

## **CRITERION VI.: RESEARCH**

**The program shall pursue an active research program consistent with its mission, through which its faculty and students contribute to the knowledge base of the public health disciplines, including research directed at improving the practice of public health.**

In the recent past, the University has placed increasing emphasis on research. The Dean of the School of Medicine (SOM) promotes research as an important component of scholarly activity. He has encouraged greater research productivity by both civilian and military faculty. To support this goal, the Vice President for Financial Management has increased financial resources to support intramural research and to improve the laboratory infrastructure at the University. The current Vice President for Research has aggressively sought ways to make the University faculty more competitive in obtaining extramural funds and to facilitate grant submission procedures. Funding by the National Institutes of Health (NIH) carries special weight as a metric for comparing research productivity with other Schools of Medicine.

The Chair of the Department of Preventive Medicine and Biometrics (PMB) is an active laboratory scientist with a P01 grant from NIH and other external grants, and has made it his goal to strengthen the Department's research program. He appointed a Vice Chair for Research and Faculty Development to assist the PMB faculty in pursuing an active and diverse research program consistent with the mission and goals of the Department and the University, and which also complements the Department's instructional programs. The mission-related nature of the research activities is reflected throughout the full range of public health subspecialties and by the unique orientation of the program towards studies of military personnel and their dependents. The local research institutes (i.e., NIH, Walter Reed Army Institute of Research, Naval Medical Research Center), as well as University and Departmental policies and procedures, provide a setting for the involvement of faculty and students in basic and applied research directed at extending the knowledge base of the public health disciplines and improving the practice of public health.

**VI.1. A description of the program's research activities, including policies, procedures and practices which support research and scholarly activities.**

### **a. USUHS**

The Office of Research Administration, headed by the University Vice President for Research, provides full administrative support for grants management, including coordinating communications between the various assurance committees and the principal investigators. It also administers an intramural grants program, receiving applications from investigators, coordinating their initial and ongoing review, and providing administrative support functions. In addition, the University established a Biostatistical Consulting Center to assist faculty and students with all phases of statistical analyses, from study design and development to study implementation and reporting of results. The Biostatistical Consulting Center is housed within the PMB Department.

Guidelines for applying for research funding, both intramural and extramural are on the University website at <http://usuhs.mil/research>. Several types of intramural funding are available to both students and faculty.

## **FUNDING MECHANISMS FOR STUDENTS**

**Graduate students:** Funding for masters thesis and doctoral dissertation awards are overseen by Program Directors and the Associate Dean for Graduate Education within the School of Medicine or Graduate School of Nursing and administered by the Office of Research. Applications must be submitted through the Office of Research to ensure that approvals from all relevant assurance committees are in place before funds are released.

**Medical students, residents, and clinical fellows:** Applications and awards for medical students, medical residents, and those in accredited clinical fellowship programs are administered by the Office of Research. Proposals from medical students and medical residents are reviewed by an ad hoc committee and funded on a rolling basis year-round. Proposals from clinical fellows are reviewed up to three times a year by a standing University committee.

## **INTRAMURAL FUNDING MECHANISMS FOR FACULTY**

Eligibility for funding from the University's intramural program is restricted to billeted civilian and uniformed faculty members at the academic rank of Full, Associate, or Assistant Professor. Civilian faculty members must derive at least 50% of their salaries from USUHS-appropriated funds. Billeted research-track faculty members are eligible only for standard and exploratory awards.

### **Award Types**

**Standard:** Applicants for standard funding can request up to \$20,000 per year for up to three years, regardless of whether the PI is new or experienced. (The old, two-tiered funding structure has been eliminated). Available funding for approved standard protocols is determined each fiscal year, based on the size of the University's actual research appropriation. In recent years, the funding level has been consistent at 90% of the approved project budget.

**Exploratory:** Applicants can request up to \$150,000 per year over a 24-month project period. Some restrictions are waived for these applications, but the proposal must demonstrate that the personnel and equipment requested are necessary to the work and not otherwise available to the study team. Due to funding guidelines for the research, development, technology and evaluation (RDTE) appropriation that supports this type of grant, exploratory applications must address questions in infectious diseases, combat casualty care, or military operational medicine. From time to time, a more targeted request for applications within those categories may be issued based on guidance from one or more of the DoD agencies that monitors the University's research.

**Instructional:** Instructional applications must propose research projects regarding innovative instructional methods (versus faculty development, course development, or course or program evaluation). These applications, which may include budget requests up to \$10,000 for up to 2 years, will be peer-reviewed by the SOM Educational Research Committee and composed of SOM faculty with expertise in both teaching and instructional research.

**Pilot:** This category includes all of the small awards formerly reviewed under separate categories as starter, pilot, and special awards. Funding may be requested for up to \$10,000 for up to two years. These projects should be short-term studies designed to collect preliminary data for a subsequent grant application, either intramural or extramural.

In the last year, the University has greatly expanded the funding opportunities for new civilian tenure-track faculty; this is negotiated as part of the hiring package, and is not part of the competitive grant process. The maximum funding for new civilian faculty is \$50,000 per year for up to three years. It is intended to cover the costs of research supplies, essential equipment, and up to two years salary for a post doctoral fellow. A Departmental mentoring committee of three senior faculty members oversees the progress of the new faculty member in research to help insure that research tenure requirements are achieved. New faculty members who negotiate research support as part of their hiring package are not eligible for other simultaneous intramural funding.

The University provides or arranges for annual continuing education offerings to ensure that investigators are up to date on research ethical issues, HIPAA privacy requirements, and other research topics. In addition, the Henry M. Jackson Foundation for the Advancement of Military Medicine also sponsors workshops in grantsmanship.

#### **b. Department of Preventive Medicine and Biometrics**

In 2004, the Department hired a grants coordinator through the Henry M. Jackson Foundation for the Advancement of Military Medicine (HMJF). The grants coordinator works with investigators applying for extramural research funding, by offering advice and assistance in preparing the submission, thus streamlining this process within the Department. Once funding is obtained, this coordinator also assists faculty with administrative functions such as hiring, budget, management, and progress report submission. The Department also lists research interests of some faculty members in its directory on the PMB website in order to guide students to possible research mentors.

