Military Health Research Forum

PROGRAM

August 31 - September 3, 2009

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Kansas City, MO

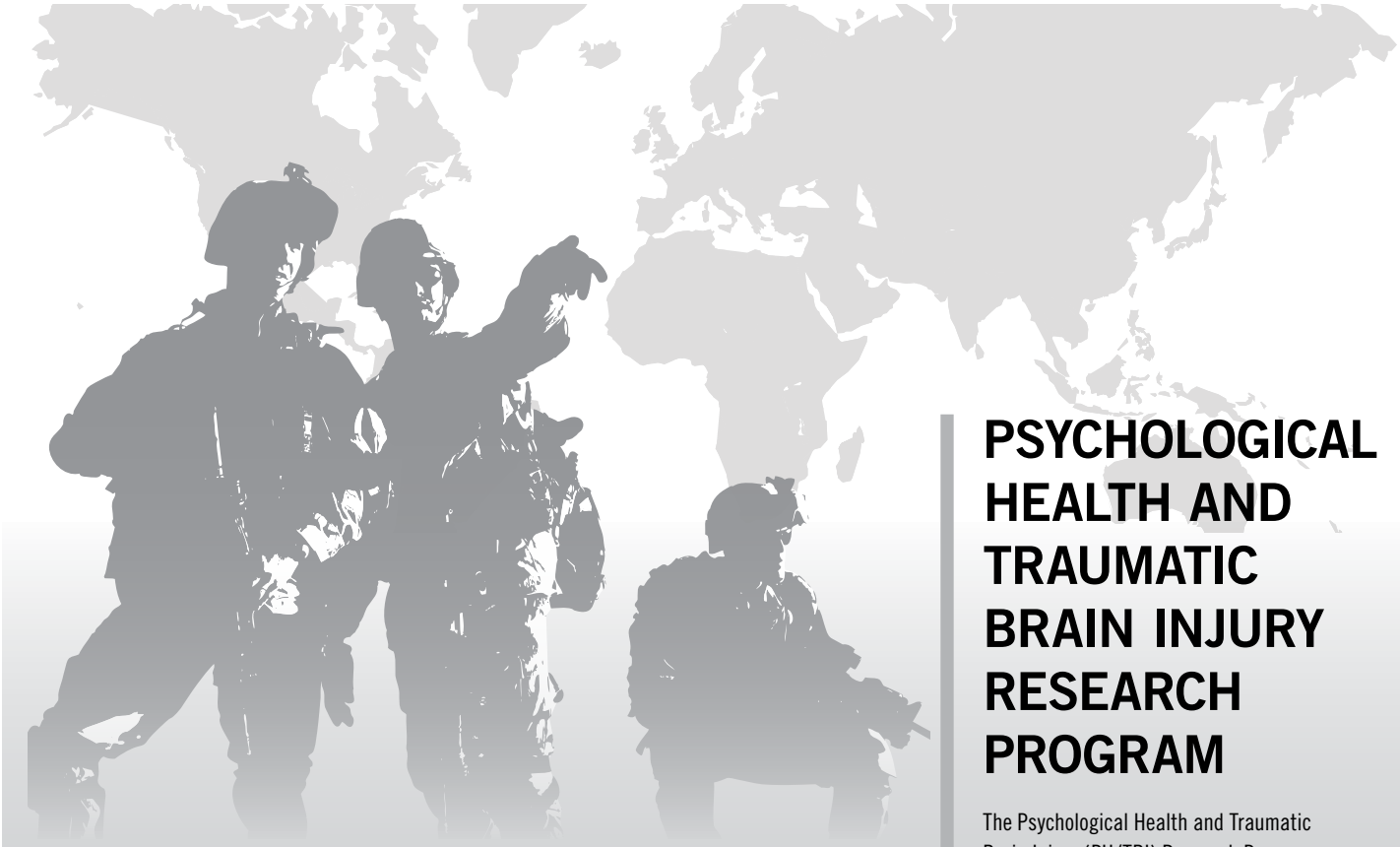
Military Health Research Forum

Major General James K. Gilman
Commanding General
United States Army Medical Research and Materiel Command (USAMRMC)

"The USAMRMC is pleased to host the third Military Health Research Forum. The purposes of this conference are to encourage scientific interchange, promote collaboration and teamwork, and provide information that facilitates translation of research into improving outcomes for our warriors and their families. These purposes could not be met without your commitment and active participation. On behalf of the men and women of USAMRMC, thank you for your interest in militarily relevant medical research and, especially, for taking the time to be with us here in Kansas City this year."

Captain E. Melissa Kaime
Director, Congressionally Directed Medical Research Programs (CDMRP)
USAMRMC

"The scientific research presented at this Military Health Research Forum reflects the commitment of the talented biomedical scientists supported by the DOD Peer Reviewed Medical Research Program, the Gulf War Illness Research Program, and the Psychological Health and Traumatic Brain Injury Research Program. I look forward to the program's continued advancement, including fielding militarily relevant products and technologies for our Soldiers, Sailors, Airmen, and Marines and their families."



PEER REVIEWED MEDICAL RESEARCH PROGRAM

Since 1999, the PRMRP has supported scientifically meritorious research across a broad range of topic areas with the underlying goal of improving the health and well-being of service personnel, family members, and veterans. To accomplish this goal, the PRMRP has funded disease-specific research that will aid in understanding disease processes and progressing toward the development of new diagnostic and therapeutic options.

Karen H. Tountas, Ph.D.
Program Manager

GULF WAR ILLNESS RESEARCH PROGRAM

The Department of Defense has been researching Gulf War Illness (GWI) since the early 1990s. The CDMRP's GWIRP carries on the commitment to understanding this multisymptom illness and discovering new therapies to mitigate its impact on the lives of our veterans and their families. It is an honor to fund cutting-edge research that may benefit these ill Soldiers, Sailors, Airmen, and Marines who defended our freedom almost 20 years ago, and for more than 200,000 of whom the war has never ended.

Melissa Forsythe, RN, Ph.D.
Program Manager

PSYCHOLOGICAL HEALTH AND TRAUMATIC BRAIN INJURY RESEARCH PROGRAM

The Psychological Health and Traumatic Brain Injury (PH/TBI) Research Program Team welcomes this opportunity to highlight the developing PH/TBI Research Program portfolio, which ranges from small high-risk studies that have the potential to reveal entirely new avenues for investigation to large multidisciplinary research and clinical consortia. These efforts are responsive to key priorities of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, including interventions across the deployment life cycle for warriors veterans, family members, caregivers, and communities. Participation in the 2009 Military Health Research Forum, which has brought together highly qualified research, provider, and policy communities, affords an excellent opportunity for expanded collaboration toward ensuring the health and readiness of our military forces and a means to better serving the needs of warriors and their family members impacted by PH issues and TBI.

Barbara Terry-Koroma, Ph.D.
Program Manager

MILITARY HEALTH RESEARCH FORUM

Program-at-a-Glance

Monday, August 31, 2009

5:00 PM – 9:00 PM	**OPENING SESSION AND NETWORKING RECEPTION** *Westin Century Ballrooms A & B*	**Poster Setup** 1:00 PM – 6:00 PM *Crown Center Exhibit Halls A & B*	**Registration** Noon – 8:00 PM *Westin Century Prefunction*

Tuesday, September 1, 2009

Poster Setup
7:00 AM – 11:00 AM
Crown Center Exhibit Halls A & B

Registration
7:00 AM – 7:00 PM
Westin Century Prefunction

7:00 AM – 8:00 AM — MORNING SESSIONS

Complementary and Alternative Medicine	Therapeutic Applications of Virtual Reality	What Is Gulf War Illness and What Caused It?	Advances in Imaging Techniques
Hyatt New York A	*Hyatt Chicago A*	*Hyatt Chicago B*	*Hyatt Chicago C*

7:00 AM – 8:30 AM — CONTINENTAL BREAKFAST

Westin Century Ballroom B/Hyatt Regency Prefunction

8:15 AM – 11:30 AM — PLENARY SESSION: The New Face of War

Westin Century Ballroom C

11:30 AM – 2:15 PM — POSTER SESSIONS/LUNCH

Crown Center Exhibit Hall

P1 Pain I	P2 Sleep
P3 Substance Abuse I	P4 Virtual Reality I
P5 Imaging I	P6 Biomarkers I
P7 Inflammation	P8 Molecular Pathobiology I
P9 Tropical Diseases	P10 Neurobiology I
P11 Neuroprotection I	P12 Wound Healing
P13 Regenerative Medicine I	P14 Blast Injury Sequelae I
P15 Physical Rehabilitation I	P16 Resilience I
P17 PTSD Treatment I	

11:30 AM – 2:15 PM — FY07 PH/TBI RESEARCH PROGRAM CONSORTIA POSTER SESSION/NETWORKING LUNCHEON

Hyatt Pershing Exhibition Hall

2:15 PM – 4:15 PM — CONCURRENT SYMPOSIA I

SYMPOSIUM 1:	SYMPOSIUM 2:	SYMPOSIUM 3:	SYMPOSIUM 4:	SYMPOSIUM 5:
Assessment Tools *Hyatt New York A*	**Biomarkers I** *Hyatt New York B*	**Stress and Fear** *Hyatt Chicago A*	**Resuscitation** *Hyatt Chicago B*	**Molecular Pathobiology I** *Hyatt Chicago C*

4:30 PM – 6:30 PM — CONCURRENT SYMPOSIA II

SYMPOSIUM 6:	SYMPOSIUM 7:	SYMPOSIUM 8:	SYMPOSIUM 9:	SYMPOSIUM 10:
Telemedicine *Hyatt New York A*	**PTSD Treatment I** *Hyatt New York B*	**Epidemiology** *Hyatt Chicago A*	**Molecular Processes of Treatment** *Hyatt Chicago B*	**Neuroprotection I** *Hyatt Chicago C*

Wednesday, September 2, 2009

Poster Setup 7:00 AM – 11:00 AM *Crown Center Exhibit Halls A & B*

Registration 7:00 AM – 7:00 PM *Westin Century Prefunction*

7:00 AM – 8:00 AM — MORNING SESSIONS

Caretakers	Eradicating Disease	Challenges in Chronic Pain Management	Neurogenesis and Depression
Hyatt New York A	*Hyatt Chicago A*	*Hyatt Chicago B*	*Hyatt Chicago C*

7:00 AM – 8:30 AM — CONTINENTAL BREAKFAST

Westin Century Ballroom B/Hyatt Regency Prefunction

8:15 AM – 11:30 AM — PLENARY SESSION: Tomorrow's Medicine

Westin Century Ballroom C

11:30 AM – 2:30 PM — POSTER SESSIONS/LUNCH

Crown Center Exhibit Halls A & B

P18 Quality of Life and Family Issues	P19 Stress and Fear
P20 Substance Abuse II	P21 Telemedicine
P22 Assessment Tools	P23 Biomarkers II
P24 Molecular Pathobiology II	P25 Molecular Processes of Treatment
P26 Neurobiology II	P27 Neuroprotection II
P28 Blast Injury Sequelae II	P29 Resuscitation
P30 Epidemiology	P31 PTSD Treatment II
P32 Imaging II	P33 Resilience II
P34 Pain II	P35 Regenerative Medicine II
P36 Physical Rehabilitation II	P37 Virtual Reality II

2:30 PM – 3:45 PM — CONCURRENT SYMPOSIA III

SYMPOSIUM 11:	SYMPOSIUM 12:	SYMPOSIUM 13:	SYMPOSIUM 14:	SYMPOSIUM 15:
Sleep *Hyatt New York A*	**Wound Healing** *Hyatt New York B*	**Tropical Diseases** *Hyatt Chicago A*	**Virtual Reality** *Hyatt Chicago B*	**Pain** *Hyatt Chicago C*

4:00 PM – 5:30 PM — CONCURRENT SYMPOSIA IV

SYMPOSIUM 16:	SYMPOSIUM 17:	SYMPOSIUM 18:	SYMPOSIUM 19:	SYMPOSIUM 20:
Inflammation *Hyatt New York A*	**Blast Injury Sequelae I** *Hyatt New York B*	**Regenerative Medicine** *Hyatt Chicago A*	**Physical Rehabilitation** *Hyatt Chicago B*	**Resilience** *Hyatt Chicago C*

6:00 PM – 9:00 PM — EVENING PLENARY SESSION AND NETWORKING RECEPTION

National World War I Museum at the Liberty Memorial

Thursday, September 3, 2009

Registration 7:00 AM – Noon *Westin Century Prefunction*

Hall Open for Poster Removal 7:00 AM – 1:00 PM *Crown Center Exhibit Halls A & B*

7:00 AM – 8:00 AM — MORNING SESSIONS

Problem Solving for Prosthetic Development	Problems and Prospects in Wound Management	Clinical Trials with Military Populations	Behavioral Therapies
Hyatt New York A	*Hyatt Chicago A*	*Hyatt Chicago B*	*Hyatt Chicago C*

7:00 AM – 8:30 AM — CONTINENTAL BREAKFAST

Westin Century Ballroom B/Hyatt Regency Prefunction

8:15 AM – 10:15 AM — CONCURRENT SYMPOSIA V

SYMPOSIUM 21:	SYMPOSIUM 22:	SYMPOSIUM 23:	SYMPOSIUM 24:	SYMPOSIUM 25:
Quality of Life and Family Issues *Hyatt New York A*	**Neuroprotection II** *Hyatt New York B*	**Neurobiology** *Hyatt Chicago A*	**Imaging** *Hyatt Chicago B*	**Biomarkers II** *Hyatt Chicago C*

10:30 AM – 12:30 PM — CONCURRENT SYMPOSIA VI

SYMPOSIUM 26:	SYMPOSIUM 27:	SYMPOSIUM 28:	SYMPOSIUM 29:
Substance Abuse *Hyatt New York B*	**Molecular Pathobiology II** *Hyatt Chicago A*	**PTSD Treatment II** *Hyatt Chicago B*	**Blast Injury Sequelae II** *Hyatt Chicago C*

12:30 PM – 1:30 PM — NETWORKING LUNCHEON

Westin Century Ballroom B

1:30 PM – 2:30 PM — CLOSING PLENARY SESSION

Westin Century Ballroom C

The 2009 **Military Health Research Forum** will be held at the Westin, the Hyatt Regency, and the Crown Center Exhibit Hall. There is a convenient walkway spanning the Westin and the Hyatt Regency referred to as *"The Link." The Link* is accessible from the Ballroom level of the Westin and the Mezzanine level of the Hyatt Regency.

Westin Crown Center
1 East Pershing Road
Kansas City, MO 64108
(816) 474-4400

Hyatt Regency Crown Center
2345 McGee Street
Kansas City, MO 64108
(816) 421-1234

Crown Center Exhibit Hall
2323 McGee Street
Kansas City, MO 64108

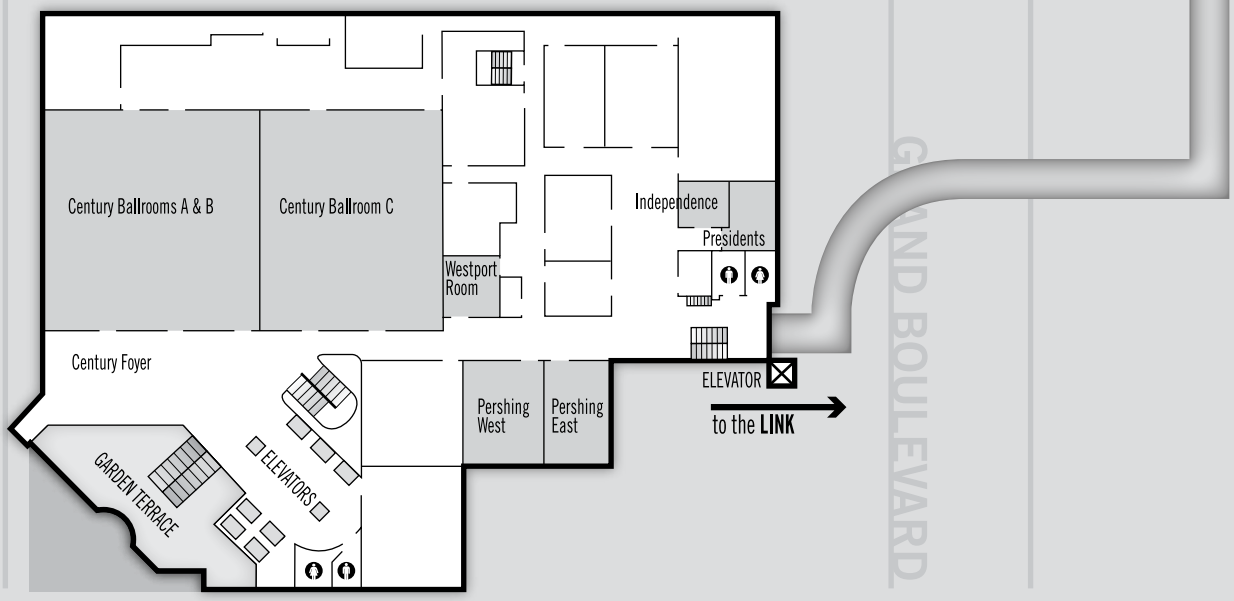
MAIN STREET

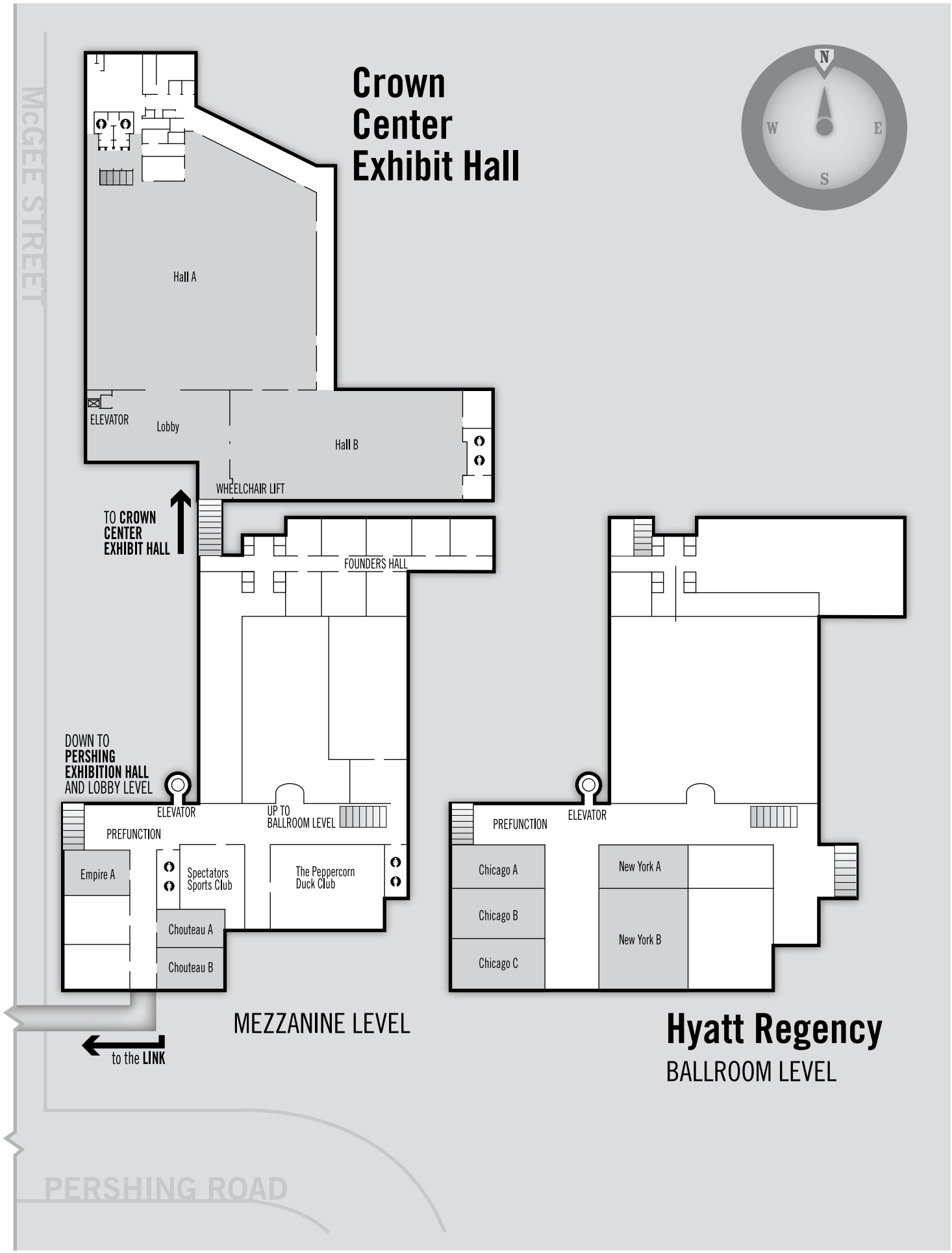
PERSHING ROAD

GRAND BOULEVARD

Westin

BALLROOM LEVEL




Crown Center Exhibit Hall
N
W
E
S
Hall A
ELEVATOR
Lobby
Hall B
WHEELCHAIR LIFT
TO CROWN CENTER EXHIBIT HALL
FOUNDERS HALL
DOWN TO PERSHING EXHIBITION HALL AND LOBBY LEVEL
ELEVATOR
UP TO BALLROOM LEVEL
PREFUNCTION
Empire A
Spectators Sports Club
The Peppercorn Duck Club
Chouteau A
Chouteau B
MEZZANINE LEVEL
to the LINK
PREFUNCTION
ELEVATOR
Chicago A
Chicago B
Chicago C
New York A
New York B
Hyatt Regency
BALLROOM LEVEL
McGEE STREET
PERSHING ROAD

General Information

Promptness and consideration for the speakers who have devoted significant time to the preparation of outstanding presentations are deeply appreciated. All events will start and end on time. Please turn off or mute pagers and cell phones in session rooms.

REGISTRATION AND INFORMATION CENTER
Westin Century Ballroom Foyer
Ballroom Level
All participants must register for the meeting. Each participant will receive one set of conference materials. MHRF staff will be available to answer questions and assist throughout the meeting.

NAME BADGES
Name badges must be worn at all times for admission to all scientific sessions. Meals and refreshments are provided concurrent with the scientific sessions.

CONFERENCE DRESS CODE
The dress code for the MHRF is business casual. Military uniforms are not required.

REGISTRATION AND INFORMATION CENTER HOURS
Monday, Aug. 31 Noon–8:00 PM
Tuesday, Sept. 1, 7:00 AM–7:00 PM
Wednesday, Sept. 2, 7:00 AM–7:00 PM
Thursday, Sept. 3, 7:00 AM–12:00 PM

HYATT LOBBY INFORMATION CENTER
MHRF staff will be available to answer questions and assist you throughout the meeting.

SPECIAL ASSISTANCE
The Department of Defense is committed to making this meeting accessible to all participants. Registrants with special requirements for transportation or hotel accommodations should visit the Registration and Information Center for assistance.

INTERNET ACCESS AT THE CONFERENCE
Terminals with free Internet access are available in three locations:

1. Near the MHRF Registration and Information Center in the Westin Century Ballroom Foyer
2. In the Hyatt Regency Rooms Prefunction area
3. In the lobby of the Crown Center Exhibit Hall, where the poster sessions are held.

Free wireless high-speed Internet access is available in the lobby areas of the Westin Crown Center and Hyatt Regency Crown Center.

Internet service is available for a fee in hotel rooms. Internet fees will not be reimbursed by SAIC.

MESSAGE CENTER
Messages will be posted on the message board (near the Registration and Information Center).

CONCURRENT SESSIONS
Morning
Four sessions are scheduled to run concurrently during each morning time frame; participants may move among the sessions. Presenters are asked to adhere to a strict time schedule of 1 hour per session.

Symposia
Four to five sessions are scheduled to run concurrently during each Symposium time frame. Participants may move among the sessions. Each presenter is asked to adhere to the strict time allotment of 8 minutes for presentation and 2 minutes for questions. Presenters will be asked to step down after 10 minutes.

POSTER SESSIONS
Posters will be displayed in the Crown Center Exhibit Hall. Poster board assignments were provided to each investigator in advance of the conference and can be found in the Author Index. An informational kiosk showing the location of each poster will be located in the front of the Crown Center Exhibit Hall. In addition, computer kiosks throughout the Crown Center Exhibit Hall can be used to search for posters by author, title, and keyword.

All individuals with invited abstracts are obliged to have their posters assembled and ready for display in the Exhibit Hall by 11:00 AM on Tuesday, September 1, or as soon as possible after arriving on site. Poster boards will be available for setup beginning at 1:00 PM, Monday, August 31. Posters are to be left up for display during the entire conference.

Investigators are expected to be available at their posters for discussion during their scheduled poster session as follows: odd-numbered posters from Noon–1:00 PM; even-numbered posters from 1:00–2:00 PM

All posters must be removed by 3 PM on Thursday, September 3.

MEALS
Continental breakfast will be available in the prefunction area of the Hyatt Regency Rooms and Westin Century Ballroom B on Tuesday and Wednesday. Thursday breakfast will only be available at Hyatt Regency Prefunction.

Lunch will be provided in the Crown Center Exhibit Hall during the poster sessions on Tuesday and Wednesday. Lunch will be provided in the Westin Century Ballroom B on Thursday.

TRANSPORTATION
Transportation to/from the Airport
The KCI Super Shuttle (800-243-6383 or http://www.kctg.com/super-shuttle.html) leaves from the Baggage Claim area at 5 minutes to the hour and 25 minutes after the hour. Reservations are not required. Shuttle hours are 5:50 AM–11:25 PM. The fare is $17.00 one way and $29.00 round trip per person. The shuttle service is wheelchair accessible with chair lifts (maroon vans and buses with yellow lettering that say KCI Shuttle).

Taxi Service:
$2.50 = Base fare
$2.00 = Each additional 1 mile
The cost for taxi service to/from the airport is approximately $50.00.

From Union Station
The cost for taxi service to/from Union Station is $2.00.

Around Kansas City
Bus Service:
Kansas City Area Transportation Authority http://www.kcata.org/rider_guide/ offers more than 70 routes. Single trip fares range from $1.50 to $3.00.

TRAVEL ASSISTANCE
A representative of SAIC travel is available at the Registration and Information Center to provide travel assistance for participants whose travel was booked by SAIC travel.

ABSTRACTS AVAILABLE ON THE INTERNET
All participants will receive one copy of the Program Book. Following the MHRF, all abstracts presented at the meeting will be available at www.cdmrpcures.org and cdmrp.army.mil.

PRESS RELATIONS
The Press Room is Pershing East in the Westin. All members of the press should report to the Press Room to register. Dr. Heather Sansbury is the MHRF Press Manager. All press activities will be managed by Mary Ellen Hackett and Dayna Hochstein of Spectrum.

CONTINUING EDUCATION ACCREDITATION
Please see Program Supplement.

SMOKING POLICY
Kansas City Law does not permit smoking in any public areas, including restaurants, bars, and convention facilities such as the Crown Center Exhibit Hall. The Westin Crown Center is a smoke-free hotel while the Hyatt Crown Center offers one guest room floor that allows smoking.

SPEAKER READY ROOM
Speaker Ready Rooms are located in the Westin Westport Room adjacent to Century Ballroom C and the Hyatt Chouteau B room. Speakers are required to deliver their presentations in software compatible with Microsoft PowerPoint on a USB flash drive (thumb drive) or a PC-compatible CD ROM/DVD to a staff member in the Speaker Ready Room closest to their session room no less than 3 hours before their session begins. We recommend delivering the presentation upon arrival at the meeting so that there is ample time to load and review the presentation. See the following sections for more information about audiovisual presentation preparation.

SPEAKER READY ROOM HOURS
12:00 PM TO 6:00 PM on Mon., Aug. 31
6:30 AM TO 4:30 PM on Tues., Sept. 1
6:30 AM TO 4:30 PM on Wed. Sept. 2
6:30 AM TO 12:00 PM on Thurs., Sept. 3

AUDIOVISUAL PRESENTATIONS
Please read and follow the guidelines below to ensure that your presentation will be compatible with equipment used at the MHRF. Do not plan to connect your individual computer to the projector or bring your presentation on disk directly to the meeting room.

All speaker presentations must be prepared in presentation software compatible with Microsoft PowerPoint 2007 and should be delivered to the Speaker Ready Room on a USB flash drive (thumb drive) or a PC-compatible CD ROM/DVD no less than 3 hours before their session begins.

FONT RECOMMENDATIONS
Arial or Times New Roman used for text and Symbol and Monotype Sorts will be supported. Other fonts will not necessarily be available and could cause formatting issues.

SUPPORTED PHOTO AND VIDEO FORMATS
The recommended format for still photos in presentations is JPG. Recommended video formats for video links in presentations are WMV and AVI files. It is important that you bring your video files along with your presentation file so they can be relinked appropriately on our computers and that you let the Speaker Ready Room staff know that there are videos in your presentation.

MACINTOSH USERS
All presentations must be prepared to run on a PC. If you have prepared it on a Mac, it is highly recommended that you test your file on a PC running MS Office 2007 before coming to the conference. As an alternate, you may bring your presentation as a PDF file, which can be projected like a PowerPoint presentation. The recommended format for still photos in presentations is JPG. Please note that TIFFs cannot be supported. Recommended formats for video links in presentations are WMV and AVI files. MPG and Quicktime (.MOV) file formats can be problematic on PCs. The Speaker Ready Room will have a Mac available to help troubleshoot problems; however, it is important to plan accordingly and allow enough time prior to your presentation (at least 3 hours before your presentation) for necessary testing and troubleshooting. We will attempt to fix any of these problems that occur if given enough time but cannot guarantee that all issues will be resolved.

Video Disclaimer

Still photography and background video footage will be shot of various portions of the meeting. We will not be videotaping the oral presentations or photographing posters. However, the session rooms and poster hall will be videotaped and/or photographed. Photo and video image use would be limited to the purpose of illustrating, depicting, and promoting the Congressionally Directed Medical Research Programs (CDMRP) in projects such as annual reports, brochures, displays, and research program videos. Your attendance and participation in this meeting release the CDMRP and Science Applications International Corporation from all claims and demands arising out of or in connection with the use of these images. Anyone who does not wish his or her identifiable image to be used in this manner must fill out and sign a non-release form available in the Speaker Ready Room during this meeting. Thank you for your assistance.

