



## **Dr. Beals Receives Sir Henry Wellcome Medal and Prize from AMSUS**

Dr. Kim Beals was awarded the Sir Henry Wellcome Medal and Prize by the Association of Military Surgeons of the United States on November 14, 2012 for her publication in the journal of Military Medicine, "Less Body Fat Improves Physical and Physiological Performance in Army Soldiers." Dr. Beals has been selected to receive this award because of her outstanding scholarly contribution to current military medicine research through her published work.



## **US Special Operations Command Research Expands**



Researchers at the University of Pittsburgh recently received two research grants to expand their research agenda within US Special Operations Command. A \$7M grant was received from the Office of Naval Research to continue its work with Naval Special Warfare. The specific aims will include interval testing and surveillance to assess career decrement and injury prevalence, reference following injury,

and effectiveness of TAP to improve physical readiness. An additional grant for \$3M was received from the Air Force Research Laboratory/Air Force Materiel Command to study injury mitigating and physical readiness strategies with the Air Force Special Operations Command (Hurlburt Field, FL).

## **Air Force Special Operations Command**

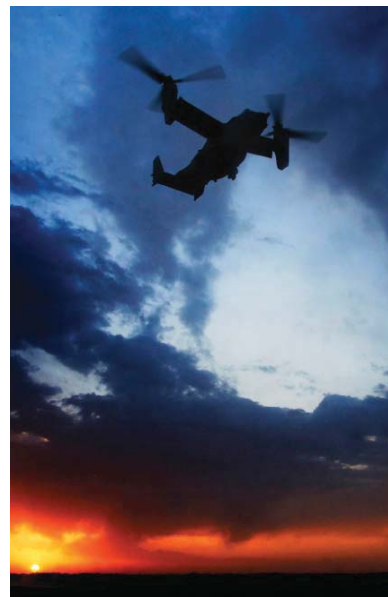
The University of Pittsburgh's Neuromuscular Laboratory (NMRL) collaborating with Air Force Special Operations Command (AFSOC) for an injury prevention and performance optimization research project. This project will be located at Hurlburt Field, Florida.

Funded by a 3 year, \$3M research grant from the Air Force Research Laboratory/Air Force Materiel Command and modeled after our research with Naval Special Warfare, this project will study human performance and injury mitigation specific to the tactical requirements of AFSOC.

An initial kick-off meeting was held mid-November with representative from the University of Pittsburgh, AFSOC, and 711 HPW to orga-

nize project logistics. Laboratory construction of the Warrior Human Performance Research Laboratory at Hurlburt Field is currently ongoing and scheduled to complete spring 2013.

This work was supported by the Air Force Research Laboratory/Air Force Materiel Command, #FA8650-12-2-6271.



## **In this issue:**

Research Expands & AFSOC **P.1**

Army 101st & USASOC **P.2**

Naval Special Warfare **P.3**

Personnel Spotlight **P.4**

# NEWS/ MEDIA

UPitt Warrior Human Performance Laboratory, Coronado featured in *Ethos Magazine*



NMRL Research Spotlighted in *FACETS Magazine*



## 101st Airborne Division (Air Assault)

The University of Pittsburgh is finalizing its research with the 101st Airborne Division (Air Assault) which will conclude in February 2013. Initiated in 2006, the overall objective of the research was to optimize physical readiness and performance and mitigate unintentional musculoskeletal injuries in the Soldier. Utilizing injury epidemiology and laboratory testing of 1000 test sessions of Soldiers, researchers developed the Eagle Tactical Athlete Program (ETAP) to replace the physical training program previously performed by the Division. The ETAP Instructor Certification School (ICS) was also developed as one of the Division's individual training courses as the means by which ETAP would be implemented throughout Division physical training. Over 3000 Soldiers were studied during tactical preparation exercises, at the University of Pittsburgh Warrior Human Performance Research Laboratory, and garrison and deployment environments. An additional 2000 Soldiers were certified through the ICS.



pelvic regions

ETAP knowledge transfer will be provided to the Division for continued implementation of a scientifically designed and validated injury prevention and human performance physical readiness program.

Key research accomplishments:

- Demonstrated improvements in musculoskeletal and physiological characteristics necessary for tactical readiness
- Demonstrated improvements in performance testing and the Army Physical Fitness Test
- ETAP successfully implemented by ICS Certified 101st Airborne Division (Air Assault) Non-Commissioned Officers at the unit level
- Significant reduction in preventable musculoskeletal injury rates including overuse injuries and injuries to the upper extremity, lower extremity, knee, and lumbo-

This work was supported by the US Army Medical Research and Materiel Command (Research grant USAMRMC/TATRC # W81XWH-06-2-0070/W 8 1 X W H - 0 9 - 2 - 0 0 9 5 / W81XWH-11-2-0097). Opinions, interpretations, conclusions, and recommendations are those of the author and not necessarily endorsed by the US Army.