As part of their course of study, students in the Master of Public Health and Master of Tropical Medicine and Hygiene are required to complete an independent project to demonstrate their ability to synthesize, integrate, and apply the knowledge and skills acquired through their coursework. Working with a project mentor, students conduct a research project, including, in most cases, formulating a focused research question around a health problem or issue, conducting a systematic review of the scientific literature, developing a research protocol, obtaining necessary institutional assurances and approvals, collecting data, selecting and applying appropriate analytic techniques, and interpreting and communicating study findings to faculty and students. The students also have access to the University

Biostatistical Consulting Center for assistance with the analytical portion of their research projects. A listing of independent projects is included in *Attachment VI-1*.

Students pursuing the Master of Science in Public Health (MSPH), Doctor of Public Health (DrPH) and Doctor of Philosophy (PhD) degrees must complete independent, original research, culminating in a written thesis and thesis defense. A listing of theses in the Department of Preventive Medicine and Biometrics from 1 January 2002 to 31 December 2004 is shown in *Attachment VI-2*.

### **c. Henry M. Jackson Foundation for the Advancement of Military Medicine**

The Henry M. Jackson Foundation (HMJF) was named in honor of Henry "Scoop" Jackson, the late Senator from the State of Washington, and embodies his long-standing commitment to military medicine and public health. The HMJF ranks among the top 5% of all organizations receiving funding from NIH, and most of this research is conducted at USUHS. It offers comprehensive technical and administrative support services to USUHS scientists conducting biomedical research, education, and training programs. The Foundation provides assistance with investigator-initiated research proposals to NIH, other government agencies, and private sponsors. It also fosters cooperative relationships between the private sector and the Federal medical community. The HMJF website is at <http://www.hjf.org>.

HMJF has programs at USUHS, its four affiliated teaching hospitals, military research institutes, and many other military medical centers across the country. It currently administers hundreds of government and privately-sponsored basic and applied research projects in collaboration with USUHS academic departments. The Foundation assists investigators in obtaining research funds by maintaining a database of military researchers and their areas of interest identifying potential funding sources and soliciting clinical protocols, assisting in proposal preparation and negotiated agreements, and conducting periodic grantsmanship workshops.

Clinical trials enhance patient care and provide military medical facilities with additional resources. The Foundation promotes the capabilities of the military medical community to private industry and solicits clinical trial protocols to be conducted at military medical facilities. It negotiates research agreements with private companies and provides full support during study implementation.

Technology transfer offers Federal institutions and scientists financial rewards, recognition, and support for additional research and development, while promoting the development and utilization of new medical products. The Foundation provides advice and assistance to investigators who wish to pursue patents and commercial development of their discoveries. The Foundation can patent, license and market intellectual property for military and other Federal agencies through cooperative agreements.

The Foundation provides a unique service to USUHS and other Federal institutions and scientists by securing and administering funds from private companies to meet special non-budgeted needs. This service is provided through special project funds and endowments.

These funds foster graduate and continuing medical education by supporting visiting speakers, seminars, and other special events, including awards for research excellence. In some cases, the Foundation offers direct financial support to faculty and students in the form of bridge grants or limited stipends.

### **Organizational Relationships**

The University has close relationships with several Federal health facilities that offer many opportunities for research collaboration and scientific interchange. These include the National Institutes of Health, the Walter Reed Army Medical Center, the Walter Reed Army Institute of Research, the National Naval Medical Center, the Naval Medical Research Center, the Armed Forces Institute of Pathology, the U.S. Army Center for Health Promotion and Preventive Medicine, the U.S. Army Medical Research and Materiel Command, and the Armed Forces Radiobiology Research Institute. The location of the University within the Department of Defense facilitates opportunities to interact with preventive medicine components of foreign militaries, both in terms of scientific exchange and research collaboration. One component of the Department of Defense that contributes to the foreign activities is the network of overseas laboratory activities in Peru, Egypt, Thailand, and Indonesia, as well as a collaborative relationship with a laboratory in Belize. These unique organizational relationships contribute to a rich environment for conducting preventive medicine research.

The University itself is a rich environment for scientific interchange and research collaboration. There are three major interdisciplinary graduate education programs with faculty from many departments, including PMB. These programs are in Molecular and Cell Biology, Emerging Infectious Diseases, and Neuroscience. In addition, there are a number of special interest groups in the University, such as the Tropical Medicine Interest Group, as well as a Preventive Medicine Interest Group to promote the medical specialty of Preventive Medicine/Public Health. These programs and groups foster communication among scientists and enhance the ability of researchers to remain on the cutting edge of their areas of specialization.

### **Centers for Preventive Medicine and Public Health**

The Centers for Preventive Medicine and Public Health, within the PMB Department, operates under terms of a memorandum of understanding with the Henry M. Jackson Foundation for the Advancement of Military Medicine. Combining broad expertise in research, consultation, education, training, and clinical preventive medicine and public health, the Centers develop databases and analytic methodologies, conduct population-based studies, prepare innovative curricula, and evaluate processes and outcomes in clinical practice.

The Centers serve program managers and policy makers in the Department of Defense, other Federal agencies, local governments and private organizations concerned with health policies and services. They coordinate the resources of multiple separate centers of excellence to ensure that the appropriate collective expertise is available. They enhance the stability and long-term effectiveness of the parent organization by attracting, retaining, and providing for

the professional growth of outstanding faculty and staff, by providing high quality educational experiences to our students, and by promoting excellence in clinical preventive medicine and public health. The seven individual Centers are described below.

The Center for Force Health Protection Studies conducts a comprehensive research program on the short- and long-term health outcomes associated with military service, in particular, the conditions and experiences associated with training, deployment, combat, and humanitarian/disaster relief operations. This Center promotes the use of a systematic, scientifically rigorous process to evaluate disease and non-battle injuries in our military and veteran populations in order to guide health policy development. Its goal is to enhance the scientific knowledge base for military public health and to develop recommendations for preventive health interventions.

The Center for Population Health is an integral part of the research, service and educational activities of the Division of Health Services Administration. This Center provides expertise and experience in assessing quality of care for populations, analyzing large databases to determine trends in population health, the efficiency and effectiveness of healthcare delivery, and the relationship of practice patterns to outcomes. In addition, faculty and staff associated with this Center develop innovative educational curricula and provide training to federal health care executives and managers to create, manage and improve high quality systems.

The Center for Application of Remote Sensing and GIS in Public Health (Landscape Epidemiology) conducts basic landscape epidemiological research using remote sensing (RS), geographic information systems (GIS), and other technologies to protect the environment and improve public health. Faculty and staff associated with this Center compile satellite and earth-based data to identify relationships between environmental parameters and human health. This information is used to predict the temporal and spatial distribution of diseases, as well as the impact of environmental perturbations on health.