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Congressionally Directed Medical Research Programs (CDMRP)

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Bethany Orlando, Ph.D.
Program Coordinator, PH/TBIRP
SAIC

Psychological Health/Traumatic Brain Injury Research Program Integration Panel

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Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE for PH and TBI)

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Veronica Thurmond, Ph.D. (Secondary Co-Alternate Chair)
Colonel, U.S. Army
DCoE for PH and TBI

Michael Leggieri (Secondary Co-Alternate Chair), M.S.
U.S. Army Medical Research and Materiel Command (USAMRMC)

Carl Castro, Ph.D.
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Richard Griffith, M.D.
Colonel, U.S. Air Force
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Ramona Hicks, Ph.D.
National Institute of Neurological Disorders and Stroke/National Institutes of Health (NIH)

Steve Kaminsky, Ph.D.
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Geoffrey Ling, M.D., Ph.D.
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E. Jane McCarthy, C.R.N.A., Ph.D.,
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Russell Shilling, Ph.D.
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Farris Tuma, Sc.D., M.H.S
National Institute of Mental Health/NIH

Christopher S. Williams, M.D.
Colonel, U.S. Air Force
DCoE for PH and TBI

Gulf War Illness Research Program Integration Panel

Lea Steele, Ph.D. (Chair)
Kansas State University

Anthony Hardie
Wisconsin Department of Veterans Affairs

Chris Kornkven
National Gulf War Resource Center

Cornelius Maher, M.D., Ph.D.
Colonel, U.S. Army
U.S. Army Medical Command

Mary Nettleman, M.D., M.S.
Michigan State University

Kerry Thompson, Ph.D.
Captain, U.S. Navy
Naval Health Research Center

David Watson, Ph.D.
Major, U.S. Air Force
Clinical Investigations Facility
Travis Air Force Base

Monday-at-a-Glance

Monday, August 31, 2009			
5:00 PM – 9:00 PM	**OPENING SESSION AND NETWORKING RECEPTION** *Westin Century Ballrooms A & B*	**Poster Setup** 1:00 PM – 6:00 PM *Crown Center Exhibit Halls A & B*	**Registration** Noon – 8:00 PM *Westin Century Prefunction*

Agenda

Monday, August 31, 2009		
TIME	**EVENT**	**ROOM**
Noon – 8:00 PM	Registration	*Westin Century Prefunction*
1:00 PM – 6:00 PM	Poster Setup	*Crown Center Exhibit Halls A & B*
5:00 PM – 9:00 PM	**OPENING SESSION AND NETWORKING RECEPTION** MG James K. Gilman CAPT Melissa Kaime Dr. Karen Tountas SFC Todd Nelson	*Westin Century Ballrooms A & B*

Tuesday-at-a-Glance

Tuesday, September 1, 2009

Poster Setup
7:00 AM – 11:00 AM
Crown Center Exhibit Halls A & B

Registration
7:00 AM – 7:00 PM
Westin Century Prefunction

7:00 AM – 8:00 AM — MORNING SESSIONS

Complementary and Alternative Medicine	Therapeutic Applications of Virtual Reality	What Is Gulf War Illness and What Caused It?	Advances in Imaging Techniques
Hyatt New York A	*Hyatt Chicago A*	*Hyatt Chicago B*	*Hyatt Chicago C*

7:00 AM – 8:30 AM — CONTINENTAL BREAKFAST
Westin Century Ballroom B /Hyatt Regency Prefunction

8:15 AM – 11:30 AM — PLENARY SESSION: The New Face of War
Westin Century Ballroom C

11:30 AM – 2:15 PM — POSTER SESSIONS/LUNCH
Crown Center Exhibit Hall

P1 Pain I	P2 Sleep
P3 Substance Abuse I	P4 Virtual Reality I
P5 Imaging I	P6 Biomarkers I
P7 Inflammation	P8 Molecular Pathobiology I
P9 Tropical Diseases	P10 Neurobiology I
P11 Neuroprotection I	P12 Wound Healing
P13 Regenerative Medicine I	P14 Blast Injury Sequelae I
P15 Physical Rehabilitation I	P16 Resilience I
P17 PTSD Treatment I	

11:30 AM – 2:15 PM — FY07 PH/TBI RESEARCH PROGRAM CONSORTIA POSTER SESSION/NETWORKING LUNCHEON
Hyatt Pershing Exhibition Hall

2:15 PM – 4:15 PM — CONCURRENT SYMPOSIA I

SYMPOSIUM 1:	SYMPOSIUM 2:	SYMPOSIUM 3:	SYMPOSIUM 4:	SYMPOSIUM 5:
Assessment Tools *Hyatt New York A*	**Biomarkers I** *Hyatt New York B*	**Stress and Fear** *Hyatt Chicago A*	**Resuscitation** *Hyatt Chicago B*	**Molecular Pathobiology I** *Hyatt Chicago C*

4:30 PM – 6:30 PM — CONCURRENT SYMPOSIA II

SYMPOSIUM 6:	SYMPOSIUM 7:	SYMPOSIUM 8:	SYMPOSIUM 9:	SYMPOSIUM 10:
Telemedicine *Hyatt New York A*	**PTSD Treatment I** *Hyatt New York B*	**Epidemiology** *Hyatt Chicago A*	**Molecular Processes of Treatment** *Hyatt Chicago B*	**Neuroprotection I** *Hyatt Chicago C*

Agenda

Tuesday, September 1, 2009

TIME	EVENT	ROOM
7:00 AM – 7:00 PM	Registration	*Westin Century Prefunction*
7:00 AM – 11:00 AM	Poster Setup	*Crown Center Exhibit Halls A & B*
	MORNING SESSIONS	
7:00 AM – 8:00 AM **Speaker abstracts follow Tuesday's Agenda*	**Complementary and Alternative Medicine** Dr. John Glowa: *NIH, NCCAM, and CAM* Ms. Joan Walter: *CAM and Integrative Medicine in the Military*	*Hyatt New York A*
	Therapeutic Applications of Virtual Reality COL Rachel Evans (Moderator) Dr. Greg Reger: *Treatment of Post-Traumatic Stress Disorder with Virtual Reality Exposure Therapy* Dr. Jason Wilken: TBD	*Hyatt Chicago A*
	What Is Gulf War Illness and What Caused It? A Discussion of the Evidence Dr. Lea Steele COL Charles Engel Dr. Roberta White Dr. Kelley Brix	*Hyatt Chicago B*
	Advances in Imaging Techniques Dr. Tom Budinger: *Early Detection of Mild Traumatic Brain Injury by Battlefield Imaging* Dr. Michael Seiden: *Enzyme-Activated Optical Probes: Toward Personalizing Therapy in Cancer*	*Hyatt Chicago C*
7:00 AM – 8:30 AM	Continental Breakfast	*Westin Century Ballroom B / Hyatt Regency Prefunction*
8:15 AM –11:30 AM **Speaker abstracts follow Tuesday's Agenda*	**PLENARY SESSION: THE NEW FACE OF WAR** Moment of Silence: TBD Dr. Ellen Embry: *The New Face of War: Research Imperatives* COL Erin Edgar: *Baghdad ER Revisited: The 28th Combat Support Hospital of Operation Iraqi Freedom 2006–2008* CAPT Jonathan Kuniholm: *Prosthetic Rehabilitation* BG Margaret Wilmoth: *The Impact of War on the Reserve Components* Dr. Lynn McCollum: *Impact of War on Soldiers and Families*	*Westin Century Ballroom C*
11:30 AM – 2:15 PM	Poster Sessions/Lunch P1 Pain I P2 Sleep P3 Substance Abuse I P4 Virtual Reality I P5 Imaging I P6 Biomarkers I P7 Inflammation P8 Molecular Pathobiology I P9 Tropical Diseases P10 Neurobiology I P11 Neuroprotection I P12 Wound Healing P13 Regenerative Medicine I P14 Blast Injury Sequelae I P15 Physical Rehabilitation I P16 Resilience I P17 PTSD Treatment I	*Crown Center Exhibit Hall*
11:30 AM – 2:15 PM	FY07 PH/TBI Research Program Consortia Networking Luncheon	*Hyatt Pershing Exhibition Hall*
	CONCURRENT SYMPOSIA I	
2:15 PM – 4:15 PM	***SYMPOSIUM 1: Assessment Tools***	*Hyatt New York A*
	1-1 DEVELOPMENT AND VALIDATION OF A SCALE TO ASSESS FUNCTIONAL IMPAIRMENT AMONG ACTIVE-DUTY SERVICE MEMBERS AND VETERANS (P22-1) **Brian P. Marx,** *VA Boston Healthcare System* 1-2 A COMPREHENSIVE APPROACH TO DISSEMINATE EVIDENCE-BASED CARE FOR PTSD (P22-2) **Farifteh F. Duffy,** *American Psychiatric Institute for Research and Education* 1-3 STRONG FAMILIES STRONG FORCES: PRELIMINARY FINDINGS IN THE DEVELOPMENT OF A FAMILY-BASED REINTEGRATION PROGRAM SUPPORTING MILITARY FAMILIES WITH VERY YOUNG CHILDREN (P15-11) **Betsy McAlister Groves,** *Boston Medical Center Corporation*	

Agenda

Tuesday, September 1, 2009

2:15 PM – 4:15 PM	***SYMPOSIUM 1: Assessment Tools (cont.)***	*Hyatt New York A*

1-4 FAMILY FUNCTIONING AND SOLDIER TREATMENT ENGAGEMENT FOR POST-TRAUMATIC STRESS DISORDER (P22-4)
Laurel Hourani, *Research Triangle Institute*

1-5 THE IMPACT OF SUPPORTED EMPLOYMENT VERSUS STANDARD VOCATIONAL REHABILITATION IN VETERANS WITH PTSD (P22-5)
Lori L. Davis, *Tuscaloosa VA Medical Center*

1-6 POST-DEPLOYMENT ADJUSTMENT AND CROSS-LEVELING CONCERNS OF OPERATION ENDURING FREEDOM AND OPERATION IRAQI FREEDOM RESERVE AND NATIONAL GUARD SERVICEWOMEN (P22-6)
Anne Gordon Sadler, *VA Medical Center, Iowa City*

1-7 MORTUARY AFFAIRS SOLDIERS: EARLY INTERVENTION AND ALTERING BARRIERS TO CARE FOR TRAUMATIC STRESS AND PTSD (P22-8)
Quinn M. Biggs, *Uniformed Services University of the Health Sciences*

1-8 POST-DEPLOYMENT DRIVING PROBLEMS: SURVEY OF SCOPE AND TIMELINE FOR POST-DEPLOYMENT SOLDIERS WITH AND WITHOUT MILD TRAUMATIC BRAIN INJURY (P22-9)
Todd Rockwood, *University of Minnesota, Twin Cities*

1-9 IMPACT OF PTSD, DEPRESSION, AND MILD TBI ON COGNITIVE EFFORT (P22-10)
Karen A. Tucker, *VA Medical Center, Durham, NC*

2:15 PM – 4:15 PM	***SYMPOSIUM 2: Biomarkers I***	*Hyatt New York B*

2-1 VALIDATION OF A NOVEL BIOMARKER PANEL FOR ACTIVE LUPUS NEPHRITIS (P6-1)
Prasad Devarajan, *Children's Hospital, Cincinnati*

2-2 IDENTIFICATION OF STRESS-RESPONSIVE GENES, CANONICAL PATHWAYS, MOLECULAR NETWORKS AND DRUG TARGETS IN BRAIN TISSUES OF HUMAN AND ANIMALS FOR SYSTEMS BIOLOGY STUDY OF POST-TRAUMATIC STRESS DISORDER (P23-2)
Yan An Su, *George Washington University Medical Center*

2-3 ALTERED FUNCTIONAL BRAIN ACTIVITY DURING EMOTION PROCESSING IN OEF-OIF VETERANS WITH A HISTORY OF MILD BLAST-RELATED TRAUMATIC BRAIN INJURY (P23-3)
Scott C. Matthews, *VA Medical Center, San Diego, CA*

2-4 A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED, CROSSOVER TRIAL OF MIFEPRISTONE IN GULF WAR VETERANS WITH CHRONIC MULTISYMPTOM ILLNESS (P23-4)
Julia Golier, *Mount Sinai School of Medicine, New York*

2-5 DTI FINDINGS IN TBI PATIENTS AT WALTER REED ARMY MEDICAL CENTER (P23-5)
Gerard Riedy, *Walter Reed Army Medical Center*

2-6 POST-TRAUMATIC HYPOPITUITARISM FOLLOWING MILD TRAUMATIC BRAIN INJURY (P23-6)
Brent Masel, *Transitional Learning Center at Galveston*

2-7 MICRORNA FUNCTION IN KIDNEY CANCER (P23-7)
Maria F. Czyzyk-Krzeska, *University of Cincinnati College of Medicine*

2-8 P11, A POTENTIAL BIOMARKER FOR PTSD AND P11 KNOCKOUT MICE, AN ANIMAL MODEL FOR PTSD RESEARCH (P23-8)
Lei Zhang, *Uniformed Services University of the Health Sciences*

2-9 COMPREHENSIVE EXPERIMENTAL MODELS FOR PROFILING MECHANISMS AND DEVELOPING BIOMARKERS OF BLAST BRAIN INJURY (P23-10)
Stanislav Svetlov, *Banyan Biomarkers, Inc.*

2-10 PERSONALIZED MEDICINE IN VETERANS WITH TRAUMATIC BRAIN INJURIES (P23-11)
Giulio Maria Pasinetti, *VA Medical Center, Bronx, NY*

2-11 EVIDENCE-BASED MULTIMODAL NEURODIAGNOSTIC IMAGING OF TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC STRESS DISORDER AT THE SAINT LOUIS UNIVERSITY ADVANCED NEUROSURGICAL INNOVATION CENTER (SANIC) (P23-12)
Richard Donald Bucholz, *St. Louis University School of Medicine*

Agenda

Tuesday, September 1, 2009

2:15 PM – 4:15 PM	***SYMPOSIUM 2: Biomarkers I (cont.)***	*Hyatt New York B*
	2-12 A NEW MEASURE FOR CHARACTERIZING DEFICIENT FUNCTIONAL CONNECTIVITY OF THE BRAIN AFTER BLAST INJURY (P5-13) **Scott R. Sponheim,** *VA Medical Center, Minneapolis, MN*	
2:15 PM – 4:15 PM	***SYMPOSIUM 3: Stress and Fear***	*Hyatt Chicago A*
	3-1 USING PROPRANOLOL TO BLOCK COMBAT MEMORY RECONSOLIDATION (P19-1) **Deane Aikins,** *Yale University* 3-2 FEAR CONDITIONING ALTERS THE SENSITIVITY TO OPIATE REWARD (P19-2) **Gary B. Kaplan,** *VA Boston Healthcare System* 3-3 CONDITIONED FEAR ACQUISITION, DISCRIMINATION, AND EXTINCTION IN COMBAT VETERANS FROM OPERATION IRAQI FREEDOM WITH POST-TRAUMATIC STRESS DISORDER (P19-4) **Seth Davin Norrholm,** *Emory University School of Medicine* 3-4 REGULATION OF EXTINCTION BY GONADAL HORMONES: IMPLICATIONS FOR PTSD (P19-5) **Laura Schrader**, *Tulane University* 3-5 ATTENUATING FEAR RESPONSE IN AN ANIMAL MODEL OF PTSD (P19-7) **He Li,** *Uniformed Services University of the Health Sciences* 3-6 REDUNDANT CATECHOLAMINERGIC SIGNALING IN THE CONSOLIDATION OF FEAR MEMORY (P19-8) **Steven A. Thomas,** *University of Pennsylvania School of Medicine* 3-7 DEVELOPING A RAT MODEL OF DELAYED BEHAVIORAL STRESS REACTIVITY IN PTSD SUITABLE TO INVESTIGATE POTENTIAL PHARMACOLOGIC INTERVENTIONS (P19-9) **David A. Morilak,** *University of Texas Health Science Center at San Antonio* 3-8 PROTEIN KINASE C-EPSILON IN THE AMYGDALA-PREFRONTAL CORTEX CIRCUIT CONTROLS THE EXTINCTION OF CONDITIONED FEAR (P19-10) **Philip Mark Newton**, *University of California, San Francisco, Ernest Gallo Clinic and Research Center* 3-9 TREATING POST-TRAUMATIC STRESS DISORDER BY BLOCKING MEMORY RECONSOLIDATION (P19-11) **Roger K. Pitman,** *Massachusetts General Hospital* 3-10 ENHANCEMENT OF GLUTAMATE TRANSMISSION FOR TREATMENT OF PTSD (P19-12) **Victoria B. Risbrough,** *University of California, San Diego School of Medicine* 3-11 OXYTOCIN REDUCES ANXIETY-RELATED INCREASES IN STARTLE, BUT NOT CUE-SPECIFIC FEAR-POTENTIATED STARTLE IN RATS (P19-13) **Jeffrey B. Rosen,** *University of Delaware*	
2:15 PM – 4:15 PM	***SYMPOSIUM 4: Resuscitation***	*Hyatt Chicago B*
	4-1 OPTIMIZATION ANALYSIS OF ARTIFICIAL VENTILATION (P29-1) **Uichiro Narusawa,** *Northeastern University* 4-2 LYOPHILIZED PLASMA FOR RESUSCITATION IN A SWINE MODEL OF SEVERE INJURY (P29-2) **Nicholas Spoerke,** *Oregon Health and Science University* 4-3 REDUCTION OF HEPATIC INJURY AND IMPROVEMENT OF CARDIAC FUNCTION AND INCREASED SURVIVAL IN A RAT MODEL OF COMBINED BURN INJURY AND POLYMICROBIAL SEPSIS (P29-3) **Joseph L. Messina,** *University of Alabama at Birmingham* 4-4 TARGETED PHARMACOTHERAPIES TO IMPROVE OUTCOMES FROM SHOCK IN THE ALCOHOL-INTOXICATED HOST (P29-4) **Patricia E. Molina,** *Louisiana State University Health Sciences Center* 4-5 NONINVASIVE TRAUMA MONITOR: EARLY INDICATION OF CENTRAL HYPOVOLEMIA THROUGH THE MEASUREMENT OF MUSCLE OXYGEN LEVELS (P29-5) **Babs R. Soller,** *University of Massachusetts Medical School* 4-6 STABLE INTRAVENOUS FLUOROHYDROCARBON EMULSION WITH HIGH OXYGEN CAPACITANCE COMBINED WITH HYPERBARIC OXYGEN FOR THE ACUTE SALVAGE OF TISSUE INJURY AFTER TBI (P29-6) **Yurong Gu,** *Massachusetts General Hospital*	

Agenda

Tuesday, September 1, 2009

2:15 PM – 4:15 PM	***SYMPOSIUM 4: Resuscitation (cont.)***	*Hyatt Chicago B*

4-7 TRAINING FORWARD SURGICAL TEAMS: DO MILITARY-CIVILIAN COLLABORATIONS WORK? (P29-7)
Jeffery S. Augenstein, *University of Miami School of Medicine*

4-8 CARDIOVASCULAR HORMONAL RESPONSES AND MICROCIRCULATORY FLOW DURING ECMO TREATMENT IN A PIGLET MODEL OF ENDOTOXIC SHOCK (P29-8)
Catherine Uyehara, *Tripler Army Medical Center*

4-9 ANTIOXIDANT CARBON NANOTUBE THERAPY OF EXPERIMENTAL BRAIN INJURY (P29-9)
Thomas Kent, *Baylor College of Medicine*

4-10 THE ROLE OF IRON IN LUNG INFLAMMATION FOLLOWING BLAST EXPOSURE OR HEMORRHAGE RESUSCITATION (P29-10)
James L. Atkins, *Walter Reed Army Institute of Research*

4-11 IMPLANTABLE MOLECULAR DIAGNOSTICS: A TOOL IN THE MANAGEMENT OF BATTLEFIELD HEMORRHAGE (P29-11)
Anthony Guiseppi-Elie, *Clemson University*

2:15 PM – 4:15 PM	***SYMPOSIUM 5: Molecular Pathobiology I***	*Hyatt Chicago C*

5-1 NEPHROPATHY, MITOCHONDRIAL FUNCTION, AND OXIDATIVE STRESS IN DIABETIC RATS (P24-1)
Lawrence H. Lash, *Wayne State University School of Medicine*

5-2 RISK FACTORS FOR MENTAL HEALTH-RELATED DISABILITY DISCHARGE FROM THE U.S. ARMY: 1981–2005 (P24-2)
Phillip R. Hunt, *Social Sectors Development Strategies, Inc.*

5-3 EPIDEMIOLOGICAL STUDY OF MILD TRAUMATIC BRAIN INJURY SEQUELAE CAUSED BY BLAST EXPOSURE DURING OPERATIONS IRAQ FREEDOM AND ENDURING FREEDOM (P24-3)
William C. Walker, *Virginia Commonwealth University*

5-4 S-NITROSOTHIOLS: THEIR ROLE IN THE DEVELOPMENT OF PULMONARY ARTERIAL HYPERTENSION (P24-4)
Lisa A. Palmer, *University of Virginia Health Sciences Center*

5-6 REQUIREMENT OF G PROTEINS IN ACTIVATION OF THE PI3K-AKT-MTORC1 PATHWAY BY EGFR (P24-6)
Wen-Ming Chu, *Brown University*

5-7 BETA-ARRESTIN 2 AND MACROPHAGE APOPTOSIS: IMPLICATIONS FOR OBESITY-RELATED CARDIOVASCULAR DISEASE (P24-7)
Judith Sluimer, *Columbia University Medical Center*

5-8 DECREASED EXTRACELLULAR MATRIX MOLECULES IN SYSTEMIC SCLEROSIS FIBROBLASTS UTILIZING THE GLUCOSE METABOLITE 3-DEOXYGLUCOSONE (3DG) (P24-8)
Carol M. Artlett, *Drexel University College of Medicine*

5-9 THE ROLE OF PROTEIN KINASE M-ZETA (PKMζ) IN POST-TRAUMATIC STRESS DISORDER (P24-9)
Peter A. Serrano, *City University of New York*

5-10 PRECONCEPTIONAL PATERNAL EXPOSURE TO EMBEDDED DEPLETED URANIUM: TRANSMISSION OF GENETIC DAMAGE, TRANSGENERATIONAL OFFSPRING EFFECTS, AND PATERNAL GERM CELL DNA DAMAGE (P24-10)
Alexandra Miller, *Armed Forces Radiobiology Research Institute*

5-11 MANGANESE IMAGING IN THE BRAIN: RELATIONSHIP TO IRON HOMEOSTASIS (P5-2)
Michael Aschner, *Vanderbilt University*

CONCURRENT SYMPOSIA II

4:30 PM – 6:30 PM	***SYMPOSIUM 6: Telemedicine***	*Hyatt New York A*

6-1 RANDOMIZED CLINICAL EQUIVALENCE TRIAL COMPARING VIDEOCONFERENCE AND FACE-TO-FACE DELIVERY OF COGNITIVE PROCESSING THERAPY FOR PTSD (P21-1)
Tracey Smith, *University of Wisconsin, Madison*

6-2 TELEREHABILITATION FOR COMBAT WOUNDED WITH TRAUMATIC BRAIN INJURY (TBI) AND POST-TRAUMATIC STRESS DISORDERS (PTSD) (P21-2)
Kris Siddharthan, *VA Medical Center, Tampa, FL*

6-3 SPOUSE BATTLEMIND TELEPHONE SUPPORT GROUPS (P21-3)
Linda O. Nichols, *VA Medical Center, Memphis, TN*

Agenda

Tuesday, September 1, 2009

4:30 PM – 6:30 PM	***SYMPOSIUM 6: Telemedicine (cont.)***	*Hyatt New York A*

6-4 TELEMENTAL HEALTH AND COGNITIVE PROCESSING THERAPY GROUPS FOR RURAL COMBAT VETERANS WITH PTSD: PRELIMINARY FINDINGS (P21-4)
Leslie Anne Morland, *VA Research and Education Corporation of the Pacific*

6-5 INNOVATIVE SERVICE DELIVERY FOR SECONDARY PREVENTION OF PTSD IN AT-RISK OIF-OEF SERVICE MEN AND WOMEN (P21-5)
Ronald Acierno, *VA Medical Center, Charleston*

6-6 UPDATE ON NOVEL TREATMENT STUDIES BY THE NATIONAL CENTER FOR TELEHEALTH AND TECHNOLOGY IN THE INTRUST CONSORTIUM (P21-6)
Gregory A. Gahm, *Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury*

6-7 RANDOMIZED TRIAL OF A WEB-BASED NURSE-ASSISTED PTSD SELF-MANAGEMENT INTERVENTION FOR PRIMARY CARE: STUDY DESIGN AND STATUS (P21-7)
Charles C. Engel, *Uniformed Services University of the Health Sciences*

6-8 THE EFFECT OF TELEPHONE FOLLOW-UP ON OUTCOME FOR MILITARY PERSONNEL WITH COMPLEX MILD TRAUMATIC BRAIN INJURY (P21-8)
Nancy Temkin, *University of Washington*

6-9 DISSEMINATION OF EVIDENCE-BASED CBT INTERVENTION COMPONENTS: ONLINE SELF-ADMINISTERED TRAINING FOR PROVIDERS TREATING MILITARY DEPLOYMENT-RELATED PTSD (P21-9)
Josef Ruzek, *National Center for PTSD, VA Palo Alto Healthcare System*

6-10 PERSONAL MONITORING FOR AMBULATORY PTSD AND MTBI ASSESSMENT (P21-10)
Paul Nicholas Kizakevich, *Research Triangle Institute*

6-11 PSYCHOTHERAPY VIA TELEMEDICINE FOR POST-TRAUMATIC STRESS DISORDER (P21-12)
Steven Russell Thorp, *VA Medical Center, San Diego, CA*

4:30 PM – 6:30 PM	***SYMPOSIUM 7: PTSD Treatment I***	*Hyatt New York B*

7-1 PREDICTORS OF TREATMENT RESPONSE TO FLUOXETINE IN PTSD FOLLOWING A RECENT HISTORY OF WAR ZONE STRESS EXPOSURE (P31-3)
Paul B. Hicks, *Central Texas Veterans Health Care System*

7-2 A RANDOMIZED, PLACEBO-CONTROLLED TRIAL OF THE DOPAMINE-BETA-HYDROXYLASE (DBH) INHIBITOR, NEPICASTAT, FOR THE TREATMENT OF PTSD IN OIF/OEF VETERANS (P31-4)
Lori L. Davis, *Tuscaloosa VA Medical Center*

7-3 PROLONGED EXPOSURE THERAPY FOR PTSD AMONG OIF/OEF PERSONNEL WEEKLY SESSION VS. DAILY (P31-5)
Edna B. Foa, *University of Pennsylvania School of Medicine*

7-4 A RANDOMIZED CLINICAL TRIAL OF MEDITATION FOR VETERANS WITH POST-TRAUMATIC STRESS DISORDER (P31-6)
Julie E. Malphurs, *VA Medical Center, Miami, FL*

7-5 COGNITIVE PROCESSING THERAPY FOR COMBAT-RELATED POST-TRAUMATIC STRESS DISORDER (P31-7)
Patricia A. Resick, *VA Boston Healthcare System*

7-6 COMPUTER-GUIDED PROLONGED EXPOSURE THERAPY FOR PTSD (P31-8)
Claudia Zayfert, *Dartmouth Medical School*

7-7 EVALUATION OF A YOGA INTERVENTION FOR PTSD (P31-9)
Sat Bir Singh Khalsa, *Brigham and Women's Hospital*

7-8 PTSD-FOCUSED COGNITIVE BEHAVIOR THERAPY FOR PARTNER VIOLENCE: PRELIMINARY FINDINGS (P31-10)
Casey T. Taft, *National Center for PTSD, VA Boston Healthcare System*

7-9 OPTICAL NEURAL CONTROL: ENGINEERING THERAPEUTIC CIRCUIT DYNAMICS: APPLICATION TO POST-TRAUMATIC STRESS DISORDER (P31-11)
Edward S. Boyden, *Massachusetts Institute of Technology*

7-10 EFFECTIVENESS OF COGNITIVE, EXPOSURE, AND SKILLS GROUP MANUALIZED TREATMENTS IN OIF/OEF FEMALE VETERANS (P31-12)
Diane T. Castillo, *VA Medical Center, Albuquerque, NM*

Agenda

Tuesday, September 1, 2009

4:30 PM – 6:30 PM	***SYMPOSIUM 8: Epidemiology***	*Hyatt Chicago A*

8-1 CREATION OF A PTSD REGISTRY FOR VETERANS: PROJECT VALOR (P30-1)
Terence Keane, *VA Boston Healthcare System*

8-2 PROSPECTIVE STUDY OF MILITARY SERVICE, CHEMICAL EXPOSURES, AND RISK OF AMYOTROPHIC LATERAL SCLEROSIS AND PARKINSON'S DISEASE (P30-2)
Marc Weisskopf, *Harvard University School of Public Health*

8-3 PTSD AND DNA METHYLATION IN SERUM OF OIF AND OEF SERVICE MEMBERS (P30-3)
Jennifer A. Rusiecki, *Uniformed Services University of the Health Sciences*

8-4 BEHAVIORAL HEALTH CONSEQUENCES OF DEPLOYMENT AMONG RESERVE AND NATIONAL GUARD FORCES (P30-5)
Marta R. Prescott, *University of Michigan, Ann Arbor*

8-5 THE ASSOCIATION OF POST-TRAUMATIC STRESS DISORDER WITH PREGNANCY OUTCOMES AMONG WOMEN IN THE MILITARY (P30-6)
Kathleen O'Rourke, *University of South Florida*

8-6 TBI AND DNA METHYLATION IN SERUM OF OIF AND OEF SERVICE MEMBERS (P30-7)
Jennifer A. Rusiecki, *Uniformed Services University of the Health Sciences*

8-7 MOLECULAR EPIDEMIOLOGY OF ADENOVIRUS-ASSOCIATED OUTBREAKS OF ACUTE RESPIRATORY DISEASE IN MILITARY RECRUIT TRAINING CAMPS (P30-8)
Adriana E. Kajon, *Lovelace Respiratory Research Institute*

8-8 LONGITUDINAL STUDY OF MILD TRAUMATIC BRAIN INJURY IN TROOPS RETURNING FROM OIF/OEF (P30-9)
Karen Schwab, *Walter Reed Army Medical Center*

8-9 A ROLE FOR ORAL AND EARLY LIFE EXPOSURES IN YOUNG ADULT HODGKIN LYMPHOMA ETIOLOGY (P30-10)
Alan D. Moreno, *University of Southern California, Keck School of Medicine*

4:30 PM – 6:30 PM	***SYMPOSIUM 9: Molecular Processes of Treatment***	*Hyatt Chicago B*

9-1 CRITICAL ROLE OF ACTIVATING TRANSCRIPTION FACTOR 4 IN PARATHYROID HORMONE-MEDIATED BONE FORMATION (P25-1)
Guozhi Xiao, *University of Pittsburgh Medical Center*

9-2 BONE-TARGETING NANOPARTICLES FOR TREATMENT OF MYELOMA (P25-3)
Gianny Rossini, *Southwest Research Institute*

9-3 SNAKE VENOM EXTRACT INDUCES STERILE INFLAMMATION AND POTENT VACCINE-TRIGGERED ADAPTIVE IMMUNITY (P25-4)
Larry W. Kwak, *M.D. Anderson Cancer Center, University of Texas*

9-4 IDENTIFICATION OF COMPOUNDS THAT BLOCK NOROVIRUSES BINDING TO THEIR CARBOHYDRATE RECEPTORS BY COMPUTER-AIDED DRUG DESIGN METHODS (P25-5)
Xi Jiang, *University of Cincinnati College of Medicine*

9-5 ENDURANCE TRAINING MINIMIZES ALTERATIONS IN IGF-I AND SKELETAL MASS, BUT NOT FAT MASS OR LEPTIN, DURING PROLONGED ENERGY RESTRICTION (P25-6)
Susan A. Bloomfield, *Texas A&M University, College Station*

9-6 MITIGATION OF WHOLE-BODY RADIATION TOXICITY BY NF-KAPPAB INHIBITORS EP AND CDDO-TFEA (P25-7)
Ulrich Rodeck, *Thomas Jefferson University*

9-7 MODULATION OF DNA DAMAGE BY GREEN TEA (P25-8)
Iman Hakim, *University of Arizona, Tucson*

9-8 MECHANISMS OF FIBRONECTIN ATTACHMENT PROTEIN, FROM BACILLUS CALMETTE-GUERIN, BINDING, AND INTERNALIZATION IN BLADDER TUMOR CELLS (P25-10)
Jennifer Sowa, *Purdue University Cancer Center*

9-9 TRACKING THE FATE OF THE CLONE IN PATIENTS WITH THE MYELODYSPLASTIC SYNDROME (P25-11)
Lewis R. Silverman, *Mount Sinai School of Medicine, New York*

Agenda

Tuesday, September 1, 2009		
4:30 PM – 6:30 PM	***Symposium 10: Neuroprotection I***	*Hyatt Chicago C*
	10-1 OPTIMAL THERAPEUTIC TARGET FOR STEREOTACTIC X-IRRADIATION IN EXPERIMENTAL SPINAL CORD INJURY (P27-3) **Richard J. Zeman,** *New York Medical College*	
	10-2 COG1410 AS A NOVEL POST-TRAUMA TREATMENT FOR TRAUMATIC BRAIN INJURY (P27-4) **Michael P. Vitek,** *Cognosci, Inc.*	
	10-3 PREVENTING EPILEPSY AFTER TRAUMATIC BRAIN INJURY (P27-5) **Marc A. Dichter,** *University of Pennsylvania School of Medicine*	
	10-4 PROLONGED MIDBRAIN STIMULATION EARLY AFTER TRAUMATIC BRAIN INJURY AIDS BEHAVIORAL RECOVERY IN RATS. (P27-6) **Ian D. Hentall,** *University of Miami School of Medicine*	
	10-5 SIMVASTATIN PROTECTS NEURONS FROM CYTOTOXICITY BY UPREGULATING BCL-2 MRNA (P27-7) **Urule Igbavboa,** *University of Minnesota Medical School*	
	10-6 A NOVEL ASPIRIN IMPROVES LOCOMOTOR RECOVERY IN RATS WITH SPINAL CORD INJURY (SCI) (P27-8) **Lenard M. Lichtenberger,** *University of Texas Health Science Center at Houston*	
	10-7 DEVELOPMENT OF RNA APTAMERS AS ANTI-EXCITOTOXIC DRUGS FOR ALS THERAPY (P27-9) **Li Niu,** *State University of New York, Albany*	
	10-8 DEVELOPMENT AND SCREENING OF WATER SOLUBLE ANALOGUES OF PROGESTERONE: POTENTIAL FOR AN INNOVATIVE, SAFE, AND EFFECTIVE APPROACH TO ACUTE TRAUMATIC BRAIN INJURY TREATMENT (P11-10) **Donald G. Stein,** *Emory University School of Medicine*	

Morning Session Abstracts

COMPLEMENTARY AND ALTERNATIVE MEDICINE

NIH, NCCAM, and CAM

John R. Glowa, Ph.D.
National Center for Complementary and Alternative Medicine
National Institutes of Health

The National Institutes of Health (NIH) is the largest biomedical research organization in the United States and is legislatively mandated to address the scientific and clinical approaches to treat a wide variety of human disorders. The National Center for Complementary and Alternative Medicine (NCCAM) is one of the 27 institutes or centers within NIH. Its mission is to conduct and support basic and applied research, research training, and other programs that identify, investigate, and validate complementary and alternative medicine (CAM) treatments for biomedical and behavioral disorders, diagnostic and preventative modalities, or disciplines and systems relevant to a greater understanding of CAM. This talk gives an overview of NIH, NCCAM, and those components of NCCAM that are relevant to the Military Health Research Forum. This presentation will prepare military researchers for the possibility that NCCAM could support certain types of research applications and, to that end, who they may want to contact for further information. Lastly, several examples of past success and areas of current interest will be presented to demonstrate the validation of CAM approaches in the treatment of biomedical and behavioral disorders.

Complementary and Alternative Medicine and Integrative Practices in the Military

Joan Walter
Samueli Institute

There is growing interest in the potential benefits and value of integrating Complementary and Alternative Medicine (CAM) practices and approaches into care for military personnel and their families. A number of biopsychosocial, cultural, and economic factors can be identified, which have led to both an increase in use of CAM and integrative practices by military personnel and treatment facilities, and in research in these areas. This presentation will discuss some of these factors, describe a selection of research initiatives on CAM and Integrative Medicine (IM) sponsored by the DoD, and report some recent data from a large, DoD-wide survey on the prevalence of CAM and dietary supplement use by military personnel.

