



NMR&D News

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and Development

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Presidential Science Envoy Dr. Ahmed Zewail visits NAMRU-3

By Darnell Gardner
NAMRU-3 Technical Writer

On February 9, the Naval Medical Research Unit 3 (NAMRU-3) hosted Nobel Laureate Ahmed Zewail, who was in Cairo to promote partnerships in science and technology. Dr. Zewail, the Linus Pauling Professor of Chemistry at Caltech, was recently appointed to President Obama's Council of Advisors on Science and Technology and named United States Science Envoy to ten countries in the Middle East. A renowned Egyptian-American scientist, he received the Nobel Prize in chemistry in 1999 for his groundbreaking work in femtochemistry.



*CAPT Earhart, Dr. Zewail and Dr. Mansour tour NAMRU-3.
Photos by Darnell Gardner*

NAMRU-3 Commanding Officer CAPT Kenneth Earhart and Science Director Dr. Moustafa Mansour briefed Dr. Zewail on the Navy lab in Cairo, explaining how NAMRU-3 partners with Egypt and other host nations in the region to carry out scientific research and public health capacity building. NAMRU-3's scope has expanded in recent years to encompass significant medical diplomacy and public health capacity building roles.

Dr. Zewail noted that the U.S. Navy and Nobel laureates have a special relationship. The website of the Office of Naval Research (ONR) lists fifty-seven Nobel laureates (including Dr. Zewail) that have been funded by the ONR, which has a long history of funding innovative scientists. In January, ONR-Global co-sponsored a workshop with NAMRU-3 in Cairo to discuss renewing efforts to fund research in the Middle East and Africa.

Following a tour of the NAMRU-3 laboratory, Dr. Zewail participated in a roundtable discussion with Egyptian and American scientists. NAMRU-3 scientists outlined their background and current activities; Dr. Zewail shared his vision of novel approaches to studying pathogenesis through four-

dimensional electron microscopy.

Dr. Zewail is an advocate of science diplomacy, as borne out in the epilogue of his autobiography: "Although I am concerned about injustice in the world today, I am an optimist. I believe that with the power of knowledge and rational thinking, we can—and should—build bridges between humans, between cultures and between nations."

NAMRU-3 is proud of the bridges it is building through engagement with scientists in the region and looks forward to supporting Dr. Zewail in his efforts to further promote new science and technology partnerships between East and West.



Mr. Joshua Goldberg, Dr. Mansour, Dr. Zewail and CAPT Earhart tour the NAMRU-3 facility

Advances in the Prevention of Japanese Encephalitis

The Naval Medical Research Center (NMRC) is sponsoring a monthly seminar series designed as a scientific forum and dialogue among infectious disease investigators. During the February seminar, CDR Charmagne Beckett, MC, USN, FACP, Deputy Director of NMRC's Infectious Diseases Directorate (IDD), presented an overview of Japanese Encephalitis (JE) covering virology, epidemiology and disease burden. CDR Beckett addressed the impact of JE on the U.S. military and ongoing interest in the development of

a safe and effective replacement vaccine against JE. A clinical overview of the new vaccine, including the major clinical trials, was presented. Current results show an acceptable safety profile in over 3,000 volunteers.

Overall, the new JE vaccine was well tolerated with a similar efficacy (non-inferior) profile as the current JE vaccine, which has been in use since 1992. The Food and Drug Administration licensed the newly developed vaccine in March 2009.

CDR Beckett, along with other

subject matter experts, will continue the dialogue by hosting webcasts aimed at educating the medical community about JE disease and advances in prevention. The webcast schedule will be available soon.

The U.S. military has been involved in the development of vaccines against the JE virus for decades. In 2006, investigators from NMRC's Viral and Rickettsial Diseases Department participated in a multi-centered clinical trial to test the safety and tolerability of
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Commanding Officer's Message

Greetings!

This past month was challenging for us in the Nation's Capital. We dealt with historic snowfall (31 inches or more) not seen since 1899. Our base was closed for several days during February, which affected our routine daily operations. So we are all looking forward to spring, and at the same time we are reminded that some of the worst snowstorms in this area have been in March.

