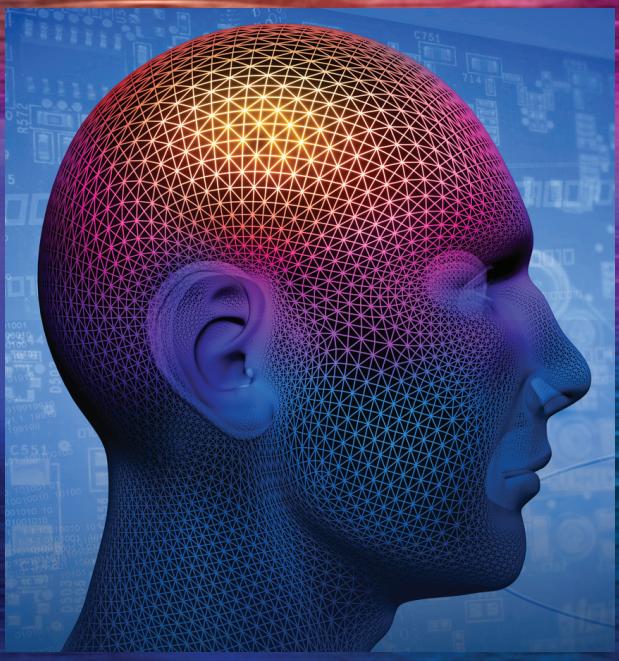

Bass Neurosurgery Symposium

THE TECHNOLOGIES OF NEURORESTORATION

Friday, March 2, 2018 -
Saturday, March 3, 2018

T. Boone Pickens Biomedical Building
UT Southwestern Medical Center
Dallas, Texas

PLANNING COMMITTEE

Hunt Batjer, M.D.
Professor and Chairman
Neurological Surgery
UT Southwestern Medical Center
Dallas, TX

Babu G. Welch, M.D., FAANS
Professor
Neurosurgery & Radiology
Cerebrovascular & Endovascular Neurosurgery
UT Southwestern Medical Center
Dallas, Texas

Bradley Lega
Assistant Professor
Neurological Surgery
Neurology & Neurotherapeutics
Adjunct Professor,
UT Dallas Dept. of Bioengineering

Sponsored by UT Southwestern Medical Center
Department of Neurological Surgery and the
Office of Continuing Medical Education

UT Southwestern
Medical Center

Bass Neurosurgery Symposium

THE TECHNOLOGIES OF NEURORESTORATION

Target Audience

This program is designed for Neurosurgeons, Neurologists, Psychiatrists, Physical Medicine and Rehabilitation, Physical Therapists, Nurses and other healthcare professionals interested in neurorestoration.

Purpose and Content

The field of neuromodulation is rapidly changing with the advent of newer and more precise tools to alter neuroplasticity and to treat brain-based disorders. Physicians need to understand the advantages and limitations of these technologies and how they are being applied for rehabilitation purposes. This activity will be focused on new developments in neuromodulation, including brain machine interface devices, non-invasive modulation, and breakthroughs in genetics. A participant in this activity will be able to describe emerging strategies for treating conditions such as quadriparesis, stroke, mild cognitive impairments, and Alzheimer's disease. Several topics will be presented at a live, one day symposium through lectures and question and answer sessions by experts in the field of neurosurgery.

Educational Objectives

Upon completion of this activity, participants should be able to link the educational objectives to Core Competencies (Medical Knowledge) and:

- Identify issues facing memory restoration
- Explain how a motor prosthetic works
- Describe the uses of TMS for neural restoration
- Discuss new materials being used to develop brain devices
- Describe gene expression profiles and how it may be used for neuromodulation

Accreditation

The University of Texas Southwestern Medical Center is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Continuing Education Information

PHYSICIANS: The University of Texas Southwestern Medical Center designates this live activity for a maximum of 5.0 *AMA PRA Category 1 Credits™.* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

NURSES: UT Southwestern University Hospitals is an approved provider of continuing nursing education by the Texas Nurses Association – Approver, an accredited approver with distinction by the American Nurses Credentialing Center's Commission on Accreditation. This activity provides 5.66 contact hours of continuing nursing education.