Learning Objectives:

1. To understand some of the biopsychosocial, cultural, and economic factors that may be related to growing interest in CAM/IM in the DoD.
2. To learn about ongoing CAM/IM research activities across the DoD, specifically in the areas of pain management and stress/PTSD management.
3. To learn about the prevalence of CAM and dietary supplement use in military populations and recognize some differences in patterns of use compared to civilian populations.

Notes:

Morning Session Abstracts

THERAPEUTIC APPLICATIONS OF VIRTUAL REALITY

Treatment of Post-Traumatic Stress Disorder with Virtual Reality Exposure Therapy

Greg Reger, Ph.D.
National Center for Telehealth & Technology

Exposure therapy is one of the best researched, evidence-based treatments for a number of anxiety disorders. This treatment approach requires the patient to progressively confront feared but safe stimuli or memories in order for habituation to take place. For post-traumatic stress disorder (PTSD), effective exposure requires activation of the trauma memory during exposure so that new corrective learning can take place. Imaginal exposure is the most frequently used tool for producing emotional engagement during clinical exposure to trauma memories, and research suggests that it is an effective treatment for many patients with PTSD. However, veteran patients have benefited less from exposure therapy than nonveteran patient populations, and one explanation may be poor activation of the memory during exposure. Multisensory virtual reality (VR) may provide the ability to present a customized simulated environment that represents aspects of a patient's trauma, activating the memory and increasing emotional engagement. Mental health applications of virtual reality typically involve computer-generated environments and computer peripherals that create an interactive, immersive environment in which the user has a sense of participating in an environment in which they are not physically located. This presentation will review research related to the use of VR to treat PTSD. It will focus in particular on the use of a VR Iraq to treat PTSD for active duty Soldiers. Specifically, research related to Soldiers' willingness to use VR, previously deployed Soldiers' evaluation of the realism of VR Iraq, and preliminary clinical outcomes will be reviewed. Future directions for this innovative form of exposure therapy will be discussed.

***See Supplement for Abstract**

Notes:

Morning Session Abstracts

WHAT IS GULF WAR ILLNESS AND WHAT CAUSED IT? A DISCUSSION OF THE EVIDENCE

What is Gulf War Illness and What Caused It? A Panel Discussion of the Evidence

Lea Steele,[1] COL Charles Engel,[2] Robert[a] White,[3] and Kelley Brix[4]
[1]Kansas State University, [2]Uniformed Services University of the Health Sciences, [3]Boston University School of Public Health, and [4]Office of the Assistant Secretary of Defense for Health Affairs

After Iraq's invasion of Kuwait in 1990, the United States and its Coalition partners achieved a quick and decisive victory against Saddam Hussein's forces following a 6-week air campaign and 4-day ground war. But despite the brevity of the Gulf War and its successful execution, widespread reports of unexplained health problems affecting these military personnel emerged in the months after their return from theater. Studies have consistently identified a significant excess of physical symptoms in Gulf War veterans compared to nondeployed veterans of the same era. Collectively, these symptoms have come to be known as Gulf War illness or Gulf War veterans' illnesses, referring to a complex of multiple symptoms that typically include persistent headache, cognitive difficulties, widespread pain, unexplained fatigue, mood alterations, chronic diarrhea, respiratory problems, and/or skin rashes. Diverse views about the nature of Gulf War veterans' symptoms were espoused in the years after the war, with various factors suggested as contributing causes: deployment stress, smoke from hundreds of burning oil well fires, vaccines, depleted uranium, and acetylcholinesterase-inhibiting chemicals found in anti-nerve gas (pyridostigmine bromide) pills, pesticides, and low-level exposure to nerve agents. Some suggested that these symptoms were no different from what may be expected after any large-scale military conflict. For some years after the war, there was little clear evidence to shed light on the ongoing controversies surrounding the health of Gulf War veterans.

An extensive amount of information from scientific studies and government investigations on the health of Gulf War veterans is now available, providing the basis for a more evidenced-based assessment of the nature and causes of Gulf War veterans' symptoms. The discussion panel includes scientists and clinicians who have long been involved in research studies, clinical care, and government programs related to the health of Gulf War veterans and bring different perspectives to this issue. They will provide an overview of currently available evidence, forming the basis for a discussion of prominent questions associated with Gulf War illness(es): What are Gulf War illnesses?, What caused this problem?, What biological differences have been associated with veterans' symptoms?, How was the 1990-1991 Gulf War different from current conflicts in Iraq and Afghanistan?, What is the role of psychological factors in veterans' symptoms?, and Where do we go from here?

Notes:

Morning Session Abstracts

ADVANCES IN IMAGING TECHNIQUES

Battle Casualty Care Improvements Through Noninvasive Sensing and Imaging

Thomas F. Budinger, M.D., Ph.D.
University of California, Berkeley

New noninvasive dynamic sensing and imaging instrumentation approaches are presented for four of the major problem areas associated with battlefield casualties. These are determination of mild traumatic brain injury, detection of systemic hypoxia associated with blood loss or respiratory compromise, neurochemical changes associated with post-traumatic stress symptoms, and rehabilitation. In general the methods are adaptations of well-known methods of measuring changes in the physical, chemical, and physiologic properties of the human body with the benefit of miniaturization, on-board computation, and wireless technologies. Examples of these methods are:

1. Brain dielectric property changes measured by changes in 10 GHz radar reflection patterns
2. Low-frequency ultrasound (300 kHz) potential Doppler regional flow methods
3. Battlefield portable MRI at 1.0 Tesla for the head
4. EEG reduced number of electrodes and wireless field unit
5. Dynamic Impedance (Rheoencephalography) of the head (brain) from scalp electrodes (with/without CO_2 stimulus)
6. Noninvasive deep-muscle oxygen saturation by infrared spectroscopy
7. Continental U.S. measurements of brain neurochemistry imbalances using PET
8. Intra-oral tongue-touch controller for wireless communications (e.g., computer and wheelchair)

These measurement tools, enabled by modern technologies, have promise to prevent mistakes in battlefield casualty care. Examples are missed hypovolemia, inappropriate hypotensive treatment in brain trauma, delayed detection of shock, missed mild traumatic brain injury, misdiagnosis of post-traumatic stress as psychological rather than the neurochemical consequence of brain trauma, and over or undertreatment in respiratory system pathology.

Enzyme-Activated Optical Probes: Toward Personalizing Therapy in Cancer

Michael V. Seiden, M.D. Ph.D.
Fox Chase Cancer Center

Data from the several sources including the Tumor Cancer Genome Atlas project has demonstrated significant molecular heterogeneity, especially in solid tumors. In contrast, data from clinical trials demonstrate that treatment with agents such as imatinib, rituximab, trastuzumab, and erlotinib can lead to striking responses if patient selection is guided by key molecular determinants. Strategies to build a broader collection of tools that will accurately characterize key biochemical characteristics in human malignancies are paramount to accelerating the development of targeted therapeutics. The use of PET scanning is one clear demonstration of the potential power of molecular imaging to determine early responses to therapy. The use of optical imaging techniques and, in particular, the merging of this technology with enzyme-activated near-infrared probes offers the opportunity to define and quantitate biologic processes that support the neoplastic process. Development of a NIRF (near-infrared fluorescence) probe optical imaging platform in humans should add a new dimension to drug development, drug resistance research, and eventually the clinical management of malignancies. We describe here the early steps in moving a novel near-infrared imaging system and probe to the clinical arena and specifically toward the evaluation of individuals with intra-abdominal and pelvic malignancies.

Notes:

Plenary Session Abstract

The New Face of War

Ellen Embrey
Office of the Assistant Secretary of Defense for Health Affairs, Washington, DC

Since 2001, our nation has been engaged in a war unlike any other our nation has fought in the past. Yet despite prolonged hostilities, the single largest contributor to loss of forces is not combat but disease and non-battlefield injuries. Moreover, the disease and non-battle injury rate today is the lowest ever reported – 5% for Afghanistan and 4% for Iraq. For those who are wounded in action, 54% return to duty within 72 hours, and the battlefield survival rate is 97%, the highest of all wars in U.S. history. Of those who incur traumatic brain injury (TBI), 89% were assessed as having mild TBI. What accounts for these remarkable statistics? In addition to the best combat protection available, state-of-the art medical treatment and equipment reach the wounded within the first hour of injury, and many are transported back to hospitals in the United States within 48 hours.

In her introductory remarks to the plenary session, "The New Face of War," Ellen Embrey will describe how today's Military Health System is protecting the lives and health of U.S. forces on the 21st century battlefield.

Baghdad ER Revisited: The 28th Combat Support Hospital of Operation Iraqi Freedom 2006–2008

COL Erin Edgar
U.S. Army 18th Medical Command, Fort Shafter

The China Dragons of the 28th Combat Support Hospital (CSH) deployed in support of Operation Iraqi Freedom (OIF) from September 2006 to November 2007 and conducted split-based, Level III operations in Baghdad and Mosul. This period of OIF was marked with the highest casualty rates of the war to date. The China Dragons endured unprecedented trauma numbers and sustained the magnificent care of wounded, which has advanced roughly from the Vietnam War's Case Fatality Rate of 15% to one of 9%.

The 28th witnessed the tenets of Tactical Combat Casualty Care take hold throughout the uniformed services. Primarily among those tenets is the fact that the most preventable death on the battlefield is exsanguination from an extremity. Thanks to the efforts of the Committee on Tactical Combat Casualty Care and other proponents at the AMEDD Center and School, tourniquets are now used early and liberally. They are saving many lives that would have perished in other conflicts in which tourniquet use was decried as a "last measure." Furthermore, studies of tourniquet use in our current conflicts show that those who apply them do so ably and do not harm their patients.

The daily trauma load took its toll on the unit as it saw unimaginable wounds and death at an unprecedented rate. One of the most common weapons used by the enemy—the Improvised Explosive Device—cemented itself as one of the signature weapons of OIF. The disabling wounds it has caused have led to a revolutionary improvement in our care of amputees and in the growth of technology in artificial limbs.

Although there is likely no signature wound of our current conflicts, post-traumatic stress disorder (PTSD) looms as a menace for the Department of Defense. Studies vary widely in their prediction of its post-deployment prevalence. A survey of the China Dragons prior to redeployment showed a PTSD prevalence of 15%. The factors most associated with PTSD risk were youth and sleeping difficulties.

The 28th CSH's OIF 2006–2008 deployment was a combination of tragedy and triumph and showcased the stunning accomplishments of American troopers under the adverse realities of today's battlefield.

Notes:

Plenary Session Abstract

THE NEW FACE OF WAR

Prosthetic Rehabilitation

Jonathan Kuniholm
Duke University

Since 2001, despite advances in medical care and shifting demographics of injury, service members wounded through the traditional mechanism of amputation have once again become the very public face of war injury and recovery. Fueled by science fiction and the fictionalization of science, the story told over and over again is that of lives restored through the triumph of high technology. While the Department of Defense (DoD) has spared no expense in the rehabilitation of its amputees, a newly fat wallet cannot overcome years of neglect in research and development (R&D) of any kind, public or private, in the area of prosthetic arms (in contrast to legs, where diabetes carried the torch). Nor should the DoD or the Department of Veterans Affairs (VA), despite the attention these types of injuries command, overemphasize them at the expense of more pressing public health problems.

To contribute to the plenary session, "The New Face of War," Jonathan Kuniholm would like to discuss the public and private faces of prosthetic rehabilitation and the divide between perception and reality (through his own experience) in prosthetic arm technology. This legacy of stagnant innovation in the prosthetic arm industry must be acknowledged and understood. The DoD and VA, as the sole funders of R&D and initially as the sole customers of its new products, must secure the future of innovation in this (and other) underserved industry(ies) by attacking the problem in nontraditional ways that acknowledge and address these issues.

Jonathan Kuniholm is a medically retired U.S. Marine Captain and arm amputee, and graduate student and research assistant working on the Defense Advanced Research Projects Agency (DARPA) Revolutionizing Prosthetics 2009 project through the Johns Hopkins Applied Physics Lab and Duke University.

The Impact of War on the Reserve Components

BG Margaret Wilmoth
Office of the Assistant Secretary of Defense for Health Affairs

The Reserve Components of the Armed Forces are composed of more than 1 million Soldiers, Sailors, Airmen, Marines, and Coast Guardsmen—almost 50% of our total force. The Reserve Components face the same challenges of multiple mobilizations and deployments as those of their Active Duty counterparts. The unique challenge to Reserve Component members is the fact that they return to their civilian lives and employment with limited access to the Military Health System and uneven contact with the Veterans Health Administration. Therefore, less is known about the health impacts of war on Reserve Component members, especially the health consequences of service on women veterans and families. This presentation will provide an overview of gaps in knowledge on the effects of war on the Reserve Components, including visible and nonvisible injuries.

Notes:

Plenary Session Abstract

THE NEW FACE OF WAR

Impact of War on Soldiers and Families

Lynn McCollum
Family Programs, Family and MWR Command

Research suggests that most military families are resilient but stressed by cumulative effects of war and ongoing mission of an Expeditionary Force. Families support the mission and want Soldiers to be victorious. Soldiers are concerned about Post-Traumatic Stress Disorder (PTSD), traumatic brain injury (TBI), and adjustments to physical war injuries such as burns and amputations. Skills that serve a Soldier in the combat zone may be hazardous to social and behavioral health in the home zone. Spouse issues include depression, exhaustion, loss of jobs and medical care, as well as overwhelming paper work and systems negotiation while spending long periods of time at the bedside of a wounded warrior. The Army has a myriad of programs to promote self-sufficiency, resiliency, and life skills development. It is important for researchers to look at those problems that we do not have answers to. What are the components of resiliency? What is the impact of television, Internet, and immediate access to information on the stages of deployment? What is the impact of those families with special needs children particularly those with a diagnosis of autism? How do we track family member suicides? What is the impact of suicide on Families and military units? How is family functioning impacted by PTSD and TBI?

Lynn McCollum will speak to the above in her presentation to the Military Health Research Forum. Ms. McCollum is the Director of Family Programs, Family and Morale, Welfare and Recreation Command.

Notes:

Wednesday-at-a-Glance

Wednesday, September 2, 2009

Poster Setup 7:00 AM – 11:00 AM *Crown Center Exhibit Halls A & B*

Registration 7:00 AM – 7:00 PM *Westin Century Prefunction*

7:00 AM – 8:00 AM — MORNING SESSIONS

Caretakers	Eradicating Disease	Challenges in Chronic Pain Management	Neurogenesis and Depression
Hyatt New York A	*Hyatt Chicago A*	*Hyatt Chicago B*	*Hyatt Chicago C*

7:00 AM – 8:30 AM — CONTINENTAL BREAKFAST

Westin Century Ballroom B/Hyatt Regency Prefunction

8:15 AM – 11:30 AM — PLENARY SESSION: Tomorrow's Medicine

Westin Century Ballroom C

11:30 AM – 2:30 PM — POSTER SESSIONS/LUNCH

Crown Center Exhibit Halls A & B

P18 Quality of Life and Family Issues	P19 Stress and Fear
P20 Substance Abuse II	P21 Telemedicine
P22 Assessment Tools	P23 Biomarkers II
P24 Molecular Pathobiology II	P25 Molecular Processes of Treatment
P26 Neurobiology II	P27 Neuroprotection II
P28 Blast Injury Sequelae II	P29 Resuscitation
P30 Epidemiology	P31 PTSD Treatment II
P32 Imaging II	P33 Resilience II
P34 Pain II	P35 Regenerative Medicine II
P36 Physical Rehabilitation II	P37 Virtual Reality II

2:30 PM – 3:45 PM — CONCURRENT SYMPOSIA III

SYMPOSIUM 11:	SYMPOSIUM 12:	SYMPOSIUM 13:	SYMPOSIUM 14:	SYMPOSIUM 15:
Sleep *Hyatt New York A*	**Wound Healing** *Hyatt New York B*	**Tropical Diseases** *Hyatt Chicago A*	**Virtual Reality** *Hyatt Chicago B*	**Pain** *Hyatt Chicago C*

4:00 PM – 5:30 PM — CONCURRENT SYMPOSIA IV

SYMPOSIUM 16:	SYMPOSIUM 17:	SYMPOSIUM 18:	SYMPOSIUM 19:	SYMPOSIUM 20:
Inflammation *Hyatt New York A*	**Blast Injury Sequelae I** *Hyatt New York B*	**Regenerative Medicine** *Hyatt Chicago A*	**Physical Rehabilitation** *Hyatt Chicago B*	**Resilience** *Hyatt Chicago C*

6:00 PM – 9:00 PM — EVENING PLENARY SESSION AND NETWORKING RECEPTION

National World War I Museum at the Liberty Memorial

Agenda

Wednesday, September 2, 2009

TIME	EVENT	ROOM
7:00 AM – 7:00 PM	Registration	*Westin Century Prefunction*
7:00 AM – 11:00 AM	Poster Setup	*Crown Center Exhibit Halls A & B*
	MORNING SESSIONS	
7:00 AM – 8:00 AM **Speaker abstracts follow Wednesday's Agenda*	**Caretakers** COL Kathyrn Gaylord: *Caring for the Caregiver: A Provider Resiliency Program* Ms. Sarah Wade: *Family Caregiving: A Lifelong Commitment from Hospital to Home* Dr. Heidi Kraft: *Compassion Fatigue in Caregivers on the Front Lines and at Home*	*Hyatt New York A*
	Eradicating Disease Dr. Joseph Fair: *Viral Forecasting & Pandemic Prevention* TBD	*Hyatt Chicago A*
	Challenges in Chronic Pain Management TBD	*Hyatt Chicago B*
	Neurogenesis and Depression Dr. Fritz Henn: *Does Neurogenesis Play a Role in Depression?* Dr. Barry Jacobs: *Changes in Adult Brain Neurogenesis: A Novel Theory for the Neurobiology of Depression*	*Hyatt Chicago C*
7:00 AM – 8:30 AM	Continental Breakfast	*Westin Century Ballroom B/ Hyatt Regency Prefunction*
8:15 AM –11:30 AM **Speaker abstracts follow Wednesday's Agenda*	**PLENARY SESSION: TOMORROW'S MEDICINE** Moment of Silence: Dr. Melissa Forsythe Moderator: Dr. George Weightman Dr. Amishi Jha: TBD Dr. Greg Downing: TBD BG Michael Yaszemski: *Musculoskeletal Regenerative Medicine: Bone and Nerve Tissue Engineering* Dr. Robert Dennis: *Tissue Engineering: Learning from the Past While Looking Toward the Future* Dr. Stephen Johnston: *Prospects for Presymptomatic Diagnosis*	*Westin Century Ballroom C*
11:30 AM – 2:30 PM	Poster Sessions/Lunch P18 Quality of Life and Family Issues P19 Stress and Fear P20 Substance Abuse II P21 Telemedicine P22 Assessment Tools P23 Biomarkers II P24 Molecular Pathobiology II P25 Molecular Processes of Treatment P26 Neurobiology II P27 Neuroprotection II P28 Blast Injury Sequelae II P29 Resuscitation P30 Epidemiology P31 PTSD Treatment II P32 Imaging II P33 Resilience II P34 Pain II P35 Regenerative Medicine II P36 Physical Rehabilitation II P37 Virtual Reality II	*Crown Center Exhibit Halls A & B*
	CONCURRENT SYMPOSIA III	
2:30 PM – 3:45 PM	***SYMPOSIUM 11: Sleep***	*Hyatt New York A*
	11-1 PRAZOSIN REDUCES TRAUMA NIGHTMARES AND SEVERE SLEEP DISTURBANCE IN SOLDIERS DEPLOYED IN IRAQ (P31-18) **Murray A. Raskind,** *VA Northwest Network Mental Illness Research, Education, and Clinical Center, VA Puget Sound Health Care System* 11-2 INDIVIDUAL DIFFERENCES IN DIABETES RISK: ROLE OF SLOW-WAVE ACTIVITY DURING SLEEP (P18-1) **Eve Van Cauter,** *University of Chicago* 11-3 CBT FOR NIGHTMARES IN OEF AND OIF VETERANS (P2-2) **Richard Ross,** *VA Medical Center, Philadelphia* 11-4 ACUPUNCTURE AS A NOVEL TECHNIQUE FOR TREATING INSOMNIA IN THE OUTPATIENT TRAUMATIC BRAIN INJURY POPULATION: A RANDOMIZED CONTROLLED TRIAL (P2-3) **Felise S. Zollman,** *Rehabilitation Institute of Chicago*	

Agenda

Wednesday, September 2, 2009

2:30 PM – 3:45 PM	***SYMPOSIUM 11: Sleep (cont.)***	*Hyatt New York A*
	11-5 WORK, SLEEP, AND PERFORMANCE IN OPERATIONAL SETTINGS (P2-4) **Gregory Belenky,** *Washington State University, Spokane*	
	11-6 EFFICACY OF SLEEP INTERVENTION IN MILITARY VETERANS WITH POST-DEPLOYMENT ADJUSTMENT DISORDERS (P2-5) **Anne Germain,** *University of Pittsburgh School of Medicine*	
	11-7 NEUROBIOLOGY OF SLEEP AND SLEEP TREATMENT RESPONSE IN RETURNING VETERANS (P2-6) **Anne Germain,** *University of Pittsburgh School of Medicine*	
2:30 PM – 3:45 PM	***SYMPOSIUM 12: Wound Healing***	*Hyatt New York B*
	12-1 THE ROLE OF THE PSEUDOPTEROSINS AND THEIR ANALOGS IN WOUND HEALING (P12-1) **Raymond Daniel Little,** *University of California, Santa Barbara*	
	12-2 SYNERGISM OF HUMAN AMNION-DERIVED MULTIPOTENT PROGENITOR (AMP) CELLS AND A COLLAGEN SCAFFOLD IN PROMOTING BRAIN WOUND RECOVERY: PRECLINICAL STUDIES IN AN EXPERIMENTAL MODEL OF PBBI (P12-2) **Zhiyong Chen,** *Walter Reed Army Institute of Research*	
	12-3 THE USE OF NOVEL PROTEINS AND NEURAL STEM CELLS TO HEAL TBI (P12-6) **Sharon Leah Juliano,** *Uniformed Services University of the Health Sciences*	
	12-4 CHRONIC PAIN TREATMENT BY CONTROLLED RELEASE OF LOCAL ANESTHETICS FROM BIOCOMPATIBLE WOUND DRESSINGS (P12-7) **David I. Devore,** *Rutgers University, New Brunswick*	
	12-5 SYSTEMIC AND INTRATRACHEAL MURINE MODELS OF ACINETOBACTER BAUMANNII INFECTION: EFFECT OF MORPHINE AND TRAUMA (P12-8) **Toby K. Eisenstein,** *Temple University School of Medicine*	
	12-6 HIGHLIGHTS OF MICROBIOLOGIC STUDY OF 400 ACUTE SURGICAL WOUND INFECTIONS AND CLOSED SOFT TISSUE ABSCESSES (P12-9) **Sydney M. Finegold,** *VA Greater Los Angeles HCS*	
	12-7 RESPIRATORY BIODEFENSE INITIATIVES: DEVELOPMENT OF A NOVEL METALLOPORPHYRIN AS AN EFFECTIVE RADIOPROTECTANT (P12-10) **Robert Mason,** *National Jewish Health*	
2:30 PM – 3:45 PM	***SYMPOSIUM 13: Tropical Diseases***	*Hyatt Chicago A*
	13-1 THE ANTIMALARIAL DRUG AMODIAQUINE INHIBITS THE PLASMODIUM FALCIPARUM PHOSPHOETHANOLAMINE METHYLTRANSFERASE (P9-1) **Choukri Ben Mamoun,** *Yale University School of Medicine*	
	13-2 LEAD OPTIMIZATION AND PRECLINICAL STUDIES OF IMIDAZOLIDINEDIONE DERIVATIVES AS MALARIA PROPHYLACTIC AGENTS (P9-2) **Ai J. Lin,** *Walter Reed Army Institute of Research*	
	13-3 VETERINARY RESEARCH MANPOWER DEVELOPMENT (P9-3) **Mohammed Sawkat Anwer,** *Tufts Cummings School of Veterinary Medicine*	
	13-4 RESEARCH ON PLASMODIUM VIVAX PARASITES TO SUPPORT DRUG AND VACCINE DEVELOPMENT (P9-4) **Jetsumon Prachumsri,** *Armed Forces Research Institute of Medical Sciences*	
	13-5 NON-INVASIVE REAL-TIME MONITORING OF LIVER STAGE DEVELOPMENT OF BIOLUMINESCENT PLASMODIUM PARASITES (P9-5) **Agnes Mwakingwe,** *Albert Einstein College of Medicine of Yeshiva University*	
	13-6 SAFETY, TOLERABILITY, IMMUNOGENICITY, AND PROTECTIVE EFFICACY OF A MULTI-STAGE, MULTI-ANTIGEN ADENOVIRUS-VECTORED P. FALCIPARUM MALARIA VACCINE IN HEALTHY, MALARIA-NAÏVE ADULTS (P9-7) **Cindy Tamminga,** *Naval Medical Research Center*	
2:30 PM – 3:45 PM	***SYMPOSIUM 14: Virtual Reality***	*Hyatt Chicago B*
	14-1 COMPARING VIRTUAL REALITY EXPOSURE THERAPY TO PROLONGED EXPOSURE IN THE TREATMENT OF SOLDIERS WITH POST-TRAUMATIC STRESS DISORDER (P37-1) **Gregory A. Gahm,** *Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury*	

Agenda

Wednesday, September 2, 2009

2:30 PM – 3:45 PM	***SYMPOSIUM 14: Virtual Reality (cont.)***	*Hyatt Chicago B*
	14-2 FROM COGNITIVE NEUROSCIENCE TO INTERVENTION: DEVELOPMENT OF THE NEURAL PATHFINDER SERIES COMPUTER-ASSISTED TRAINING TOOLS FOR IMPROVING COGNITIVE FUNCTIONING AFTER BRAIN INJURY (P4-2) **Anthony J.-W. Chen,** *VA Medical Center, San Francisco, CA*	
	14-3 SELF-MANAGING THE CONSEQUENCES OF TRAUMA: THE NEXTSTEPS PROGRAM (P4-3) **Ellen J. MacKenzie,** *Johns Hopkins University, Bloomberg School of Public Health*	
	14-4 VIRTUAL ENVIRONMENTS FOR COGNITIVE AND AFFECTIVE DYSFUNCTION IN MILD TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC STRESS DISORDER: DEVELOPMENT OF A 21ST CENTURY TREATMENT PLATFORM (P4-4) **Charles E. Levy,** *North Florida Foundation for Research and Education, Inc.,*	
	14-5 PRELIMINARY REPORT OF THE VIRTICO TRIAL: VIRTUAL REALITY THERAPY AND IMAGING IN COMBAT VETERANS (P4-5) **Michael J. Roy,** *Uniformed Services University of the Health Sciences*	
2:30 PM – 3:45 PM	***SYMPOSIUM 15: Pain***	*Hyatt Chicago C*
	15-1 EFFECTS OF SIT-UP TRAINING VS. CORE STABILIZATION EXERCISES ON SIT-UP PERFORMANCE (P1-1) **John D. Childs,** *Baylor University*	
	15-2 ACUPUNCTURE FOR THE TREATMENT OF TRAUMA-INDUCED SPECTRUM DISORDER: A THREE-ARMED RANDOMIZED PILOT STUDY (P1-2) **Wayne Jonas,** *Samueli Institute*	
	15-3 MU-OPIOID RECEPTOR AVAILABILITY IN MULTIPLE BRAIN REGIONS CORRELATES WITH LONGITUDINAL CHANGES IN CLINICAL PAIN IN PATIENTS WITH FIBROMYALGIA (P1-3) **Richard E. Harris,** *University of Michigan, Ann Arbor*	
	15-4 THE FORT MILITARY PAIN PROGRAM: 1-YEAR OUTCOMES (P34-1) **Robert J. Gatchel,** *University of Texas at Arlington*	
	15-5 THE IMPACT OF THE TREATMENT OF PTSD ON COMORBID PAIN AND SLEEP DISTURBANCE (P34-2) **Stacey Young-McCaughan,** *University of Texas Health Science Center at San Antonio*	
	CONCURRENT SYMPOSIA IV	
4:00 PM – 5:30 PM	***SYMPOSIUM 16: Inflammation***	*Hyatt New York A*
	16-1 CHITIN MICROPARTICLES AS A TH1 ADJUVANT DOWNREGULATING TH2 ALLERGIC RESPONSES (P7-1) **Yoshimi Shibata,** *Florida Atlantic University*	
	16-2 ROLE OF MAST CELLS IN T CELL-MEDIATED BLADDER AUTOIMMUNE INFLAMMATION (P7-2) **Yi Luo,** *University of Iowa, Roy J. and Lucille A. Carver College of Medicine*	
	16-3 EFFECTS OF SARIN INHALATION ON VENTILATORY AND NEUROIMMUNE RESPONSES (P7-3) **Mohan L. Sopori,** *Lovelace Biomedical and Environmental Research Institute*	
	16-4 ROLE OF IL-1 AND TNF RECEPTOR ACTIVATION IN NEUROLOGICAL DEFICITS AFTER TBI (P28-13) **Jose Regino Perez-Polo,** *University of Texas Medical Branch, Galveston*	
	16-5 DEVELOPMENT OF A MODEL OF MS PERMITTING STUDY OF EARLY LESION DEVELOPMENT (P7-7) **Kristen M. Drescher**, *Creighton University*	
	16-6 SONIC HEDGEHOG PATHWAY ACTIVATION IS INDUCED BY ACUTE BRAIN INJURY AND REGULATED BY INJURY-RELATED INFLAMMATION (P7-8) **Eric C. Holland,** *Memorial Sloan-Kettering Cancer Center*	
	16-7 PRIMARY AND SECONDARY PREVENTION STRATEGIES FOR CONTROLLING ASTHMA: AGE AND SEX CONSIDERATIONS IN A MOUSE MODEL (P7-11) **Jean Regal,** *University of Minnesota, Duluth*	
	16-8 ROLE OF VLA-1 IN INFLAMMATORY LYMPHANGIOGENESIS AND CORNEAL TRANSPLANTATION (P7-12) **Lu Chen,** *University of California, Berkeley*	
4:00 PM – 5:30 PM	***SYMPOSIUM 17: Blast Injury Sequelae I***	*Hyatt New York B*
	17-1 TRANSFER OF ENERGY INSIDE THE BODY AFTER EXPOSURE TO BLAST (P14-1) **Mikulas Chavko,** *Naval Medical Research Center*	

Agenda

Wednesday, September 2, 2009

4:00 PM – 5:30 PM	***SYMPOSIUM 17: Blast Injury Sequelae I (cont.)***	*Hyatt New York B*
	17-2 THALAMIC PROJECTION FIBERS AND COGNITIVE IMPAIRMENT FOLLOWING TRAUMATIC BRAIN INJURY (P14-2) **Deborah M. Little,** *University of Illinois College of Medicine at Chicago*	
	17-3 BLAST PRESSURE EFFECT ON ISOLATED COLLOID SOLUTIONS (P28-10) **David Francis Moore,** *Defense and Veterans Brain Injury Center*	
	17-4 MECHANISMS OF TRAUMATIC BRAIN INJURIES (TBI) DUE TO BLAST AND IMPACT: AN INVESTIGATION USING COMPUTATIONAL MODELING (P14-4) **Abdullatif Zaouk,** *Foster-Miller Technologies, Inc.*	
	17-5 MISSION CONNECT MILD TBI TRANSLATIONAL RESEARCH CONSORTIUM: HISTOPATHOLOGY CORE (P28-11) **Raymond Grill,** *University of Texas Health Science Center at Houston*	
	17-6 HELMET-INTEGRATED NANOSENSORS WITH REAL-TIME SIGNAL PROCESSING, AND WIRELESS DATA COMMUNICATION FOR MONITORING THE EFFECTS OF BLAST EXPOSURE TO BATTLEFIELD PERSONNEL (P14-7) **Kenneth L. Watkin,** *University of Illinois, Champaign/Urbana*	
	17-7 BLAST ENERGY TRANSMISSION AND NEUROTRAUMA (P14-8) **Pamela J. Vandevord,** *Wayne State University*	
	17-8 MODELING BLAST-INDUCED MILD TRAUMATIC BRAIN INJURY USING AN INTEGRATED APPROACH (P14-9) **Candace Floyd,** *University of Alabama at Birmingham*	
4:00 PM – 5:30 PM	***SYMPOSIUM 18: Regenerative Medicine***	*Hyatt Chicago A*
	18-1 REPAIR OF CORNEAL INJURY WITH STEM CELL-BASED BIOENGINEERED TISSUE (P13-1) **De-Quan Li,** *Baylor College of Medicine*	
	18-2 ROLE OF GLIAL CELL LINE-DERIVED NEUROTROPHIC FACTOR IN HUMAN NEURAL STEM CELL-MEDIATED IMPROVEMENT OF COGNITIVE FUNCTION AFTER TRAUMATIC BRAIN INJURY (P35-1) **Ping Wu,** *University of Texas Medical Branch, Galveston*	
	18-3 BONE TISSUE REGENERATION FROM HUMAN MESENCHYMAL STEM CELLS (P13-3) **Teng Ma,** *Florida State University*	
	18-4 INJECTABLE HYDROGELS FOR BRAIN TISSUE REGENERATION AFTER TRAUMATIC BRAIN INJURY (TBI) (P13-4) **Ning Zhang,** *Clemson University*	
	18-5 OXYGEN-GENERATING BIOMATERIALS FOR ENHANCING TISSUE SURVIVAL (P13-5) **Benjamin Harrison,** *Wake Forest University Health Sciences*	
	18-6 NON-INVASIVE CELLULAR THERAPY FOR SPINAL FUSION TREATMENT (P13-6) **Elizabeth Olmsted-Davis,** *Baylor College of Medicine*	
	18-7 CELLULAR THERAPY TO ACCELERATE FRACTURE HEALING (P13-7) **Elizabeth Olmsted-Davis,** *Baylor College of Medicine*	
	18-8 THE GENERATION AND USE OF INDUCED PLURIPOTENT STEM (IPS) CELLS IN THE TREATMENT OF GENETIC DISORDERS AND TISSUE INJURY (P13-9) **David Ward,** *Nevada Cancer Institute*	
4:00 PM – 5:30 PM	***SYMPOSIUM 19: Physical Rehabilitation***	*Hyatt Chicago B*
	19-1 THE NEURAL RESPONSE TO ELECTRIC STIMULATION (P15-1) **Shelley I. Fried,** *Massachusetts General Hospital*	
	19-2 IMPLANTABLE MICROSYSTEMS FOR ANATOMICAL REWIRING OF CORTICAL CIRCUITRY (P15-2) **Randolph J. Nudo,** *Case Western Reserve University*	
	19-3 THE PATHOGENESIS OF HETEROTOPIC OSSIFICATION IN MICE (P15-3) **Frederick P. Heinzel,** *VA Medical Center, Tampa, FL*	
	19-4 DEVELOPMENT OF A SINGLE-STAGE ANIMAL AMPUTATION MODEL FOR LOAD-BEARING PERCUTANEOUS OSSEOINTEGRATED IMPLANTS (P15-4) **Roy D. Bloebaum,** *VA Salt Lake City Health Care System*	
	19-5 NEURAL PLASTICITY AND NEUROREHABILITATION FOLLOWING TRAUMATIC BRAIN INJURY (P27-10) **Dorothy A. Kozlowski,** *DePaul University*	