Another historical moment was developing for the R&D community on the other side of the globe. Our decades-long biomedical research and public health relationship with Indonesia is changing. Negotiations between the key players have not been successful in guaranteeing the continuation of Navy Medicine's efforts in Jakarta. As this newsletter goes to press, we are still coordinating with PACOM, PACFLT and BUMED on relocation plans. But one thing is guaranteed: we will continue infectious diseases research in support of the Navy and Fleet Marine Forces in the Pacific Theater by studying military relevant disease threats. I will keep you apprised of NAMRU-2's relocation efforts in future newsletters.

In the second of our 2010 series of Clinical Investigations Lectures, Dr. Karen Midthun, Acting Director of the FDA's Center for Biologics Evaluation and Research, addressed a very receptive audience here on the topic of the future of clinical investigators. These lectures are valuable to all clinical research professionals, and I encourage everyone who can to attend.

In February the Command celebrated Black History Month and recognized the contributions of our diverse workforce. If you haven't seen the PBS series on African American Lives, I strongly recommend it. Part of our Black History Month program included showing the series, which received high praise from our staff. It will make you proud and make you cry at the same time.

I also strongly recommend inviting Mr. Mauricio Velazquez to your command; he provided a very entertaining and educational interactive presentation that led the staff in an exploration of diversity.

On March 3, the U.S. Navy Medical Corps will celebrate 139 years of service. Within the Naval Medical Research Enterprise, over 40 Medical Corps Officers serve in laboratories and organizations around the world supporting the mission of world-class, operationally relevant biomedical research. These Medical Corps Officers are working in the U.S. and overseas supporting our efforts in Peru, Indonesia, Egypt, Cambodia, Ghana and Geneva as well as other locations.

A large section of this issue is devoted to awards. We recognize our personnel are our most important asset. Congratulations to all awardees throughout the enterprise.

Once again, just skimming through our newsletter you can appreciate the significance of our enterprise to not only our Navy and Marine Corps, but our nation and the host countries who we work with on cooperative research efforts.

Commanding Officer sends,
Richard L. Haberberger, Jr.
CAPT, MSC, USN



Graphic Novel - A New Stress Mitigation Tool from NHRC

Submitted by the
NHRC Public Affairs Office

The Graphic Novel for Expeditionary Corpsmen is another unique stress mitigation tool under development by researchers at the Naval Health Research Center. Results from NHRC's in-theater surveys of expeditionary Sailors indicate that Hospital Corpsmen (HMs) experience greater psychological strain than almost any other group of Sailors who are deployed to combat zones. Closer examination of the survey data indicates that corpsmen in war zones experience a unique combination of stressors, since many are exposed to

direct combat while accompanying Marine Corps teams on a variety of missions, interspersed with caregiver stress and burnout as a result of treating the wounded and dying.

To help prepare corpsmen for the numerous challenges awaiting them during deployment, NHRC is creating a graphic novel that tells the stories of four corpsmen on a deployment to Iraq at the height of Operation Iraqi Freedom. The four protagonists grapple with enemy combatants, their inability to save the life of a dying Marine, homefront issues such as injuries to their children, and other issues that test their resilience. The graphic novel is intended both to psychologically

prepare HMs by realistically portraying common concerns faced in war zones and to serve as a discussion tool for lessening the stigma associated with combat stress.

In addition to the printed graphic novel, the story is being animated for viewing on iPods and other portable electronic devices. Graphic novels and animation are highly appealing media among the audience and age range being targeted by this program. The graphic novel/animation is yet another example of NHRC's efforts to develop and deliver operational biomedical research solutions that enhance the health, safety, readiness, and performance of our military forces.

NAMRU-3 Advances Health-Related Research in Afghanistan

By Darnell Gardner
NAMRU-3 Technical Writer

In 2004, U.S. Naval Medical Research Unit 3 (NAMRU-3) embarked on a mission to provide support to the Islamic Republic of Afghanistan focusing on the advancement of health and science-related research, development and sustainability. Since then, NAMRU-3 has worked with agencies such as the Afghan Ministry of Public Health, the World Health Organization (WHO), and the Office of Disaster and Coordination of Humanitarian Aid in an effort to increase international awareness of the deteriorating health crisis in Afghanistan.