## US Army Special Operations Command



skeletal injuries in Special Forces. To date 80 subjects have been participated with enrollment to continue through 2013.

This work was supported by the US Army Medical Research and Materiel Command (Research grant USAMRMC/TATRC # W81XWH-11-2-0020). Opinions, interpretations, conclusions, and recommendations are those of the author and not necessarily endorsed by the US Army.

Initiated in April 2012, our research with US Army Special Operations Command (USASOC) will test the effectiveness of its Tactical Human Optimization, Rapid Rehabilitation, and Reconditioning (THOR3) program to induce adaptations in human performance characteristics and mitigate unintentional musculo-



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## Naval Special Warfare Group 4 - Special Boat Team 22



musculoskeletal, and physiological characteristics. Upon completion of data analysis, Phase 3 research activities will be implemented to test the effectiveness of a SWCC-specific Tactical Athlete Program to improve/maintain physical readiness characteristics given the varied training environments.

This work was supported by the Office of Naval Research, Grant #N00014-10-1-0912/N00014-1-11-0929.



Initiated in 2010, Phases 1-2 research activities with Naval Special Warfare Group 4 (NSWG4) and Special Boat Team 22 (SBT-22) are being finalized having tested 200 Special Warfare Combatant-Craft Crewman (SWCC). Data analysis will address the immediate needs of the SWCC by identifying specific suboptimal biomechanical,

## Naval Special Warfare Group 2



induced adaptations in physiological and tactically-relevant performance. Further research is necessary to test the effectiveness of TAP to address improvements in injury mitigating characteristics

and to reduce unintentional musculoskeletal injuries.

This work was supported by the Office of Naval Research, Grant #N00014-11-1-0929.



Based on scientific evaluation of physical, physiological, and tactically-relevant characteristics in Naval Special Warfare (NSW) Operators tested during Phases 1-2 of this research, the Tactical Athlete Program (TAP) was designed/refined to address immediate and long term needs of the Operators. TAP was designed to elicit improvements in physical readiness, while concomitantly reducing the risk of overtraining and injury with concurrent tactical training. Implementation of TAP

## Naval Special Warfare SQT/CQT

deployments. This research will also establish baseline data for Force-wide interval testing to assess career decrement and injury prevalence, reference following injury, and effectiveness of TAP to improve physical readiness. To date, 162 students have been tested during Phases 1 and 2 of research.



Initiated in February 2012, our research with NSW SQT/CQT will provide base line data for analysis to determine direct and long-term career needs for the Operator. The data will identify physical, physiological, and nutritional characteristics requiring immediate need for improvement and preventative strategies in SQT/CQT students based on tactical requirements and as compared to Operators with higher years of service and



*“ Ultimately, UPitt will help us improve our human performance and sports medicine testing, training, rehabilitation, and nutrition protocols...They will help us discover where our operators have opportunities for improvement, and assist us in implementing scientifically-based strategies to facilitate resilience and rapid recovery.”*

**Capt. Scott R. Jonson,  
MSC, USN,  
Former Deputy Force  
Medical Officer,  
US Naval Special  
Warfare Command**

## Personnel Spotlight: Fort Bragg, NC USASOC



Julie is an Assistant Professor at the University of Pittsburgh in the Department of Sports Medicine and Nutrition. She received her PhD in Exercise Physiology from Texas A&M University in 2011 and her Masters Degree in Exercise Physiology from the University of Texas at Arlington in 2005. She has previously worked in the Exercise and Sport Nutrition Lab at Texas A&M University coordinating research studies related to improving health, body composition and exercise performance. She has also worked as a Research Coordinator for Spinal Cord Injury Research at the Baylor Institute of Rehabilitation in Dallas, Texas. Her research interests include the utilization of exercise training and nutrition for the improvement of physical performance in trained or athletic populations.



Tony is an Instructor at the University of Pittsburgh in the Department of Sports Medicine and Nutrition. He returns to the University of Pittsburgh, where he completed his Bachelor's degree in Athletic Training and his Master's degree in Sports Medicine and Nutrition. He previously served as the certified athletic trainer for the University of Pittsburgh's baseball team. He has also worked for UPMC's Center for Sports Medicine as a Certified Athletic Trainer and completed an athletic training internship in the NFL with the New York Giants. Tony's research interests include the prevention of musculoskeletal injuries and identifying risk factors for musculoskeletal injury in athletic and military populations.



Amanda is an Instructor at the University of Pittsburgh in the Department of Sports Medicine and Nutrition. She completed both her Bachelor's and Master's degrees in Health, Exercise, and Sport Science at The Citadel. She assisted in both laboratory and classroom instruction in required physical education courses at The Citadel. She has five years of experience working with the Navy and Air Force military fitness training and testing. Her research interests are in optimizing human performance of tactical athletes, health education, and a proactive approach to preventing musculoskeletal injury.

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