Agenda

Wednesday, September 2, 2009

4:00 PM – 5:30 PM	***SYMPOSIUM 19: Physical Rehabilitation (cont.)***	*Hyatt Chicago B*
	19-6 VISUALLY DRIVEN ACTIVATION IN AREAS V2, V3 FOLLOWING AREA V1 LESIONS (P36-1) **Stelios Manolis Smirnakis,** *Baylor College of Medicine* 19-7 TREATMENT OF LASER-INDUCED RETINAL INJURY AND VISUAL LOSS USING SUSTAINED RELEASE OF INTRA-VITREAL NEUROTROPHIC GROWTH FACTORS (P15-7) **Randy H. Kardon,** *University of Iowa College of Medicine* 19-8 COMBINING TDCS AND ROBOTIC TRAINING IN TBI SURVIVORS (P36-2) **Ross Zafonte,** *Spaulding Rehabilitation Hospital*	
4:00 PM – 5:30 PM	***SYMPOSIUM 20: Resilience***	*Hyatt Chicago C*
	20-1 COMBAT STRESS CASUALTY REDUCTION: DEVELOPMENT OF A PRE-DEPLOYMENT STRESS INOCULATION TRAINING (PRESTINT) PROGRAM (P16-1) **Laurel L. Hourani,** *Research Triangle Institute* 20-2 VALIDATION OF THE MILITARY ACUTE CONCUSSION EVALUATION (MACE) FOR IN-THEATER EVALUATION OF COMBAT-RELATED TRAUMATIC BRAIN INJURY (P16-2) **Michael A. McCrea,** *Waukesha Memorial Hospital* 20-3 PROSPECTIVE RISK AND RESILIENCE FACTORS ASSOCIATED WITH PTSD SYMPTOMS IN NATIONAL GUARD SOLDIERS DEPLOYED TO IRAQ (P16-3) **Melissa A. Polusny,** *University of Minnesota, Twin Cities* 20-4 THE EFFECTS OF HYPOXIA ON COGNITIVE FUNCTION IN AVIATORS AND COMPLEX SYSTEM OPERATORS THAT HAVE HAD A MILD TRAUMATIC BRAIN INJURY (P16-4) **Leonard Temme,** *U.S. Army Aeromedical Research Laboratory* 20-5 MENTAL HEALTH IN THE CONTEXT OF WAR: GENETIC AND ENVIRONMENTAL FACTORS (P33-1) **Michael Escamilla,** *University of Texas Health Science Center at San Antonio* 20-6 THE STRONG STAR MULTIDISCIPLINARY PTSD RESEARCH CONSORTIUM (P33-2) **Alan L. Peterson,** *University of Texas Health Science Center at San Antonio* 20-7 PRE-DEPLOYMENT PSYCHOPHYSIOLOGIC PREDICTORS AND RESILIENCY TRAINING TO IMPROVE POST-DEPLOYMENT PTSD (P33-3) **Jeffrey M. Pyne,** *VA Health Care System, Central Arkansas* 20-8 EARLY PREDICTORS OF EVENTUAL RETURN-TO-WORK IN A POPULATION OF TRAUMA PATIENTS WITH MILD TBI (P16-8) **Patricia C. Dischinger,** *University of Maryland, Baltimore*	
6:00 PM – 9:00 PM	**EVENING PLENARY SESSION AND NETWORKING RECEPTION** Dr. Robert E. Foster Dr. Dale Smith, Uniformed Services University of the Health Sciences: *Reflections on the History of Military Medicine and Medical Research*	*National World War I Museum at the Liberty Memorial*

Morning Session Abstracts

CARETAKERS

Family Caregiving: A Lifelong Commitment from Hospital to Home

Sarah Wade
Wounded Warrior Project

Sarah Wade is the wife of retired Army Sergeant Ted Wade. Sarah will share her and her husband's experiences and their fight to overcome adversity. Ted joined the Army during the summer of 2000 and served in both Afghanistan and Iraq. On Valentine's Day 2004, his humvee was hit by an improvised explosive device (IED). Ted suffered very serious complex injuries, including a severe traumatic brain injury (TBI) and right arm amputation. Ted was one of the first cases of severe explosive blast TBI the Department of Defense and the Department of Veterans Affairs had to care for. Sarah suspended her studies in 2004 to serve as an advocate for her husband. Ted's treatment often languished due to bureaucratic tangles and legislative stumbling blocks. Navigating the continuum of care and maze of federal benefits was particularly challenging, as the systems to help him were in their infancy. Ted has since made a remarkable recovery, which he and his wife credit to the comprehensive, individualized treatment he has received through a collaboration of military and civilian providers. Sarah and Ted's story covers many of the hurdles that are being experienced by returning service members and their families to get the services needed to overcome their injuries.

Caregivers on the Frontline: Risks and Challenges

Heidi Kraft, Ph.D.
Naval Health Research Center

This talk will emphasize the challenges and risks facing military providers who deploy to care for warriors in combat. Through storytelling, with focus on her own struggle as a uniformed mental health provider during a period of high American casualties in Iraq, Dr. Kraft will describe the difficulties facing our uniformed medical personnel as they provide care for trauma that might be very close to their own. The concept of compassion fatigue as it relates to frontline medical connection with warfighters and the necessary breakdown in stigma for medical providers to seek needed help for that compassion fatigue are discussed.

Notes:

Morning Session Abstracts

ERADICATING DISEASE

Viral Forecasting and Pandemic Prevention

Joseph N. Fair
Global Viral Forecasting Initiative

The past 50 years has witnessed an incredible surge in emerging and zoonotic infectious diseases around the world. HIV, influenza virus, Ebola virus, Lassa virus, Nipah virus, Marburg virus, and others are known to be, or highly suspected to be, transmitted via exposure to wildlife and livestock. These viruses have all proven to be highly contagious and pathogenic in human populations and in some cases have resulted in worldwide pandemics, even before the widespread use of global air travel. As evidenced by the recent declaration of the H1N1 influenza pandemic, highly transmissible viruses can now spread to most corners of the globe in a matter of weeks. These notable zoonotic spillovers into humans dictate a change in our approach to emerging and zoonotic diseases from a responsive to a proactive approach. The Global Viral Forecasting Initiative is an attempt to predict, identify, respond to, and ultimately prevent the spillover of infectious zoonotic agents into humans by establishing a global infectious disease surveillance system. Our network of laboratories and partners is strategically placed to monitor populations repeatedly exposed to potential zoonotic infectious diseases. With an established presence in the Congo Basin region of Central Africa, the Rift Valley in East Africa, Northern South America, the Gangetic Plane, and Southeast Asia, we employ a variety of methods that facilitate disease surveillance, such as innovative communications technologies to increase awareness and reporting of suspected zoonotic infections, as well as state-of-the-art pathogen detection and discovery technologies. Currently, our Initiative operates in 12 countries, and we have collected more than 30,000 human and animal specimens, resulting in the identification of novel retroviruses, poxviruses, and malarial parasites. By expanding and linking disease surveillance networks, and through further refinement of pathogen discovery technology, we will improve the global ability to predict and ultimately prevent disease spillover events. Our vision is that this approach will not only strengthen our own national security but will also offer the collateral benefit of safeguarding the health and safety of millions of people worldwide.

***See Supplement for Additional Abstract**

Notes:

Morning Session Abstracts

CHALLENGES IN CHRONIC PAIN MANAGEMENT

**See Supplement for Abstract*

**See Supplement for Abstract*

Notes:

Morning Session Abstracts

NEUROGENESIS AND DEPRESSION

The Etiology of Depression: Does Neurogenesis Play a Role?

Fritz Henn, M.D., Ph.D.
Brookhaven National Laboratory

Over the last decade, it has become clear that neurogenesis takes place in all adult mammals and is restricted to two locations. New cells appear to be born in the subventricular zone and dentate gyrus of the hippocampus. Cells mature in the hippocampus over approximately 4 weeks into mature granule cells and integrate into the hippocampal network. Early on it was shown that antidepressants such as fluoxetine stimulate neurogenesis, and stress and corstisol reduce the rate of neurogenesis. Since there is a delay of up to 2 weeks for a full antidepressant effect, it appeared that impaired neurogenesis might offer an explanation for the lag seen in the action of the drugs as well as the decrease in hippocampal volume seen in depressed patients. A wide range of antidepressants were examined along with electroconvulsive therapy and all these effective antidepressant treatments increased the rate of neurogenesis. Ablating neurogenesis in the hippocampus with X-rays eliminated the behavioral effects of antidepressants, strengthening the evidence that depression may be related to decreased neurogenesis in the hippocampus. Stress appears to play a major role in depression, as seen through the changes in hypothalamic-pituitary-adrenal axis function in the disease, so many animal models of depression are stress induced. One of these, learned helplessness, results in a subset of animals exposed to a stressor showing depressive-like behavior. When it was examined, the animals all had a similar stress, and those who showed helpless behavior showed a decrease in neurogenesis. However, when those without behavioral changes were examined, they had the same decrease, suggesting perhaps neurogenesis was not responsible for this behavior. An analogous design using environmental stimulation by Rene Hen again separated the change in neurogenesis from behavior. Most recently, Gass and his students have shown that using a running wheel to increase neurogenesis had no protective effects in terms of the induction of helplessness by stress. Recently, a method for measuring neurogenesis in vivo has been developed, and this will perhaps provide a way to define definitively the role of neurogenesis in depression. A very recent paper has shown that benzodiazepines inhibit the stimulation of neurogenesis caused by fluoxetine, even 2 weeks after its discontinuation. Since many patients are treated with both classes of drug and the clinical literature suggests that this combination improves outcome, this result strongly suggests neurogenesis does not play a critical role in depression.

Changes in Adult Brain Neurogenesis: A Novel Theory for the Neurobiology of Depression

Barry Jacobs, Ph.D.
Princeton University

When I began to study the role of serotonin in adult brain neurogenesis with Elizabeth Gould in 1996, there were no neurobiological theories of the brain mechanisms underlying major depressive disorders (MDDs) that had any specificity. The existing hypotheses stopped short, at the point of stating things like "decreased activity in left prefrontal cortex" or "decreased serotonin neurotransmission in brain." As an example of the limited explanatory value of these statements, let's look at the one about the role of serotonin. It is clear that this leaves unexplored any discussion of underlying mechanism. Where is serotonin acting? Upon what? To do what?

When our initial studies of serotonin's role in adult rat hippocampal cell proliferation (the first step in neurogenesis) showed a strong facilitatory effect, I immediately thought about the use of SSRIs (selective serotonin reuptake inhibitors), the preeminent pharmacotherapy for MDD. The proverbial light went off in my head when I put this together with the facts that: (1) stress, which is a strong, common antecedent for human depression, greatly inhibits hippocampal neurogenesis; and (2) that the process of neurogenesis requires several weeks for completion (a time frame similar to the characteristic "therapeutic lag" that is common to antidepressant treatments). Other facts, such as decreased hippocampal volume in depressed patients, nicely fit into the theory. Therefore, in 2000 my colleagues and I wrote a theoretical article ("Adult brain neurogenesis and psychiatry: A novel theory of depression" Jacobs, van Praag and Gage *Molecular Psychiatry* vol. 5, 262-269). In simple terms, it proposes that chronic, unremitting stress precipitates depressive episodes and also suppresses hippocampal cell proliferation and neurogenesis, which then sustains this depressive state by preventing the development of new positive cognitions. Only a reversal of this suppression, through pharmacotherapy, ECT, psychotherapy, etc. permits the termination of these episodes. This theory was not intended to be universal, that is, to account for all instances and types of MDDs, but to suggest an important causal factor.

Since, 2000, there have been extensions and support of this theory as well as critiques of it. My position is that it represents a plausible neurobiological theory that accounts for a great deal of clinical data. It is, however, based on laboratory results generated almost exclusively in studies of rodents. The acid test will come when this issue can be directly examined in the brains of a human clinical population through a sensitive and specific imaging technique, which I suspect will emerge within the next 5-10 years. Until that time, the validity of this theory remains an open question.

Plenary Session Abstract

TOMORROW'S MEDICINE

**See Supplement for Abstract*

**See Supplement for Abstract*

Notes:

Plenary Session Abstract

TOMORROW'S MEDICINE

Musculoskeletal Regenerative Medicine: Bone and Nerve Tissue Engineering

Michael J. Yaszemski, M.D., Ph.D.
Headquarters, U.S. Air Force

The nature of combat injuries has changed dramatically in Operations Iraqi Freedom and Enduring Freedom compared to injury patterns that our service men and women experienced in prior conflicts. The improved body armor, helmets, casualty evacuation, forward resuscitative care, and forward surgical care have resulted in more injured warriors surviving their wounds. This increased survival also has resulted in many more people who have significant reconstructive needs for their extremities to compensate for missing bone, nerve, vascular, and soft tissues. This presentation will address translational research for the regeneration of bone tissue and nervous system tissue. The bone tissue regenerative strategies include those for contained defects (a hole in a bone) and those for segmental defects (a missing length of bone). Both strategies use polymeric scaffolds, which are synthetic analogues of the extracellular matrix, coupled with cells and bioactive molecules that direct the cells' phenotypic function via their synthesis of extracellular matrix tissue. The contained defects are addressed with injectable scaffold technology, and the segmental defects are addressed with preformed, shape-specific scaffold technology.

The second regeneration strategy presented in this lecture, that of nervous system tissue, includes both peripheral nerve regeneration and spinal cord regeneration. The clinical needs for these two types of nervous system regeneration differ. The tissue engineering strategies to address those needs are similar to each other and similar to the bone regeneration strategies discussed above: a polymeric scaffold, cells, and bioactive molecules. The hope for our wounded warriors is that these and other regenerative medicine strategies will provide them with increased opportunities to recover some of the functions they lost as a result of injuries suffered in the service of our country.

Tissue Engineering: Learning from the Past While Looking Toward the Future

Robert Dennis, Ph.D.
University of North Carolina, Chapel Hill

Tissue engineering is generally viewed as a relatively new field, with its earliest beginnings traceable to the 1980s, and focused primarily on the ex vivo generation of new engineered tissues for use in the surgical correction of injury, mass tissue loss, or congenital deformity. Neither view is entirely correct. It is instructive to understand the early work that over the course of decades has evolved into modern tissue engineering, stretching back a century or more, when assessing recent progress in this field. Also, tissue engineering as a scholarly field lacks consensus on the "core question" that could be used to help focus and drive the basic research. One potential candidate for the core question in tissue engineering has been known and largely overlooked for more than eight decades. Finally, the scope of tissue engineering, its current applications, and future potential in the directed modification of a wide range of tissues and regenerative processes in vivo will be discussed.

Notes:

Plenary Session Abstract

TOMORROW'S MEDICINE

Prospects for Presymptomatic Diagnosis

Stephen Johnston, Ph.D.
Director, Center for Innovations in Medicine, The Biodesign Institute, Arizona State University

Biomarkers have long been sought to detect and predict disease. Most of the candidate biomarkers tested to date have suffered from genetic biases, extremely low concentration, high turnover, lack of reproducibility, or difficulty in sampling. An ideal biomarker is the antibody—it shows little to no variation from race, age, sex, or other confounding factors. It is stable and abundant in the blood, and it is information rich. The problem is the difficulty in interpreting antibodies—they are difficult to sequence, and once sequenced, it is very difficult to obtain the original antigen, especially if that antigen is modified in any way. We have a system of splaying out the antibody repertoire onto a high-density peptide microarray, and we have been able to presymptomatically detect disease well before standard biochemical assays. In fact, we are able to distinguish the most recent infection above background circulating immunoglobulin G's using only a drop of blood, or even blood spotted onto Whatman paper and stored. We have a number of methods to obtain the original antigen, and together this package of technologies paves the way for truly simple and inexpensive health monitoring.

Notes:

Thursday-at-a-Glance

Thursday, September 3, 2009

7:00 AM – 8:00 AM	**MORNING SESSIONS**				**Registration** 7:00 AM – Noon *Westin Century Prefunction*	**Hall Open for Poster Removal** 7:00 AM – 1:00 PM *Crown Center Exhibit Halls A & B*
	Problem Solving for Prosthetic Development *Hyatt New York A*	**Problems and Prospects in Wound Management** *Hyatt Chicago A*	**Clinical Trials with Military Populations** *Hyatt Chicago B*	**Behavioral Therapies** *Hyatt Chicago C*		
7:00 AM – 8:30 AM	**CONTINENTAL BREAKFAST** *Hyatt Regency Prefunction*					
8:15 AM – 10:15 AM	**CONCURRENT SYMPOSIA V**					
	SYMPOSIUM 21:	**SYMPOSIUM 22:**	**SYMPOSIUM 23:**	**SYMPOSIUM 24:**	**SYMPOSIUM 25:**	
	Quality of Life and Family Issues *Hyatt New York A*	**Neuroprotection II** *Hyatt New York B*	**Neurobiology** *Hyatt Chicago A*	**Imaging** *Hyatt Chicago B*	**Biomarkers II** *Hyatt Chicago C*	
10:30 AM – 12:30 PM	**CONCURRENT SYMPOSIA VI**					
	SYMPOSIUM 26:	**SYMPOSIUM 27:**	**SYMPOSIUM 28:**	**SYMPOSIUM 29:**		
	Substance Abuse *Hyatt New York B*	**Molecular Pathobiology II** *Hyatt Chicago A*	**PTSD Treatment II** *Hyatt Chicago B*	**Blast Injury Sequelae II** *Hyatt Chicago C*		
12:30 PM – 1:30 PM	**NETWORKING LUNCHEON** *Westin Century Ballrooms A & B*					
1:30 PM – 2:30 PM	**CLOSING PLENARY SESSION** *Westin Century Ballroom C*					

Agenda

Thursday, September 3, 2009

TIME	EVENT	ROOM
7:00 AM – Noon	Registration	*Westin Century Prefunction*
7:00 AM – 1:00 PM	Hall open for poster removal	*Crown Center Exhibit Halls A & B*
	MORNING SESSIONS	
7:00 AM – 8:00 AM **Speaker abstracts follow Thursday's Agenda*	**Problem Solving for Prosthetic Development** Dr. Glenn Klute: *Prosthetic Development for Lower Limb Amputees* Dr. Michael Goldfarb: *Some New Possibilities in the Design and Functionality of Upper and Lower Limb Prostheses* CAPT Jonathan Kuniholm: *Prosthetic Rehabilitation*	*Hyatt New York A*
	Problems and Prospects in Wound Management Dr. Graeme O'May: *Infection Modality – The Missing Link in the Design of Vaccines Effective Against Chronic Bacterial Disease* TBD	*Hyatt Chicago A*
	Clinical Trials with Military Populations Ms. Annette McClinton: *Research in a Theatre of Operations*	*Hyatt Chicago B*
	Behavioral Therapies Dr. Alexander Prokhorov: *Tobacco Control Among 21st Century Youth*	*Hyatt Chicago C*
7:00 AM – 8:30 AM	Continental Breakfast	*Hyatt Regency Prefunction*
	CONCURRENT SYMPOSIA V	
8:15 AM – 10:15 AM	***SYMPOSIUM 21: Quality of Life and Family Issues***	*Hyatt New York A*
	21-1 INJURY AND TRAUMATIC STRESS (INTRUST) CONSORTIUM: FROM INSPIRATION TO IMPLEMENTATION (P18-2) **Murray B. Stein,** *University of California, San Diego School of Medicine*	
	21-2 PSYCHOLOGICAL AND PHYSIOLOGICAL CORRELATES OF INSULIN RESISTANCE AND OBESITY IN AFRICAN AMERICANS AND CAUCASIANS (P18-3) **Patricia A. Deuster,** *Uniformed Services University of the Health Sciences*	
	21-3 OVERCOMING BARRIERS TO DIABETES MANAGEMENT IN THE ELDERLY (P18-4) **Medha N. Munshi,** *Joslin Diabetes Center*	
	21-4 CANCER RESEARCH PARTNERSHIP BETWEEN TRIPLER ARMY MEDICAL CENTER AND CANCER RESEARCH CENTER OF HAWAII (P18-5) **Carl Wilhelm Vogel,** *University of Hawaii Cancer Research Center of Hawaii*	
	21-5 FAMILY MALTREATMENT, SUBSTANCE PROBLEMS, AND SUICIDALITY: RANDOMIZED PREVENTION EFFECTIVENESS TRIAL (P18-6) **Richard E. Heyman,** *State University of New York, Stony Brook*	
	21-6 A RANDOMIZED CONTROLLED STUDY OF MIND-BODY SKILLS GROUPS FOR TREATMENT OF WAR-ZONE STRESS IN MILITARY AND VETERAN POPULATIONS (P18-7) **James S. Gordon,** *The Center for Mind-Body Medicine*	
	21-7 FAMILY MALTREATMENT, SUBSTANCE PROBLEMS, AND SUICIDALITY (P18-8) **Amy M. Smith Slep,** *State University of New York, Stony Brook*	
	21-8 RESTORATION OF LIFE ROLE PARTICIPATION THROUGH INTEGRATED COGNITIVE AND MOTOR TRAINING FOR INDIVIDUALS WITH TBI (P18-9) **Janis J. Daly,** *VA Medical Center, Cleveland, OH*	
	21-9 THE USE OF PSYCHIATRIC SERVICE DOGS WITH SOLDIERS WHO HAVE PTSD (P18-11) **Craig T. Love,** *Westat, Inc.*	
	21-10 MULTI-FAMILY GROUP INTERVENTION FOR OEF-OIF TRAUMATIC BRAIN INJURY SURVIVORS AND THEIR FAMILIES (P18-12) **Deborah Perlick,** *Mount Sinai School of Medicine, New York*	
	21-11 PARTNERSHIP FOR ASTHMA TRIGGER-FREE HOMES (P18-13) **Cheryl Golden,** *Le Moyne-Owen College*	

Agenda

Thursday, September 3, 2009

8:15 AM – 10:15 AM	***SYMPOSIUM 22: Neuroprotection II***	*Hyatt New York B*
	22-1 HIGH-DOSE VALPROIC ACID IS NEUROPROTECTIVE AND OFFERS BEHAVIORAL IMPROVEMENTS FOLLOWING EXPERIMENTAL TBI (P27-13) **Pramod Dash,** *University of Texas Medical School at Houston*	
	22-2 EVALUATION OF THE SAFETY AND EFFICACY OF OXYCYTE AS AN OXYGEN CARRIER IN PATIENTS AND ANIMAL MODELS OF CNS INJURY (P11-2) **Bullock M. Ross,** *University of Miami School of Medicine*	
	22-3 MINOCYCLINE AND N-ACETYL CYSTEINE SYNERGISTICALLY IMPROVE COGNITIVE PERFORMANCE FOLLOWING TBI IN RATS (P11-3) **Peter J. Bergold,** *State University of New York, Downstate Medical Center*	
	22-4 NEUROPROTECTION BY ESTROGEN FOLLOWING TRAUMATIC BRAIN INJURY (P11-4) **Irshad Chaudry,** *University of Alabama at Birmingham*	
	22-5 ENHANCED NEUROLOGICAL RECOVERY WITH ERYTHROPOIETIN IN MILD TBI (P27-11) **Claudia Robertson,** *Baylor College of Medicine*	
	22-6 A PHASE II TRIAL OF THE NEUROPROTECTIVE AGENT, ATORVASTATIN (P27-12) **Alex Valadka,** *University of Texas Health Science Center at Houston*	
	22-7 LOSS OF CERULOPLASMIN FERROXIDASE ACTIVITY CONTRIBUTES TO NEURONAL INJURY AFTER BLAST EXPOSURE (P11-7) **James L. Atkins,** *Walter Reed Army Institute of Research*	
	22-8 EFFICACY OF COUNTERMEASURES AGAINST TRAUMATIC BRAIN INJURIES SUSTAINED IN AIRBORNE OPERATIONS (P11-9) **John Stephen Crowley,** *U.S. Army Aeromedical Research Laboratory*	
8:15 AM – 10:15 AM	***SYMPOSIUM 23: Neurobiology***	*Hyatt Chicago A*
	23-1 ROLE OF STIMULUS PATTERN IN INDUCTION OF PLASTICITY IN THE NORMAL AND INJURED CEREBRAL CORTEX (P26-10) **Michael Friedlander,** *Baylor College of Medicine*	
	23-2 INVERSE RELATIONSHIPS BETWEEN SEIZURE EXPRESSION AND PRESYNAPTIC AND EXTRASYNAPTIC NMDAR FUNCTION FOLLOWING CHRONIC TREATMENT WITH NONSUBTYPE AND NR2B-SELECTIVE NMDAR ANTAGONISTS IN ORGANOTYPIC HIPPOCAMPAL SLICE CULTURES (P26-1) **Suzanne B. Bausch,** *Uniformed Services University of the Health Sciences*	
	23-3 MICE TREATED WITH CHLORPYRIFOS OXON HAVE DISRUPTED MICROTUBULE STRUCTURES IN BRAIN (P10-2) **Wei Jiang,** *University of Nebraska Medical Center*	
	23-4 SYNAPTIC PLASTICITY, MICRORNA PROFILES, AND BEHAVIOR CHARACTERISTICS IN A MOUSE MODEL OF POST-TRAUMATIC STRESS DISORDER (P10-3) **Amy Starosciak,** *Uniformed Services University of the Health Sciences*	
	23-5 NEUROPSYCHOLOGICAL FUNCTIONING IN MILITARY PESTICIDE APPLICATORS FROM GULF WAR I (P26-3) **Maxine Krengel,** *Boston University Medical Campus*	
	23-6 TARGETING RHO GTPASE SIGNALING PATHWAYS TO ENHANCE RECOVERY AFTER TBI (P26-8) **Kimberley Tolias,** *Baylor College of Medicine*	
	23-7 INJURY-INDUCED PROTEOLYSIS OF THE AXON INITIAL SEGMENT IS A NEW MECHANISM FOR NERVOUS SYSTEM INJURY (P26-9) **Matthew Rasband,** *Baylor College of Medicine*	
	23-8 MEMANTINE DOES NOT ATTENUATE EVOKED HIPPOCAMPAL GLUTAMATE RELEASE IN ANIMALS CHRONICALLY EXPOSED TO DEPLETED URANIUM (DU) (P26-5) **Stephen M. Lasley,** *University of Illinois, College of Medicine at Peoria*	
	23-9 NEUROADAPTATIONS IN STRESS-RELATED PEPTIDERGIC BRAIN SYSTEMS FOLLOWING SOCIAL DEFEAT STRESS (P19-6) **Eric P. Zorrilla,** *Scripps Research Institute*	
	23-10 REPAIRING THE BRAIN'S CAPACITY TO LEARN (P26-6) **Andreas Savas Tolias,** *Baylor College of Medicine*	
8:15 AM – 10:15 AM	***SYMPOSIUM 24: Imaging***	*Hyatt Chicago B*
	24-1 OBSERVER STUDY OF STEREOSCOPIC DISPLAY OF CHEST CT IMAGES FOR LUNG CANCER DETECTION (P5-1) **Xiao Hui Wang,** *University of Pittsburgh*	

Agenda

Thursday, September 3, 2009

8:15 AM – 10:15 AM	***SYMPOSIUM 24: Imaging (cont.)***	*Hyatt Chicago B*

24-2 FULLY AUTOMATED PIPELINE FOR DIFFUSION TENSOR IMAGING ANALYSIS (P32-1)
Kurt Bockhorst, *University of Texas Medical School at Houston*

24-3 TIME-DOMAIN NEAR-INFRARED SPECTROSCOPY SYSTEM FOR PATHOPHYSIOLOGICAL MONITORING OF PATIENTS WITH STROKE OR TRAUMATIC BRAIN INJURIES (P5-4)
Nicusor Iftimia, *Physical Sciences, Inc.*

24-4 VALIDATION OF THE SPECT LIGAND CLINDE AS A MARKER OF MICROGLIAL ACTIVATION IN BABOONS (P5-5)
Jonas Hannestad, *Yale University School of Medicine*

24-5 CONTRAST AGENTS FOR MICRO-COMPUTED TOMOGRAPHY OF MICRODAMAGE IN BONE (P5-6)
Ryan K. Roeder, *University of Notre Dame*

24-6 SENSORY INFORMATION PROCESSING IN AUTISM (P5-7)
Mark Tommerdahl, *University of North Carolina at Chapel Hill*

24-7 MEG CONTRIBUTIONS TO THE DIAGNOSIS OF MTBI (P32-2)
Andrew Papanicolaou, *University of Texas Health Science Center at Houston*

24-8 A RESEARCH PLAN FOR CHARACTERIZING AND REHABILITATING MILD TRAUMATIC BRAIN INJURY USING TEMPORALLY ADAPTIVE FUNCTIONAL MAGNETIC RESONANCE IMAGING (P32-3)
Stephen M. LaConte, *Baylor College of Medicine*

24-9 DEVELOPING AN MRI-COMPATIBLE HEAD PHANTOM FOR EVALUATING TRAUMATIC BRAIN INJURY (P32-4)
Mark George, *Medical University of South Carolina*

24-10 NEUROIMAGING INVESTIGATIONS OF THE STRONG STAR PTSD COHORTS (P32-5)
Peter T. Fox, *University of Texas Health Science Center at San Antonio*

24-11 EVALUATION OF WHOLE BRAIN AND REGIONAL DTI PARAMETERS ON DIFFUSE AXONAL INJURY PATIENTS IN THE SUB-ACUTE STAGE (P5-15)
Rao P. Gullapalli, *University of Maryland School of Medicine*

8:15 AM – 10:15 AM	***SYMPOSIUM 25: Biomarkers II***	*Hyatt Chicago C*

25-1 CHARACTERIZATION OF CONJUNCTIVAL GOBLET CELLS BEFORE AND AFTER PHOTOREFRACTIVE KERATECTOMY (P6-2)
Darlene A. Dartt, *Schepens Eye Research Institute*

25-2 GENETIC FACTORS ASSOCIATED WITH FIBROTIC RESPONSE OF HUMAN FIBROBLASTS TO SILICA (P6-3)
Xiaodong Zhou, *University of Texas Health Science Center at Houston*

25-3 COMPLEMENT ACTIVATION AFTER EXERCISE: MARKERS OF PROLONGED MYALGIA-ARTHRALGIA-FATIGUE SYNDROMES POST-VACCINE AND IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA (P6-4)
Renata Johanna Martha Engler, *Walter Reed Army Medical Center*

25-4 MISSION CONNECT MILD TBI TRANSLATIONS RESEARCH CONSORTIUM (P23-16)
Harvey Levin, *Baylor College of Medicine*

25-5 A PANEL OF BIOMARKERS ACCURATELY PREDICTS THE PROBABILITY OF INTRACRANIAL PATHOLOGY IN MILD TRAUMATIC BRAIN INJURIES (P23-17)
Gerald Grant, *Duke University*

25-6 HRPO A-14542.0: CNDP1 POLYMORPHISMS AND CARNOSINE TREATMENT IN GULF WAR ILLNESS (P6-7)
James N. Baraniuk, *Georgetown University Medical Center*

