3 - 4, 2018

General Session: November 3	Hands-on Lab: November 4
Chevy Chase Auditorium	VISTA Lab
Johns Hopkins Hospital	1030 North Charles Street
Baltimore, MD	Baltimore, MD



This activity has been approved for *AMA PRA Category 1 Credits™*.



JOHNS HOPKINS
MEDICINE

DESCRIPTION

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 fourth annual symposium dedicated to the subjects of “cranioplasty,” “implantable neurotechnology,” and “neuroplastic surgery”— to be hosted this year in Baltimore, Maryland. 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 will engage an international faculty and audience consisting of neurosurgery, neuroplastic surgery, craniofacial surgery, plastic/reconstructive surgery, oral/maxillofacial surgery, and otolaryngology/head and neck surgery 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 Oculoplastic Surgery.

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 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 12.50 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

OTHER CREDIT(S)

American Nurses Credentialing Center (ANCC) accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

American Academy of Nurse Practitioners National Certification Program accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

National Commission on Certification of Physician Assistants (NCCPA). PAs may claim a maximum of 12.50 Category 1 credits for completing this activity. NCCPA accepts *AMA PRA Category 1 Credit™* from organizations accredited by ACCME or a recognized state medical society.

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 3, 2018
6:00 – 7:00 a.m.

LOCATION

Chevy Chase Bank Conference Center
The Sheikh Zayed Tower
The Johns Hopkins Hospital
1800 Orleans Street, Main Level
Baltimore, Maryland 21287

FEES

REGISTRATION CUT-OFF DATE: October 28, 2018

Register Online at:

<https://hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=14181>

Methods of Payment: We require full payment prior to the start of the activity. The registration fee includes instructional materials, continental breakfasts, refreshment breaks and lunch.

Physicians

Saturday, November 3rd only.....	\$495
Sunday, November 4th only	\$750
Saturday and Sunday	\$1,200

Residents*/Fellows*/Allied Health Professionals

Saturday, November 3rd only.....	\$95
Sunday, November 4th only	\$100
Saturday and Sunday	\$195

**with verification of status*

You will receive a confirmation by e-mail. If you have not received it by October 28, 2018, 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.

LATE FEE AND REFUND POLICY

A \$50 late fee applies to registrations received after 5:00 p.m. ET on October 28, 2018. 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 28, 2018. 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 18, 2018.

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 3, 2018 direct emergency calls to the Hopkins registration desk, (443) 287-5426. On November 4, 2018 direct emergency calls to the Hopkins registration desk, (410) 637-3704. 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.

ACKNOWLEDGEMENT

Applications for commercial support from health care related industries are pending. A complete list of contributors will be provided in the syllabus. Please note that commercial support received is solely for the educational component of the activity and will not be used to provide food and beverage.

Please note: The Physician Payments Sunshine Act was enacted by Congress to increase public awareness of financial relationships between drug and medical device manufacturers and physicians. In compliance with the requirements of this Act, the commercial supporter/s of this activity may require the Johns Hopkins University School of Medicine to report certain professional information (such as name, address, National Provider Identifier (NPI), and State License number) of physician attendees who receive complimentary food and beverage in conjunction with a CME activity. The commercial supporter is required to submit the collected data to the Centers for Medicare and Medicaid Services which will then publish the data on its website.

Program

SATURDAY, NOVEMBER 3, 2018

- 6:00 - 7:00 Registration and Continental Breakfast
- 7:00 - 7:10 **Welcome and Conference Goals**
Chad Gordon, DO, FACS
- 7:10 - 7:20 **Chairman's Welcome**
Henry Brem, MD
- 7:20 - 7:30 **Opening Remarks**
Redonda Miller, MD, MBA
- 7:30 - 7:50 **Patient Experience with Neuroplastic Surgery and Cranial Reconstruction**

Session 1: Implantable Neurotechnology

Moderators: William Curry, MD and Michael Yaremchuk, MD

- 8:00 - 8:15 **Expansion Microscopy and Optogenetics in Normal and Diseased Brain**
Pablo Valdes Quevado, MD, PhD
- 8:15 - 8:30 **Intraoperative OCT Imaging for Brain Tumors**
Kaisorn Chaichana, MD
- 8:30 - 8:45 **Implanting Seeds for Local Radiation Therapy**
Lawrence Kleinberg, MD
- 8:45 - 9:00 **Convection-Enhanced Delivery for Brain Tumors**
Jon Weingart, MD
- 9:00 - 9:15 **Improving Shunts and Devices for Hydrocephalus**
Mark Luciano, MD, PhD
- 9:15 - 9:30 **Foreign Body Reaction and Biological Interface Phenomena**
Aldo Ferrari, MD
- 9:30 - 9:45 **Patient Selection for Implantable Neuromodulation**
Gregory Bergey, MD
- 9:45 - 10:00 **Neurostimulation for Epilepsy**
William Anderson, MD
- 10:00 - 10:30 **Fourth Annual Keynote Lectureship: Restoration and Control of Motor Function and Sensation Using High Electrode Count Utah Electrode Arrays**
Richard Normann, PhD
- 10:30 - 10:45 **Challenges of Achieving Long-Term Neural Interfaces**
John Donoghue, PhD
- 10:45 - 11:00 **Neuromodulation for Movement Disorders**
Jason Gerrard, MD, PhD
- 11:00 - 11:15 **Local vs Systemic Chemotherapy for Malignant Brain Tumors**
John Latterra, MD, PhD
- 11:15 - 11:30 **Cell Delivery Catheters for Stem Cell-Based Therapeutics**
Jeff Schweitzer, MD, PhD
- 11:30 - 11:45 **Low-Profile Intracranial Devices with Power**
Chad Gordon, DO, FACS
- 11:45 - 12:15 Lunch