The Center for International Health advances the tenets of preventive medicine and public health in the tropics and in developing regions of the world, with specific reference to health-related operations and interests of the Department of Defense, other Federal agencies, local governments, and private organizations. This Center promotes, facilitates and implements programs of research, consultation, education, and training in the related disciplines of tropical public health, tropical medicine, and environmental health in the developing world.

The Center for Oral Health Studies provides oral health care services information and dental public health education to the Department of Defense, the Tri-Service Dental Corps Chiefs, and other interested organizations. This Center gathers, synthesizes, and distributes management information needed to develop oral health care policies and programs necessary to optimize the oral health of Department of Defense beneficiaries and the dental readiness of service members.

The Center for Environmental and Occupational Health provides research, consultation, education, and training support in environmental and occupational health to government entities and educational institutes. The main areas of interest for this Center include policy

development, education and training, health risk and hazard assessment, standards setting, resource management, regulatory compliance, pollution prevention, and environmental restoration.

The Center for Ergonomics and Workplace Health focuses on an integrated approach to ergonomics and occupational health, targeting both the civilian and military workplace. Research within this Center is directed at understanding the interactive roles of medical, biomechanical, organizational, workplace, and individual psychosocial factors in the etiology, prevention, and management of highly prevalent occupational health problems.

A copy of the Centers' Annual Reports the past year may be found in *Appendix II-1*. This report contains detailed information on research and educational projects undertaken by the individual Centers.

**VI.2. A description of the current community-based research activities and/or those undertaken in collaboration with health agencies and community-based organizations. Formal research agreements with such agencies should be identified.**

**Community-based research or collaboration with other agencies**

Departmental faculty members are involved in a number of different community-based research activities and/or collaborative activities in partnership with health agencies and community-based organizations, both in the United States and overseas (*Attachment VI-3*). An example of community-based research in the United States is behavioral science research on the prevention of toddler drowning and access to cancer screening. An example of community-based international research is a longitudinal research project the Division of Tropical Public Health has been conducting in Peru on the epidemiology of bartonellosis in small rural communities in the Andes Mountains. This research is being done in collaboration with the Peruvian Ministry of Health and was funded by the National Institutes of Health (NIH), the National Oceanographic and Atmospheric Administration (NOA), the National Aeronautics and Space Administration (NASA), and USUHS. Another PMB Department overseas collaboration involves evaluating the risk of malaria transmission in rural Belize with the Belizean Ministry of Health (funded by NIH, NASA, and USUHS). Other examples include: collaborative international study of potential health effects of the 1991 Gulf War on Saudi Arabian National Guard soldiers involving the Saudi Arabian Ministry of Health, King Abdul Aziz Medical City, USUHS, Centers for Disease Control and Prevention, and Naval Health Research Center (NHRC); DoD-Department of Veterans Affairs (VA) collaboration on study of fatal motor vehicle crashes in returning combat veterans; and a large-scale, 21-year prospective cohort study of 140,000 military service members with collaboration across all three Service branches, the VA, and USUHS. With the principle in mind that the main community served by the PMB Department is the Department of Defense (DoD), it can be considered that many additional projects are community-based. Examples include studies of risk factors for hyperbaric pressure injuries in aviators, and of leishmania infections in troops returning from Iraq and Afghanistan. Additional examples of collaborative community-based research projects include effort to develop vaccines for biodefense as part of the Mid-Atlantic Regional Center for Excellence in Biodefense Research, and to develop a vaccine for prevention of HIV infections in collaboration with the China Center for Disease Control and Prevention, NIH in the US, and the Paul Erlich Institute in Germany. In addition, our faculty and students often participate in collaborative, DoD community-based research in the absence of specific grant funding.

**VI.3. A list of current research activity, including amount and source of funds, over the last three years.**

*Attachment VI-3* shows current research funding with information on funding agency, amount of funding, whether the research is a community-based, interagency collaboration, and if there is a formal Interagency Agreement (IAA). Additional details, including the title and description of current research is included in *Appendix VI-1*.

**VI.4. Identification of measures by which the program may evaluate the success of its research activities, along with data regarding the program's performance against those measures over the last three years.**

The evaluation measures used to measure success were: 1) the extent to which the research program addresses the mission of the organization and the stated goals of the instructional program; 2) research funding; 3) publication of research results; 4) existence of collaborations and formal agreements with outside health agencies; and 5) student involvement in research activities.

**Mission and instructional programs:** The research-related goal of the Department is to enhance health in human populations through research that supports and improves programs in preventive medicine, community health, and health promotion in the Uniformed Services. The goals of the instructional programs are to provide students with the necessary background to practice as competent public health officers in the Uniformed Services. The goal of the PhD programs in environmental health sciences and medical zoology is to develop independent scholarship, originality, and competence in research, teaching and professional service. The research program addresses the mission and the goals of the Department's instructional program. A review of research activities in *Attachment VI-3* shows that the research program addresses diverse topics of public health relevance, most of which have significant implications for health of Uniformed Services communities.

**Research funding:** Detailed information on grants held by Departmental faculty during the reporting period (1 January 2002 to 31 December 2004) is presented in *Appendix VI-1*. The following items are addressed: 1) Division in which the grantee belongs 2) title of grant, 3) funding agency, 4) start and end dates of grant, 5) amount of funds, 6) whether research is community based, 7) whether it is a collaborative project with an outside agency, and 8) whether an interagency agreement existed during the reporting period. Extramural grants were funded by a variety of agencies, including the following: DoD, NASA, NIH, National Science Foundation, NOAA, Environmental Protection Agency, and Food and Drug Administration. Intramural grants were funded by USUHS. Eighty-six percent (44/51) of the grants address military-relevant issues, including tropical disease prevention and control, health effects of radiation exposure and environmental contaminants, and health care management policy research, and health outcomes related to military deployment. Many of our grants address the needs of our community, the Uniformed Services. Others address community needs in overseas locations.

**Publications:** The University actively encourages their faculty to publish research results in peer-reviewed publications. The James A. Zimble Learning Resource Center (LRC) assists faculty with literature searches, and supplies other research tools, including databases, full-text references, a listing of USU dissertations and theses, research guides in specific subject areas (for example, bioterrorism), and a faculty publications database. The faculty publications for the last three years are shown in *Attachment VI-4*. There were 184 scholarly publications, not including a large number of abstracts and presentations.

