



## **Northwest MIRECC**

### **(VISN 20) Mental Illness Research, Education and Clinical Center**

#### **Overview**

The Northwest MIRECC develops novel and improved treatments for major behavioral disorders afflicting veterans. These and other effective treatments are disseminated across veteran and military personnel health care systems through model clinical programs, educational outreach, and leadership of VA cooperative studies. Since the onset of Operation Enduring Freedom (OEF) in Afghanistan and Operation Iraqi Freedom (OIF), the Northwest MIRECC has directed major resources to the neuropsychiatric disorders highly prevalent among combat-exposed OEF/OIF returnees (posttraumatic stress disorder [PTSD] and blast concussive mild traumatic brain injury [mTBI]), and to collaborations in research, educational and treatment efforts between the MIRECC and Department of Defense components locally (Madigan AMC/Fort Lewis) and nationally (Walter Reed AMC and the Office of the Chairman Joint Chiefs of Staff).

#### **Mission**

The Northwest MIRECC applies modern genetic, neurobiologic and clinical trial methodology to the discovery and development of new and more effective treatments for major and often treatment resistant mental disorders afflicting veterans and the active duty combat personnel who will become veterans. Translational research efforts focus on treatment for PTSD and its substance abuse comorbidities (alcohol and tobacco); the chronic behavioral consequences of mTBI and its objective diagnosis through biomarkers; the elderly veteran with agitated dementia; and schizophrenia and the adverse metabolic consequences of antipsychotic drug therapy.

#### **Research (Highlights)**

MIRECC investigators discovered that the inexpensive generic drug prazosin (that blocks excessive responses to the "adrenaline" neurotransmitter norepinephrine) is highly effective for reducing and often eliminating PTSD trauma nightmares, sleep disruption and daytime hyperarousal and reexperiencing symptoms in combat veterans and in civilians. These results have led to DoD funding for a placebo-controlled prazosin trial in active duty soldiers from OIF/OEF with Madigan AMC and Walter Reed AMC and a VA Cooperative Study (CSP #563) of prazosin for combat trauma PTSD in veterans. Encouraging results with prazosin for mTBI sleep disturbance, headaches, and cognitive impairment has led to inclusion of prazosin for mTBI in the forthcoming VA/DoD treatment guidelines for mTBI (personal communication, Robert L. Ruff, MD, VA National Director for Neurology). Integrating smoking cessation within specialized PTSD clinics significantly improves cessation rates. MIRECC leads VA Cooperative Study (CSP #519) an effectiveness trial of this approach.

#### **Clinical (Highlights)**

We have developed a Deployment Health Clinic for combat veterans returning from Iraq and Afghanistan. This integrated, multidisciplinary clinic provides "one stop shopping" post-deployment evaluations with easy access, integrated care and de-stigmatized mental health assessment and interventions. This model is being "rolled out" nationally with DHC founder and MIRECC investigator Stephen Hunt, MD leading this effort nationally. The MIRECC African-American Veterans Stress Disorders Program is a model program for African-American veterans. Co-facilitated by Vietnam First Cavalry Division combat veteran Lemanuel Jones and MIRECC Director Dr. Murray Raskind, the program has been rated significantly superior to standard PTSD psychotherapy by over 500 African-American veterans.

#### **Education (Highlights)**

We have produced a Best Practices Manual for Posttraumatic Stress Disorder Compensation and Pension Examination. A CD-ROM independent study program has been widely disseminated

across VA to complement the manual. VA Boise and VA Puget Sound MIRECC faculty are collaborating with the Office of the Chairman Joint Chiefs of Staff (Admiral Mike Mullen) to produce training and education films about PTSD and mTBI in OIF/OEF returnees as well as older veterans.

### **Selected Studies and Projects**

Prazosin for Combat Trauma PTSD. Prazosin is a long available generic drug that easily enters the brain and blocks excess "adrenaline" stimulation. We recently confirmed in a second placebo-controlled study that evening prazosin substantially reduces or eliminates combat trauma related nightmares and sleep disruption and improves global clinical status (sense of well-being and ability to function). We are leading a VA Cooperative Study (CSP #563) and a DoD funded study in active duty soldiers to expand the prazosin database in PTSD.

VA CSP #519: Tobacco Cessation in Veterans with PTSD: Integration of Practice Guidelines.

Nicotine dependence contributes substantially to medical morbidity and mortality among veterans with PTSD. Unfortunately, referral to traditional VA smoking cessation programs results in a very low rate of cessation. We have established that integrating smoking cessation with specialized PTSD clinics significantly improves cessation rates.

Anonymous Foundation: Biomarkers and Clinical Course of Mild Traumatic Brain Injury Blast

Trauma in OIF/OEF Veterans. This innovative project is studying comprehensively and longitudinally OIF returnees exposed to blast concussive trauma and with symptoms consistent with mTBI and non-blast exposed controls. It is quantifying blast exposure, characterizing subjects neuropsychologically, evaluating brain structure and function with neuroimaging (DTI, CRI, fMRI, PET) and measuring biomarkers associated with neurodegeneration in cerebrospinal fluid.

### **Selected Publications**

McFall M, Saxon AJ, Thanneemit-Chen S, Smith MW, Joseph AM, Carmody TP, Beckham JC, Malte CA, Vertrees JE, Boardman KD, Lavori PW. Integrating smoking cessation into mental health care for posttraumatic stress disorder. Clin Trials 4:178-189, 2007.

Raskind MA, Burke BL, Crites NJ, Tapp AM, Rasmussen DD. Olanzapine-induced weight gain and increased visceral adiposity is blocked by melatonin replacement therapy in rats. Neuropsychopharmacology 32:284-288, 2007.

Raskind MA, Peskind ER, Hoff DJ, Hart KL, Holmes HA, Warren D, Shofer J, O'Connell J, Taylor F, Gross C, Rohde K, McFall ME. A parallel group placebo controlled study of prazosin for trauma nightmares and sleep disturbances in combat veterans with posttraumatic stress disorder. Biol Psychiatry 61:928-934, 2007.

Szot P, White SS, Greenup JL, Leverenz JB, Peskind ER, Raskind MA. Changes in adrenoreceptors in the prefrontal cortex of subjects with dementia: evidence of compensatory changes. Neuroscience 146:471-480, 2007.

### **Leadership**

Director – Murray Raskind, M.D.

Associate Research Director – Elaine Peskind, M.D.

Associate Education Director – James Boehnlein, M.D./Ruth Ann Tsukuda, EdD

Associate Clinical Director – Miles McFall, Ph.D.

Administrative Officer – Patrice Brower

### **Contact**

Northwest MIRECC

VA Puget Sound Health Care System

1660 S. Columbian Way

Seattle, WA 98108

(206) 764-2067