

ATS visits U.S.S. Asheville

Advanced Targeting Systems was honored to receive a personal tour of the USS Asheville. Thea Marlinga's husband Rick is Master Chief of the Boat and proudly showed us around. Thank you to the brave crew!

USS Asheville (SSN-758) is the 47th Los Angeles Class Fast Attack Nuclear Submarine. Commissioned in 1991, the USS Asheville is a true state-of-the-art sub. Some improved features of the USS Asheville include vertical launch cruise missiles, the Submarine Advanced Combat Control System, and an ESM direction finding capability. In addition to these tactical advances, retractable bow planes, and a hardened sail provide the capability to surface through the ice, allowing USS Asheville to operate freely in any of the world's oceans, including the Arctic basin.

The crest of the USS Asheville is made up of a color drawing depicting a surfacing submarine with the mountains of western North Carolina in the background; the words "From the mountains to the seas" complete the crest. USS Asheville is the fourth Navy vessel to bear the name of the North Carolina mountain city with a strong Naval heritage.

Designed for carrier escort, the Los Angeles class submarine combines the most desired attack qualities: speed, silence, and powerful weaponry. The submarine's key attribute has always been and will continue to be its stealth, with nuclear power providing the advantages of sustainability and mission flexibility. Perhaps this is why Master Chief Marlinga suggested the submarine be nicknamed the "Ghost of the Coast." Today's SSNs expound the element of surprise and create leverage out of proportion to their size because an adversary does not know whether, or in what number, submarines might be present. These boats are ideally suited for covert surveillance, intelligence gathering and special forces missions.



Pictured left to right: Douglas Lappi, Thea Marlinga, Amalia Dingman, Brian Russell, Leonardo Ancheta, Majid Pajouh, Matthew Kohls, and Denise Higgins

Targeting Teaser Winners

Congratulations to the puzzle solvers from our last newsletter. Each winner receives \$100 credit towards research product purchases from Advanced Targeting Systems.

The solution to the puzzle was:

Jumbles: IMMUNOLOGY
ANTIBODIES
SWITZERLAND
MOLECULAR
MICROBE
CULTURE

Answer: SUSUMU TONEGAWA

WINNERS: Geda C. Unabia, Univ of Texas, Med. Branch, Dept of Anatomy * Kris Preddy, Lakeside CA * Ilham Bensmail, Panacea * Rebecca Pearson, Georgetown, Dept of Pharmacology * Vivian Yip, Tissuegene Inc * Genevieve Vazquez, Univ of Miami, The Miami Project * Key Kang, Raven Biotechnologies * Raduwan Dackour, L.I.J Med. Center * Joseph Menonna, VA Bio Med. Center * Laura Emond, Dartmouth Med. School, Dept of Physiology * Marcia McInerney, Univ of Toledo, Dept of Pharmacy * Robert Speth, Univ of Mississippi, School of Pharmacy * Seto Chice, SUNY HSC at Brooklyn * Doug Wallace, Northern Illinois Univ, Dept of Psychology



Susumu Tonegawa was awarded the 1987 Nobel Prize in physiology and medicine for his work on understanding the body's immune system. The Nobel jurors said Tonegawa wrote an influential paper in 1976 resolving questions about how the body fights disease, and that his work had dominated research in the area for two years. Although Tonegawa was cited for his work in immunology, he is a molecular biologist by training.

Dr. Tonegawa's experiments revealed that a body's immune cells during a lifetime reshuffle their genetic makeup to form millions of antibodies against bacteria. This contradicted the prevailing dogma that genes could not change, and helped to explain how the body could resist newly conceived microbes.

Tonegawa was born in Nagoya, Japan. He earned a bachelor of science degree from Kyoto University in Japan in 1963 and at 22 left for the United States. He received a doctorate from the University of California at San Diego. Following postgraduate work at the Salk Institute in San Diego, Tonegawa joined the Basel Institute of Immunology in Switzerland before moving to MIT in 1981. The bulk of the work that led to the Nobel Prize took place in Switzerland. Dr. Tonegawa is also winner of the Order of Culture "Bunkakunsho" from the Emperor of Japan.