Conflict of Interest

All persons in the position to control the content of an education activity are required to disclose all relevant financial relationships in any amount occurring within the past 12 months with any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on patients. A primary mechanism to resolve identified conflicts of interest is a content review that is prior to the activity.

Discussion of Off-Label Use

This course is meant to educate physicians with what is currently in use and what may be available in the future. There may be "off-label" use discussed in the activity. Speakers have been requested to inform the audience when off-label use is discussed.

Registration

The registration fee entitles the participants to admission to the conference, all course materials, continental breakfast, refreshments at break, and lunch during the meeting. Enrollment is confirmed up receipt of registration fee. We are unable to process any registration without payment. Please register early.

$80 Registration includes Saturday program and Friday evening dinner

$80 Attending dinner with guest

Complementary – UTSW Faculty and Staff

Registration is confirmed upon receipt of registration fee.

Location

UT Southwestern Medical Center–North Campus
T. Boone Pickens Biomedical Building
6001 Forest Park Road
Dallas, Texas 75390

Refund Policy

A $25 handling fee will be deducted from cancellation refunds. Refund requests must be received by email at cmeregistrations@utsouthwestern.edu by February 23, 2018. No refunds will be made thereafter.

Cancellation Policy

The Office of Continuing Medical Education reserves the right to limit registration and cancel courses, no less than one week prior to the course, should circumstances deem this necessary.

Additional Information

For additional information, please call The Office of Continuing Medical Education at 214-648-2166 or email cmeregistrations@utsouthwestern.edu.

Program Accessibility

UT Southwestern Medical Center is committed to providing programs and activities to all persons regardless of race, color, national origin, religion, sex, age, veteran status or disability.

UT Southwestern is an equal opportunity institution.

INVITED SPEAKERS

Robert Kirsch, Ph.D., is the Allen H. and Constance T. Ford Professor and Chair of Biomedical Engineering at Case Western Reserve University and the Executive Director of the Department of Veterans Affairs Rehabilitation Research and Development Service "Center for Functional Electrical Stimulation". He is the Principal Investigator of the Case-Coulter Translational Research partnership, a Fellow of the American Institute for Medical and Biological Engineering (AIMBE), the Chair of the national BME Council of Chairs (2017), the Director of a NIBIB T32 training grant, and a member of advisory boards for a number of biomedical engineering departments, research centers, and training grants across the US and internationally.

His research focuses on the restoration of arm movements to individuals with complete paralysis of arm muscles due to spinal cord injury or other neurological disorders using functional electrical stimulation (FES), as well as high performance user command interfaces such as brain computer interfaces and advanced prosthetic user interfaces. He received a BS in electrical engineering (University of Cincinnati) and the MS and Ph.D. in biomedical engineering (Northwestern University), and completed post-doctoral research (McGill University).

Dan Rizzuto, Ph.D., is developing brain stimulation therapies for patients with memory disorders as part of the DARPA Restoring Active Memory project at the University of Pennsylvania and as a Founder at Nia Therapeutics. He previously managed neurotechnology development at the Allen Institute for Brain Science, led a hospital-based clinical research program at Swedish Neuroscience Institute and developed an implantable brain stimulator for patients with major depression with Northstar Neuroscience. Dan completed his doctorate in systems neuroscience and human memory at Brandeis University; completed his postdoctoral training in brain-machine interfaces at Caltech; and was the recipient of the 2015 Neurotechnology Researcher of the Year award from Neurotech Reports.