Primary donors to NAMRU-3's ongoing projects in Afghanistan include Global Emerging Infections Surveillance (GEIS), the U.S. Department of Defense Commanders' Emergency Response Program (CERP) and the U.S. Department of State (DoS). Funding from CERP paved the way for NAMRU-3 and the Central Public Health Laboratory (CPHL) to begin a laboratory support projects that resulted in the

installation of five laboratories in hospitals throughout Afghanistan and introduced pandemic influenza diagnostic capability in Kabul. WHO, recognizing these capabilities, designated the CPHL as a National Influenza Center. GEIS has also provided funding to support research on causes of acute febrile illnesses and diarrhea in Afghanistan in an ongoing study. As a reflection of NAMRU-3's efforts, Dr. Sayed Mohammed Amin Fatemei, former Minister of Public Health of Afghanistan, sent a letter to the U.S. Secretary of Defense in appreciation of NAMRU-3's support throughout Afghanistan with hopes to set up a permanent detachment partnering with U.S. DoS.

In the wake of the H1N1 pandemic, NAMRU-3, GEIS and the Chemical Biological Medical Systems Joint Project joined efforts to launch the Joint Biological Agent Identification and Diagnostic System throughout Central Command. Craig Joint Theater Hospital/Bagram Air Base, Afghanistan was one of the locations where NAMRU-3 certified trainers traveled to instruct hospital laboratory personnel on the



Central Public Health Laboratory staff

real-time pandemic H1N1/2009 diagnostic testing capability. This advancement gave doctors the ability to clinically diagnose swine flu infection from patients presenting with influenza-like illnesses in-theater, drastically reducing laboratory turn-around time. Given this, combat physicians were able to quickly prescribe accurate courses of treatment.

NAMRU-3's continued partnership with the Afghan Ministry of Health and various international agencies will ensure efforts to improve laboratory capacity and health threat surveillance are carried out well into the future.

IDD Seminar

Continued from page 1

the new JE vaccine. The project was a collaborative effort between NMRC, the Walter Reed Army Institute of Research, Naval Medical Center Portsmouth and a commercial partner.

NMRC's IDD conducts research on infectious diseases that are considered to be significant threats to our deployed Sailors, Marines, Soldiers and Airmen. Significant threats are those that have the potential to incapacitate a large number of deployed forces over a short period of time, hindering the ability of warfighters to accomplish their mission. The geographical distribution of a disease; the lack of an effective vaccine, treatment, or other control measures; the mode of transmission; and the historical impact during past wars are all factors that determine the importance of an infectious disease to the U.S. military.

NMRC Explores Diversity and Inclusiveness

Mr. Mauricio Velásquez, president of the Diversity Training Group, led Naval Medical Research Center staff in an exploration of the concept of diversity February 22. The purpose of looking at diversity is to create and promote a more inclusive work environment in which the talents, abilities and contributions of all personnel are recognized and valued.

Using an entertaining multimedia presentation, group discussions and

anecdotes from his own experiences, Mr. Velásquez encouraged his audience to challenge their preconceived ideas about others and learn to relate to one another as individuals, not as members of particular race, ethnicity, gender or other group. He also discussed methods that can be used to break down stereotypes and more effectively communicate with people who appear to be relating to others from a biased point of view.



Mauricio Velásquez



Discussing part of the presentation

Greetings from the NMRC Ombudsman!

Spring is around the corner and a great time to get started on the many things we've forgotten over the winter. Whether it's cleaning out the basement, picking up a new hobby, getting out and doing some exercise or taking some classes you've always wanted, you really don't have to do much to feel like a brand new person.

Fleet and Family Support Is Now on Facebook!

To ensure more information and support is communicated to the families, Fleet and Family Services now has a Facebook page. Check out <http://www.facebook.com/navyffsc> for all the latest information. Also feel free to leave feedback and comments to help make the website more useful.

Navy Safe Harbor

I want to highlight an important Navy initiative that was established to support our sailors when they are ill, injured, or wounded. Navy Safe Harbor is the lead organization for providing non-medical care to seriously wounded, ill and injured Sailors, Coast Guardsmen and their families. Safe Harbor provides a lifetime of individually tailored assistance designed to optimize the success of our shipmates' recovery, rehabilitation and reintegration activities. It is incumbent upon Navy leaders to ensure that wounded warriors are referred to Safe Harbor for help and to support them with their recovery and return to a healthy, productive life. For more information,

visit <http://www.safeharbor.navy.mil> or contact CAPT Key Watkins at 703-695-0982, email safeharbor@navy.mil.