Session 2: Cranioplasty and Craniofacial Implants

Moderators: Peter Taub, MD and Judy Huang, MD

- 12:15 - 12:30 **Cranial Implants for Pediatric Patients**
Jesse Goldstein, MD
- 12:30 - 12:45 **Brain Tumors And Neuro-Reconstruction**
William Curry, MD
- 12:45 - 1:00 **Skull Neoplasm Resection and Single-Stage Reconstruction with Implants**
Michael Lim, MD
- 1:00 - 1:15 **Neuro-Cranial Injuries from the Battlefield**
Randy Bell, MD
- 1:15 - 1:30 **Reconstructing the Wounded Warrior**
Anand Kumar, MD
- 1:30 - 1:45 Refreshment Break

Session 3: Neurocranial Reconstruction and Post-Traumatic Cranioplasty

Moderators: Rafael Tamargo, MD and Mutaz Habal, MD

- 1:45 - 2:00 **Managing Civilian Neurotrauma**
Bizhan Aarabi, MD
- 2:00 - 2:15 **Osteoplastic Craniotomy for Improved Outcomes**
Fotios Vrionis, MD
- 2:15 - 2:30 **Robotic-Assisted Technology for Cranial Implant Modification**
Mehran Armand, PhD
- 2:30 - 3:00 **Intra-Op Modification of Cranial Implants**
Orin Bloch, MD
- 3:00 - 3:15 **The Apollo System and Futuristic Applications**
Erol Veznedaroglu, MD
- 3:15 - 3:30 **An Analysis of Cranioplasty Complications and Costs**
Gordon Li, MD
- 3:30 - 3:45 **Preferred Technique and Materials for Cranioplasty**
Amir Wolff, DMD
- 3:45 - 4:00 **Futuristic Applications of 3D Printing for Neuro-Cranial Reconstruction**
Gerald Grant, DMD, MS
- 4:00 - 4:15 **Novel Applications of Rectus Fascia for Repairing Dura Defects and Thin Scalps**
Gabriel Santiago, MD
- 4:15 - 4:30 **Non-Invasive Temporal Hollowing Correction with Fillers**
Mary Sheu, MD
- 4:30 - 4:35 **Closing Remarks**
Chad Gordon, DO, FACS

SUNDAY, NOVEMBER 4, 2018

VISTA 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 Craniotomy 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 Cranioplasty for Frontal Bone/Frontal Sinus Trauma
 2. Pterional Cranioplasty Reconstruction with Customized Cranial Implant
 3. Hemicraniectomy Cranioplasty Reconstruction with Customized Cranial Implant
 4. Chiari Reconstruction with Alloplastic Implant
 5. Temporal Hollowing Correction with Methyl Methacrylate
 6. Complex Scalp Reconstruction for Large Defects
- 11:45 - 12:00 **Closing Remarks**
Adjourn

You will receive an email notification to complete the evaluation form and to attest to the number of hours in attendance.

The registration desk will remain open during conference hours

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.

Activity Directors

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Gregory Bergey, MD

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Henry Brem, MD

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Medical Director, Johns Hopkins Dermatology & Cosmetic Center
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Professor of Neurosurgery
Director, Neurosurgical Operating Room

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**Fourth Annual Selected Topics in
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To Register:Online: <https://hopkinscme.cloud-cme.com/aph.aspx?P=5&EID=96361>

FAX: (866) 510-7088 Phone: (410) 502-9636

Or mail this form to the Johns Hopkins University, Office of Continuing Medical Education, 720 Rutland Avenue, Baltimore, Maryland 21205.

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*

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 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**Physicians**

Saturday, November 3rd only \$495

Sunday, November 4th only \$750

Saturday and Sunday \$1,200

Residents*/Fellows*/Allied Health Professionals

Saturday, November 3rd only \$95

Sunday, November 4th only \$100

Saturday and Sunday \$195

*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 28, 2018, 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 activity link above.

 TR Form: <http://benefits.jhu.edu/documents/trffacandstaff.pdf> ION Form: <http://hopkinscme.edu/migration/IonRequest.pdf> e-Check: Routing # _____ Account # _____ Credit Card: VISA MASTERCARD DISCOVER AMEX

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