**Collaborations with outside agencies:** The Department has numerous collaborative research arrangements with other US government agencies, domestic and foreign universities, and domestic and foreign health agencies. These collaborations contribute to the diversity of research activities and provide opportunities for students to participate in health agency and community-based research activities.

#### **VI.5. A description of student involvement in research.**

Graduate students routinely participate in research projects. MPH and MTM&H students must complete an independent project as a required component of their graduate degree program (*Attachment VI-1*). The MSPH, DrPH and PhD candidates conduct research leading to the completion of a thesis or dissertation (*Attachment VI-2*). Some students participate with faculty in research to earn additional elective credits. Research completed by PhD candidates is routinely published. In the list of faculty publications over the last three years, students appear (shown in bold font in *Attachment VI-4*) as co-authors in over 50 of the 184 articles listed.

#### **VI.6. Assessment of the extent to which this criterion is met.**

##### **VI.6.a. Strengths**

The University and PMB Department have made significant efforts to encourage research by both faculty and students by increased intramural funding support and through hiring a grants manager to assist investigators with obtaining extramural funding. A robust research enterprise within the Department is essential to attract and support masters and doctoral students to our graduate degree programs.

The University and Department collaborations with a variety of other federal entities, including the National Naval Medical Center, Walter Reed Army Medical Center, Walter Reed Army Institute for Research, and the National Institutes of Health, provide abundant opportunities for graduate student involvement in research activities.

Many members of the faculty, both those on active duty and those retired from the military, come to USUHS with a great deal of research experience from their past assignments, within the United States as well as overseas. Thus, many of our faculty members have contacts outside the University that provide opportunities for further collaboration.

**VI.6.b. Weaknesses**

Military faculty are not assured of being assigned to USUHS for a sufficient length of time in order to be competitive for extramural grants.

**VI.6.c. Recommendations**

The University and Department should continue to make a concerted effort to recruit military faculty who have research as well as teaching experience. Faculty coming to the University with previous research experience might be able to compete for extramural research funding. Enhanced mentoring by senior PMB faculty members for incoming military faculty might also enhance chances for success.

**This criterion is met.**

## Attachment VI-1. MPH Student Independent Research Projects

CLASS OF 2002		
Student Name	Degree	Project Title
Gary Carter LT, USPHS Ind Hlth Srv	MPH	Estimation of the Solid Phase Microextraction Distribution Coefficient for Naphthalene
John Completo CPT, MC, USN GPM Res (WRAMC)	MPH	What is the Relationship Between Military Deployment and Self-Assessed Health Status? A Secondary Analysis of the 1998 Department of Defense Survey of Health-Related Behaviors Among Military Personnel
Byron Connor LCDR, MC, USN OEM Res	MPH	Estimation of the Solid Phase Microextraction Distribution Coefficients for Naphthalene Using the Linear Temperature-Programmed Retention Index System
James Dunn CDR, MC, USN OEM Res	MPH	Survey of Laser Injury
Scott Eader CPT, MC, USA GPM Res (Madigan)	MPH	Department of Defense Pharmacy Data: A Prescription for Surveillance of Respiratory and Gastrointestinal Illness
Michael Feuerstein Civilian PhD (Med Psych Fac)	MPH	National Trends in Outpatient Health Care for Non-Specific Back Pain
Joseph Flynn MAJ, MC, USA Oncology Fellow	MPH	Analysis of Banked Sera for Molecular and Biochemical Changes Associated with Development of Breast Cancer
Tara Hall CPT, MSC, USA	MSPH	The Use of Solid-Phase Microextraction in the Assurance of Safe Drinking Water
Michael Hartzell LtCol, USAF, BSC AF PHO	MPH	How Effective is DoD in the Delivery of Preventive Medical Services Using Childhood Immunization as a Marker?
Paul Hemmer LtCol, USAF, MC Int Med Faculty	MPH	Can Medical Students Accurately Self-Assess Using Standard, Descriptive Vocabulary?
Brian Hroch LT, USPHS Ind Hlth Srv	MPH	Assessing the Performance of the Non-Equilibrium Model in Predicting Occupational Inhalation Exposures From Indoor Hazardous Material Releases of Formaldehyde
Eric Kasowski LCDR, MC, USN OEM Res	MPH	A Descriptive Study of Laboratory Abnormalities in U.S. Navy Security Forces
Nathalie Keeler Capt, USAF, BSC AF PHO	MPH	Laser Eye Injuries Among Air Force Personnel
Gregory Kimm	MSPH	Application of Headspace Solid Phase Microextraction and Gas Chromatography/Mass Spectrometry for Rapid Detection of the Chemical Warfare Agent Sulfur Mustard
Joyce Lapa CAPT, MC, USN GPM Res	MPH	Statistical Power in Randomized Controlled Trials
Keegan Lyons Capt, USAF, MC OEM Res	MPH	A Study of the Influence of Media Events on Anthrax Vaccine Adverse Event Reporting System (VAERS) Reporting Rates
Paul Maher LT, USPHS FDA	MPH	A Descriptive Analysis of the Office of Orphan Product Development Grants Program
Charles McCannon LCDR, MC, USN GPM Res	MPH	TRICARE Network and Non-Network Ambulatory Pharmacy Usage Rates of Retired Uniformed Service Retirees and Family Members Near VHA Facilities