Reminders

Now that tax season is upon us, don't forget to take advantage of FREE tax filing services available through the MilitaryOneSource website: <http://www.militaryonesource.com/MOS/FindInformation/Category/TaxFilingServices.aspx>

Also check out MCPON's Bottom Line: Up Front. It is full of great information and resources! [BLUF 01-10 Final.pdf](#)

If you need additional information on these or any other resources, please feel free to contact me at 217-722-4981 or angela.prouty@med.navy.mil.

Angela Prouty
Ombudsman, NMRC

U.S. Navy Medical Corps Celebrates 139 Years of Service

The U.S. Navy Medical Corps, a diverse cadre of military physicians, includes more than 47 specialties and almost 200 subspecialties. Every day, these dedicated people perform research, care for the ill and work to find new solutions to health problems.

More than 3,700 active duty Navy physicians and 564 Reserve-affiliated Medical Corps Officers currently serve. Within the Naval Medical Research Enterprise, over 40 Medical Corps Officers serve around the world supporting the mission of world-class, opera-

tionally relevant biomedical research. These Medical Corps Officers work throughout the United States and overseas in locations like Lima, Peru; Jakarta, Indonesia; Cairo, Egypt; and the WHO in Geneva.

The Navy Medical Corps was founded March 3, 1871, by an Act of Congress; this Act went further than any previous Congressional act in strengthening and transforming the Navy Medical Department.

One of the first research efforts began in 1879, when the Bureau of Medicine and Surgery established a laboratory to investigate hygiene-related issues, according to the BUMED publication *A Short History of Navy Medicine*. Items collected from these research efforts became the collection of the Navy Museum of Hygiene, established in Washington, D.C., in 1882. Until it merged with the Naval Medical School in 1905, the Museum exhibited ships' ventilation systems and housed displays illustrating disinfection techniques. The Museum strongly promoted environmental and occupational medicine and expanded its museum role by becoming an education center for the promotion and development of laboratory research, particularly with chemical, bacteriological, and microscopic investigations.

The occasion of the 139th birthday of the Navy Medical Corps gives us pause to celebrate. Though for several years our great nation has been called to defend herself, we pause to celebrate how well Navy physicians have "answered the bell" in that fight. Since 9/11, fully a third of our Corps has deployed throughout the world, delivering a level of healthcare and injury resuscitation that has never been matched in the history of warfare. At the same time, we celebrate the medical expertise we have provided to emerging nations, our recovery of those whose honored sacrifice was in previous wars, the humane care we provide to our enemy's warriors, and the innocent victims of natural catastrophe we are blessed to be able to touch. We have "delivered the benefit" to the deserving families back home--all the while continually advancing the science of medicine through our remarkable research and passing these advances to the next generation of our nation's finest physicians through Navy GME.



We begin our 140th year with even more promise. New missions calling for new skills sets are in our immediate future. I have every confidence that we will remain in the coming years a competent, flexible and willing Navy Medical Corps, equal to the tasks our Nation asks. We have much to celebrate this day. To the 3,700 Active Duty Navy physicians and our 564 Reserve-affiliated Medical Corps Officers, I extend my heartfelt gratitude and admiration. Thank you for your professionalism; thank you for your sacrifice and most of all, thank you for your Service!

Vice Admiral Adam M. Robinson Jr., MC
Surgeon General of the Navy

Lecture Series in Clinical Investigations

Dr. Karen Midthun, Acting Director of the FDA's Center for Biologics Evaluation and Research, lectured on the future of clinical investigators in the evaluation of new biological products at NMRC February 25. Dr. Midthun described biologics and how they are manufactured, regulated and tested in clinical trials. She reviewed key safety questions, including contamination, insufficient inactivation, adventitious agents and unexpected severe adverse events. She also outlined a path for the future development of new biologics.