25-7 SPREADING DEPOLARIZATIONS AS SECONDARY INSULTS AFTER SEVERE TRAUMATIC BRAIN INJURY (P6-8)
Jed A. Hartings, *University of Cincinnati*

25-8 IMAGING OF HETEROTOPIC OSSIFICATION IN ADVANCE OF BONE FORMATION (P6-9)
Alan R. Davis, *Baylor College of Medicine*

25-9 LOW-DOSE SARIN PRODUCES LONG-TERM EFFECTS ON CARDIAC FUNCTION IN MICE AS SHOWN BY ECHOCARDIOGRAPHY (P6-10)
Mariana Morris, *Wright State University*

25-10 DETECTION AND VERIFICATION OF TWO TARGETED TRAUMATIC BRAIN INJURY BIOMARKERS IN CIRCULATING BIOFLUIDS AS WELL AS BRAIN TISSUE IN A RAT MODEL OF PENETRATING BALLISTIC-LIKE BRAIN INJURY (P6-12)
Li-Xia Yang, *Banyan Biomarkers, Inc.*

Agenda

Thursday, September 3, 2009

CONCURRENT SYMPOSIA VI

10:30 AM – 12:30 PM

SYMPOSIUM 26: Substance Abuse

Hyatt New York B

26-1 REDUCTION OF AFFECTIVE LABILITY AND ALCOHOL USE FOLLOWING TRAUMATIC BRAIN INJURY: A CLINICAL PILOT STUDY OF ANTICONVULSANT MEDICATIONS (P20-1)
Thomas Beresford, *VA Medical Center, Denver, CO*

26-2 NEUROPEPTIDE Y (NPY) Y1 AND CORTICOTROPIN-RELEASING FACTOR (CRF)-1 RECEPTORS MODULATE STRESS-INDUCED INCREASES OF ETHANOL INTAKE IN MICE (P20-2)
Todd E. Thiele, *University of North Carolina at Chapel Hill*

26-3 SSRI TREATMENT OF PTSD AND ALCOHOL DUAL DISORDER: A TEST OF THE SEROTONERGIC HYPOTHESIS (P20-3)
John D. Roache, *University of Texas Health Science Center at San Antonio*

26-4 ALCOHOL USE AFTER FORCED ABSTINENCE IN BASIC TRAINING AMONG JUNIOR AIRMEN AND SAILORS (P20-4)
Robert M. Bray, *Research Triangle Institute*

26-5 SMOKING CESSATION: MINIMIZING WEIGHT GAIN AND PREVENTING RELAPSE BY REDUCING ALCOHOL CONSUMPTION (P20-5)
Mark B. Sobell, *Nova Southeastern University*

26-6 A COMPARISON OF INDIVIDUAL AND GROUP MOTIVATIONAL INTERVENTIONS WITH AIR FORCE PERSONNEL (P20-6)
Janice M. Brown, *RTI International*

26-7 GLUTAMATE RECEPTOR GENE VARIANT PREDISPOSES TO EXCESSIVE ALCOHOL DRINKING (P20-7)
Csaba Vadasz, *New York University School of Medicine*

26-8 CIGARETTE USE AMONG ARMY, NAVY, AND AIR FORCE TRAINEES (P20-8)
Robert M. Bray, *Research Triangle Institute*

26-9 ALCOHOL DECREASES DE NOVO BONE FORMATION BY REDUCING THE CONCENTRATION OF IGF-I IN BONE MATRIX (P20-9)
Kathleen Howe, *Oregon State University*

10:30 AM – 12:30 PM

SYMPOSIUM 27: Molecular Pathobiology II

Hyatt Chicago A

27-1 EFFECTS OF ABNORMAL TAU FUNCTION ON ALS PATHOLOGY IN THE SOD1 MOUSE MODEL (P8-1)
Hana N. Dawson, *Duke University Medical Center*

27-2 THE ROLE OF CANDIDATE GENE POLYMORPHISMS IN SYSTEMIC SCLEROSIS (SSC, SCLERODERMA) (P8-2)
Maureen Mayes, *University of Texas Health Science Center at Houston*

27-3 MAINTENANCE OF GLUCOSE HOMEOSTASIS THROUGH ACETYLATION OF THE METABOLIC TRANSCRIPTIONAL COACTIVATOR PGC-1 (P8-3)
Pere Puigserver, *Dana-Farber Cancer Institute*

27-4 NOVEL ATYPICAL RAMBAS AND HDACIS FOR BREAST CANCER THERAPY (P8-4)
Vincent C. O. Njar, *Thomas Jefferson University*

27-5 ROLE OF NICOTINIC ACETYLCHOLINE RECEPTORS IN LUNG DEVELOPMENT: IMPLICATIONS FOR AIRWAY DISEASE IN ADULTS (P8-5)
Jeffery Ritzenthaler, *Emory University School of Medicine*

27-6 MODULATION OF CELL LINEAGE COMMITMENT BY SKELETAL MUSCLE-DERIVED STEM CELLS, MDSC, FROM MDX AND MYOSTATIN KNOCKOUT MICE (P8-6)
Nestor F. Gonzalez-Cadavid, *Charles R. Drew University of Medicine and Science*

27-7 MOLECULAR MECHANISMS UNDERLYING INDIVIDUAL DIFFERENCES IN RESPONSE TO STRESS IN A PREVIOUSLY VALIDATED ANIMAL MODEL OF PTSD (P8-7)
Rachel Yehuda, *Bronx Veterans Medical Research Foundation*

27-8 TOXICITY OF GLYCOLS: RENAL FAILURE THROUGH GENERATION OF METABOLITES (P8-8)
Kenneth McMartin, *Louisiana State University Health Sciences Center – Shreveport*

27-9 APPLICATION OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) TO REVERSE THE MOLECULAR EPILEPTOGENIC CHANGES FOLLOWING TRAUMATIC BRAIN INJURY (P8-9)
Alexander Rotenberg, *Children's Hospital, Boston*

Agenda

Thursday, September 3, 2009

10:30 AM – 12:30 PM	***SYMPOSIUM 27: Molecular Pathobiology II (cont.)***	*Hyatt Chicago A*
	27-10 NICOTINE ENHANCES CARTILAGE FORMATION BUT DELAYS CALLUS REMODELING DURING FRACTURE HEALING IN THE MOUSE (P8-10) **Li-Xia Yang,** *University of Rochester Medical Center*	
	27-11 DEPLOYMENT, PTSD SYMPTOMS, AND COMORBID MENTAL HEALTH CONDITIONS IN THE ACTIVE FORCE AND RESERVE COMPONENTS (P24-5) **Laurel L. Hourani,** *Research Triangle Institute*	
10:30 AM – 12:30 PM	***SYMPOSIUM 28: PTSD Treatment II***	*Hyatt Chicago B*
	28-1 VENLAFAXINE AND CBT FOR PSYCHOLOGICAL DISTRESS AFTER TBI: A RANDOMIZED CONTROLLED TRIAL (P31-15) **Thomas W. McAllister,** *Dartmouth Medical School*	
	28-2 ATTENTIONAL BIAS AND RESPONSE INHIBITION IN VETERANS WITH POST-TRAUMATIC STRESS DISORDER AND TRAUMATIC BRAIN INJURY (P17-3) **Diane Swick,** *VA Northern California Health Care System*	
	28-3 AN EVALUATION OF COGNITIVE PROCESSING THERAPY TO TREAT PATIENTS IN A PTSD RESIDENTIAL REHABILITATION PROGRAM (P31-13) **Jennifer Alvarez,** *VA Health Care System, Palo Alto*	
	28-4 USING COGNITIVE PROCESSING THERAPY TO TREAT MTBI AND PTSD (P31-16) **Kathleen M. Chard,** *VA Medical Center, Cincinnati, OH*	
	28-5 PILOT OUTCOME STUDY ON AURICULAR ACUPUNCTURE IN A VA PTSD TREATMENT CLINIC: IMPLEMENTATION ISSUES AND POTENTIAL IMPACT (P17-7) **Irene Powch,** *VA Medical Center, Portland, OR*	
	28-6 MINDFULNESS AND SELF-COMPASSION MEDITATION FOR COMBAT PTSD (P17-8) **Tony King,** *University of Michigan Medical School*	
	28-7 PSYCHOTHERAPY TREATMENT OF DEPLOYMENT-RELATED PTSD IN PRIMARY CARE: A PILOT INVESTIGATION (P31-14) **Jeffrey Cigrang,** *Wilford Hall Medical Center*	
	28-8 GENERALIZABILITY OF PTSD COGNITIVE BEHAVIORAL PSYCHOTHERAPY CLINICAL TRIALS FOR TRAUMATIZED INDIVIDUALS WITH SUICIDE BEHAVIOR (P17-10) **Marjan G. Holloway,** *Uniformed Services University of the Health Sciences*	
10:30 AM – 12:30 PM	***SYMPOSIUM 29: Blast Injury Sequelae II***	*Hyatt Chicago C*
	29-1 THE ROLE OF EARLY STRESS ON THE DEVELOPMENT OF PTSD AFTER BLAST INJURY (P28-1) **Denes V. Agoston,** *Uniformed Services University of the Health Sciences*	
	29-2 ADVANCED MAGNETIC RESONANCE IMAGING IN BLAST-RELATED TRAUMATIC BRAIN INJURY (P28-2) **David L. Brody,** *Washington University in St. Louis School of Medicine*	
	29-3 CEREBROVASCULAR INJURY IN BLAST LOADING (P28-3) **Kenneth L. Monson,** *University of Utah*	
	29-4 VESTIBULAR MECHANISMS OF IMBALANCE AFTER TRAUMATIC BRAIN INJURY (P28-4) **Mark Walker,** *Case Western Reserve University*	
	29-5 DEVELOPING A BLAST-INDUCED TRAUMATIC BRAIN INJURY MODEL (P28-5) **Samuel S. Panter,** *VA Medical Center, San Francisco, CA*	
	29-6 DIRECT CRANIAL BLAST, NOVEL RODENT MODEL OF BLAST TRAUMATIC BRAIN INJURY (P28-6) **J. Marc Simard,** *University of Maryland School of Medicine*	
	29-7 TRANSFER FUNCTION DEVELOPMENT FOR HELMET-MOUNTED SENSORS (P28-7) **B. Joseph McEntire,** *U.S. Army Aeromedical Research Laboratory*	
	29-8 BIOMECHANICAL MECHANISMS OF BLAST-INDUCED TRAUMATIC BRAIN INJURY (P28-8) **Liying Zhang,** *Wayne State University*	
12:30 PM – 1:30 PM	Networking Luncheon	*Westin Century Ballroom B*
1:30 PM – 2:30 PM	**CLOSING PLENARY SESSION** Moment of Silence: Sarah and Ted Wade	*Westin Century Ballroom C*

Morning Session Abstracts

PROBLEM SOLVING FOR PROSTHETIC DEVELOPMENT

Prosthetic Development for Lower Limb Amputees

Glenn K. Klute, Ph.D.
University of Washington

Major limb amputation can have a profound impact on an individual's life. Regardless of etiology, lower limb amputees walk slower, have higher heart rates when active, and require more metabolic resources than their non-amputee counterparts. They experience a greater number of falls and fall-related injuries in addition to a host of skin problems at the limb-prosthesis interface. The growing U.S. diabetic population and the continuing military conflicts in Iraq and Afghanistan suggest an urgent need to improve the quality of life and functional status of these individuals.

Clinical practice in this decade has witnessed the introduction of numerous new prosthetic components intended to address the issues of lower limb amputees. Innovations include devices to aid propulsion, improve stability, and enhance fit and suspension. While some technologies are more mature than others, the available evidence suggests that the mobility, biomechanics, and comfort of lower limb amputees remain compromised while the incidence of injury and secondary disabilities is not well known.

This presentation and ensuing roundtable discussion will briefly review lower limb prosthetic interventions and the evidence related to their efficacy and focus on current research efforts intended to resolve the long-standing problems faced by lower limb amputees.

Some New Possibilities in the Design and Functionality of Upper and Lower Limb Prostheses

Michael Goldfarb, Ph.D.
Vanderbilt University

Advances in power, actuation, and microelectronics technology over the past decade, together with advances in neural interfacing methods, enable new possibilities in the design and functionality of upper and lower limb prosthetic devices. With regard to lower limb prostheses, such advances enable the implementation of fully powered joints that approximate the biomechanical capabilities of the native limb and as such restore the ability of the limb to contribute net positive power to gait. Doing so, however, greatly changes the nature and significance of the prosthesis control and interface problem (i.e., fundamentally, a passive prosthesis can only react to the user's input, but a powered prosthesis can both act as well as react). With regard to upper limb prostheses, multichannel EMG interfaces (and other neural interfaces in development) relax considerably the communication "bottleneck" between the user and prosthesis, and thus enable prostheses with considerably more versatile functionality than current commercially available devices. This talk will discuss such advances in lower and upper limb prostheses with emphasis on the functional improvements new technologies could provide to amputees within the next decade.

Notes:

Morning Session Abstracts

PROBLEM SOLVING FOR PROSTHETIC DEVELOPMENT

The Big Challenge for Prosthesis Development

Jeffery Morgan, Ph.D.
Center for Biomedical Engineering, Brown University, and Center for Restorative and Regenerative Medicine, Providence VA Medical Center

Transcutaneous osseointegration is a promising new method of fixing a prosthesis directly to bone. A titanium rod is screwed into the bone of the residual limb and protrudes from the skin, and the exoprosthesis is attached to the protruding rod. In true osseointegration, the living bone becomes fused with the oxide layer of the titanium, and this anchorage persists under normal conditions of loading, a true biohybrid approach. Among the benefits claimed for this technique is osseoperception, a term that denotes the ability of patients with osseointegrated devices to identify tactile thresholds through their prostheses, thus improving amputee perception of his or her environment. Several fully internal osseointegrated devices have been described for orthopedic applications. Indeed, titanium joint replacements in use worldwide incorporate osseointegration principles. The application of these principles to amputees, however, has raised concerns because the titanium device is transcutaneous. Thus, the concern is not with the integration of these devices with bone, but rather the concern is focused on the ability of these devices to adequately integrate with the skin. Without a permanent long-lasting seal with the skin, these devices will suffer from the same problems of infection and inflammation that limits the lifetime of the entire family of percutaneous medical devices that penetrate the skin. There are more than a million percutaneous devices (indwelling catheters, dialysis ports, feeding tubes, etc.) put in patients each year. The problems of infection and inflammation severely limit the indwell time and thus the usefulness of the entire family of percutaneous devices. There are several instances (e.g., cochlear implants) in which medical devices have undergone sophisticated re-engineering to circumvent the problem of the skin biointerface (e.g., wireless). There are certainly other ideas for assistive technologies that are not feasible, nor under consideration for development, due to this problem. The penetration of medical devices through the skin is in many respects the ultimate unsolved barrier to the patient/machine biointerface. If a suitable solution could be found to this problem, whereby percutaneous devices could function for years to the lifetime of the patient with minimal to no inflammation/infection, then an exciting new chapter could unfold in the design of new assistive technologies.

Notes:

Morning Session Abstracts

PROBLEMS AND PROSPECTS IN WOUND MANAGEMENT

Infection Modality – the Missing Link in the Design of Vaccines Effective Against Chronic Bacterial Disease

Graeme A. O'May and Mark. E. Shirtliff
University of Maryland, Baltimore

Introduction. *Staphylococcus aureus* is now the leading cause of nosocomial infections in the United States, around 50% of which are caused by methicillin-resistant *S. aureus* (MRSA). Furthermore, community-acquired MRSA infection is increasingly common. *S. aureus* is capable of causing chronic disease through the generation of *biofilm,* a surface-resident community exhibiting a phenotype and physiology distinct from those of identical, free-floating bacteria. A number of antistaphylococcal vaccines have been tested; however, all have focused on prevention of acute disease caused by *S. aureus* in its planktonic form.

Methods. Our laboratory identified 22 cell wall-associated immunogens, of which several were up-regulated throughout biofilm formation and maturation. Purified, recombinant forms of four such antigens were generated. These were combined into a multicomponent vaccine with adjuvant and administered to New Zealand White rabbits; a second, booster vaccination was given 10 days later. Ten days following the boost, the animals were challenged through percutaneous inoculation of the left tibia with MRSA. Ten days later, vancomycin was administered to both a vaccinated and a nonvaccinated group. Two weeks after challenge, efficacy was assessed by evaluation of clinical, radiological, and bacteriological signs of osteomyelitis.

Results. Compared to a nonvaccinated and untreated control group, vaccinated animals and animals treated with vancomycin alone showed no significant differences. In contrast, those animals both vaccinated and vancomycin-treated showed significant decreases in tibial bacterial load ($P = 0.025$), proportion of animals infected ($P = 0.03$) and clinical ($P = 0.009$) and radiological ($P = 0.00025$) signs of infection. Therefore, this vaccine—when used in conjunction with antibiotic treatment—was able to significantly abrogate the clinical and radiological signs of osteomyelitis in a rabbit model of disease and greatly diminish *S. aureus* colony counts in the infected bone.

Conclusions. We hypothesize that while the vaccine was able to prevent biofilm formation, its use selects for planktonic survivors. The opposite was true in animals treated only with antibiotics. Thus the combination of vaccine and antibiotic was able to ameliorate completely the infection. We conclude from this that the infection modality (i.e., biofilm with its distinct phenotype) must be taken into account when considering vaccine composition.

See Supplement for Additional Abstract

Notes:

Morning Session Abstracts

CLINICAL TRIALS WITH MILITARY POPULATIONS

Research in a Theatre of Operations

McClinton, A. R.
U.S. Army Institute of Surgical Research

Many advances made in military medicine came as a result of medical care done on the battlefields of World War II, Korean War and Vietnam War, and other military engagements. Conducting research in a theatre of operations is extremely challenging. Individuals conducting research in a combat zone are also the same individuals providing clinical care to the Wounded Warriors. Deployment of the Joint Combat Casualty Research Team (JC2RT) include a physician Director, a Ph.D. nurse researcher, senior researchers, staff researchers , a Human Protection Administrator (HPA) and an NCOIC. The team members receive a week-long research orientation course at the U.S. Army Institute of Surgical Research (USAISR) on research regulations, different templates, data collection techniques, and reporting of various life-cycle events such as amendments, continuing reviews, and adverse events. The primary goal of the JC2RT is to foster and facilitate combat casualty care research for the benefit of the Soldiers and the wounded Warriors. With the assistance of the JC2RT, protocols are developed, reviewed, and revised in theatre and then forwarded to the USAISR for official scientific review. The protocol is then sent to the Brooke Army Medical Center Institutional Review Board for final review and approval. Some investigators begin their protocol development prior to being deployed which drastically reduce the amount of time it takes to get a protocol approved and implemented in theatre. Currently there are more than 50 ongoing protocols in both Iraq and Afghanistan with over 150 having been reviewed and approved since 2005.

BEHAVIORAL THERAPIES

Tobacco Control Among 21st Century Youth

Alexander Prokhorov, M.D., Ph.D.
The University of Texas M.D. Anderson Cancer Center

An interactive, tailored educational videogame was developed for smoking prevention and cessation among youth. A preliminary study was conducted using a pretest-posttest cohort design with assessments at baseline, 7 days and 6 months post-intervention. Feasibility and impact of the videogame on some tobacco-related measures at 6-month follow-up are reported. A total of 239 high-risk alternative-school students were recruited. Mean age of the participants was 16.2 years (SD=1.0), 79% were male. Thirty-six percent of the participants were Hispanic and 49% were African American. Twenty-five percent were smokers.

Six-Month Feasibility Analysis: To date the 6-month survey has been completed by 146 participants. All participants played the videogame at least once, and 59% played twice or more times. Over 87% of participants reported ease of use of this educational tool, and the majority of participants enjoyed the experience. After playing the videogame, 94% reported increased knowledge about the tobacco effects, 82% were inspired never to start or to quit, and 71% planned to share the videogame with family or friends.

Mediating Variables of Smoking at 6-Month Follow-Up: The primary outcomes of interest in this study were the mediating determinants of smoking initiation and cessation including the pros and cons of tobacco use, decisional balance, and temptations to smoke. These outcomes were analyzed using mixed model regression with time and baseline smoking status and their interaction as fixed effects. At baseline, smokers had significantly lower scores on cons of smoking and temptations to smoke and significantly higher scores on pros of smoking and decisional balance. Comparisons from baseline to 6 months showed a significant interaction effect for cons of smoking ($F = 5.3$; $p<.05$), decisional balance ($F = 8.0$; $p<.01$), and temptations to smoke ($F = 7.6$; $p<.01$). For baseline smokers, 6-month temptations to smoke were significantly lower than baseline, and 6-month cons of smoking were significantly higher than baseline. For nonsmokers these variables did not change significantly. The educational videogame showed considerable promise in terms of increasing tobacco knowledge and changing attitudes among high-risk youth.

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Poster Sessions

P1 Pain I

Tuesday, September 1, 2009
11:30 AM-2:15 PM
Posters Manned:
Odd-Numbered - Noon-1:00 PM
Even-Numbered - 1:00-2:00 PM

P1-1 EFFECTS OF SIT-UP TRAINING VS. CORE STABILIZATION EXERCISES ON SIT-UP PERFORMANCE
John D. Childs,[1] Deydre S. Teyhen,[1] Timothy M. Benedict,[1] Jamie B. Morris,[1] Andrew D. Fortenberry,[1] Rene M. McQueen,[1] Janice B. Preston,[1] Alison C. Wright,[1] Jessica L. Dugan,[1] and Steven Z. George[2]
[1]Baylor University and [2]University of Florida

P1-2 ACUPUNCTURE FOR THE TREATMENT OF TRAUMA-INDUCED SPECTRUM DISORDER: A THREE-ARMED RANDOMIZED PILOT STUDY
Wayne Jonas and Alexandra York
Samueli Institute

P1-3 MU-OPIOID RECEPTOR AVAILABILITY IN MULTIPLE BRAIN REGIONS CORRELATES WITH LONGITUDINAL CHANGES IN CLINICAL PAIN IN PATIENTS WITH FIBROMYALGIA
Richard E. Harris,[1] Joshua W. Russell,[1] Jon-Kar Zubieta,[1] David J. Scott,[2] and Daniel J. Clauw[1]
[1]University of Michigan, Ann Arbor, and [2]International Council on Mining & Metals

P1-4 BEHAVIORAL EFFECTS OF A SYNTHETIC AGONIST SELECTIVE FOR NOCICEPTIN-ORPHANIN FQ PEPTIDE RECEPTORS IN PRIMATES
Mei-Chuan Ko
University of Michigan Medical School

P1-5 A PILOT STUDY TO IDENTIFY BARRIERS TO TREATMENT IN OEF-OIF VETERANS WITH PTSD AND LOW BACK PAIN IN ESTABLISHING FUTURE TRANSDISCIPLINARY COMPLEMENTARY INTERVENTIONS
Agnes Wallbom,[1] Tara Victor,[1] David Benton,[2] Alberto Miranda,[1] and Anne Nastasi[1]
[1]VA Greater Los Angeles HCS and [2]Western University of Health Sciences

P1-8 A RANDOMIZED CONTROLLED TRIAL OF MEDICAL THERAPIES FOR CHRONIC POST-TRAUMATIC HEADACHES
Jay Erickson, Dean Kao, and Fred Flynn
Madigan Army Medical Center

P2 Sleep

Tuesday, September 1, 2009
11:30 AM-2:15 PM
Posters Manned:
Odd-Numbered - Noon-1:00 PM
Even-Numbered - 1:00-2:00 PM

P2-2 CBT FOR NIGHTMARES IN OEF AND OIF VETERANS
Richard Ross,[1] Gerlinde Harb,[1] Ilan Harpaz-Rotem,[2] Joan Cook,[3] Philip Gehrman,[1] Russell Localio,[4] and Geraldine Gamble[1]
[1]VA Medical Center, Philadelphia, [2]VA Connecticut Healthcare System, [3]Yale University School of Medicine, and [4]University of Pennsylvania

P2-3 ACUPUNCTURE AS A NOVEL TECHNIQUE FOR TREATING INSOMNIA IN THE OUTPATIENT TRAUMATIC BRAIN INJURY POPULATION: A RANDOMIZED CONTROLLED TRIAL
Felise S. Zollman
Rehabilitation Institute of Chicago

P2-4 WORK, SLEEP, AND PERFORMANCE IN OPERATIONAL SETTINGS
Gregory Belenky, Jennifer McDonald, Lindsey Tompkins, and Hans P. A. Van Dongen
Washington State University, Spokane

P2-5 EFFICACY OF SLEEP INTERVENTION IN MILITARY VETERANS WITH POST-DEPLOYMENT ADJUSTMENT DISORDERS
Anne Germain and Eric Nofzinger
University of Pittsburgh School of Medicine

P2-6 NEUROBIOLOGY OF SLEEP AND SLEEP TREATMENT RESPONSE IN RETURNING VETERANS
Anne Germain, Mary Phillips, and Eric Nofzinger
University of Pittsburgh School of Medicine

P2-7 IMPACT OF SLEEP DEPRIVATION ON DECISION MAKING: BEHAVIOR AND BRAIN FUNCTION
Sean Drummond,[1] Michelle Jonelis,[2] Benjamin McKenna,[1] Robert Wang,[1] and David Dickinson[3]
[1]VA San Diego Healthcare System, [2]University of California, San Francisco School of Medicine, and [3]Appalachian State University

P3 Substance Abuse I

Tuesday, September 1, 2009
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P3-1 ETHANOL AND MESOLIMBIC DOPAMINE-SEROTONIN INTERACTIONS VIA 5-HT1B RECEPTORS
Qing-shan Yan and Shu-e Yan
University of Illinois, College of Medicine at Peoria

P3-2 DISSECTING THE ACTIONS OF ALCOHOL METABOLITES MEDIATING PATHOLOGIC EXOCYTOSIS THAT UNDERLIE ALCOHOLIC PANCREATITIS
Herbert Y. Gaisano and Subbulakshmi Chidambaram
University of Toronto

P3-3 BRAIN MARKERS OF RISK FOR ALCOHOLISM
Frances H. Gabbay, Connie C. Duncan, and Erin C. Hall
Uniformed Services University of the Health Sciences

P3-4 PHARMACOLOGIC MANAGEMENT OF POST-TRAUMATIC STRESS DISORDER AND CO-MORBID ALCOHOL DEPENDENCE IN VETERANS
Ismene Petrakis[1] and Nitigna V. Desai[2]
[1]Yale University School of Medicine and [2]VA Medical Center, Bedford, MA

P3-5 GABAERGIC INTERNEURONS ARE IMPORTANT TARGETS OF ALCOHOL IN THE BRAIN
Carlos Fernando Valenzuela, Mario Carta, Manuel Mameli, and Paolo Botta
University of New Mexico, Albuquerque

P3-6 TOBACCO CESSATION IN MILITARY PERSONNEL: RESULTS OF A RANDOMIZED CLINICAL TRIAL
Herbert Severson,[1] Alan Peterson,[2] Jeffrey Cigrang,[3] and Brian Danaher[1]
[1]Oregon Research Institute, [2]University of Texas Health Science Center at San Antonio, and [3]Wilford Hall Medical Center

P4 Virtual Reality I

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P4-2 FROM COGNITIVE NEUROSCIENCE TO INTERVENTION: DEVELOPMENT OF THE NEURAL PATHFINDER SERIES COMPUTER-ASSISTED TRAINING TOOLS FOR IMPROVING COGNITIVE FUNCTIONING AFTER BRAIN INJURY
Anthony J.-W. Chen,[1] Silvia Bunge,[2] Michael Souza,[2] Gary Turner,[2] Ryan McKim,[2] and Tatjana Novakovic-Agopian[1]
[1]VA Medical Center, San Francisco, CA, and [2]University of California, Berkeley

P4-3 SELF-MANAGING THE CONSEQUENCES OF TRAUMA: THE NEXTSTEPS PROGRAM
Ellen J. MacKenzie,[1] Stephen Wegener,[2] Renan Castillo,[1] and Nathan Parmer[2]
[1]Johns Hopkins University, Bloomberg School of Public Health and [2]Johns Hopkins University School of Medicine

P4-4 VIRTUAL ENVIRONMENTS FOR COGNITIVE AND AFFECTIVE DYSFUNCTION IN MILD TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC STRESS DISORDER: DEVELOPMENT OF A 21ST CENTURY TREATMENT PLATFORM
Charles E. Levy,[1] James C. Oliverio,[2] Jill Sonke-Henderson,[2] Thomas Hundersmarck,[3] Jason Demery,[3] Christian Tassin,[2] Arturo Sinclair,[2] Hellena Scott-Okafor,[3] and David Omura[3]
[1]North Florida Foundation for Research and Education, Inc., [2]University of Florida, and [3]North Florida/South Georgia Veterans Health System

P4-5 PRELIMINARY REPORT OF THE VIRTICO TRIAL: VIRTUAL REALITY THERAPY AND IMAGING IN COMBAT VETERANS
Michael J. Roy,[1] Jennifer Francis,[1] Joshua Friedlander,[2] Lisa Banks-Williams,[2] Raymond G. Lande,[2] Patricia Taylor,[1] James Blair,[3] Jennifer McLellan,[3] Wendy Law,[2] Ivy Patt,[1] Joann Difede,[4] and Albert S. Rizzo[5]
[1]Uniformed Services University of the Health Sciences, [2]Walter Reed Army Medical Center, [3]National Institutes of Health, [4]Cornell University, Weill Medical College, and [5]University of Southern California

P5 Imaging I

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P5-1 OBSERVER STUDY OF STEREOSCOPIC DISPLAY OF CHEST CT IMAGES FOR LUNG CANCER DETECTION
Xiao Hui Wang[1] and Walter F. Good[2]
[1]University of Pittsburgh and [2]University of Pittsburgh School of Medicine

P5-2 MANGANESE IMAGING IN THE BRAIN: RELATIONSHIP TO IRON HOMEOSTASIS
Michael Aschner,[1] Na Zhang,[1] Malcolm J. Avison,[1] John C. Gore,[1] and Vanessa A. Fitsanakis[2]
[1]Vanderbilt University and [2]University of Utah Huntsman Cancer Institute

P5-4 TIME-DOMAIN NEAR-INFRARED SPECTROSCOPY SYSTEM FOR PATHOPHYSIOLOGICAL MONITORING OF PATIENTS WITH STROKE OR TRAUMATIC BRAIN INJURIES
Nicusor Iftimia,[1] Mircea Mujat,[1] Juliette Selb,[2] Daniel Hammer,[1] and Daniel Ferguson[1]
[1]Physical Sciences, Inc. and [2]Massachusetts General Hospital

P5-5 VALIDATION OF THE SPECT LIGAND CLINDE AS A MARKER OF MICROGLIAL ACTIVATION IN BABOONS
Jonas Hannestad,[1] Kelly Cosgrove,[1] Gilles Tamagnan,[2] John Seibyl,[2] John Krystal,[1] and Julie Staley[1]
[1]Yale University School of Medicine and [2]Institute for Neurodegenerative Disorders

P5-6 CONTRAST AGENTS FOR MICRO-COMPUTED TOMOGRAPHY OF MICRODAMAGE IN BONE
Ryan K. Roeder, Ryan D. Ross, Zhenyuan Zhang, Matthew D. Landrigan, and Glen L. Niebur
University of Notre Dame

P5-7 SENSORY INFORMATION PROCESSING IN AUTISM
Mark Tommerdahl
University of North Carolina at Chapel Hill

P5-11 NEURAL AND BEHAVIORAL SEQUELAE OF BLAST-RELATED TRAUMATIC BRAIN INJURY
Stephen M. Rao
Cleveland Clinic Foundation

P5-12 A FUNCTIONAL MAGNETIC RESONANCE IMAGING STUDY OF TRAUMATIC BRAIN INJURY ASSOCIATED WITH BLAST INJURY
Walter Carr and Joseph J. McArdle
Naval Medical Research Center

P5-13 A NEW MEASURE FOR CHARACTERIZING DEFICIENT FUNCTIONAL CONNECTIVITY OF THE BRAIN AFTER BLAST INJURY
Scott R. Sponheim,[1] Edward M. Bernat,[2] Seung Suk Kang,[2] and Selin Aviyente[3]
[1]VA Medical Center, Minneapolis, MN, [2]University of Minnesota, Twin Cities, and [3]Michigan State University

P5-15 EVALUATION OF WHOLE BRAIN AND REGIONAL DTI PARAMETERS ON DIFFUSE AXONAL INJURY PATIENTS IN THE SUB-ACUTE STAGE
Rao P. Gullapalli, Jiachen Jiachen Zhuo, Andrew Rosenkrantz, and Kathirkamanthan Shanmuganathan
University of Maryland School of Medicine

P5-16 COMPUTER-AIDED DETECTION OF BREAST CANCER
Heang-Ping Chan, Jun Wei, Berkman Sahiner, Lubomir Hadjiiski, and Chuan Zhou
University of Michigan, Ann Arbor

P6 Biomarkers I

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P6-1 VALIDATION OF A NOVEL BIOMARKER PANEL FOR ACTIVE LUPUS NEPHRITIS
Prasad Devarajan
Children's Hospital, Cincinnati

P6-2 CHARACTERIZATION OF CONJUNCTIVAL GOBLET CELLS BEFORE AND AFTER PHOTOREFRACTIVE KERATECTOMY
Darlene A. Dartt,[1] Marie Shatos,[1] Denise Sediq,[2] Jayson Edwards,[2] Larmarr Peppers,[2] Charles Coe,[2] and K. Scot Bower[2]
[1]Schepens Eye Research Institute and [2]Walter Reed Army Medical Center