CLASS OF 2002		
Student Name	Degree	Project Title
Michael Meier LCDR, MC, USN OEM Res	MPH	Factors Predicting Disability in Enlisted Marines
Helena Mishoe CAPT, USPHS FDA	MPH	Attitudes, Perceptions, and Practices in Clinical Trials: A Study of Physician Characteristics
Len Murray MAJ, VC, USA LAM	MPH	<i>Helicobacter pylori</i> as a Risk Factor in Rhesus Monkeys ( <i>Macaca mulatta</i> ) Exposed to <i>Shigella flexneri</i>
Tram Nguyen Civilian (Vietnam)	MPH	Correlation Between Weather and <i>Cyclospora</i> Concentration Isolated From Natural Water in Hanoi's Lakes and Rivers
Jose Ortiz MAJ, MC, USA OEM Res	MPH	Patient Satisfaction with Integrated Case Management
Chris Robinson Maj, USAF, BSC Clin Psych (Fam Med Fac)	MPH	Development of the Cultural Sensitivity Measure: Preliminary Results
James Sheehan MAJ, MC, USA GPM Res (Madigan)	MPH	The Cost-Effectiveness of the Army's Aeromedical Evaluation of Asymptomatic Left Anterior Hemi-Block: Is It a Good Screening Tool for Coronary Heart Disease?
Michael Staker CPT, MC, USA OEM Res	MPH	When City Buildings Fall and Burn:
Astri Szeto LCDR, USPHS FDA	MPH	Can Low and Ultra-Low Dose Toxin Exposure Protect Against Biological and Chemical Attack? A Systematic Review of the Literature
Ting Tai CPT, MC, USA OEM Res	MPH	Finding Predictors of Progression Through the Stages of Change Model for Smoking Cessation in a Sample of Active Duty Army Personnel-
Maria Thomas-Fuentes Civilian (FDA)	MPH	Medication Errors Associated with Serious Outcomes: Five-Year Study of Post-Marketing Reporting to the Food and Drug Administration
Venita Thornton LCDR, USPHS LAM	MPH	Multiple Sclerosis: Research Model Refinement
Jeanne Tofferi	MPH	Treatment of Fibromyalgia with Cyclobenzaprine: A Meta-Analysis
Ian Torrie Lt, Canadian Forces Medical	MPH	Are Models Describing Risk Factors for Work-Related Upper Extremity Disorders Improved by Considering Health Behaviors?
Andrew Vaughn LCDR, MC, USN	MPH	A Cost-Effectiveness Analysis of Hepatitis B Immunization Strategies at Recruit Accession into the U.S. Military

CLASS OF 2003		
Student Name	Degree	Project Title
David Bentzel CAPT, VC, USA LAM	MPH	Susceptibility to Intratracheal <i>Klebsiella Pneumoniae</i> and Efficacy of Therapeutic Drugs in Mice
Sven Berg LtCol, USAF, MC Intl Hlth	MPH	Comparison of Cesarean Section Rates Among Military Beneficiaries Delivering in Military and Civilian Hospitals in Puerto Rico
Stacey Branch Capt, USAF, MC RAM	MPH	Assessing Changes in Self-Perceived Health Status from Pre- to Post-Deployment Among Army and Air Force Personnel Deployed Between 2000 & 2002
Stephanie Buffett Capt, USAF, NC Intl Hlth	MPH	Prevalence of Malnutrition in Rural Honduran Children
Jon Champine Civilian Aerosp Phys	MPH	Has Centrifuge-Based Flight Environment Training Reduced Occurrence of Gravity-Induced Loss of Consciousness in Naval Aviators?
Paul Ciminera CPT, MC, USA GPM (WRAMC)	MPH	A Proposal to Compare Gas Emboli Production During Bipolar and Monopolar Myomectomy Procedures
Claude Cowan Civilian (VA Ophth)	MPH	Do the Results of a National Survey on Eye Health-Related Behaviors Support or Reject the Health Belief Model?
Colleen Daniels CPT, SP, USA Occup Ergonomics	MPH	Validation of a Self-Report Measure for Low Back-Related Biomechanical Exposures in a U.S. Army Population
Mark Duffy Capt, USAF, BSC AF PHO	MPH	Is Self-Assessment of General Health Condition Post-Deployment Related to Post-Deployment Hospitalization?
Stephen Felt MAJ, VC, USA LAM	MPH	In-vivo Monitoring of Intratracheal Bioluminescent <i>Klebsiella Pneumoniae</i> and Efficacy of Therapeutic Drugs in Gamma-Irradiated Mice
Jose Fonseca-Rivera Maj, USAF, BSC Intl Hlth	MPH	Ethical Review of Biomedical Research in Latin America and the Caribbean: Comparison of Pan American Health Organization and Member State Ethical Committee Practices and Decisions
John Gibbons Maj, USAF, BSC AF PHO	MPH	Strategies to Prepare Veterinary Medicine for Opportunities and Responsibilities in the 21st Century
Francis Hall LCDR, MC, USNR GPM Res	MPH	Pes Planus Outcomes in Military Recruits
Christos Hatzigeorgious MAJ, MC, USA Int Med Fellow	MPH	HMG-Coa Reductase Inhibitors and Osteoporosis: A Meta-Analysis
Sarah Hinds CAPT, VC, USA LAM	MPH	Characterizing Cross Reactivity of Subtype Clade C HIV Type 1 from China with Chinese and Indian Sera Using a Neutralizing Antibody Assay
Suezane Holtzclaw LCDR, MC, USN OEM Res	MPH	Childhood Injuries from Ingestion of Consumer Products Containing N,N-Dimethyl-P-Toluidine and Nitroethane
Kenneth Jacobsen MAJ, VC, USA LAM	MPH	5-Androstene Steroids and Hemopoietic Syndrome in Mice
Jon Jacobson CPT, MC, USA OEM Res	MPH	Rescuing the Rescuers
Christopher Keller MAJ, VC, USA LAM	MPH	Susceptibility of Irradiated B6D2F1/J Mice to <i>Klebsiella Pneumoniae</i> Administered Intratracheally: A Pulmonary Infection Model in an Immunocompromised Host

