

Lee Spacewalker:
Astronaut Flight Surgeon

Lee ME. Morin, M.D., Ph.D. Captain, USN
Masters of Public Health from UAB 1988.

When Lee Morin was finishing his Masters of Public Health at UAB classes in Gulf Shores, it was probably easy to see that this Pensacola-based flight surgeon would go far. Last April, in fact, he made it all the way into space aboard Atlantis flight 109.

“Working in microgravity had a surreal quality like floating in an aquarium.” Lee said. “At first it was hard for the rookies to just relax and float, but soon we were doing it just like the veterans. Fingertip pressure was all it took to get around.”

One of his first tasks in the 11 day-mission was delivering and setting up a protein crystallography experiment for UAB researcher Larry DeLucas.

“As soon as we powered up the protein crystal growth high density experiment, UAB started receiving status data and continued to get telemetry.” Lee said

Though Lee and astronaut Jerry Ross are a bit young for their “Silver Team” nickname, they became the first pair of space-walking grandfathers when they helped deliver and install a segment of the space station’s primary truss. The Atlantis crew was also first to do all their EVA’s from the station’s airlock with the assistance of the station’s robot arm.

“We called it the “Hi-ya” maneuver, as in the karate yell. There was only a tiny space to stand out on the end of a 60 to 70-foot pole. It was like being a flag pole sitter as the arm slowly moved us from one side to the other.

“Installing the truss reminded me of maintaining a sterile field in an operating room. We had to control every bolt and tool. It would be a long way to go to get replacement parts, and even one stray screw could drift into the wrong place and cause a problem.”

In spite of the 14 hours of space walking, Lee did get a chance to enjoy the view.

“Seeing earth from space was spectacular. We could look out the window and see ocean and clouds and places we recognized. The whole gulf, Florida and the Yucatan filled the view. A while later, we could see Africa and a wine glass-shaped discoloration that was the Nile river. I looked through binoculars and saw a light patch below and realized I was looking at the Great Pyramid.”

Does Lee want to go back into space? Definitely. In the meantime, his next assignment is to be capsule communicator for the fall mission, when he’ll be on the radio talking with the team installing the next section of the space station.

He also has a message for his fellow UAB alums: “Thanks for the “Bragging Dragon” award that was waiting for me when I landed. It really means a lot, guys.”

Pollution Part II

The New Threat To Drinking Water

Suzi Ruhl

Director of Public Health & Law

Environmental Law Institute

Over 70% of the earth’s surface is covered in water. But if we aren’t careful, soon there will be dirty water everywhere, and not a drop to drink.

“Our treatment capabilities are on the verge of becoming obsolete,” said clean water advocate Suzi Ruhl. “Now, in addition to chemicals, pesticides, heavy metals and microbial contaminants, we’re finding pharmaceuticals in drinking water. Resistant strains of mutated microbes are emerging that are difficult to detect and destroy. Now terrorism has added a new threat.”

President emeritus of L.E.A.F.(Legal Environmental Assistance Foundation), a Florida-based organization she founded in Birmingham over two decades ago. Suzi has been fighting the good fight for clean drinking water using both her training in public health and her legal skills as an attorney. Now she has

taken that crusade to Washington as director of Public Health and Law for the Environmental Law Institute.

“We’re looking at root causes and working to get everyone who has a stake in clean water to work together. Much of the technology being developed for homeland security to protect the water supply could help us with other quality issues.”

Suzi sees an urgent role for public health workers.

“We don’t have effective methods in place to track water borne diseases. Public Health proactivity is a must. I applaud the School of Public Health for doing such tremendous work on cutting edge issues. “The Handle” is a wonderful name for your magazine. When Dr. John Snow linked a cholera outbreak to a water pump and removed the handle in Victorian London, it was one of the first public-health interventions in modern times.

“Now there’s a new urgency to pay attention and get involved. It isn’t enough just to manage pollution. We need to prevent it.”

Disease Detective

Looking for Unusual Patterns in Cancer Incidence

Sandra L. Melnick

Chief of the Analytic Epidemiology Research Branch
Division of Cancer Control and Population Sciences,
National Cancer Institute

Looking through a microscope isn’t the only way to search for clues to the causes and cures for cancer. In fact, it’s the big picture where Sandra Melnick is seeing exciting new possibilities. As Chief of the Analytic Epidemiology Research Branch (AERB) for the National Cancer Institute, she and her team manage funding for research all over the world.

“In addition to studying risk factors and special populations, where we see the field going now is toward larger and larger science. Consortia of studies give sufficient numbers that we can study genetic-environmental interactions,” said Sandra.

Sandra considers the work she does a great career option for epidemiologists at both the master’s and doctorate level.

“Managing extramural grants gives us the opportunity to help promising studies get established and funded,” she said. “We work with primary researchers through both investigator-initiated research and studies funded through our programs.”

Dr. Sten Vermund, who was at the National Institute of Health before coming to UAB, recruited Sandra to her precious position at the NIH. She helped establish and get funding for the Women's Interagency HIV study, the largest U.S. Study of HIV in women

After hours, Sandra volunteers as an advanced life support paramedic for the Bethesda-Chevy Chase Rescue Squad. She was among the rescuers whose efforts at the Pentagon on 9/11 were recognized by an award from the Business and Professional Women/USA.

Looking at the big picture in cancer research, or close up, caring for one patient at a time, Sandra Melnick is making a difference.