P6-3 GENETIC FACTORS ASSOCIATED WITH FIBROTIC RESPONSE OF HUMAN FIBROBLASTS TO SILICA
Xiaodong Zhou, Xinjian Guo, Momiao Xiong, and Frank Arnett
University of Texas Health Science Center at Houston

P6-4 COMPLEMENT ACTIVATION AFTER EXERCISE: MARKERS OF PROLONGED MYALGIA-ARTHRALGIA-FATIGUE SYNDROMES POST-VACCINE AND IN

PATIENTS WITH OBSTRUCTIVE SLEEP APNEA
Renata Johanna Martha Engler,[1] Patricia C. Giclas,[2] Melanie Guerrero,[3] Jeannette F. Williams,[1] Laurie L. Duran,[1] Christina E. Spooner,[1] Michael R. Nelson,[1] and Limone C. Collins[1]
[1]Walter Reed Army Medical Center, [2]National Jewish Medical and Research Center, and [3]Walter Reed Army Institute of Research

P6-7 HRPO A-14542.0: CNDP1 POLYMORPHISMS AND CARNOSINE TREATMENT IN GULF WAR ILLNESS
James N. Baraniuk
Georgetown University Medical Center

P6-8 SPREADING DEPOLARIZATIONS AS SECONDARY INSULTS AFTER SEVERE TRAUMATIC BRAIN INJURY
Jed A. Hartings,[1] Anthony J. Strong,[2] Frank C. Tortella,[3] David Okonkwo,[4] Lori Shutter,[1] Bruce Mathern,[5] Martin Fabricius,[6] Jens P. Dreier,[7] and Ross Bullock[8]
[1]University of Cincinnati, [2]King's College Hospital, [3]Walter Reed Army Institute of Research, [4]University of Pittsburgh, [5]Virginia Commonwealth University, [6]University of Copenhagen, [7]Charite University Medicine, and [8]University of Miami

P6-9 IMAGING OF HETEROTOPIC OSSIFICATION IN ADVANCE OF BONE FORMATION
Alan R. Davis
Baylor College of Medicine

P6-10 LOW-DOSE SARIN PRODUCES LONG-TERM EFFECTS ON CARDIAC FUNCTION IN MICE AS SHOWN BY ECHOCARDIOGRAPHY
Brent Izu,[1] Eric Morgan,[2] James Lucot,[1] Mark Anstadt,[1] and Mariana Morris[1]
[1]Wright State University and [2]University of Toledo

P6-11 PROINFLAMMATORY PROTEIN BIOMARKER DISCOVERY IN CEREBROSPINAL FLUID AND PLASMA FROM PATIENTS WITH POST-TRAUMATIC STRESS DISORDER
Harvey Pollard,[1] Meera Srivastava,[1] Ofer Eidelman,[1] Catherine Jozwik,[1] Stephen Rothwell,[1] Gregory P. Mueller,[1] Omer Bonne,[2] and David M. Jacobowitz[1]
[1]Uniformed Services University of the Health Sciences and [2]Hadassah Medical Center

P6-12 DETECTION AND VERIFICATION OF TWO TARGETED TRAUMATIC BRAIN INJURY BIOMARKERS IN CIRCULATING BIOFLUIDS AS WELL AS BRAIN TISSUE IN A RAT MODEL OF PENETRATING BALLISTIC-LIKE BRAIN INJURY
Li-Xia Yang,[1] Changping Yao,[2] X.-C. May Lu,[2] Jitendra R. Dave,[2] Frank C. Tortella,[2] Kevin K. Wang,[1] and Ronald L. Hayes[1]
[1]Banyan Biomarkers, Inc. and [2]Walter Reed Army Institute of Research

P7 Inflammation

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P7-1 CHITIN MICROPARTICLES AS A TH1 ADJUVANT DOWNREGULATING TH2 ALLERGIC RESPONSES
Yoshimi Shibata
Florida Atlantic University

P7-2 ROLE OF MAST CELLS IN T CELL-MEDIATED BLADDER AUTOIMMUNE INFLAMMATION
Yi Luo
University of Iowa, Roy J. and Lucille A. Carver College of Medicine

P7-3 EFFECTS OF SARIN INHALATION ON VENTILATORY AND NEUROIMMUNE RESPONSES
Mohan L. Sopori
Lovelace Biomedical and Environmental Research Institute

P7-5 A PRECLINICAL MODEL OF POLYTRAUMA
Helen M. Bramlett
University of Miami School of Medicine

P7-6 SCAVENGER RECEPTORS AND RESISTANCE TO ALLERGIES
Lester Kobzik
Harvard University School of Public Health

P7-7 DEVELOPMENT OF A MODEL OF MS PERMITTING STUDY OF EARLY LESION DEVELOPMENT
Kristen M. Drescher and Helene Thal-Jantzen
Creighton University

P7-8 SONIC HEDGEHOG PATHWAY ACTIVATION IS INDUCED BY ACUTE BRAIN INJURY AND REGULATED BY INJURY-RELATED INFLAMMATION
Eric C. Holland, Nduka M. Amankulor, Dolores Hambardzumyan, Stephanie M. Pyonteck, Oren Josh Becher, and Johanna J. Joyce
Memorial Sloan-Kettering Cancer Center

P7-9 HUMANIZED PRECLINICAL MODEL OF TYPE I DIABETES
Gerald T. Nepom, John A. Gebe, Betty B. Yue, and Ben A. Falk
Benaroya Research Institute at Virginia Mason

P7-10 THE ROLE OF MICROGLIAL SUBSETS IN REGULATING TRAUMATIC BRAIN INJURY
William E. Seaman
VA Medical Center, San Francisco, CA

P7-11 PRIMARY AND SECONDARY PREVENTION STRATEGIES FOR CONTROLLING ASTHMA: AGE AND SEX CONSIDERATIONS IN A MOUSE MODEL
Jean Regal, Ronald Regal, and Margaret Mohrman
University of Minnesota, Duluth

P7-12 ROLE OF VLA-1 IN INFLAMMATORY LYMPHANGIOGENESIS AND CORNEAL TRANSPLANTATION
Lu Chen and Sammy Grimaldo
University of California, Berkeley

P8 Molecular Pathobiology I

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P8-1 EFFECTS OF ABNORMAL TAU FUNCTION ON ALS PATHOLOGY IN THE SOD1 MOUSE MODEL
Hana N. Dawson
Duke University Medical Center

P8-2 THE ROLE OF CANDIDATE GENE POLYMORPHISMS IN SYSTEMIC SCLEROSIS (SSC, SCLERODERMA)
Maureen D. Mayes, Pravitt Gourh, Filemon Tan, Shervin Assassi, John Reveille, Marilyn Perry, Julio Charles, and Frank Arnett
University of Texas Health Science Center at Houston

P8-3 MAINTENANCE OF GLUCOSE HOMEOSTASIS THROUGH ACETYLATION OF THE METABOLIC TRANSCRIPTIONAL COACTIVATOR PGC-1
Pere Puigserver
Dana-Farber Cancer Institute

P8-4 NOVEL ATYPICAL RAMBAS AND HDACIS FOR BREAST CANCER THERAPY
Vincent C. O. Njar,[1] Lalji K. Gediya,[1] Puranik Purushottamachar,[1] Abhijit Godbole,[2] and Aakanksha Khandelwal[3]
[1]Thomas Jefferson University, [2]University of Maryland School of Medicine, and [3]U.S. Food and Drug Administration, Rockville, MD

P8-5 ROLE OF NICOTINIC ACETYLCHOLINE RECEPTORS IN LUNG DEVELOPMENT: IMPLICATIONS FOR AIRWAY DISEASE IN ADULTS
Jesse Roman and Jeffery Ritzenthaler
Emory University School of Medicine

P8-6 MODULATION OF CELL LINEAGE COMMITMENT BY SKELETAL MUSCLE-DERIVED STEM CELLS, MDSC, FROM MDX AND MYOSTATIN KNOCKOUT MICE
Nestor F. Gonzalez-Cadavid,[1] James Tsao,[1] Dolores Vernet,[2] Robert Gelfand,[2] and Gaby Nolazco[1]
[1]Charles R. Drew University of Medicine and Science and [2]Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center

P8-7 MOLECULAR MECHANISMS UNDERLYING INDIVIDUAL DIFFERENCES IN RESPONSE TO STRESS IN A PREVIOUSLY VALIDATED ANIMAL MODEL OF PTSD
Rachel Yehuda,[1] Joseph Buxbaum,[2] and Gregory Elder[2]
[1]Bronx Veterans Medical Research Foundation, Inc. and [2]Mount Sinai School of Medicine, New York

P8-8 TOXICITY OF GLYCOLS: RENAL FAILURE THROUGH GENERATION OF METABOLITES
Kenneth McMartin, Lauren Besenhofer, Yan Li, Marie Cain, Knut Erik Hovda, and Chungang Guo
Louisiana State University Health Sciences Center – Shreveport

P8-9 APPLICATION OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) TO REVERSE THE MOLECULAR EPILEPTOGENIC CHANGES FOLLOWING TRAUMATIC BRAIN INJURY
Alexander Rotenberg,[1] Iglesias Antonio,[1] Paul A. Muller,[1] Alvaro Pascual-Leone,[2] Frances E. Jensen,[1] and Sanjay Rakhade[1]
[1]Children's Hospital, Boston and [2]Harvard University, Cambridge

P8-10 NICOTINE ENHANCES CARTILAGE FORMATION BUT DELAYS CALLUS REMODELING DURING FRACTURE HEALING IN THE MOUSE
Hsin-Chiu Ho and Michael J. Zuscik
University of Rochester Medical Center

P9 Tropical Diseases

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P9-1 THE ANTIMALARIAL DRUG AMODIAQUINE INHIBITS THE PLASMODIUM FALCIPARUM PHOSPHOETHANOLAMINE METHYLTRANSFERASE
Choukri Ben Mamoun,[1] April M. Bobenchik,[1] Jae-Yeon Choi,[2] Arunima Mishra,[3] Iulian N. Rujan,[3] Bing Hao,[3] Dennis R. Voelker,[2] and Jeffrey C. Hoch[3]
[1]Yale University School of Medicine, [2]National Jewish Medical and Research Center, and [3]University of Connecticut, Farmington

P9-2 LEAD OPTIMIZATION AND PRECLINICAL STUDIES OF IMIDAZOLIDINEDIONE DERIVATIVES AS MALARIA PROPHYLACTIC AGENTS
Ai J. Lin, Michael P. Kozar, Michael T. O'Neil, Victor Melendez, David Saunders, and Alan J. Magill
Walter Reed Army Institute of Research

P9-3 VETERINARY RESEARCH MANPOWER DEVELOPMENT
Mohammed Sawkat Anwer
Tufts Cummings School of Veterinary Medicine

P9-4 RESEARCH ON PLASMODIUM VIVAX PARASITES TO SUPPORT DRUG AND VACCINE DEVELOPMENT
Jetsumon Prachumsri
Armed Forces Research Institute of Medical Sciences

P9-5 NON-INVASIVE REAL-TIME MONITORING OF LIVER STAGE DEVELOPMENT OF BIOLUMINESCENT PLASMODIUM PARASITES
Kami Kim
Albert Einstein College of Medicine of Yeshiva University

P9-6 SHIGELLA CONJUGATE VACCINE
Gary L. Gustafson,[1] Dan C. DeBorde,[1] George L. Card,[1] Ryan T. Ranallo,[2] Thomas L. Hale,[2] Tara L. Boren,[2] Jacqueline M. Reimers,[1] and Andrew E. Waters[1]
[1]EndoBiologics, Inc. and [2]Walter Reed Army Institute of Research

P9-7 SAFETY, TOLERABILITY, IMMUNOGENICITY, AND PROTECTIVE EFFICACY OF A MULTI-STAGE, MULTI-ANTIGEN ADENOVIRUS-VECTORED P. FALCIPARUM MALARIA VACCINE IN HEALTHY, MALARIA-NAÏVE ADULTS
Cindy Tamminga,[1] Martha Sedegah,[1] Ilin Chuang,[1] David Regis,[1] Judith Epstein,[1] Jose Mendoza-Silveiras,[1] Victoria Steinbeiss,[1] Sharina Reyes,[1] Charlotte Fedders,[1] Kathryn Smith,[1] Santina Maiolatesi,[1] Michele Spring,[1] Falgunee Parekh,[1] Keith Limbach,[1] Noelle B. Patterson,[1] Frank Williams,[2] Denise Doolan,[1] Joe Bruder,[3] C. R. King,[3] Lorraine Soisson,[4] Carter Diggs,[4] Christian Ockenhouse,[1] and Thomas L. Richie[1]
[1]Naval Medical Research Center, [2]National Naval Medical Center, Bethesda, MD, [3]GenVec, and [4]USAID

P9-8 TOWARD THE DEVELOPMENT OF A HIGH THROUGHPUT ASSAY TO IDENTIFY INHIBITORS OF THE OTU PROTEASE ENCODED BY CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS
Adolfo Garcia-Sastre, Natalia Frías-Staheli, and Rafael Medina
Mount Sinai School of Medicine, New York

P10 Neurobiology I

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P10-2 MICE TREATED WITH CHLORPYRIFOS OXON HAVE DISRUPTED MICROTUBULE STRUCTURES IN BRAIN
Wei Jiang, Heidi K. Hansen, Ellen G. Duysen, and Oksana Lockridge
University of Nebraska Medical Center

P10-3 SYNAPTIC PLASTICITY, MICRORNA PROFILES, AND BEHAVIOR CHARACTERISTICS IN A MOUSE MODEL OF POST-TRAUMATIC STRESS DISORDER
Amy Starosciak, Omar Logue, Xiufen Xu, Roopa Biswas, Neil E. Grunberg, and Zygmunt Galdzicki
Uniformed Services University of the Health Sciences

Poster Sessions

P11 Neuroprotection I

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P11-2 EVALUATION OF THE SAFETY AND EFFICACY OF OXYCYTE AS AN OXYGEN CARRIER IN PATIENTS AND ANIMAL MODELS OF CNS INJURY
Bullock M. Ross
University of Miami School of Medicine

P11-3 MINOCYCLINE AND N-ACETYL CYSTEINE SYNERGISTICALLY IMPROVE COGNITIVE PERFORMANCE FOLLOWING TBI IN RATS
Peter J. Bergold, Samah Abdel Baki, and Andre A. Fenton
State University of New York, Downstate Medical Center

P11-4 NEUROPROTECTION BY ESTROGEN FOLLOWING TRAUMATIC BRAIN INJURY
Irshad Chaudry, William J. Hubbard, Candace L. Floyd, Huadong Zeng, Fariba Moeinpour, Thian Ng, Elijah Kindred, and Tracy D'Alessandro
University of Alabama at Birmingham

P11-7 LOSS OF CERULOPLASMIN FERROXIDASE ACTIVITY CONTRIBUTES TO NEURONAL INJURY AFTER BLAST EXPOSURE
James L. Atkins and Joseph Long
Walter Reed Army Institute of Research

P11-8 SMALL MOLECULE ACTIVATORS OF THE TRK RECEPTORS FOR NEUROPROTECTION; PRECLINICAL STUDIES IN TRAUMATIC BRAIN INJURY AND MICE MODEL OF NEURODEGENERATION
Stanley Krajewski,[1] Bo Lin,[2] Juan Rong,[1] Jing Li,[2] Xianshu Huang,[1] Maryla Krajewska,[1] Michael Pirrung,[3] and Nicholas Webster[2]
[1]Burnham Institute, [2]University of California, San Diego School of Medicine, and [3]University of California, Riverside

P11-9 EFFICACY OF COUNTERMEASURES AGAINST TRAUMATIC BRAIN INJURIES SUSTAINED IN AIRBORNE OPERATIONS
John Stephen Crowley,[1] Brian Ivins,[2] Barney McEntire,[1] and Karen Schwab[2]
[1]U.S. Army Aeromedical Research Laboratory and [2]Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury

P11-10 DEVELOPMENT AND SCREENING OF WATER SOLUBLE ANALOGUES OF PROGESTERONE: POTENTIAL FOR AN INNOVATIVE, SAFE, AND EFFECTIVE APPROACH TO ACUTE TRAUMATIC BRAIN INJURY TREATMENT
Donald G. Stein,[1] Iqbal Sayeed,[1] Dennis C. Liotta,[2] Christopher J. MacNevin,[2] and Fahim Atif[1]
[1]Emory University School of Medicine and [2]Emory University

P12 Wound Healing

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P12-1 THE ROLE OF THE PSEUDOPTEROSINS AND THEIR ANALOGS IN WOUND HEALING
Raymond Daniel Little, Robert S. Jacobs, Wei Zhong, Claudia Moya, and Daniel Day
University of California, Santa Barbara

P12-2 SYNERGISM OF HUMAN AMNION-DERIVED MULTIPOTENT PROGENITOR (AMP) CELLS AND A COLLAGEN SCAFFOLD IN PROMOTING BRAIN WOUND RECOVERY: PRECLINICAL STUDIES IN AN EXPERIMENTAL MODEL OF PBBI
Frank Tortella,[1] Zhiyong Chen,[1] X.-C. May Lu,[1] and Catherine Trumpower[2]
[1]Walter Reed Army Institute of Research and [2]Stemnion, Inc.

P12-3 BISPHOSPHONATE-CIPROFLOXACIN CARRIED BY OR TETHERED TO MICRON OR NANOSIZED HYDROXYAPATITE PARTICLES AS A PROTOTYPE FOR LOCAL ANTIBIOTIC DELIVERY TO INJURED BONE
James C. McPherson, III, and Thomas B. Buxton
Eisenhower Army Medical Center

P12-4 CORNEAL DAMAGE FROM MID-INFRARED RADIATION
Russell McCally
Johns Hopkins University, Applied Physics Laboratory, and The Wilmer Eye Institute, Johns Hopkins School of Medicine

P12-5 A SEQUENCE-BASED BIOCURATED DATABASE FOR THE IDENTIFICATION OF HUMAN FUNGAL PATHOGENS
Brian L. Wickes and Anna M. Romanelli
University of Texas Health Science Center at San Antonio

P12-6 THE USE OF NOVEL PROTEINS AND NEURAL STEM CELLS TO HEAL TBI
Sharon Leah Juliano, Kapinga Patricia Ngalula, and Michael Davis
Uniformed Services University of the Health Sciences

P12-7 CHRONIC PAIN TREATMENT BY CONTROLLED RELEASE OF LOCAL ANESTHETICS FROM BIOCOMPATIBLE WOUND DRESSINGS
David I. Devore,[1] Paul Ducheyne,[2] Marius Costache,[1] and Haibo Qu[2]
[1]Rutgers University, New Brunswick and [2]University of Pennsylvania

P12-8 SYSTEMIC AND INTRATRACHEAL MURINE MODELS OF ACINETOBACTER BAUMANNII INFECTION: EFFECT OF MORPHINE AND TRAUMA
Toby K. Eisenstein, Jessica M. Breslow, Phillip B. Spence, M. Alexandra Monroy, Joseph J. Meissler, and Martin W. Adler
Temple University School of Medicine

P12-9 HIGHLIGHTS OF MICROBIOLOGIC STUDY OF 400 ACUTE SURGICAL WOUND INFECTIONS AND CLOSED SOFT TISSUE ABSCESSES
Sydney M. Finegold and Paula Carlson
VA Greater Los Angeles HCS

P12-10 RESPIRATORY BIODEFENSE INITIATIVES: DEVELOPMENT OF A NOVEL METALLOPORPHYRIN AS AN EFFECTIVE RADIOPROTECTANT
Robert Mason, James D. Crapo, and Rebecca Oberley-Deegan
National Jewish Health

P13 Regenerative Medicine I

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P13-1 REPAIR OF CORNEAL INJURY WITH STEM CELL-BASED BIOENGINEERED TISSUE
De-Quan Li
Baylor College of Medicine

P13-3 BONE TISSUE REGENERATION FROM HUMAN MESENCHYMAL STEM CELLS
Teng Ma,[1] Katie Sellgren,[1] Kimberly Thompson,[1] and Bruce Bunnell[2]
[1]Florida State University and [2]Tulane University Health Sciences Center

P13-4 INJECTABLE HYDROGELS FOR BRAIN TISSUE REGENERATION AFTER TRAUMATIC BRAIN INJURY (TBI)
Ning Zhang
Clemson University

P13-5 OXYGEN-GENERATING BIOMATERIALS FOR ENHANCING TISSUE SURVIVAL
Benjamin Harrison, Catherine L. Ward, Se Heang Oh, James J. Yoo, and Anthony Atala
Wake Forest University Health Sciences

P13-6 NON-INVASIVE CELLULAR THERAPY FOR SPINAL FUSION TREATMENT
Elizabeth Olmsted-Davis,[1] ZaWaunyka Lazard,[1] Ronke Olabisi,[2] Francis Gannon,[1] Michael Heggeness,[1] Logan Hsu,[2] John Hipp,[1] Jennifer West,[2] and Alan R. Davis[1]
[1]Baylor College of Medicine and [2]Rice University

P13-7 CELLULAR THERAPY TO ACCELERATE FRACTURE HEALING
Elizabeth Olmsted-Davis,[1] ZaWaunyka Lazard,[1] Michael Heggeness,[1] Ronke Olabisi,[2] Logan Hsu,[2] Francis Gannon,[1] and Alan R. Davis[1]
[1]Baylor College of Medicine and [2]Rice University

P13-8 GENETICALLY MODIFIED NEURAL PROGENITOR CELLS FOR THE TREATMENT OF TRAUMATIC BRAIN INJURY
Helen M. Bramlett and Dalton Dietrich
University of Miami School of Medicine

P13-9 THE GENERATION AND USE OF INDUCED PLURIPOTENT STEM (IPS) CELLS IN THE TREATMENT OF GENETIC DISORDERS AND TISSUE INJURY
David Ward, Yupo Ma, Zaida Alipio, Xiqian Lan, Jianchang Yang, and Louis Fink
Nevada Cancer Institute

P14 Blast Injury Sequelae I

Tuesday, September 1, 2009
11:30 AM-2:15 PM
Posters Manned:
Odd-Numbered - Noon-1:00 PM
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P14-1 TRANSFER OF ENERGY INSIDE THE BODY AFTER EXPOSURE TO BLAST
Mikulas Chavko
Naval Medical Research Center

P14-2 THALAMIC PROJECTION FIBERS AND COGNITIVE IMPAIRMENT FOLLOWING TRAUMATIC BRAIN INJURY
Deborah M. Little, Marilyn F. Kraus, Josh Joseph, Elizabeth K. Geary, Teresa Susmaras, Xiaohong Joe Zhou, and Philip B. Gorelick
University of Illinois College of Medicine at Chicago

P14-4 MECHANISMS OF TRAUMATIC BRAIN INJURIES (TBI) DUE TO BLAST AND IMPACT: AN INVESTIGATION USING COMPUTATIONAL MODELING
Abdullatif Zaouk and Xudong Xin
Foster-Miller Technologies, Inc.

P14-6 POST-TRAUMATIC BACILLUS CEREUS ENDOPHTHALMITIS: EFFICACY OF EARLY INTRAVITREAL THERAPY
Michelle C. Callegan, Brandt J. Wiskur, Dustin C. Woods, and Nanette R. Wheatley
University of Oklahoma Health Sciences Center

P14-7 HELMET-INTEGRATED NANOSENSORS WITH REAL-TIME SIGNAL PROCESSING, AND WIRELESS DATA COMMUNICATION FOR MONITORING THE EFFECTS OF BLAST EXPOSURE TO BATTLEFIELD PERSONNEL
Kenneth L. Watkin
University of Illinois, Champaign/Urbana

P14-8 BLAST ENERGY TRANSMISSION AND NEUROTRAUMA
Pamela J. Vandevord
Wayne State University

P14-9 MODELING BLAST-INDUCED MILD TRAUMATIC BRAIN INJURY USING AN INTEGRATED APPROACH
Candace Floyd,[1] John K. Shropshire,[1] and W. Steve Shepard, Jr.[2]
[1]University of Alabama at Birmingham and [2]University of Alabama, Tuscaloosa

P14-10 COMPREHENSIVE THREE-DIMENSIONAL MODEL OF SHOCK WAVE-BRAIN INTERACTIONS IN BLAST-INDUCED TRAUMATIC BRAIN INJURY
Francesco P. Curra
University of Washington

P14-11 BRAIN VULNERABILITY TO REPEATED BLAST OVERPRESSURE AND POLYTRAUMA
Joseph Long, Timothy Bentley, James Atkins, Adolph Januszkiewicz, and Richard Bauman
Walter Reed Army Institute of Research

P15 Physical Rehabilitation I

Tuesday, September 1, 2009
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P15-1 THE NEURAL RESPONSE TO ELECTRIC STIMULATION
Shelley I. Fried,[1] Neal J. Desai,[2] and Joseph F. Rizzo[3]
[1]Massachusetts General Hospital, [2]VA Medical Center, Boston, MA, and [3]Massachusetts Eye and Ear Infirmary

P15-2 IMPLANTABLE MICROSYSTEMS FOR ANATOMICAL REWIRING OF CORTICAL CIRCUITRY
Meysam Azin,[1] David J. Guggenmos,[2] Mariko Nishibe,[2] Scott Barbay,[2] Randolph J. Nudo,[2] and Pedram Mohseni[1]
[1]Case Western Reserve University and [2]University of Kansas Medical Center, Kansas City

P15-3 THE PATHOGENESIS OF HETEROTOPIC OSSIFICATION IN MICE
Frederick P. Heinzel[1] and Xin Li[2]
[1]VA Medical Center, Tampa, FL and [2]University of South Florida College of Medicine

P15-4 DEVELOPMENT OF A SINGLE-STAGE ANIMAL AMPUTATION MODEL FOR LOAD-BEARING PERCUTANEOUS OSSEOINTEGRATED IMPLANTS
Roy D. Bloebaum,[1] James P. Beck,[2] Kent N. Bachus,[2] Sujee Jeyapalina,[2] and Ray Olsen[2]
[1]VA Salt Lake City Health Care System and [2]University of Utah School of Medicine

P15-7 TREATMENT OF LASER-INDUCED RETINAL INJURY AND VISUAL LOSS USING SUSTAINED RELEASE OF INTRA-VITREAL NEUROTROPHIC GROWTH FACTORS
Randy H. Kardon,[1] Markus Kuehn,[1] and Sinisa Grozdanic[2]
[1]University of Iowa College of Medicine and [2]Iowa State University

P15-9 HYBRID NEUROPROSTHESIS: COMBINING BRACING WITH FES FOR IMPROVED MOBILITY
Ronald J Triolo,[1] Rudi Kobetic,[2] Musa Audu,[1] Roger Quinn,[1] Tom Bulea,[1] Nicole Kern,[1] and Arkady Polinovsky[1]
[1]Case Western Reserve University and [2]Cleveland Functional Electrical Stimulation Center

P15-10 ENGINEERING TECHNOLOGIES FOR RETINAL PROSTHETIC DEVICES TO RESTORE VISION TO THE BLIND: WHAT IS THE VISUAL POTENTIAL OF THESE DEVICES?
Lotfi B. Merabet and Joseph F. Rizzo
VA Boston Healthcare System

P15-11 STRONG FAMILIES STRONG FORCES: PRELIMINARY FINDINGS IN THE DEVELOPMENT OF A FAMILY-BASED REINTEGRATION PROGRAM SUPPORTING MILITARY FAMILIES WITH VERY YOUNG CHILDREN
Betsy McAlister Groves[1] and Ellen DeVoe[2]
[1]Boston Medical Center Corporation and [2]Boston University Charles River Campus

P16 Resilience I

Tuesday, September 1, 2009
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P16-1 COMBAT STRESS CASUALTY REDUCTION: DEVELOPMENT OF A PRE-DEPLOYMENT STRESS INOCULATION TRAINING (PRESTINT) PROGRAM
Laurel L. Hourani, Robert C. Hubal, Paul N. Kizakevich, James L. Spira, Laura B. Strange, Robert D. Furberg, and David B. Holiday
Research Triangle Institute

P16-2 VALIDATION OF THE MILITARY ACUTE CONCUSSION EVALUATION (MACE) FOR IN-THEATER EVALUATION OF COMBAT-RELATED TRAUMATIC BRAIN INJURY
Michael A. McCrea,[1] Michael Jaffee,[2] Kathy Helmick,[2] Kevin Guskiewicz,[3] and Selina Doncevic[2]
[1]Waukesha Memorial Hospital, [2]Defense and Veterans Brain Injury Center, and [3]University of North Carolina at Chapel Hill

P16-3 PROSPECTIVE RISK AND RESILIENCE FACTORS ASSOCIATED WITH PTSD SYMPTOMS IN NATIONAL GUARD SOLDIERS DEPLOYED TO IRAQ
Melissa A. Polusny,[1] Christopher R. Erbes,[2] Paul A. Arbisi,[2] Paul Thuras,[2] Madhavi K. Reddy,[3] Maureen Murdoch,[2] and Darin Erickson[4]
[1]University of Minnesota, Twin Cities, [2]VA Medical Center, Minneapolis, MN, [3]University of Minnesota Medical School, and [4]University of Minnesota School of Public Health

P16-4 THE EFFECTS OF HYPOXIA ON COGNITIVE FUNCTION IN AVIATORS AND COMPLEX SYSTEM OPERATORS THAT HAVE HAD A MILD TRAUMATIC BRAIN INJURY
Leonard Temme,[1] Krista Ellison-Bundy,[2] Dennis Reeves,[2] David Still,[1] Joseph Bleiberg,[3] James Kelly,[4] and Loraine Parish St. Onge[1]
[1]U.S. Army Aeromedical Research Laboratory, [2]Clinvest, a division of Banyan Group, Inc., [3]University of Minnesota, Twin Cities Cancer Center, and [4]University of Colorado Hospital, Anschutz Medical Campus

P16-8 EARLY PREDICTORS OF EVENTUAL RETURN-TO-WORK IN A POPULATION OF TRAUMA PATIENTS WITH MILD TBI
Patricia C. Dischinger,[1] Robert L. Kane,[2] Gabriel E. Ryb,[1] Colin F. Mackenzie,[1] Kimberly M. Auman,[1] and Joseph A. Kufera[1]
[1]University of Maryland, Baltimore and [2]Walter Reed Army Medical Center

P16-9 NUTRITIONAL EFFECTS ON COGNITIVE PERFORMANCE
Glenda N. Lindseth, Paul Lindseth, Thomas Petros, and Warren Jensen
University of North Dakota

P16-10 MTBI AND EMOTION SYMPTOM EFFECTS ON NEUROCOGNITIVE PERFORMANCE: A LONGITUDINAL STUDY OF OIF DEPLOYED ARMY SOLDIERS
Kevin Brailey
Institution VA Boston Healthcare System

P17 PTSD Treatment I

Tuesday, September 1, 2009
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P17-1 KETAMINE AS A RAPID TREATMENT FOR POST-TRAUMATIC STRESS DISORDER
Marije aan het Rot, Adriana Feder, Dennis S. Charney, Sanjay J. Mathew, and David L. Reich
Mount Sinai School of Medicine, New York

P17-3 ATTENTIONAL BIAS AND RESPONSE INHIBITION IN VETERANS WITH POST-TRAUMATIC STRESS DISORDER AND TRAUMATIC BRAIN INJURY
Diane Swick, Victoria Ashley, Nikki Pratt, Jary Larsen, and Timothy Justus
VA Northern California Health Care System

P17-5 MILITARY TO CIVILIAN: RCT OF A WEB-BASED EXPRESSIVE WRITING INTERVENTION
Nina A. Sayer,[1,2] Robert Orazem,[1] Patricia Frazier,[2] Siamak Noorbaloochi,[1] Paula Schnurr,[3] Brett Litz,[3] Kathleen Carlson,[1] Mauren Murdoch,[1] and James Pennebaker[4]
[1]VA Medical Center, Minneapolis, MN, [2]University of Minnesota, [3]National Center for PTSD, and [4]University of Texas

P17-7 PILOT OUTCOME STUDY ON AURICULAR ACUPUNCTURE IN A VA PTSD TREATMENT CLINIC: IMPLEMENTATION ISSUES AND POTENTIAL IMPACT
Irene Powch
VA Medical Center, Portland, OR

P17-8 MINDFULNESS AND SELF-COMPASSION MEDITATION FOR COMBAT PTSD
Tony King,[1] Sheila A.M. Rauch,[2] Nicholas Giardino,[2] and Israel Liberzon[3]
[1]University of Michigan Medical School, [2]VA Medical Center, Ann Arbor, MI, and [3]University of Michigan, Ann Arbor

P17-10 GENERALIZABILITY OF PTSD COGNITIVE BEHAVIORAL PSYCHOTHERAPY CLINICAL TRIALS FOR TRAUMATIZED INDIVIDUALS WITH SUICIDE BEHAVIOR
Marjan G. Holloway and Elisabeth Fritz
Uniformed Services University of the Health Sciences

P18 Quality of Life and Family Issues

Wednesday, September 2, 2009
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P18-1 INDIVIDUAL DIFFERENCES IN DIABETES RISK: ROLE OF SLOW-WAVE ACTIVITY DURING SLEEP
Eve Van Cauter
University of Chicago

P18-2 INJURY AND TRAUMATIC STRESS (INTRUST) CONSORTIUM: FROM INSPIRATION TO IMPLEMENTATION
Murray B. Stein, Ariel J. Lang, Ronald G. Thomas, Raul S. Coimbra, and Lawrence F. Marshall
University of California, San Diego School of Medicine

P18-3 PSYCHOLOGICAL AND PHYSIOLOGICAL CORRELATES OF INSULIN RESISTANCE AND OBESITY IN AFRICAN AMERICANS AND CAUCASIANS
Patricia A. Deuster,[1] Su Jong Kim-Dorner,[1] Stacey A. Zeno,[1] Alan T. Remaley,[2] and Merrily Poth[1]
[1]Uniformed Services University of the Health Sciences and [2]National Institutes of Health

P18-4 OVERCOMING BARRIERS TO DIABETES MANAGEMENT IN THE ELDERLY
Medha N. Munshi
Joslin Diabetes Center

P18-5 CANCER RESEARCH PARTNERSHIP BETWEEN TRIPLER ARMY MEDICAL CENTER AND CANCER RESEARCH CENTER OF HAWAII
Carl Wilhelm Vogel,[1] Cheryl L. Albright,[1] Erin Bantum,[1] Christina Belnap,[2] Jeffrey Berenberg,[2] Terrilea Burnett,[1] Jonathan Cho,[1] Dorothy Coleman,[1] Gregory Fredericks,[2] Judy Freeman,[2] Ronald Gagliano,[2] Joanna Gawecka,[1] Alan F. Lau,[1] Loic LeMarchand,[1] Lenora Loo,[1] Patricia Lorenzo,[1] Alan McClelland,[1] Gordon Okimoto,[1] Sandra Pastorino,[1] Joe Ramos,[1] Maarit Tiirikainen,[1] Marcus Tius,[1] and Catherine Uyehara[2]
[1]University of Hawaii Cancer Research Center of Hawaii and [2]Tripler Army Medical Center

P18-6 FAMILY MALTREATMENT, SUBSTANCE PROBLEMS, AND SUICIDALITY: RANDOMIZED PREVENTION EFFECTIVENESS TRIAL
Richard E. Heyman and Amy M. Smith Slep
State University of New York, Stony Brook

P18-7 A RANDOMIZED CONTROLLED STUDY OF MIND-BODY SKILLS GROUPS FOR TREATMENT OF WAR-ZONE STRESS IN MILITARY AND VETERAN POPULATIONS
James S. Gordon,[1] Julie K. Staples,[1] Madeline Uddo,[2] and Michelle Hamilton[2]
[1]The Center for Mind-Body Medicine and [2]Southeast Louisiana Veterans Health Care System

P18-8 FAMILY MALTREATMENT, SUBSTANCE PROBLEMS, AND SUICIDALITY
Amy M. Smith Slep, Richard E. Heyman, Jeffrey D. Snarr, and Heather M. Foran
State University of New York, Stony Brook

P18-9 RESTORATION OF LIFE ROLE PARTICIPATION THROUGH INTEGRATED COGNITIVE AND MOTOR TRAINING FOR INDIVIDUALS WITH TBI
Janis J. Daly
VA Medical Center, Cleveland, OH

P18-10 COENZYME Q10 AS A TREATMENT FOR VETERANS WITH GULF WAR ILLNESS
Beatrice A. Golomb
University of California, San Diego School of Medicine

P18-11 THE USE OF PSYCHIATRIC SERVICE DOGS WITH SOLDIERS WHO HAVE PTSD
Craig T. Love[1] and Joan Gibbon Esnayra[2]
[1]Westat, Inc. and [2]Educational Transformations Pty., Ltd.