CLASS OF 2003		
Student Name	Degree	Project Title
Monica Kueny LCDR, USPHS Coast Guard	MPH	Quality of Health Care Systems: Comparison in the US Coast Guard
Gregory Langham LT, VC, USPHS LAM	MPH	Measuring Laboratory Animal Room Particulate Matter as a Method for Assessing Individually Ventilated Caging Systems to Self-Containment
Joanne Leal CDR, DC, USN Dental PH	MPH	What are Predictors of Navy Dentistry Staff Satisfaction?
Steven Matis LCDR, DC, USN Dental PH	MPH	What Questions on the DoD Dental Patient Satisfaction Survey are Most Predictive of Reported Overall Patient Satisfaction for Patients Treated in Land-Based Navy Dental Corps Treatment Facilities During Financial Year 2002?
Nancy Merrill CPT, VC, USA LAM	MPH	What Factors Contribute to the Use of Rabies Post-Exposure Prophylaxis Treatment in Humans?
Amy Millikan CPT, MC, USA GPM (WRAMC)	MPH	Federal vs. Private Healthcare Delivery Systems: A Comparison of Performance Measures for the Management of Diabetes
Nathalie Morin Major, Army Canadian Forces Dental Services	MPH	Improving Oral Health Surveillance in Canada
Brian Mulhall MAJ, MC, USA GI Fellow	MPH	Exploring System- and Patient-Level Predictors of Adherence to Secondary Screening for Colorectal Carcinoma
Cara Olsen Civilian (Biostatistical Consulting Center)	MPH	Quality of Statistics in <i>Infection and Immunity</i> : A Systematic Review
Stephen Phillips LTC, MC, USA HSA	MPH	The Prevalence of Obesity-Related Morbidities in Adolescents in the Military Health System From 1998-2002
Joann Richardson Maj, USAF, MC Peds Inf Dis Fellow	MPH	Geographic Information Systems: Underutilized Tool in Health Promotion
Paul Seeman LCDR, MC, USN OEM Res	MPH	Trends in Avoidable Hospitalizations in the Military Health System
Larry Shelton CPT, VC, USA LAM	MPH	An Evaluation of the Department of Defense Equine West Nile Virus Surveillance Project
Evan Shukan Civilian DVM	MPH	An Evaluation of the Occupational Safety and Health Program in the Non-Human Primate Facilities at the National Institutes of Health
Kari Stone Capt, USAF, NC Intl Hlth	MPH	Exploring Factors Affecting Neonatal Mortality in Nepal
Christine Tabatzky Civilian MD (ENT)	MPH	Leading Causes of Death Among Children of Military Servicemembers: An Exploratory Study
Sharon White LCDR, USPHS FDA	MPH	Varicella Outbreak Investigation in Loudon County, Virginia
Kirk Winger Maj, USAF, BSC AF PHO	MPH	Assessment of a Rodent Population and the Disease Threat to Military Forces Deployed to a Coalition Base in Southwest Asia

<b>CLASS OF 2004</b>		
<b>Student</b>	<b>Degree</b>	<b>Project Title</b>
Kimberly Beck CPT, MC, USA OEM Res	MPH	Effects of Ionizing Radiation on Interventional Radiologists: A Mortality Study
Elizabeth Barbano MAJ, MC, USA Int Med Fellow	MPH	Microalbumin Use in Screening Hypertensive Patients for Chronic Kidney Disease: A Cost-Effectiveness Analysis
Michael Bonhage MAJ, VC, USA LAM	MPH	Is There an Association Between Measured Ambient Airborne Particulate (PM10) Concentrations and Upper Respiratory DNBI Rates in Active Duty Personnel Deployed to Two Military "Units" in Southwest Asia Between October 1999 and February 2002?
Lyndon Bowden III CPT, MC, USA GPM Res (Madigan)	MPH	A Structured Interview to Assess Qualitative Factors Associated with Attrition from USUHS Medical School
Sean Boyd LCDR, USPHS FDA	MPH	Comparison of Methods for Normalizing Patient Dose Data for Interventional Radiology Procedures
Lorie Brosch LtCol, USAF, MC GPM Res	MPH	Drug Utilization in the Medicare Eligible DoD TRICARE Beneficiary Population: A Descriptive Analysis
David Cockrum Maj, USAF, MC RAM	MPH	Evaluation of Surveillance Practices for Ocular Laser Injuries
Brad Cogswell Capt, USAF, MSC Intl Hlth	MPH	Humanitarian Assistance After-Action Reports: Process, Standardization and Dissemination
David Cramer LCDR, USPHS Ind Hlth Srv	MPH	WebCident: Analysis of Safety & Infection Control Incidents in the Indian Health Service
Melinda Eaton Capt, USAF, BSC AF PHO	MPH	Communication of Evidence-Based Education
Wayne Hachey LTC, MC, USA HSA (Peds)	MPH	Evaluating Concordance in Hospital Bioterrorism Preparedness Assessment Tools
Dale Harman LCDR, MC, USN OEM Res	MPH	Descriptive Analysis of Injuries and Illnesses in U.S. Military Members Who Were Aeromedically Evacuated From the Theater of Operations During Operation Iraqi Freedom
Nishith Jobanputra LCDR, MC, USN GPM Res	MTM&H	A Case-Control Analysis for the Diagnosis of Tuberculous Meningitis
Bradford Lang Civilian (attorney)	MPH	Collaborative Competency-Based Medical Education
James Lawler LCDR, MC, USN Inf Dis Fellow	MPH	Analysis of Results of Whole Blood PCR for Vaccinia Virus and Common Serologic Tests Following Vaccination with Dryvax Smallpox Vaccine
Thomas Luke LCDR, MC, USN GPM Res	MPH	Determine an Optimized Method to Aseptically Raise Anopheles Mosquitoes
Anne MacLarty MAJ, VC, USA LAM	MPH	Use of Animal Syndromic Surveillance as a Tool for Detecting Bioterrorism Events and Human Disease Outbreaks

<b>CLASS OF 2004</b>		
<b>Student</b>	<b>Degree</b>	<b>Project Title</b>
Brian Moore Maj, USAF, BSC Intl Hlth	MPH	A Descriptive Study of HIV/AIDS Clinical Training Programs Using the Content Analysis Model Through a Pilot Study Comparison of Curricula
Gregory Ostrander, MAS LT, MSC, USN Aerosp Phys	MPH	Study of Hypoxic Hypoxia Incidence in Naval Aircraft: Do Aircraft Equipped with Onboard Oxygen Generating Systems Have a Higher Hypoxia Incidence than Similar Models with Other Installed Oxygen Systems?
William Otto, MD CPT, MC, USA OEM Res	MPH	Attrition Rates for Military Recruits for Myopia
Christine Poel, DVM Maj, USAF, BSC AF PHO	MPH	United States Air Force Weapons Handling Mishap Study
Elsbeth Richie, MD COL, MC, USA Prev Psych Fellow	MPH	Assessing Mental Health Needs and Resources in Iraq: Development of Survey Tool
Paul Rockswold, MD CDR, MC, USN GPM Res	MPH	Differential Mortality by Educational Attainment in 25-64 Year Olds in the US during 2000, Stratified by Sex and Race
Richard Schaefer COL, MC, USA Ortho	MPH	The Frequency and Distribution of Sarcomas in the Military Healthcare System
Monica Selent, DVM Capt, USAF, BSC Intl Hlth	MPH	Correlation Between Measured Ambient Airborne Particulate Matter (PM10) Concentrations and Ophthalmologic Disease-Non-Battle Injuries
Mark Strauss LT, USPHS Indian Hlth Srv	MPH	Indian Health Service Compliance with Occupational Safety and Health Administration (OSHA) Guidelines for Controlling Occupational Exposure
Julia Sundstrom Capt, USAF, BSC Aerosp Phys	MPH	Environmental Conditions Leading to Class A Spatial Disorientation Mishaps in U.S. Air Force Fighter Operations
Johann Westphall, MD Maj, USAF, MC RAM	MPH	Content Analysis of Air Show Medical Disaster Plans
Keith Wilson Capt, USAF, NC Intl Hlth	MPH	Using Cognitive Interviews to Improve an After-Action Report Used with Humanitarian Assistance

