

**BUMED Oral History Project
CDR René Hernandez, MSC, USN
Synopsis and Glossary**

Date and location of interview: 12 June 2013 at NMRDC, Fort Detrick, MD

Interviewer: André Sobocinski, BUMED Historian

SYNOPSIS:

Born and raised in the suburbs of Cleveland, Ohio, after high school graduation, CDR René Hernandez moved to Seattle to attend college and pursue her passion of Marine Biology. She completed Associate of Arts Degrees in Marine Biology Technology and Professional Diving (Undersea Diving Program) then went to work aboard the NOAA Ship *Oceanographer* (RV-01), out of the Pacific Marine Center in Seattle, WA. After two years at sea as an oceanography technician and NOAA Diver, she returned to college to pursue a master's degree in oceanography. Instead, she emerged with a Ph.D. in Neuroscience and joined the U.S. Navy as a Research Physiologist in April 1988.

In July 1988, CDR Hernandez reported to the Armed Forces Radiobiology Research Institute (AFRRI), Department of Neurophysiology where she published research findings on the effects of ionizing radiation and free radical damage on calcium channels in the central nervous system. She was on the international teaching team for the "Medical Effects of Nuclear Weapons" course (now known as the "Medical Effects of Ionizing Radiation course" or "MEIR").

In 1991, CDR Hernandez transferred to the Uniformed Services University for the Health Sciences (USUHS) where she served as Course Director for "Overview of Military Medicine" and "Military Applied Physiology." She was a faculty instructor for the CONTOMS/EMT-Tactical course (the first police SWAT medic course in the USA), and for field training exercises for the military medical students, "Operation Kerkesner" and "Operation Bushmaster." She taught biological and chemical defense classes, and was a Basic Life Support instructor for USUHS medical students, National Naval Medical Center, Health Sciences Training and Education Command, and AFRRI's Emergency Response Team.

From 1994 to 1998, while at the Bureau of Naval Personnel, CDR Hernandez made significant contributions to the health and fitness of Navy personnel by researching, writing and implementing the Navy Instruction, OPNAVINST 6110.1E, on physical fitness testing. As the Program Manager for the Navy's Physical Readiness Testing (PRT) Program, she developed the

Command Fitness Leader Training Course and the Command Fitness Coordinator Course, teaching them throughout Navy commands worldwide. She developed and taught special lectures for the Senior Enlisted Academy so Navy Chiefs could become subject matter experts for PRT issues at their commands. She also taught "Suicide Prevention," and "Nutrition and Health" classes to Sailors stateside and overseas.

At the Naval Medical Research Center (1998 to 2004) CDR Hernandez researched and published in the area of hyperbaric oxygen toxicity—a problem in EOD, Spec Ops and Navy SEAL communities who dive on closed circuit oxygen re-breather rigs, as breathing 100% oxygen under pressure can cause seizures. A non-invasive means to predict the onset of these seizures was successfully developed and tested in two animal models. In March 2004, CDR Hernandez was inducted into the Women Divers Hall of Fame for opening doors for women divers within NOAA, and research breakthroughs in hyperbaric oxygen toxicity.

From April 2004 to July 2009, CDR Rene Hernandez served as Director for Graduate Studies, Director for Research and Course Director for the Military Applied Physiology course, in the Department of Military and Emergency Medicine at USUHS. During this period, she co-directed three outreach courses aimed at homeland security: "Nuclear, Radiation and High-Yield Explosives," "Biological Terrorism and Homeland Security" and the "Chemical Weapons and Emergency Management" course. She received funding for and stood up the Traumatic Injury Research Program, to find non-invasive means of diagnosing mild traumatic brain injury in the operational field environment. In 2006 CDR Hernandez was featured in an exhibit entitled "Women Divers; Part of the Navy Team" in the Naval Undersea Museum in Keyport, Washington.

In July 2009, CDR Hernandez was competitively selected as Navy Company Commander for the medical and graduate students of the Edward F. Héber School of Medicine at the Uniformed Services University.

In October 2012, due to unique and extensive experience in the areas of traumatic brain injury and hyperbaric oxygen research, CDR Hernandez was by-name requested to serve as the Bureau of Medicine's Navy Liaison to the US Army Medical Research and Materiel Command's Combat Casualty Care (Neurotrauma) and Hyperbaric Oxygen Therapy Research Programs.

KEY ACRONYMS:

AFRRI—Armed Forces Radiobiology Research Institute

CONTOMS—Counter Narcotics Tactical Operations Medical Support

course (renamed: Counter Narcotics & Terrorism Operational Medical Support)
DOMES—Deep Ocean Mining Environmental Study
EMT-Tactical--Emergency Medical TechnicianTactical (course) same as CONTOMS
MEIR—Medical Effects of Ionizing Radiation (course)
NMDRC—Naval Medical Research and Development Command
NMRC—Navy Medical Research Center
NMRI—Navy Medical Research Institute
NOAA—National Atmospheric and Oceanographic Administration
Oceanographer (RV-01)—
PRT—Physical Readiness Testing
USUHS—Uniformed Services University of the Health Sciences
WDHOF—Women's Divers Hall of Fame

GLOSSARY:

"Beneath the Sea" Conference—The largest SCUBA and dive travel show in the nation.

Glomar Explorer— The Hughes *Glomar Explorer* [HGE] was built in 1973 by Sun Shipbuilding and Drydock Co. for an intricate CIA undertaking. As part of Project Jennifer, the mission of *Glomar Explorer* was to raise a Soviet nuclear submarine that had sunk in the Pacific, resting on the ocean floor nearly 17,000 ft. (5,200 m) down. (source: <http://www.fas.org/>)

Nature— *Nature* is the world's most highly cited interdisciplinary science journal, according to the 2013 Journal Citation Reports Science Edition (Thomson Reuters, 2014). Its Impact Factor is 42.351. The impact factor of a journal is calculated by dividing the number of citations in a calendar year to the source items published in that journal during the previous two years. It is an independent measure calculated by Thomson Reuters, Philadelphia, PA (source: www.nature.com).

Operation Kerkesner—USU field training exercise takes place at Fort Indiantown Gap, PA. The exercise is followed by an individual summer experience at an installation of the student's parent service. (source: www.usuhs.mil)

Operation Bushmaster—A fourth-year USU medical student exercise held in October at Fort Indiantown Gap, PA. It is a practical exam for unique courses in the USU Department of Military and Emergency Medicine and is designed to closely replicate combat conditions and to test the students' abilities to care for people in adverse environments and adverse situations. (source: www.usuhs.mil)

Scientific American—An American Science periodical in publication since 1845.

Sea Hunt (television show)—An American adventure television series that aired in syndication from 1958 to 1961 starring actor Lloyd Bridges.

The Undersea World of Jacques Cousteau (television show)— A nonfiction documentary television series airing from 1968 to 1975 focusing on marine biodiversity hosted by marine explorer Jacques Cousteau.

Women Divers Hall of Fame—Founded in 1999, the WDOF was established to: 1. Recognize women divers who have made outstanding contributions to the exploration, understanding, safety and enjoyment of our underwater world; and 2. support the underwater world and its associated careers by promoting opportunities for women and men in diving through scholarships, internships and mentorship opportunities and a worldwide network of industry contacts. (source: www.wdof.org).