P18-12 MULTI-FAMILY GROUP INTERVENTION FOR OEF-OIF TRAUMATIC BRAIN INJURY SURVIVORS AND THEIR FAMILIES
Deborah Perlick,[1] Kristy Straits-Troster,[2] Anna Kline,[3] Adrian Cristian,[4] Dennis Dyck,[5] Diane Norell,[5] Jennifer Strauss,[6] Norman Eisenstein,[3] Rosalind Claire Henderson,[7] Deborah J. Kayman,[8] and Miklos Losonczy[3]
[1]Mount Sinai School of Medicine, New York, [2]VA Medical Center, Durham, NC, [3]VANJHCS, [4]James J. Peters VA Medical Center, Bronx NY, [5]Washington State University, Spokane, [6]Duke University Medical Center, [7]Institute of Psychiatry, London, UK, and [8]James J. Peters VA Medical Center, Bronx, NY

P18-13 PARTNERSHIP FOR ASTHMA TRIGGER-FREE HOMES
Cheryl Golden,[1] Sue Greco,[2] Ernestine Brown Small,[3] Meghan Lynch,[2] Calverta McMorris,[1] and Lawrence Brown[1]
[1]Le Moyne-Owen College, [2]Abt Associates, Inc., and [3]Memphis and Shelby County Health Department

P18-14 ADDRESSING THE NEEDS OF CHILDREN AND FAMILIES OF COMBAT INJURED
Stephen J. Cozza,[1] Jennifer M. Guimond,[1] Ryo Sook Chun,[3] Teresa Arata-Maiers,[4] Christopher Warner,[5] Patricia Lester,[2] William Saltzman,[2] Robert Pynoos,[2] Carol S. Fullerton,[1] Brett Schneider,[3] Alan Maiers,[4] Janet A. Schmidt,[1] Bruce Crow,[4] and Robert J. Ursano[1]
[1]Uniformed Services University of the Health Sciences, [2]University of California at Los Angeles, [3]Walter Reed Army Medical Center, [4]Brooke Army Medical Center, and [5]Winn Army Community Hospital

P18-15 DEPLOYMENT FAMILY STRESS: CHILD NEGLECT AND MALTREATMENT IN U.S. ARMY
Stephen J. Cozza, Jodi McKibben, Carol S. Fullerton, James E. McCarroll, John Newby, Jennifer M. Guimond, David Benedek, Danielle Marks, Tova Narrow, and Robert Ursano
Uniformed Services University of the Health Sciences

P18-16 DAY-TO-DAY MINDFULNESS SKILLS FOR IMPROVING VETERANS' REINTEGRATION
Mary Ann Dutton,[1] Richard Amdur,[2] Carmen Meyer,[2] Matthew Reinhard,[2] Marc Blackman,[2] and Brittany Zelgowski[1]
[1]Georgetown University Medical Center and [2]VA Medical Center, Washington, DC

P19 Stress and Fear

Wednesday, September 2, 2009
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P19-1 USING PROPRANOLOL TO BLOCK COMBAT MEMORY RECONSOLIDATION
Deane Aikins,[1] Jacek Debiec,[2] and Joseph LeDoux[2]
[1]Yale University and [2]New York University

P19-2 FEAR CONDITIONING ALTERS THE SENSITIVITY TO OPIATE REWARD
Gary B. Kaplan,[1] Stephen Heinrichs,[1] and Kimberly A. Leite-Morris[2]
[1]VA Boston Healthcare System and [2]Boston University School of Medicine

P19-3 THE EMERGENCE OF EXAGGERATED STARTLE REACTIVITY FOLLOWING TRAUMATIC STRESS: THE SEARCH FOR MECHANISMS MASKING ACUTE ELEVATIONS IN STARTLE REACTIVITY IMMEDIATELY AFTER TRAUMA
Kevin D. Beck,[1] Xilu Jiao,[2] and Richard J. Servatius[1]
[1]VA Medical Center, East Orange, NJ and [2]University of Medicine and Dentistry of New Jersey, Newark

P19-4 CONDITIONED FEAR ACQUISITION, DISCRIMINATION, AND EXTINCTION IN COMBAT VETERANS FROM OPERATION IRAQI FREEDOM WITH POST-TRAUMATIC STRESS DISORDER
Seth Davin Norrholm,[1] Linda Leimbach,[1] Chris Crowe,[2] Kelly Skelton,[1] Tanja Jovanovic,[1] Kerry Ressler,[1] Bekh Bradley,[1] and Erica Duncan[1]
[1]Emory University School of Medicine and [2]VA Medical Center, Atlanta, GA

P19-5 REGULATION OF EXTINCTION BY GONADAL HORMONES: IMPLICATIONS FOR PTSD
Laura Schrader and Carmel M. McDermott
Tulane University

P19-6 NEUROADAPTATIONS IN STRESS-RELATED PEPTIDERGIC BRAIN SYSTEMS FOLLOWING SOCIAL DEFEAT STRESS

Eric P. Zorrilla,[1] Eva M. Fekete,[1] Yu Zhao,[1] Marian Logrip,[1] Pietro Cottone,[1] Maegan Mattock,[1] Chien Li,[2] Wylie Vale,[3] and Valentina Sabino[1]
[1]Scripps Research Institute, [2]University of Virginia, and [3]Salk Institute

P19-7 ATTENUATING FEAR RESPONSE IN AN ANIMAL MODEL OF PTSD
He Li, Min Jia, Lei Zhang, Eleanore Gamble, and Robort Ursano
Uniformed Services University of the Health Sciences

P19-8 REDUNDANT CATECHOLAMINERGIC SIGNALING IN THE CONSOLIDATION OF FEAR MEMORY
Steven A. Thomas
University of Pennsylvania School of Medicine

P19-9 DEVELOPING A RAT MODEL OF DELAYED BEHAVIORAL STRESS REACTIVITY IN PTSD SUITABLE TO INVESTIGATE POTENTIAL PHARMACOLOGIC INTERVENTIONS
David A. Morilak, Ankur Joshi, and Gustavo Rodriguez
University of Texas Health Science Center at San Antonio

P19-10 PROTEIN KINASE C-EPSILON IN THE AMYGDALA-PREFRONTAL CORTEX CIRCUIT CONTROLS THE EXTINCTION OF CONDITIONED FEAR
Philip Mark Newton and Lily Zeng
University of California, San Francisco, Ernest Gallo Clinic and Research Center

P19-11 TREATING POST-TRAUMATIC STRESS DISORDER BY BLOCKING MEMORY RECONSOLIDATION
Roger K. Pitman,[1] Alain Brunet,[2] Vadim Y. Bolshakov,[3] Scott P. Orr,[4] Mohammed R. Milad,[1] Jacques Tremblay,[2] and Karim Nader[5]
[1]Massachusetts General Hospital, [2]Douglas Research Center, McGill University, [3]McLean Hospital, [4]VA Medical Center, Manchester, NH, and [5]McGill University

P19-12 ENHANCEMENT OF GLUTAMATE TRANSMISSION FOR TREATMENT OF PTSD
Victoria B. Risbrough
University of California, San Diego School of Medicine

P19-13 OXYTOCIN REDUCES ANXIETY-RELATED INCREASES IN STARTLE, BUT NOT CUE-SPECIFIC FEAR-POTENTIATED STARTLE IN RATS
Jeffrey B. Rosen, Galen Missig, and Luke W. Ayers
University of Delaware

P20 Substance Abuse II

Wednesday, September 2, 2009
11:30 AM-2:30 PM
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P20-1 REDUCTION OF AFFECTIVE LABILITY AND ALCOHOL USE FOLLOWING TRAUMATIC BRAIN INJURY: A CLINICAL PILOT STUDY OF ANTICONVULSANT MEDICATIONS
Thomas Beresford
VA Medical Center, Denver, CO

P20-2 NEUROPEPTIDE Y (NPY) Y1 AND CORTICOTROPIN-RELEASING FACTOR (CRF)-1 RECEPTORS MODULATE STRESS-INDUCED INCREASES OF ETHANOL INTAKE IN MICE
Todd E. Thiele, Angela M. Lyons, and Emily G. Lowery
University of North Carolina at Chapel Hill

P20-3 SSRI TREATMENT OF PTSD AND ALCOHOL DUAL DISORDER: A TEST OF THE SEROTONERGIC HYPOTHESIS
John D. Roache
University of Texas Health Science Center at San Antonio

P20-4 ALCOHOL USE AFTER FORCED ABSTINENCE IN BASIC TRAINING AMONG JUNIOR AIRMEN AND SAILORS
Robert M. Bray, Janice M. Brown, Michael R. Pemberton, and Jason Williams
Research Triangle Institute

P20-5 SMOKING CESSATION: MINIMIZING WEIGHT GAIN AND PREVENTING RELAPSE BY REDUCING ALCOHOL CONSUMPTION
Mark B. Sobell,[1] Alan L. Peterson,[2] Linda C. Sobell,[1] Christopher L. Hunter,[3] Christine M. Hunter,[4] Antoinette Brundige,[5] Jeffrey L. Goodie,[6] and Crystal Mendoza[5]
[1]Nova Southeastern University, [2]University of Texas Health Science Center at San Antonio, [3]Tricare Management Activity, [4]National Institute of Diabetes and Digestive and Kidney Diseases, [5]Wilford Hall Medical Center, and [6]Uniformed Services University of the Health Sciences

P20-6 A COMPARISON OF INDIVIDUAL AND GROUP MOTIVATIONAL INTERVENTIONS WITH AIR FORCE PERSONNEL
Janice M. Brown
RTI International

P20-7 GLUTAMATE RECEPTOR GENE VARIANT PREDISPOSES TO EXCESSIVE ALCOHOL DRINKING
Csaba Vadasz,[1] Beatrix Maria Gyetvai,[2] and Mariko Saito,[2]
[1]New York University School of Medicine and [2]Nathan S. Kline Institute for Psychiatric Research

P20-8 CIGARETTE USE AMONG ARMY, NAVY, AND AIR FORCE TRAINEES
Robert M. Bray,[1] Michael R. Pemberton,[1] and Richard Clayton[2]
[1]Research Triangle Institute and [2]University of Kentucky

P20-9 ALCOHOL DECREASES DE NOVO BONE FORMATION BY REDUCING THE CONCENTRATION OF IGF-I IN BONE MATRIX
Russell T. Turner, Kevin Marley, Cynthia H. Edwards, Kathleen S. Howe, and Urszula T. Iwaniec
Oregon State University

P21 Telemedicine

Wednesday, September 2, 2009
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P21-1 RANDOMIZED CLINICAL EQUIVALENCE TRIAL COMPARING VIDEOCONFERENCE AND FACE-TO-FACE DELIVERY OF COGNITIVE PROCESSING THERAPY FOR PTSD
Tracey Smith
University of Wisconsin, Madison

P21-2 TELEREHABILITATION FOR COMBAT WOUNDED WITH TRAUMATIC BRAIN INJURY (TBI) AND POST-TRAUMATIC STRESS DISORDERS (PTSD)
Kris Siddharthan[1] and Andrea Spehar[2]
[1]VA Medical Center, Tampa, FL and [2]James A. Haley Veterans Research and Education Foundation

P21-3 SPOUSE BATTLEMIND TELEPHONE SUPPORT GROUPS
Linda O. Nichols,[1] Jennifer Lynn Martindale-Adams,[2] Patricia Miller,[2] Meghan E. McDevitt-Murphy,[3] Karin Thompson,[1] Marshall J. Graney,[1] Robert Burns,[2] Lyndon O. Riviere,[4] and Kathleen M. Wright[4]
[1]VA Medical Center, Memphis, TN, [2]University of Tennessee, Memphis, [3]University of Memphis, and [4]Walter Reed Army Institute of Research

P21-4 TELEMENTAL HEALTH AND COGNITIVE PROCESSING THERAPY GROUPS FOR RURAL COMBAT VETERANS WITH PTSD: PRELIMINARY FINDINGS
Leslie Anne Morland,[1] Carolyn Greene,[2] Craig Rosen,[2] Patrick Mauldin,[3] Christopher Frueh,[4] and Kathleen Chard[5]
[1]VA Research and Education Corporation of the Pacific, [2]VA Health Care System, Palo Alto, [3]Medical University of South Carolina, [4]University of Hawaii, and [5]VA Medical Center, Cincinnati, OH

P21-5 INNOVATIVE SERVICE DELIVERY FOR SECONDARY PREVENTION OF PTSD IN AT-RISK OIF-OEF SERVICE MEN AND WOMEN
Ronald Acierno
VA Medical Center, Charleston

P21-6 UPDATE ON NOVEL TREATMENT STUDIES BY THE NATIONAL CENTER FOR TELEHEALTH AND TECHNOLOGY IN THE INTRUST CONSORTIUM
Gregory A. Gahm, Mark A. Reger, David D. Luxton, Nancy Skopp, and Elissa K. Thomas
Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury

P21-7 RANDOMIZED TRIAL OF A WEB-BASED NURSE-ASSISTED PTSD SELF-MANAGEMENT INTERVENTION FOR PRIMARY CARE: STUDY DESIGN AND STATUS
Charles C. Engel,[1] Brett Litz,[2] Kathy Magruder,[3] Kristie Gore,[4] Elizabeth Harper Cordova,[4] and Derik Yeager[3]
[1]Uniformed Services University of the Health Sciences, [2]VA Boston Healthcare System, [3]Medical University of South Carolina, and [4]Walter Reed Army Medical Center

P21-8 THE EFFECT OF TELEPHONE FOLLOW-UP ON OUTCOME FOR MILITARY PERSONNEL WITH COMPLEX MILD TRAUMATIC BRAIN INJURY
Nancy Temkin,[1] Kathleen Bell,[1] Jesse Fann,[1] Jo Ann Brockway,[1] Sureyya Dikmen,[1] Gregory Gahm,[2] Robert Ciulla,[2] Mark Reger,[2] and Frederick Flynn[3]
[1]University of Washington, [2]National Center for Telehealth and Technology, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, and [3]Madigan Army Medical Center

P21-9 DISSEMINATION OF EVIDENCE-BASED CBT INTERVENTION COMPONENTS: ONLINE SELF-ADMINISTERED TRAINING FOR PROVIDERS TREATING MILITARY DEPLOYMENT-RELATED PTSD
Josef Ruzek,[1] Raymond Rosen,[2] Lisa Marceau,[2] Mary Jo Larson,[3] Amy Naugle,[4] Jennifer Sharpe Potter,[5] Brett Litz,[6] J. Gayle Beck,[7] Anne Stoddard,[2] Donn Garvert,[1] and Lauren Smith[2]
[1]National Center for PTSD, VA Palo Alto Healthcare System, [2]New England Research Institutes, [3]Brandeis University, [4]Western Michigan University, [5]University of Texas at San Antonio, [6]National Center for PTSD, VA Boston Healthcare System, and [7]University of Memphis

P21-10 PERSONAL MONITORING FOR AMBULATORY PTSD AND MTBI ASSESSMENT
Paul Nicholas Kizakevich
Research Triangle Institute

P21-11 THE NEXT STEP IN TELEMEDICINE ULTRASOUND FOR CONGENITAL HEART DISEASE: LIVE VIDEO TELECONFERENCING WITH REMOTE CONTROL OF THE DISTANT SCANNER BY THE EXPERT USING A VIRTUAL USER INTERFACE
James Kinney,[1] Allegra Frank,[1] Robert Puntel,[1] Tomo Hasegawa,[2] Leo Catallo,[2] and David Sahn[3]
[1]Madigan Army Medical Center, [2]SonoSite Corporation, and [3]Oregon Health & Science University

P21-12 PSYCHOTHERAPY VIA TELEMEDICINE FOR POST-TRAUMATIC STRESS DISORDER
Steven Russell Thorp, Zia M. Agha, and Nilesh H. Shah
VA Medical Center, San Diego, CA

P22 Assessment Tools

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P22-1 DEVELOPMENT AND VALIDATION OF A SCALE TO ASSESS FUNCTIONAL IMPAIRMENT AMONG ACTIVE-DUTY SERVICE MEMBERS AND VETERANS
Brian P. Marx,[1] Paula P. Schnurr,[2] Paola Rodriguez,[1] Darren Holowka,[1] Carole Lunney,[3] Frank Weathers,[3] Denise M. Sloan,[1] and Terence M. Keane[1]
[1]VA Boston Healthcare System, [2]VA Medical and Regional Office Center, White River Junction, VT, [3]Ohio State University, and [4]Auburn University

P22-2 A COMPREHENSIVE APPROACH TO DISSEMINATE EVIDENCE-BASED CARE FOR PTSD
Farifteh F. Duffy, Eve K. Moscicki, Joyce C. West, and Darrel A. Regier
American Psychiatric Institute for Research and Education

P22-4 FAMILY FUNCTIONING AND SOLDIER TREATMENT ENGAGEMENT FOR POST-TRAUMATIC STRESS DISORDER
Laurel Hourani and Leyla Stambaugh
Research Triangle Institute

P22-5 THE IMPACT OF SUPPORTED EMPLOYMENT VERSUS STANDARD VOCATIONAL REHABILITATION IN VETERANS WITH PTSD
Lori L. Davis,[1] Pamela Parker,[2] Charles Drebing,[3] Rich Toscano,[4] Andrew Leon,[5] and Al Bartolucci[6]
[1]Tuscaloosa VA Medical Center, [2]Birmingham VA Medical Center, [3]Bedford VA Medical Center, [4]University of Alabama, Tuscaloosa, [5]Weill Cornell Medical College, and [6]University of Alabama, Birmingham

P22-6 POST-DEPLOYMENT ADJUSTMENT AND CROSS-LEVELING CONCERNS OF OPERATION ENDURING FREEDOM AND OPERATION IRAQI FREEDOM RESERVE AND NATIONAL GUARD SERVICEWOMEN
Anne Gordon Sadler
VA Medical Center, Iowa City

P22-7 POWER ANALYSES BY SIMULATION
Paul Russell Swank
University of Texas Health Science Center at Houston

P22-8 MORTUARY AFFAIRS SOLDIERS: EARLY INTERVENTION AND ALTERING BARRIERS TO CARE FOR TRAUMATIC STRESS AND PTSD
Carol S. Fullerton,[1] Robert J. Ursano,[1] David M. Benedek,[1] James E. McCarroll,[1] Quinn M. Biggs,[1] Douglas F. Zatzick,[2] John H. Newby,[1] Tzu-Cheg Kao,[1] and Heather M. Karpel,[1]
[1]Uniformed Services University of the Health Sciences and [2]University of Washington

P22-9 POST-DEPLOYMENT DRIVING PROBLEMS: SURVEY OF SCOPE AND TIMELINE FOR POST-DEPLOYMENT SOLDIERS WITH AND WITHOUT MILD TRAUMATIC BRAIN INJURY
Erica Stern and Todd Rockwood
University of Minnesota, Twin Cities

P22-10 IMPACT OF PTSD, DEPRESSION, AND MILD TBI ON COGNITIVE EFFORT
Karen A. Tucker,[1] Larry A. Tupler,[1] Jeffrey N. Browndyke,[2] and Bruce P. Capehart[1]
[1]VA Medical Center, Durham, NC and [2]Duke University Medical Center

P22-11 THE ASSESSMENT CORE OF THE SOUTH TEXAS RESEARCH ORGANIZATIONAL NETWORK GUIDING STUDIES ON TRAUMA AND RESILIENCE (STRONG STAR)
Brett Litz,[1] Nathan Stein,[2] Kimberly Arditte,[2] Christopher Sege,[2] and COL Stacey Young-McCaughan[3]
[1]VA Boston Healthcare System, [2]National Center for PTSD, VA Boston Healthcare System, and [3]University of Texas Health Science Center at San Antonio

P22-12 DERIVATION OF CHANGES IN BODY HEAT STORAGE: HOW HOT IS THE HUMAN BODY?
Glen P. Kenny,[1] Francis Reardon,[1] Paul Webb,[2] Michel DuCharme,[1] Tim Ramsay,[3] and Ollie Jay[1]
[1]University of Ottawa, [2]Wright State University, and [3]Ottawa Health Research Institute

P23 Biomarkers II

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P23-1 EFFECT OF INCREASING VITAMIN D DOSE ON SERUM 25HYDROXYVITAMIN D
John C. Gallagher
Creighton University

P23-2 IDENTIFICATION OF STRESS-RESPONSIVE GENES, CANONICAL PATHWAYS, MOLECULAR NETWORKS AND DRUG TARGETS IN BRAIN TISSUES OF HUMAN AND ANIMALS FOR SYSTEMS BIOLOGY STUDY OF POST-TRAUMATIC STRESS DISORDER
Yan An Su,[6] He Li,[2] Ping He,[3] Maree J. Webster,[4] Qiuyang Zhang,[6] Lei Zhang,[2] Mudassar Khan,[1] David M. Su,[6] Robert J. Ursano,[2] and Owen M. Rennert[5]
[1]George Washington University Medical Center, [2]Uniformed Services University of the Health Sciences, [3]Food and Drug Administration, [4]Stanley Medical Research Institute, [5]National Institute of Child Health and Human Development, and [6]GenProMarkers, Inc.

P23-3 ALTERED FUNCTIONAL BRAIN ACTIVITY DURING EMOTION PROCESSING IN OEF-OIF VETERANS WITH A HISTORY OF MILD BLAST-RELATED TRAUMATIC BRAIN INJURY
Scott C. Matthews, Irina A. Strigo, and Alan N. Simmons, Ryan M. O'Connell, Lindsay E. Reinhardt, and Suzanne A. Moseley
VA Medical Center, San Diego, CA

P23-4 A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED, CROSSOVER TRIAL OF MIFEPRISTONE IN GULF WAR VETERANS WITH CHRONIC MULTISYMPTOM ILLNESS
Julia Golier
Mount Sinai School of Medicine, New York

P23-5 DTI FINDINGS IN TBI PATIENTS AT WALTER REED ARMY MEDICAL CENTER
Gerard Riedy, Marit Peterson, and Zachary Plotz
Walter Reed Army Medical Center

P23-6 POST-TRAUMATIC HYPOPITUITARISM FOLLOWING MILD TRAUMATIC BRAIN INJURY
Brent Masel[1] and Randy Urban[2]
[1]Transitional Learning Center at Galveston and [2]University of Texas Medical Branch, Galveston

P23-7 MICRORNA FUNCTION IN KIDNEY CANCER
Maria F. Czyzyk-Krzeska, Olga Mikhaylova, Yiwen Stratton, Ying Yi, Jarek Meller, and Aygun Mamedova
University of Cincinnati College of Medicine

P23-8 P11, A POTENTIAL BIOMARKER FOR PTSD AND P11 KNOCKOUT MICE, AN ANIMAL MODEL FOR PTSD RESEARCH
Lei Zhang, He Li, David Benedek, Janis R. Carlton, Xiaoxia Li, and Robert Ursano
Uniformed Services University of the Health Sciences

P23-9 PTSD ASSOCIATED WITH REDUCED CORPUS CALLOSUM FRACTIONAL ANISOTROPY
Alan N. Simmons, Scott C. Matthews, and Irina A. Strigo
University of California, San Diego School of Medicine

P23-10 COMPREHENSIVE EXPERIMENTAL MODELS FOR PROFILING MECHANISMS AND DEVELOPING BIOMARKERS OF BLAST BRAIN INJURY
Stanislav Svetlov
Banyan Biomarkers, Inc.

P23-11 PERSONALIZED MEDICINE IN VETERANS WITH TRAUMATIC BRAIN INJURIES
Giulio Maria Pasinetti
VA Medical Center, Bronx, NY

P23-12 EVIDENCE-BASED MULTIMODAL NEURODIAGNOSTIC IMAGING OF TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC STRESS DISORDER AT THE SAINT LOUIS UNIVERSITY ADVANCED NEUROSURGICAL INNOVATION CENTER (SANIC)
Richard Donald Bucholz,[1] Jeffrey Bailey,[1] Medhat Osman,[1] Jeffrey Gfeller,[1] Brenda Kirchhoff,[2] Sami Nassif,[1] and Brent Ibata[1]
[1]St. Louis University School of Medicine and [2]University of Missouri, St. Louis

P23-14 VALIDATING BIOMARKERS IN SYSTEMIC LUPUS
Jason W. Bauer,[1] Hatice Bilgic,[1] Thearith Koeuth,[1] Joseph Wilson,[1] Carolyn Meyer,[1] Michelle Petri,[2] Peter K. Gregersen,[3] Emily B. Baechler Gillespie[1]
[1]University of Minnesota, Twin Cities, [2]Johns Hopkins University School of Medicine, and [3]Feinstein Institute for Medical Research

P23-15 A PRACTICAL EXAMPLE OF USING TRAJECTORY ANALYSIS IN PREDICTING OUTCOMES OF TRAUMATIC BRAIN INJURY
Haishin Ozawa, Anthony Fabio, Krutika Amin, Brett Postal, Emily H. Rogers, Christian Niyonkuru, and Amy Wagner
University of Pittsburgh

P23-16 MISSION CONNECT MILD TBI TRANSLATIONS RESEARCH CONSORTIUM
Harvey Levin
Baylor College of Medicine

P23-17 A PANEL OF BIOMARKERS ACCURATELY PREDICTS THE PROBABILITY OF INTRACRANIAL PATHOLOGY IN MILD TRAUMATIC BRAIN INJURIES
Gerald Grant, Ellen Bennett, and Daniel Laskowitz
Duke University

P24 Molecular Pathobiology II

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P24-1 NEPHROPATHY, MITOCHONDRIAL FUNCTION, AND OXIDATIVE STRESS IN DIABETIC RATS
Lawrence H. Lash, Qing Zhong, and David A. Putt
Wayne State University School of Medicine

P24-2 RISK FACTORS FOR MENTAL HEALTH-RELATED DISABILITY DISCHARGE FROM THE U.S. ARMY: 1981–2005
Nicole S. Bell,[1] Thomas C. Harford,[2] Ashley B. Kay,[1] and Phillip R. Hunt[1]
[1]Social Sectors Development Strategies, Inc. and [2]Boston University School of Medicine

P24-3 EPIDEMIOLOGICAL STUDY OF MILD TRAUMATIC BRAIN INJURY SEQUELAE CAUSED BY BLAST EXPOSURE DURING OPERATIONS IRAQ FREEDOM AND ENDURING FREEDOM
William C. Walker,[1] David X. Cifu,[2] Michelle Nichols,[2] and Scott McDonald[2]
[1]Virginia Commonwealth University and [2]McGuire VA Medical center

P24-4 S-NITROSOTHIOLS: THEIR ROLE IN THE DEVELOPMENT OF PULMONARY ARTERIAL HYPERTENSION
Lisa A. Palmer, Kathleen Brown-Steinke, Kimberly deRonde, and Benjamin Gaston
University of Virginia Health Sciences Center

P24-5 DEPLOYMENT, PTSD SYMPTOMS, AND COMORBID MENTAL HEALTH CONDITIONS IN THE ACTIVE FORCE AND RESERVE COMPONENTS
Laurel L. Hourani, Alyssa Mansfield, Jason Williams, Marion Lane, Robert Bray, Janice Brown, and Caroline Reyes
Research Triangle Institute

P24-6 REQUIREMENT OF G PROTEINS IN ACTIVATION OF THE PI3K-AKT-MTORC1 PATHWAY BY EGFR
Wen-Ming Chu
Brown University

P24-7 BETA-ARRESTIN 2 AND MACROPHAGE APOPTOSIS: IMPLICATIONS FOR OBESITY-RELATED CARDIOVASCULAR DISEASE
Ira Tabas,[1] Judith Sluimer,[1] and Robert J. Lefkowitz[2]
[1]Columbia University Medical Center and [2]Duke University

P24-8 DECREASED EXTRACELLULAR MATRIX MOLECULES IN SYSTEMIC SCLEROSIS FIBROBLASTS UTILIZING THE GLUCOSE METABOLITE 3-DEOXYGLUCOSONE (3DG)
Carol M. Artlett,[1] Danielle Loughlin,[1] Carol Feghali-Bostwick,[2] and Sihem Sassi-Gaha[1]
[1]Drexel University College of Medicine and [2]University of Pittsburgh Medical Center

P24-9 THE ROLE OF PROTEIN KINASE M-ZETA (PKMζ) IN POST-TRAUMATIC STRESS DISORDER
Peter A. Serrano
City University of New York

P24-10 PRECONCEPTIONAL PATERNAL EXPOSURE TO EMBEDDED DEPLETED URANIUM: TRANSMISSION OF GENETIC DAMAGE, TRANSGENERATIONAL OFFSPRING EFFECTS, AND PATERNAL GERM CELL DNA DAMAGE
Alexandra Miller,[1] Michael Stewart,[1] Rafael Rivas,[1] Robert Merlot,[2] and Paul Lison[3]
[1]Armed Forces Radiobiology Research Institute, [2]ORA, Inc., and [3]Transitional Learning Center at Galveston

P25 Molecular Processes of Treatment

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P25-1 CRITICAL ROLE OF ACTIVATING TRANSCRIPTION FACTOR 4 IN PARATHYROID HORMONE-MEDIATED BONE FORMATION
Guozhi Xiao
University of Pittsburgh Medical Center

P25-2 FGF-2 STIMULATES RANK LIGAND EXPRESSION IN PAGET'S DISEASE OF BONE
Sakamuri V. Reddy,[1] Kumaran Sundaram,[1] Joseph Sen,[2] and Sudhaker Rao[3]
[1]Medical University of South Carolina, [2]Bristol-Myers Squibb, and [3]Henry Ford Hospital

P25-3 BONE-TARGETING NANOPARTICLES FOR TREATMENT OF MYELOMA
Gianny Rossini
Southwest Research Institute

P25-4 SNAKE VENOM EXTRACT INDUCES STERILE INFLAMMATION AND POTENT VACCINE-TRIGGERED ADAPTIVE IMMUNITY
Larry W. Kwak, Hong Quin, Soung-chul Cha, Sattva S. Neelapu, Yanyan Lou, Jinsong Wei, Chengwen Liu, Yi-Hong Wang, Xiao-Feng Qin, and Yong-Jun Liu
M.D. Anderson Cancer Center, University of Texas