## Attachment VI-2. Graduate Theses

Author	Title	Degree	Year
Amon, JJ	The Molecular Epidemiology of Malaria in Western Kenya	Ph.D.	2002
Hall, TL	Application of Headspace Solid Phase Microextraction and Gas Chromatography/Mass Spectrometry for Detection of Escherichia coli in Water	MSPH	2002
Kazerouni, NN	Family History of Breast Cancer as a Determinant of the Risk of Developing Endometrial and Ovarian Cancers: A Nationwide Cohort Study	DrPH	2002
Kimm, GL	Application of Headspace Solid Phase Microextraction and Gas Chromatography/Mass Spectrometry for Rapid Method of the Chemical Warfare Agent Sulfur Mustard	MSPH	2002
Newman, SB	An Epidemiologic Analysis of Chlamydia trachomatis and Neisseria gonorrhoeae Infections in Female Federal Prisoners	PhD	2002
Scoville, SL	Mortality during U.S. Armed Forces Basic Training: A 25-Year Review (1977 – 2001)	PhD	2002
Austin-Lane, J	Influences on Tobacco Control Funding Decisions: Explaining State Variation in Appropriations	DrPH	2003
Hakre, S	Epidemiology of Malaria in Belize, 1989 – 1999	PhD	2003
Hook, GL	Application of Solid Phase Microextraction Coupled with Gas Chromatography/Mass Spectrometry as a Rapid Method for Field Sampling and Analysis of Chemical Warfare Agents and Toxic Industrial Chemicals	PhD	2003
Maloney, EM	A Cohort of Health Effects of HTLV-I Infection in Jamaican Children and Their Associations with Viral, Immunologic and Host Genetic Markers	DrPH	2003
May, LM	The Military Deployment Human Exposure Assessment Study (MDHEXAS): Blood and Urine Exposure Biomarkers as Environmental Surveillance Tools for Assessing Military Personnel Exposure to Chemicals During Deployment to Camp McGovern, Bosnia	Dr PH	2003
Tomon, JJ	Digital Mammography Breast Dosimetry Using Copper-Doped Lithium Fluoride (LiF:MCP) Thermoluminescent Dosimeters (TLDs)	MS	2003
Vest, K	Risk of Peripheral Nerve Disease in Military Working Dogs Deployed in Operations Desert Shield / Storm	DrPH	2003
Achee, NL	A Study on the Bionomics of Anopheles darlingi ROOT (Diptera culicidae) in Belize, Central America	PhD	2004
Clark, KR	The Delphi Technique Used in Laser Incident Surveillance	MSPH	2004
Nack, MJ	Identification and Quantification of Pesticides in Environmental Waters with Solid Phase Microextraction and Analysis Using Field-Portable Gas Chromatography-Mass Spectrometry	MSPH	2004
Romero, S	Detection of Bartonella bacilliformis by Real-Time PCR in Naturally Infected Fleas	MS	2004
Tribble, DR	Traveler's Diarrhea Diagnosis and Therapy Study in United States Military Personnel on Short-Term Deployment in Thailand	DrPH	2004
Williams, PC	Comparison of Experimental Models for Predicting laser Tissue Interaction from 3.8-Micron Lasers	MSPH	2004

**Attachment VI-3. Faculty Research, 2002-2004**

<b>Division/ Center</b>	<b>Faculty</b>	<b>Funding Agency</b>	<b>Funding</b>	<b>Start</b>	<b>End</b>	<b>Comm. Based</b>	<b>Collab. w/Other Agency</b>	<b>IAA</b>
TPH	Richard Andre	WRAIR	\$120,000 (per year)	Oct-94	Oct-02	No	No	No
TPH	John Cross	FDA	\$20,000 (per year)	Oct-94	Indef	No	Yes	Yes
TPH	Gerald Quinnan	NIAID	\$1,296,750	Jun-95	Mar-06	No	Yes	CRADA
TPH	Richard Andre	USUHS	\$27,000 (per year)	Oct-96	Oct-03	Yes	Yes	Yes
CFHPS*	Gary Gackstetter Tomoko Hooper	NHRC	\$20,000,000	Oct-96	Sep-04	No	Yes	Yes
TPH	Larry Laughlin	NIH (Fogarty)	\$150,000 (per year)	Jul-98	Jul-04	Yes	Yes	Yes
CFHPS	Gary Gackstetter Tomoko Hooper	Office of Spec Asst/Gulf War Illness	\$1,200,000	Jul-98	Sep-05	No	Yes	Yes
TPH	Larry Laughlin	NOAA, NSF, EPA, NASA, EPRI	\$145,000 (per year)	Oct-00	Oct-04	Yes	Yes	Yes
TPH	Donald Roberts	NIH, NSF	\$800,000	Oct-00	Sep-05	Yes	Yes	Yes
Epi/Biostat	David Trump	USAMRMC	\$0	Jan-01	Present	No	Yes	No
Epi/Biostat	David Kao (statistic consultant)	NIMH	\$800,000	Jan-01	Dec-05	No	No	NA
Epi/Biostat	David Trump	USUHS (p)	\$1,200	Feb-01	Nov-02	No	No	No
HSA	Galen Barbour	USUHS (s)	\$16,000	Mar-01	Aug-03	Yes	No	NA
Soc/Beh Sci	Deborah Girasek	USUHS	\$50,000	Apr-01	Sep-05	Yes	Yes	Yes
HSA	Galen Barbour	CA Health Dept	\$303,900	Aug-01	Aug-04	Yes	No	NA
TPH	Gerald Quinnan	NIAID	\$4,666,307	Sep-01	Jul-05	No	Yes	CRADA
Epi/Biostat	David Kao	USUHS	\$13,000	Jan-02	Dec-04	Yes	No	NA
HSA	Timothy Mallon	US Congress	\$2,000,000	Jan-02	Jul-04	Yes	Yes	Yes
HSA	Galen Barbour	USMCI	\$200,000	Feb-02	Jun-03	Yes	No	No
Epi/Biostat	David Trump	USUHS (s)	\$13,030	May-02	Present	No	No	No