The NMRC Clinical Trials Center and Office of Research Administration are co-sponsoring this lecture series, which provides an opportunity for those getting involved in clinical research to

gain a better understanding of the wide range of responsibilities that research entails. As a collective event, the lectures provide a course of instruction in clinical investigation. The lectures are valuable to all clinical research professionals, including administrators, coordinators, technical staff, clinicians and scientists.

Next in the series:

- March 11 – Mr. Joseph Griffin, Regulatory Counsel, Office of Medical Policy, CDER
- April 2 – Dr. Robert Temple, Director, Office of Medical Policy, CDER
- April TBD – Dr. Barbara Rellahan, Team Leader in Division of Monoclonal Antibodies, CDER



Dr. Karen Midthun

NMRC Awards: Recognizing the Command's Outstanding Sailors



Sailor of the Half Year HM2 Petzinger



LT Syed Muannin Husain



LTJG Anthony Eisenhardt



LCDR Janine Danko



LT Michael Prouty



HM1 Judith Gigremosa, HM1 Hector Cano, HM1 George Odom, HM2 Tashia Blue, HM2 Timothy Velasco, HM2 Stephen Petzinger, and HM2 Reggie Bienaime. Photos by Phil Collins.

NMRCD's Gladys Nuñez

The Naval Medical Research Center Detachment named Ms. Gladys Nuñez Locally Employed Staff of the Quarter for her outstanding service from April to June 2009. Part of NMRCD since its founding 26 years ago, Ms. Nuñez supervises the Bacteriology Department's Animal Model and Vaccine Testing division, where she manages preclinical studies in the evaluation of candidate vaccines for enteric diseases.

Ms. Nuñez is involved in every step of NMRCD's enteric vaccine research program. She is the department's leading expert on the management of issues related to animal experimentation.



Ms. Nuñez with Ambassador McKinley

NMRC's Sharon Hall

On February 26, Naval Medical Research Center Security Specialist Mrs. Sharon Hall retired after a distinguished 31-year career. She provided security guidance to NMRC and nine subordinate laboratories and was responsible for over 365 NMRC personnel accounts. On many occasions, she effectively guided international scientists in the security clearance process.

Mrs. Hall went above and beyond her regular duties by assisting the WRAIR Security Department. Her willingness to help and ability to provide subject matter expertise reinforced the Navy/Army relationship in our collocated command.



Mrs. Hall with CAPT Haberberger

Hail and Farewell

NMRC extends a warm welcome to LCDR Matt Weiner, CDR Gail Chapman, LCDR Tadeusz Kochel and CAPT Paul Kellerher.

Fair winds and following seas to HM2 Stephen Petzinger, CAPT Kurt Henry and LT Philip Fatolitis.

NMRC Celebrates African American History

The Naval Medical Research Center and Walter Reed Army Institute of Research celebrated the rich heritage of African Americans and their innumerable contributions to the nation's history through a brown-bag lunchtime film series on "African American Lives" that was originally shown on the Public Broadcasting Service (PBS). In the series, eminent Harvard professor Henry Louis Gates, Jr. used revolutionary breakthroughs in genealogical research and DNA analysis to take eight prominent African Americans (neurosurgeon Ben Carson, actress Whoopi Goldberg, Bishop T.D. Jakes, astronaut Mae Jemison, musician/

producer Quincy Jones, sociologist Sara Lawrence-Lightfoot, comedian/actor Chris Tucker and TV pioneer/philanthropist Oprah Winfrey) on once-unimaginable journeys into their past – tracing their family sagas down through U.S. history and even back to Africa.

In addition to the film series, Patricia Stroy of WRAIR's Medical Audio Visual Services department organized a slide show featuring historical and current African American icons and successful African American men and women. The show is displayed on plasma TV kiosks at both ends of the main corridor in NMRC/WRAIR's Inouye building.

Sailor of the Year

Congratulations to HM1 Judith R. Gigremosa, the NMRC Sailor of the Year for 2009. HM1 Gigremosa is the Leading Petty Officer for Immunology, Command Career Counselor, Assistant Command Fitness Leader and also serves NMRC on several committees and in numerous other roles.



HM1 Judith Gigremosa receives her Sailor of the Year award from CAPT Richard L. Haberberger, Jr.

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