P25-5 IDENTIFICATION OF COMPOUNDS THAT BLOCK NOROVIRUSES BINDING TO THEIR CARBOHYDRATE RECEPTORS BY COMPUTER-AIDED DRUG DESIGN METHODS
Xi Jiang,[1] Ming Tan,[1] Monica Chhabra,[2] Jarek Meller,[1] and Yizong Cheng[2]
[1]University of Cincinnati College of Medicine and [2]University of Cincinnati

P25-6 ENDURANCE TRAINING MINIMIZES ALTERATIONS IN IGF-I AND SKELETAL MASS, BUT NOT FAT MASS OR LEPTIN, DURING PROLONGED ENERGY RESTRICTION
Susan A. Bloomfield,[1] Sibyl N. Swift,[1] Mary Jane DeSouza,[2] Elizabeth S. Greene,[1] and Florence Lima[1]
[1]Texas A&M University, College Station and [2]Pennsylvania State University

P25-7 MITIGATION OF WHOLE-BODY RADIATION TOXICITY BY NF-KAPPAB INHIBITORS EP AND CDDO-TFEA
Ulrich Rodeck, Borbala Daroczi, Gabor Kari, Qing Ren, and Adam P. Dicker
Thomas Jefferson University

P25-8 MODULATION OF DNA DAMAGE BY GREEN TEA
Iman Hakim, Sherry Chow, Linda Garland, and Robin Harris
University of Arizona, Tucson

P25-9 ENHANCED TUMOR KILLING BY LYMPHOMA-CYTOTOXIC T CELLS SECRETING AN ENGINEERED TOXIN-ANTIBODY
Anna Swanson and Patricia Yotnda
Baylor College of Medicine, Houston Texas

P25-10 MECHANISMS OF FIBRONECTIN ATTACHMENT PROTEIN, FROM BACILLUS CALMETTE-GUERIN, BINDING, AND INTERNALIZATION IN BLADDER TUMOR CELLS
Jennifer Sowa, Claudio Aguilar, Scott Crist, David Thompson, and Timothy L. Ratliff
Purdue University Cancer Center

P25-11 TRACKING THE FATE OF THE CLONE IN PATIENTS WITH THE MYELODYSPLASTIC SYNDROME
Lewis R. Silverman,[1] Najfeld Vesna,[1] Svetlana Zinzar,[1] Rosalie Odchimar-Reissig,[1] Erin Demakos,[1] Jonathan Licht,[2] and Amanda Leblanc[1]
[1]Mount Sinai School of Medicine, New York and [2]Robert H. Lurie Comprehensive Cancer Center, Northwestern University Medical School

P26 Neurobiology II

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P26-1 INVERSE RELATIONSHIPS BETWEEN SEIZURE EXPRESSION AND PRESYNAPTIC AND EXTRASYNAPTIC NMDAR FUNCTION FOLLOWING CHRONIC TREATMENT WITH NONSUBTYPE AND NR2B-SELECTIVE NMDAR ANTAGONISTS IN ORGANOTYPIC HIPPOCAMPAL SLICE CULTURES
Suzanne B. Bausch and Shuijin He
Uniformed Services University of the Health Sciences

P26-2 KAPPA OPIOID AND NOCICEPTIN-ORPHANIN RECEPTORS AS NOVEL TARGETS FOR THERAPEUTIC INTERVENTION IN PTSD
Brian Cox
Uniformed Services University of the Health Sciences

P26-3 NEUROPSYCHOLOGICAL FUNCTIONING IN MILITARY PESTICIDE APPLICATORS FROM GULF WAR I
Maxine Krengel and Kimberly Sullivan
Boston University Medical Campus

P26-4 STRUCTURAL MRI AND COGNITIVE CORRELATES IN MILITARY PESTICIDE APPLICATORS FROM GULF WAR I
Kimberly Sullivan and Maxine Krengel
Boston University

P26-5 MEMANTINE DOES NOT ATTENUATE EVOKED HIPPOCAMPAL GLUTAMATE RELEASE IN ANIMALS CHRONICALLY EXPOSED TO DEPLETED URANIUM (DU)
Stephen M. Lasley, Kathrin Pastucha, and Meena Shanmugasundaram
University of Illinois, College of Medicine at Peoria

P26-6 REPAIRING THE BRAIN'S CAPACITY TO LEARN
Andreas Savas Tolias
Baylor College of Medicine

P26-7 MECHANISMS OF VULNERABILITY TO PTSD: THE ROLE OF EARLY LIFE STRESSORS
Randy Strong, David Morilak, and Alan Frazer
University of Texas Health Science Center at San Antonio

P26-8 TARGETING RHO GTPASE SIGNALING PATHWAYS TO ENHANCE RECOVERY AFTER TBI
Kimberley Tolias
Baylor College of Medicine

P26-9 INJURY-INDUCED PROTEOLYSIS OF THE AXON INITIAL SEGMENT IS A NEW MECHANISM FOR NERVOUS SYSTEM INJURY
Matthew Rasband, Dorothy Schafer, Smita Jha, Fudong Liu, Trupti Akella, and Louise McCullough
Baylor College of Medicine

P26-10 ROLE OF STIMULUS PATTERN IN INDUCTION OF PLASTICITY IN THE NORMAL AND INJURED CEREBRAL CORTEX
Michael Friedlander, Djanehodja Kalikulov, and Iskander Ismailov
Baylor College of Medicine

P27 Neuroprotection II

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P27-1 PHASE II CLINICAL TRIAL OF NNZ-2566 AS A NEUROPROTECTIVE DRUG FOR PATIENTS WITH MODERATE TO SEVERE TRAUMATIC BRAIN INJURY
Frank Tortella,[1] Gillian Robinson,[2] Maggie Scott,[3] and Larry Glass[3]
[1]Walter Reed Army Institute of Research, [2]Geneva Foundation, and [3]Neuren Pharmaceuticals

P27-2 KEVLAR VEST PROTECTION AGAINST BLAST OVERPRESSURE BRAIN INJURY: SYSTEMIC CONTRIBUTIONS TO INJURY ETIOLOGY
Joseph Long, Timothy Bentley, James Atkins, Adolph Januszkiewicz, and Richard Bauman
Walter Reed Army Institute of Research

P27-3 OPTIMAL THERAPEUTIC TARGET FOR STEREOTACTIC X-IRRADIATION IN EXPERIMENTAL SPINAL CORD INJURY
Richard J. Zeman, Xialing Wen, Alan Alfieri, Chitti R. Moorthy, and Joseph D. Etlinger
New York Medical College

P27-4 COG1410 AS A NOVEL POST-TRAUMA TREATMENT FOR TRAUMATIC BRAIN INJURY
Michael P. Vitek,[1] Suzanne E. McKenna,[1] Fengqiao Li,[1] Dale Christensen,[1] and Michael R. Hoane[2]
[1]Cognosci, Inc. and [2]Southern Illinois University

P27-5 PREVENTING EPILEPSY AFTER TRAUMATIC BRAIN INJURY
Marc A. Dichter
University of Pennsylvania School of Medicine

P27-6 PROLONGED MIDBRAIN STIMULATION EARLY AFTER TRAUMATIC BRAIN INJURY AIDS BEHAVIORAL RECOVERY IN RATS
Ian D. Hentall, Melissa M. Carballosa-Gonzalez, Lizbeth Manoah, Meghan K. O'Connell, and Helen M. Bramlett
University of Miami School of Medicine

P27-7 SIMVASTATIN PROTECTS NEURONS FROM CYTOTOXICITY BY UPREGULATING BCL-2 MRNA
Urule Igbavboa, Leslie N. Johnson-Anuna, Tammy A. Butterick, and Wellington Gibson Wood
University of Minnesota Medical School

P27-8 A NOVEL ASPIRIN IMPROVES LOCOMOTOR RECOVERY IN RATS WITH SPINAL CORD INJURY (SCI)
Lenard M. Lichtenberger, Shiqiang Tian, and Nicholas Adam Stephens
University of Texas Health Science Center at Houston

P27-9 DEVELOPMENT OF RNA APTAMERS AS ANTI-EXCITOTOXIC DRUGS FOR ALS THERAPY
Li Niu
State University of New York, Albany

P27-10 NEURAL PLASTICITY AND NEUROREHABILITATION FOLLOWING TRAUMATIC BRAIN INJURY
Dorothy A. Kozlowski
DePaul University

P27-11 ENHANCED NEUROLOGICAL RECOVERY WITH ERYTHROPOIETIN IN MILD TBI
Claudia Robertson
Baylor College of Medicine

P27-12 A PHASE II TRIAL OF THE NEUROPROTECTIVE AGENT, ATORVASTATIN
Alex Valadka[1] and Claudia Robertson[2]
[1]University of Texas Health Science Center at Houston and [2]Baylor College of Medicine

P27-13 HIGH-DOSE VALPROIC ACID IS NEUROPROTECTIVE AND OFFERS BEHAVIORAL IMPROVEMENTS FOLLOWING EXPERIMENTAL TBI
Pramod Dash, Sara Orsi, Alex Valadka, and Raymond Grill
University of Texas Medical School at Houston

P28 Blast Injury Sequelae II

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P28-1 THE ROLE OF EARLY STRESS ON THE DEVELOPMENT OF PTSD AFTER BLAST INJURY
Denes V. Agoston, Cheol Lee, Lisa Kovesdi, John Wu, John Walker, and Andrea Gyorgyi
Uniformed Services University of the Health Sciences

P28-2 ADVANCED MAGNETIC RESONANCE IMAGING IN BLAST-RELATED TRAUMATIC BRAIN INJURY
David L. Brody,[1] Christine L. Mac Donald,[1] John Witherow,[1] Joshua Shimony,[1] Avi Snyder,[1] Marcus Raichle,[1] and Stephen Flaherty[2]
[1]Washington University in St. Louis School of Medicine and [2]Landstuhl Regional Medical Center

P28-3 CEREBROVASCULAR INJURY IN BLAST LOADING
Kenneth L. Monson
University of Utah

P28-4 VESTIBULAR MECHANISMS OF IMBALANCE AFTER TRAUMATIC BRAIN INJURY
Mark Walker
Case Western Reserve University

P28-5 DEVELOPING A BLAST-INDUCED TRAUMATIC BRAIN INJURY MODEL
Samuel S. Panter, Erin Moody, Harland Wilke, Valerie Coppes, and Sandya Venugopal
VA Medical Center, San Francisco, CA

P28-6 DIRECT CRANIAL BLAST, NOVEL RODENT MODEL OF BLAST TRAUMATIC BRAIN INJURY
J. Marc Simard,[1] Reed Kuehn,[2] Kaspar Keledjian,[1] Philippe F. Simard,[1] Svetlana Ivanova,[1] Grant Bocchicchio,[1] and Volodymyr Gerzanich[1]
[1]University of Maryland School of Medicine and [2]Walter Reed Army Medical Center

P28-7 TRANSFER FUNCTION DEVELOPMENT FOR HELMET-MOUNTED SENSORS
B. Joseph McEntire and Valeta Carol Chancey
U.S. Army Aeromedical Research Laboratory

P28-8 BIOMECHANICAL MECHANISMS OF BLAST-INDUCED TRAUMATIC BRAIN INJURY
Liying Zhang
Wayne State University

P28-10 BLAST PRESSURE EFFECT ON ISOLATED COLLOID SOLUTIONS
David Francis Moore,[1] Kimberlee Potter,[2] Ruth Goldin,[1] Carol B. Fowler,[2] Jeffrey T. Mason,[2] and Michael S. Jaffee[1]
[1]Defense and Veterans Brain Injury Center and [2]Armed Forces Institute of Pathology

P28-11 MISSION CONNECT MILD TBI TRANSLATIONAL RESEARCH CONSORTIUM: HISTOPATHOLOGY CORE
Raymond Grill, Jing Zhao, and Pramod Dash
University of Texas Health Science Center at Houston

P28-12 CHARACTERIZATION OF A NEW RODENT MODEL OF BLAST-INDUCED BRAIN INJURY
Douglas S. DeWitt, Donald J. Deyo, Rinat Esenaliev, and Donald S. Prough
University of Texas Medical Branch, Galveston

P28-13 ROLE OF IL-1 AND TNF RECEPTOR ACTIVATION IN NEUROLOGICAL DEFICITS AFTER TBI
Jose Regino Perez-Polo,[1] Douglas S. Dewitt,[1] Pramod K. Dash,[2] Raymond J. Grill,[2] Margaret A. Parsley,[1] Geda Unabia,[1] Harriet Rea,[1] and Claire E. Hulsebosch[1]
[1]University of Texas Medical Branch, Galveston and [2]University of Texas Medical School at Houston

P29 Resuscitation

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P29-1 OPTIMIZATION ANALYSIS OF ARTIFICIAL VENTILATION
Uichiro Narusawa
Northeastern University

P29-2 LYOPHILIZED PLASMA FOR RESUSCITATION IN A SWINE MODEL OF SEVERE INJURY
Nicholas Spoerke,[1] Karen Zink,[1] S. David Cho,[1] Jerome Differding,[1] Patrick Muller,[1] Ahyan Karahan,[1] Jill Sondeen,[2] John B. Holcomb,[3] and Martin Schreiber[1]
[1]Oregon Health and Science University, [2]U.S. Army Institute of Surgical Research, and [3]University of Texas Health Science Center at Houston

P29-3 REDUCTION OF HEPATIC INJURY AND IMPROVEMENT OF CARDIAC FUNCTION AND INCREASED SURVIVAL IN A RAT MODEL OF COMBINED BURN INJURY AND POLYMICROBIAL SEPSIS
Joseph L. Messina, Oleg F. Sharifov, and Tatyana A. Gavrikova
University of Alabama at Birmingham

P29-4 TARGETED PHARMACOTHERAPIES TO IMPROVE OUTCOMES FROM SHOCK IN THE ALCOHOL-INTOXICATED HOST
Patricia E. Molina
Louisiana State University Health Sciences Center

P29-5 NONINVASIVE TRAUMA MONITOR: EARLY INDICATION OF CENTRAL HYPOVOLEMIA THROUGH THE MEASUREMENT OF MUSCLE OXYGEN LEVELS
Babs R. Soller,[1] Ye Yang,[1] Kathy Ryan,[2] Caroline Rickards,[2] and Victor Convertino[2]
[1]University of Massachusetts Medical School and [2]U.S. Army Institute of Surgical Research

P29-6 STABLE INTRAVENOUS FLUOROHYDROCARBON EMULSION WITH HIGH OXYGEN CAPACITANCE COMBINED WITH HYPERBARIC OXYGEN FOR THE ACUTE SALVAGE OF TISSUE INJURY AFTER TBI
Yurong Gu, Yi Zheng, Tao Qin, Jian Xu, Michael Whalen, and John R. Sims
Massachusetts General Hospital

P29-7 TRAINING FORWARD SURGICAL TEAMS: DO MILITARY-CIVILIAN COLLABORATIONS WORK?
Jeffery S. Augenstein,[1] Donald Robinson,[2] Jill Graygo,[1] Carl Schulman,[1] and Katherine Wilson[1]
[1]University of Miami School of Medicine and [2]U.S. Army Trauma Training Center

P29-8 CARDIOVASCULAR HORMONAL RESPONSES AND MICROCIRCULATORY FLOW DURING ECMO TREATMENT IN A PIGLET MODEL OF ENDOTOXIC SHOCK
Catherine Uyehara, Sherreen Batts, Thornton Mu, Sarah Lentz-Kapua, Martin Kinnison, Aileen Sato, and Wayne Ichimura
Tripler Army Medical Center

P29-9 ANTIOXIDANT CARBON NANOTUBE THERAPY OF EXPERIMENTAL BRAIN INJURY
Thomas Kent,[1] Ashley D. Leonard,[2] Brittany Renshaw Bitner,[1] Daniela Marcano,[2] Jacob M. Berlin,[2] and James M. Tour[2]
[1]Baylor College of Medicine and [2]Rice University

P29-10 THE ROLE OF IRON IN LUNG INFLAMMATION FOLLOWING BLAST EXPOSURE OR HEMORRHAGE RESUSCITATION
James L. Atkins,[1] Nikolai Gorbunov,[2] and Andrei Komarov[3]
[1]Walter Reed Army Institute of Research, [2]Armed Forces Radiobiology Research Institute, and [3]George Washington University Medical Center

P29-11 IMPLANTABLE MOLECULAR DIAGNOSTICS: A TOOL IN THE MANAGEMENT OF BATTLEFIELD HEMORRHAGE
Anthony Guiseppi-Elie
Clemson University

P30 Epidemiology

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P30-1 CREATION OF A PTSD REGISTRY FOR VETERANS: PROJECT VALOR
Terence Keane,[1] Ray Rosen,[2] Nancy Maserejian,[2] Darren Holowka,[1] Paola Rodriguez,[1] Brian Marx,[1] Han Kang,[3] Jennifer Vasterling,[1] Kathryn Wunderle,[1] Nicole Rodier,[1] Denise Sloan,[1] Matthew Friedman,[4] and Lynn Sleeper[2]
[1]VA Boston Healthcare System, [2]New England Research Institute, Waterton, [3]VA Medical Center, Washington, DC, and [4]VA Medical Center, White River Junction, VT

P30-2 PROSPECTIVE STUDY OF MILITARY SERVICE, CHEMICAL EXPOSURES, AND RISK OF AMYOTROPHIC LATERAL SCLEROSIS AND PARKINSON'S DISEASE
Marc Weisskopf and Alberto Ascherio
Harvard University School of Public Health

P30-3 PTSD AND DNA METHYLATION IN SERUM OF OIF AND OEF SERVICE MEMBERS
Jennifer A. Rusiecki,[1] Vasantha Srikantan,[1] Andrea Baccarelli,[2] Fei Zhang,[1] and Stephan C. Messer[3]
[1]Uniformed Services University of the Health Sciences, [2]Milan University, and [3]Walter Reed Army Medical Center

P30-4 INCIDENCE OF TRAUMATIC BRAIN INJURY, MILD TRAUMATIC BRAIN INJURY AND POSTCONCUSSION SYNDROME AMONG U.S. SERVICE MEMBERS BETWEEN 1997 AND 2007
Kenneth L. Cameron,[1] Rodney X. Sturdivant,[2] Steven W. Marshall,[3] Thomas M. DeBerardino,[1] and Andrew E. Lincoln[4]
[1]Keller Army Community Hospital, [2]United States Military Academy, [3]University of North Carolina at Chapel Hill, and [4]MedStar Research Institute

P30-5 BEHAVIORAL HEALTH CONSEQUENCES OF DEPLOYMENT AMONG RESERVE AND NATIONAL GUARD FORCES
Marta R. Prescott,[1] Robert Gifford,[2] Robert Ursano,[2] Carol Fullerton,[2] and Sandro Galea[1]
[1]University of Michigan, Ann Arbor and [2]Uniformed Services University of the Health Sciences

P30-6 THE ASSOCIATION OF POST-TRAUMATIC STRESS DISORDER WITH PREGNANCY OUTCOMES AMONG WOMEN IN THE MILITARY
Kathleen O'Rourke,[1] Elizabeth Barnett Pathak,[1] Michael Custer,[2] and Mary Roddy[1]
[1]University of South Florida and [2]U.S. Army Center for Health Promotion and Preventive Medicine

P30-7 TBI AND DNA METHYLATION IN SERUM OF OIF AND OEF SERVICE MEMBERS
Jennifer A. Rusiecki,[1] Vasantha Srikantan,[1] Jamie Fargus,[2] and Louis French[2]
[1]Uniformed Services University of the Health Sciences and [2]Walter Reed Army Medical Center

P30-8 MOLECULAR EPIDEMIOLOGY OF ADENOVIRUS-ASSOCIATED OUTBREAKS OF ACUTE RESPIRATORY DISEASE IN MILITARY RECRUIT TRAINING CAMPS
Adriana E. Kajon
Lovelace Respiratory Research Institute

P30-9 LONGITUDINAL STUDY OF MILD TRAUMATIC BRAIN INJURY IN TROOPS RETURNING FROM OIF/OEF
Karen Schwab
Walter Reed Army Medical Center

P30-10 A ROLE FOR ORAL AND EARLY LIFE EXPOSURES IN YOUNG ADULT HODGKIN LYMPHOMA ETIOLOGY
Wendy Cozen
University of Southern California, Keck School of Medicine

P30-11 PARENTAL STRESS, PTSD, AND INFANT HEALTH OUTCOMES IN U.S. MILITARY FAMILIES
Gia Gumbs,[1] Anna Bukowinski,[2] Ava Marie Conlin,[2] Isabel Jacobson,[2] Charles Hoge,[3] Carter Sevick,[2] Margaret Ryan,[1] and Tyler C. Smith[1]
[1]Naval Hospital Camp Pendleton, [2]Naval Health Research Center, and [3]Walter Reed Army Institute of Research

P30-12 IS MILD TRAUMATIC BRAIN INJURY ASSOCIATED WITH DECREASED WARFIGHTER PERFORMANCE?
Timothy S. Wells,[1] Suzanne H. Baktash,[1] Timothy S. Webb,[1] Tracy J. Eicher,[5] Clifford N. Otte,[1] Sarah O. Fortuna,[1] Russell K. Gore,[1] Edward J. Boyko,[3] Charles Maynard,[3] and Bruce R. Burnham[4]
[1]Air Force Research Laboratory, Dayton, OH, [2]Armstrong Laboratory, Wright-Patterson Air Force Base, [3]University of Washington Medical Center, [4]U.S. Air Force Safety Center, Kirtland AFB, NM, and [5]88th Medical Group

P31 PTSD Treatment II

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P31-1 NEUROENDOCRINE CORRELATES OF PTSD BEFORE AND AFTER TREATMENT
Rachel Yehuda, Julia Golier, and Linda Bierer
Bronx Veterans Medical Research Foundation, Inc.

P31-2 TREATMENT OF TRAUMA-RELATED ANGER IN OIF VETERANS
M. Tracie Shea,[1] Jennifer Lambert,[2] Jocelyn Howard,[3] and Abigail Mansfield[1]
[1]Brown University, [2]VA Medical Center, Providence, RI, and [3]VA Boston Healthcare System

P31-3 PREDICTORS OF TREATMENT RESPONSE TO FLUOXETINE IN PTSD FOLLOWING A RECENT HISTORY OF WAR ZONE STRESS EXPOSURE
Paul B. Hicks,[1] Michael L. Adams,[2] Brett Litz,[3] Keith Young,[1] Jed Goldart,[4] Tom Velez,[4] Walter Penk,[5] and Kathryn Kotrla[5]
[1]Central Texas Veterans Health Care System, [2]Carl R. Darnall Army Medical Center, [3]VA Health Care System, Boston, [4]Computer Technology Associates, Inc., and [5]Texas A&M University System Health Sciences Center Research Foundation

P31-4 A RANDOMIZED, PLACEBO-CONTROLLED TRIAL OF THE DOPAMINE-BETA-HYDROXYLASE (DBH) INHIBITOR, NEPICASTAT, FOR THE TREATMENT OF PTSD IN OIF/OEF VETERANS
Lori L. Davis,[1] Tom Kosten,[2] Mark Hamner,[3] Dewleen Baker,[4] Rachel Yehuda,[5] Julia Golier,[5] David Graham,[2] Al Bartolucci,[6] and Andrew Leon[7]
[1]Tuscaloosa VA Medical Center, [2]Michael E. DeBlakey VA Medical Center, [3]Ralph H. Johnson VA Medical Center, [4]VA Medical Center, San Diego, CA, [5]James J. Peters VA Medical Center, [6]University of Alabama at Birmingham, and [7]Cornell University, Weill Cornell Medical College

P31-5 PROLONGED EXPOSURE THERAPY FOR PTSD AMONG OIF/OEF PERSONNEL WEEKLY SESSION VS. DAILY
Edna B. Foa and Elizabeth A. Hembree
University of Pennsylvania School of Medicine

P31-6 A RANDOMIZED CLINICAL TRIAL OF MEDITATION FOR VETERANS WITH POST-TRAUMATIC STRESS DISORDER
Julie E. Malphurs, Molly A. Asebey-Birkholm, Ileana Petisco, and Daniella David
VA Medical Center, Miami, FL

P31-7 COGNITIVE PROCESSING THERAPY FOR COMBAT-RELATED POST-TRAUMATIC STRESS DISORDER
Patricia A. Resick and Jennifer L. Schuster
VA Boston Healthcare System

P31-8 COMPUTER-GUIDED PROLONGED EXPOSURE THERAPY FOR PTSD
Claudia Zayfert[1] and James A. Cartreine[2]
[1]Dartmouth Medical School and [2]Harvard Medical School

P31-9 EVALUATION OF A YOGA INTERVENTION FOR PTSD
Sat Bir Singh Khalsa
Brigham and Women's Hospital

P31-10 PTSD-FOCUSED COGNITIVE BEHAVIOR THERAPY FOR PARTNER VIOLENCE: PRELIMINARY FINDINGS
Casey T. Taft
National Center for PTSD, VA Boston Healthcare System

P31-11 OPTICAL NEURAL CONTROL: ENGINEERING THERAPEUTIC CIRCUIT DYNAMICS: APPLICATION TO POST-TRAUMATIC STRESS DISORDER
Edward S. Boyden
Massachusetts Institute of Technology

P31-12 EFFECTIVENESS OF COGNITIVE, EXPOSURE, AND SKILLS GROUP MANUALIZED TREATMENTS IN OIF/OEF FEMALE VETERANS
Diane T. Castillo
VA Medical Center, Albuquerque, NM

P31-13 AN EVALUATION OF COGNITIVE PROCESSING THERAPY TO TREAT PATIENTS IN A PTSD RESIDENTIAL REHABILITATION PROGRAM
Jennifer Alvarez,[1] Kent Drescher,[1] Craig Rosen,[1] Alex H.S. Harris,[1] Josef Ruzek,[1] Caitlin McLean,[2] and Rachel Kimerling[1]
[1]VA Health Care System, Palo Alto and [2]Palo Alto Institute for Research and Education

P31-14 PSYCHOTHERAPY TREATMENT OF DEPLOYMENT-RELATED PTSD IN PRIMARY CARE: A PILOT INVESTIGATION
Jeffrey Cigrang,[1] Sheila Rauch,[2] Craig Bryan,[1] Laura Avila,[3] Ann Hryshko-Mullen,[1] and Alan Peterson[4]
[1]Wilford Hall Medical Center, [2]University of Michigan, Ann Arbor, [3]Brooke Army Medical Center, and [4]University of Texas Health Science Center at San Antonio

P31-15 VENLAFAXINE AND CBT FOR PSYCHOLOGICAL DISTRESS AFTER TBI: A RANDOMIZED CONTROLLED TRIAL
Thomas W. McAllister,[1] Jesse Fann,[2] and Kathleen Chard[3]
[1]Dartmouth Medical School, [2]University of Washington, and [3]University of Cincinnati

P31-16 USING COGNITIVE PROCESSING THERAPY TO TREAT MTBI AND PTSD
Kathleen M. Chard[1] and Raj Narayan[2]
[1]VA Medical Center, Cincinnati, OH and [2]University of Cincinnati College of Medicine

P31-18 PRAZOSIN REDUCES TRAUMA NIGHTMARES AND SEVERE SLEEP DISTURBANCE IN SOLDIERS DEPLOYED IN IRAQ
Murray A. Raskind,[1,3] Jess Calohan,[2] Kris Peterson,[2] and Elaine R. Peskind[1,3]
[1]VA Puget Sound Health Care System, Education and Clinical Center, [2]Madigan Army Medical Center, and [3]VA Northwest Network Mental Illness Research, Education and Clinical Center

P32 Imaging II

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P32-1 FULLY AUTOMATED PIPELINE FOR DIFFUSION TENSOR IMAGING ANALYSIS
Kurt Bockhorst, Cheukkai Hui, and Ponnada Narayana
University of Texas Medical School at Houston

P32-2 MEG CONTRIBUTIONS TO THE DIAGNOSIS OF MTBI
Andrew Papanicolaou,[1] Joshua I. Breier,[1] Eduardo M. Castillo,[1] Roozbeh Rezaie,[1] and Thomas A. Kent[2]
[1]University of Texas Health Science Center at Houston and [2]Baylor College of Medicine Health Science Center

P32-3 A RESEARCH PLAN FOR CHARACTERIZING AND REHABILITATING MILD TRAUMATIC BRAIN INJURY USING TEMPORALLY ADAPTIVE FUNCTIONAL MAGNETIC RESONANCE IMAGING
Stephen M. LaConte, Dorina Papageorgiou, and Jonathan Lisinski
Baylor College of Medicine

P32-4 DEVELOPING AN MRI-COMPATIBLE HEAD PHANTOM FOR EVALUATING TRAUMATIC BRAIN INJURY
Mark George,[1] Koushik A. Govindarajan,[1] William F. Evans,[2] James Folk,[2] Mark Edwards,[2] Daryl E. Bohning,[1] and Paul S. Morgan[1]
[1]Medical University of South Carolina and [2]Force Protection, Inc.

P32-5 NEUROIMAGING INVESTIGATIONS OF THE STRONG STAR PTSD COHORTS
Peter T. Fox, Amy Ramage, and Ashley Acheson
University of Texas Health Science Center at San Antonio

P32-6 MONITORING FOR SEIZURES AFTER TRAUMATIC BRAIN INJURY
Paul Vespa
University of California, Los Angeles, David Geffen School of Medicine

P33 Resilence II

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P33-1 MENTAL HEALTH IN THE CONTEXT OF WAR: GENETIC AND ENVIRONMENTAL FACTORS
Michael Escamilla
University of Texas Health Science Center at San Antonio

P33-2 THE STRONG STAR MULTIDISCIPLINARY PTSD RESEARCH CONSORTIUM
Alan L. Peterson,[1] Stacey B. Young-McCaughan,[1] John D. Roache,[1] Jeffrey A. Cigrang,[2] Kathryn M. Gaylord,[3] Jay B. Higgs,[4] Jim Mintz,[1] Trisha A. Benson,[1] and David S. Riggs[5]
[1]University of Texas Health Science Center at San Antonio, [2]Wilford Hall Medical Center, [3]U.S. Army Institute of Surgical Research, [4]Brooke Army Medical Center, and [5]Uniformed Services University of the Health Sciences

P33-3 PRE-DEPLOYMENT PSYCHOPHYSIOLOGIC PREDICTORS AND RESILIENCY TRAINING TO IMPROVE POST-DEPLOYMENT PTSD
Jeffrey M. Pyne,[1] Timothy Kimbrell,[1] Teresa Kramer,[2] Joseph Constans,[3] and Mark Wiederhold[4]
[1]VA Health Care System, Central Arkansas, [2]University of Arkansas for Medical Sciences, [3]Tulane University Medical School, and [4]The Virtual Reality Medical Center

P34 Pain II

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P34-1 THE FORT MILITARY PAIN PROGRAM: 1-YEAR OUTCOMES
Robert J. Gatchel,[1] Donald D. McGeary,[2] Alan Peterson,[3] and Mysti Moore[1]
[1]University of Texas at Arlington, [2]Wilford Hall Medical Center, and [3]University of Texas Health Science Center at San Antonio

P34-2 THE IMPACT OF THE TREATMENT OF PTSD ON COMORBID PAIN AND SLEEP DISTURBANCE
Stacey Young-McCaughan and Alan Peterson
University of Texas Health Science Center at San Antonio

P35 Regenerative Medicine II

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P35-1 ROLE OF GLIAL CELL LINE-DERIVED NEUROTROPHIC FACTOR IN HUMAN NEURAL STEM CELL-MEDIATED IMPROVEMENT OF COGNITIVE FUNCTION AFTER TRAUMATIC BRAIN INJURY
Ping Wu, Donald S. Prough, Larry Denner, Junling Gao, and Yingxin Zhao
University of Texas Medical Branch, Galveston

P36 Physical Rehabilitation II

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P36-1 VISUALLY DRIVEN ACTIVATION IN AREAS V2, V3 FOLLOWING AREA V1 LESIONS
Stelios Manolis Smirnakis,[1] Michael Schmid,[2] Tianmiao Hua,[1] and Nikos Logothetis[3]
[1]Baylor College of Medicine, [2]National Institutes of Health, and [3]Max Planck Institute for Biological Cybernetics

P36-2 COMBINING TDCS AND ROBOTIC TRAINING IN TBI SURVIVORS
Ross Zafonte,[1] Effie Chew,[1] Sofia Straudi,[1] Paolo Bonato,[1] and Felipe Fregni[2]
[1]Spaulding Rehabilitation Hospital and [2]Harvard University School of Medicine

P37 Virtual Reality II

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P37-1 COMPARING VIRTUAL REALITY EXPOSURE THERAPY TO PROLONGED EXPOSURE IN THE TREATMENT OF SOLDIERS WITH POST-TRAUMATIC STRESS DISORDER
Gregory A. Gahm,[1] Greg M. Reger,[1] Albert A. Rizzo,[2] Barbara O. Rothbaum,[3] JoAnn Difede,[4] Colette Candy,[5] and Kevin Holloway[1]
[1]Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, [2]Institute of Creative Technologies, University of Southern California, [3]Emory University School of Medicine, [4]Cornell University, Weill Medical College; and [5]Madigan Army Medical Center

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