<b>Division/ Center</b>	<b>Faculty</b>	<b>Funding Agency</b>	<b>Funding</b>	<b>Start</b>	<b>End</b>	<b>Comm. Based</b>	<b>Collab. w/Other Agency</b>	<b>IAA</b>
TPH	Donald Roberts	NASA	\$800,000	Sep-02	Sep-07	Yes	Yes	Yes
TPH	Jesus Gonzalez	NHLBI	\$476,175	Sep-02	Jul-05	No	Yes	Yes
TPH	John Cross	EPA	\$51,570	Oct-02	Sep-05	No	Yes	Yes
TPH	Jesus Gonzalez	Pfizer	\$25,000	Oct-02	Sep-05	Yes	Yes	Yes
EOH	Thomas Johnson	NSWC	\$410,000	Dec-02	Sep-05	No	No	No
EOH	Gary Hook	MARCORPSYCOM	\$300,000	Dec-02	Sep-05	No	Yes	No
TPH	George Schultz	USUHS	\$6,303	Feb-03	Sep-04	No	Yes	No
EOH	Thomas Johnson	USAPRMRP	\$1,600,000	Mar-03	Feb-07	No	No	No
TPH	Gerald Quinnan	USUHS (I)	\$13,000 (per year)	Apr-03	Apr-04	No	No	No
HSA	Galen Barbour	HRSA	\$2,000,000	May-03	Mar-05	Yes	Yes	Yes
EOH	Peter LaPuma	AFPRB	\$46,990	Jun-03	Sep-05	No	No	No
CFHPS	Gary Gackstetter Tomoko Hooper	USAMRAA	\$703,000	Feb-00	Jan-06	No	Yes	No
TPH	Gerald Quinnan	DoD	\$356,117	Jul-03	Jun-05	No	Yes	Yes
Epi/Biostat	Dechang Chen	NSF	\$100,000	Aug-03	Jul-06	No	No	No
EOH	Peter LaPuma	AFOSR	\$72,000	Aug-03	Jun-04	No	No	No
TPH	Gerald Quinnan	NIAID (Coop Agrmt)	\$433,009	Sep-03	Sep-08	No	Yes	CRADA
TPH	Donald Roberts	NIH partnership	\$3,500,000	Sep-03	Jan-08	No	Yes	Yes
Epi/Biostat	David Kao	USUHS	\$3,000	Jan-04	Dec-06	No	No	NA
Soc/Beh Sci	Deborah Girasek	NIAAA	\$371,750	Apr-04	Mar-07	No	No	No
Soc/Beh Sci	Richard Palmer	USUHS (I)	\$150,000	Jun-04	May-07	Yes	No	No
Epi/Biostat	Michael Lewis	USUHS	\$20,000	Oct-04	Sep-05	Yes	Yes	Yes
TPH	Lisa Keep	USUHS	\$150,000	Oct-04	Sep-07	No	No	No
CFHPS	Gary Gackstetter Tomoko Hooper	OASD/HA	\$300,000	Oct-04	Oct-06	No	No	No

\*Center for Force Health Protection Studies (does not fall under a Division)

#### **Attachment VI-4. Faculty Publications (2002-2004)**

Names of USUHS student authors in bold font; faculty authors underlined.

Abbott KC, Bucci JR, Cruess DF, Taylor AJ, Agodoa LY. Graft loss and acute coronary syndromes after renal transplantation in the United States. *Journal of the American Society of Nephrology*. 2002;13(10):2560-9.

Abbott KC, Bucci JR, Matsumoto CS, Swanson SJ, Agodoa LY Holtzmuller KC, Cruess DF, Peters TG. Hepatitis C and renal transplantation in the era of modern immunosuppression. *Journal of the American Society of Nephrology*. 2003;14:2908-18.

Abbott KC, Cruess DF, Agodoa LY, Sawyer ES, Tveit DP. Early renal insufficiency and late venous thromboembolism after renal transplantation in the United States. *American Journal of Kidney Diseases*. 2004;43(1):120-30.

Abbott KC, Glanton CW, Trespalacios FC, Oliver DK, Ortoz MI, Agodoa LY, Cruess DF, Kimmel PL. Body mass index, dialysis modality, and survival: Analysis of the United States Renal data System Dialysis Morbidity and Mortality Wave II Study. *Kidney International*. 2004;65:597-605.

Abbott KC, Hshieh P, Cruess DF, Agodoa LY, Welch PG, Taylor AJ, Yuan CM. Hospitalized valvular heart disease in patients on renal transplant waiting lists: Incidence, clinical correlates, and outcomes. *Clinical Nephrology*. 2003;59(2):79-87.

Abbott KC, Hypolite I, Poropatich R, Hawkes C, Hshieh P, Cruess D, Agodoa LY. Hospitalizations for cytomegalovirus disease after renal transplantation in the United States. *Annals of Epidemiology*. 2002;12(6):402-9.

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Abbott KC, Reynolds JC, Agodoa LY, Cruess DF. Morning versus evening dialysis (letter). *American Journal of Kidney Diseases*. 2003;42(1):213.

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**Austin-Lane J**, Girasek D, Barbour G. A qualitative study of influences on state tobacco control funding. *Health Promotion Practice*. 2004;5(3S):46S-56S.

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Butler WP, Topper SM, Dart TS. USAF TT8: Treatment for Altitude Decompression Sickness. *Aviat Space Environ Med*. 2002;73:46-49.

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Butler WP et al. Low Altitude Decompression Sickness. In Revision: *Aviat Space Environ Med*.

Butler, WP. Epidemic Decompression Sickness: Case Report, Literature Review, and Clinical Commentary. *Aviat Space Environ Med*. 2002;73:798-804.

Butler, WP. Caisson disease during the construction of the Eads and Brooklyn Bridges: A review. *Undersea Hyperb Med*. 2004 Winter;31(4):445-59.

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**Grieco JP**, **Achee NL**, Roberts DR, Dowler M, Williams J, Andre RG. Comparative susceptibility of three species of *Anopheles* from Belize, Central America to *Plasmodium falciparum* (NF-54). *J Am Mosq Control Assoc*. 2003.

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**Harman DR**, Hooper TI, Gackstetter GD. Aeromedical Evacuations from Operation Iraqi Freedom: A Descriptive Study. *Mil Med*. Jun 2005;170(6):521-7.

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