



JIM MACLEAN/RIVERTOWNS ENTERPRISE

Isabel Danishmend and Abigail Bayer-Mertens Human

Science students aim to better others' lives

By Kris DiLorenzo

Two Dobbs Ferry High School juniors, Abigail Bayer-Mertens Human and Isabel Danishmend, are creating a stir with their projects for the school's Science Research program. The projects couldn't be more different, but have one element in common: humanitarianism.

Bayer-Mertens Human has a medical

turn of mind. Her project, "Persistent genital arousal disorder, treatment with ultrasound-guided pelvic floor trigger points injections and peripheral nerve hydrodissection — a case series," investigates PGAD, a rare disorder.

Bayer-Mertens Human has always had an interest in women's health, and discovered that in the field of women's reproductive health, there was little

information on PGAD. The National Institutes of Health's U.S. National Library of Medicine describes its symptoms, but not its causes or cures, because those haven't been definitively established.

She found two mentors, Dr. Allyson Shrikhande, a psychiatrist, and her hus-

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band, Dr. Gautam Shrikhande, a vascular surgeon. The couple work at Pelvis Rehabilitative Medicine, a private practice in Manhattan where Bayer-Mertens Human spent two or three days a week last summer, collecting data from medical records and patient survey questions she designed.

“What my research looked into was really pain management — how can we make their lives easier while we figure out how to fix it,” she explained. “People hear the name and freak out about it, because it has the word ‘arousal’ in it, and people snicker, but what it is, is incredible sensitivity. People who have it feel bone-crushing pain... all the time. [They] have poor quality of life. They also have a high suicide rate.”

Working with the Shrikhandes, Bayer-Mertens Human learned about methods that provide patients with relief. “These women have very tight groin muscles; the clenching causes nerves to react. One treatment is pelvic injections of a topical anesthetic and a muscle relaxer. Another method is injection of a liquid between the synapses so the nerves momentarily stop communicating with one another. This allows the nerves to re-set.”

The International Pelvic Pain Society, headquartered in Washington, D.C., invited Bayer-Mertens Human to present her research yesterday (Oct. 12) and today during its third annual World

Congress on Abdominal and Pelvic Pain. She is the first high school student to do so, and described the event as “a science fair for doctors. It’s very exciting.”

Bayer-Mertens Human wrote an abstract for the paper she expects to complete in approximately six months, which she will submit to journals that display interest at the Congress. Allyson Shrikhande and Dr. Tayyab Ahmed are co-authors on the paper, having contributed research.

Bayer-Mertens Human’s career goal is to help people, whether working with the underprivileged who have conditions for which there is yet no cure, or in concert with a group like Doctors Without Borders. Her ideal job, she conjectured, would be president of Planned Parenthood. Meanwhile, she continues her research.

“Never think that what you want to research should not be researched because somebody says it’s controversial, or it’s not worth researching, because if you’re interested in it, it is worth researching,” she stated. “Otherwise science doesn’t move forward.”

Danishmend’s project, “The Effect of Introducing Citrus Plantings on the Sri Lankan Human-Elephant Conflict,” also involves helping people — in a unique way. Originally interested in the study of attachment between mother and child, and then attachment between elephants, Danishmend went on a trip this past summer to Sri Lanka, organized by Nutley, N.J.-based Guru Travel.

She spent July living in a hut in a village in the island nation’s Central Province (“in the middle of nowhere”),

not far from Wasgomuwa National Park, a wildlife preserve. She taught English to children, and interviewed 20 individuals from another village about the impact of elephants on their lives.

The villagers’ crops were rice and tea, and elephants love rice, Danishmend said. “It’s like a lollipop to a child.” They invaded the village, often in the morning, to feast on the grain, and some encounters between humans and elephants turned deadly.

She related stories from her interviews. “One old man who was supposed to be watching out for the elephants, was sleeping on the ground, and was stepped on. A 13-year-old girl told me that when she was 5, elephants came near her hut when she was sleeping and went for the rice. All the walls collapsed on her, and she was buried in the rubble. Her uncle came and sliced off the elephant’s trunk to get them away. It’s devastating on both sides.”

Danishmend had her own experience with an elephant, though not as dramatic. The animal charged the open Jeep her group was riding in, “because they don’t like it when you get close. It was so, so scary.”

The Sri Lanka Wildlife Conservation Society, headquartered in Montclair, N.J., came up with a solution to keep villagers and elephants apart: orange trees. “All the villagers know that elephants don’t like citrus,” Danishmend explained. “If you attempt to feed an elephant an orange, it will not eat it.”

Though the solution seemed simple — plant orange trees — elephants were still affecting the village, which rarely

had regular access to water. To get it, and keep the trees alive, the inhabitants sometimes had to cross elephant territory. “Some people don’t have wells, some wells collapse, and no one has pumps or pipes to bring water to the trees, so a lot of trees died, and elephants still come,” Danishmend said.

Her interviews with local inhabitants and her surveys yielded a surprise: her assumption that the younger generations and women would have a more tolerant attitude toward the pachyderms was wrong. Age and gender had no correlation; attitudes depended on circumstances. Some people hated elephants and would kill them on sight, while one elderly Buddhist, who lost all his crops to elephants and his daughter to suicide, told her he couldn’t imagine harming an elephant, “because that means that some elephant out there isn’t going to have a mother or a child, and I know how that feels.”

Next summer, Danishmend plans to return to Sri Lanka to make a documentary. Meanwhile, she has been offered her first speaking engagement, at Woodstock Union High School in Vermont.

Her future plans, she said, “will definitely involve sticking up for people who don’t have voices. I will always be involved with conservation.”

Erica Curran, the school’s Science Research program coordinator, noted how passionate both girls are about their projects. “I love how different their projects are, and that their approach is both scientific and humanitarian. They’re both so altruistic — they’re inspiring to be around.”