John Rogers, Ph.D obtained BA and BS degrees in chemistry and in physics from the University of Texas, Austin, in 1989. From MIT, he received SM degrees in physics and in chemistry in 1992 and the PhD degree in physical chemistry in 1995. From 1995 to 1997, Rogers was a Junior Fellow in the Harvard University Society of Fellows. He joined Bell Laboratories as a Member of Technical Staff in the Condensed Matter Physics Research Department in 1997, and served as Director of this department from the end of 2000 to 2002. He then spent thirteen years on the faculty at University of Illinois, most recently as the Swanlund Chair Professor and Director of the Seitz Materials Research Laboratory.

In 2016, he joined Northwestern University as the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Medicine, with affiliate appointments in Mechanical Engineering, Electrical and Computer Engineering and Chemistry, where he is also Director of the newly endowed Center for Bio-Integrated Electronics. He has published nearly 600 papers, is a co-inventor on more than 100 patents and he has co-founded several successful technology companies. His research has been recognized by many awards, including a MacArthur Fellowship (2009), the Lemelson-MIT Prize (2011), and the Smithsonian Award for American Ingenuity in the Physical Sciences (2013). He is a member of the National Academy of Engineering, the National Academy of Sciences, the National Academy of Inventors and the American Academy of Arts and Sciences.

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EVENING AGENDA - Friday, March 2, 2018 - Belo Mansion

6:30 pm	Cocktails
7:15 pm	Introduction
7:25 pm	Dinner
8:15 pm	Keynote Presentation
9:00 pm	Closing Remarks

SYMPOSIUM AGENDA - Saturday, March 3, 2018

- T. Boone Pickens Biomedical Building - NG3.112

8:00 am	Registration and Breakfast
8:30 am	Introduction
8:35 am	Strategies for Motor Restoration Using Invasive Electrodes, –*Robert Kirsch, PhD*
9:35 am	Strategies for Improving Memory Using Invasive Stimulation –*Dan Rizzuto, PhD*
10:00 am	**Break**
10:15 am	Non-invasive Neuromodulation for Cognitive Restoration –*Shawn McLintock, PhD*
11:00 am	Group Discussion of Neuromodulation Strategies –*Bradley Lega, MD*
11:30 am	***Lunch***
12:30 pm	New Materials for Brain Modulation - *John Rogers, PhD*
1:15 pm	New Horizons in Neuromodulation and Gene Editing - *Genevieve Konopka, PhD*
2:00 pm	Panel Discussion – Invasive and Non-invasive Techniques in Neuromodulation: Ideas for Cooperation –*Moderator: Carol Tamminga, MD*
2:45 pm	Closing Remarks
3:00 pm	**Adjourn**

FACULTY

Shawn McClintock, PhD
Associate Professor, Department of Psychiatry
UT Southwestern Medical Center
Dallas, Texas

Genevieve Konopka, PhD
Associate Professor, Department of Neuroscience UT Southwestern Medical Center
Dallas, Texas

Carol Tamminga, MD
Professor and Chairman
Department of Psychiatry; Clinical Psychiatry;
UT Southwestern Medical Center
Dallas, Texas

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REGISTRATION #RP1803b

Register online at https://cme.utsouthwestern.edu/rp1803b

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$80 Attending dinner with guest
Complementary – UTSW Faculty and Staff

Registration Instructions

Go online to https://cme.utsouthwestern.edu/rp1803b

After clicking on registration link, you will be prompted to log in to your user account. Once you are logged in you will be able to register for the course.

If you have not previously registered for other courses in this system, you must first create a user profile. Once you have compiled your profile, you will then be able to go back to the course page and register.

*Only credit card payments are accepted

Syllabus Information

The presentations will be available online in PDF format if they have been provided by the presenters before the event.

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THE TECHNOLOGIES OF NEURORESTORATION

Office of Continuing Medical Education
5323 Harry Hines Blvd. / Dallas, Texas 75390-9059

continuing medical education

MARCH 2018

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Register online at cme.utsouthwestern.edu/rp1803bc