

Scientists Invited to Join Teachers in Fight Against Scientific Illiteracy

As a tropical disease specialist, AAAS member Barbara Sina has traveled the world from Brazil to Kenya to the Netherlands. But few of her trips have proved more satisfying than the visits she's paid closer to home—to Margaret Brent Middle School in rural St. Mary's County, Maryland.

It was there that Sina got her first taste of teaching science to adolescents as a partner to 7th-grade teacher Tony Marcino.

Sina's chance to work with the budding scientists came when she read an article about the Bell Atlantic-AAAS Institute for Middle School Science and Technology Teachers. Each year, organizers choose 40 science and technology teachers from the mid-Atlantic states to attend a two-week, three-credit graduate course on communications and information technology in

Washington, D.C. This year's Institute runs from 22 July through 2 August.

The teachers get intensive hands-on training in a variety of subjects such as weather, fiber optics, remote sensing, robotics, video-disk technology, and computer science. Seasoned veterans of the program offer ways to incorporate the new knowledge into instructional materials for the classroom.

All that sounded intriguing enough, says Sina, but what really caught her eye was the program's interest in linking Institute participants with local scientists to act as partners once the teachers were back in class. Sina called and signed right up.

"I had a great time seeing the kids get excited about science," says Sina, who worked with Marcino in 1989-90. Sina is a researcher at Biomedical

Research Institute in Rockville, Maryland. "My previous experience was with college students, [who] often just wanted to know if 'it's going to be on the test.' The energy level at the middle school was so different."

Sina worked closely with Marcino to plan out her monthly science lessons. One experiment involved showing the class how to build an incubator out of a styrofoam box and a light bulb. They hooked up a temperature probe with a computer to monitor temperature.

With the incubator, the students grew bacteria and exposed them to varying levels of ultraviolet light. Sina says the students were fascinated to see first-hand the microscopic horror show of cells mutating due to high ultraviolet exposure.

Sina says she always came with lots of equipment and materials in hand, knowing how limited school budgets are. In a lesson on measuring volumes of

liquid, for example, she brought beakers, graduated cylinders, and pipettors.

"The students might never have had the chance to use equipment like this without Barbara's help," says Marcino.

Sina wasn't afraid to tackle the tough questions students raised as well. "They were very interested in humane treatment of animals," she says, "so I brought in some materials on the subject, and we got into some nitty-gritty discussions on the ethical and moral issues."

The middle school and Sina's lab were more than an hour apart, and the commute wasn't always easy, she says. But she managed to plan her professional work around classroom visits. The challenges, she says, were well worth the effort.

"The kids would ask great questions," she says. "And I always had to work hard to explain things clearly. They didn't accept jargon."

As far as Marcino is concerned, Sina's presence in the classroom was just as important as the experiments they cooked up together. "She gave the kids a chance to relate to a real scientist," he says.

Betty Calinger, AAAS project leader for the Institute, says she is looking for scientists interested in becoming classroom partners with this year's crop of Institute graduates (see box for teachers' names and locations).

To learn more about being a scientist-partner with the Institute or to find out how to get involved with your local school, contact Calinger at 202-326-6629, or write her at AAAS, Directorate for Education and Human Resources, 1333 H St., NW, Washington, DC 20005. ♦

—EILEEN KUGLER

1991 Bell Atlantic-AAAS Institute Teachers

MARYLAND

Pamela K. Fountain, Tilden Intermediate, Rockville; Claudia C. Lewis, Westminster High, Westminster; Barbara Loughlin, Dundalk Middle, Baltimore; Jacqueline Nedab-Olds, MacArthur Middle, Fort Meade; Donald E. Patti, Redland Middle, Rockville; Ronald Sperlbaum, Gwynn Park Middle, Brandywine; Ernestine Walker Terrell, Eugene Burroughs Middle, Accokeek.

NEW JERSEY

Susan H. Covington, Burnet Street School, Newark; Andela J. Dziekanowski, Robert R. Lazer Middle, Montville; Margaret Holmquest, Wood Road School, Belle Mead; Michael McGlue, Dwight Morrow High, Englewood.

PENNSYLVANIA

Paul Barry, Elverson Middle, Philadelphia; Susan S. Fineman, East Hills Elementary, Pittsburgh; Barbara J. Goodman, West Pennsylvania School for the Deaf, Pittsburgh; Marilyn Krupnick, Roberto Clemente Middle, Philadelphia; Sandra D. Lewis, Ada H. H. Lewis Middle, Philadelphia; Edith I. Mauthe, St. Thomas More School, Allentown; Garry Popiolkowski, Chartiers-Houston Junior/Senior High, Houston; Scott H. Stein, Springside School, Philadelphia; Mario Zinga, Woolslair Gifted Center, Pittsburgh.

VIRGINIA

William I. Banks, Albert H. Middle, Richmond; Gary P. Delano, John J. Wright Middle, Spotsylvania; Cheryl L. deLusignan, Western Branch High, Chesapeake; Vicky Darcel Drew, Buckroe School, Hampton; B. E. McElwee, Jr., Binford Model Middle, Richmond; Jane Montagna, Rosemont Middle, Norfolk; Lori Papa, Francis C. Hammond Middle, Alexandria; Ann Shaffner, Poe Intermediate, Annandale; Worda James Simpson, Deer Park Pathways, Newport News; Susan Walton, Peasley Middle, Gloucester; Bernetta Marie Williams, Thomas C. Boushall, Richmond.

WEST VIRGINIA

Susy S. Calvert, Maxwell Hill Gifted Center, Beckley; Kathryn H. Hiltz, John Adams Junior High, Charleston; Roberta Long, Point Harmony Elementary, Charleston; Rick Pyles, Sistersville Junior/Senior High, Sistersville; Pamela B. Smith, West Virginia Dept. of Education, Charleston.

WASHINGTON, D.C.

Genesta R. Guirry, Davis Elementary; Rosa J. Hodge, M.L. King, Jr., Elementary; Robert R. Mathieu, Mary Church Terrell Elementary; Kevin DeWayne Riddick, Garnet-Patterson Jr. High.

AAAS Fellows Learn EPA Ways

Plummeting state budgets can mean tough times for researchers at state universities, as Northeast Louisiana University meteorologist Eric Pani knows all too well. "When you're not in a [well-funded] research environment," he says, "it's easy to fall behind with what's going on in the field."

But this summer Pani is doing plenty of research as a AAAS Environmental Science and Engineering Fellow at the Environmental Protection Agency (EPA) in Washington, D.C. As one of ten EPA Fellows, Pani is studying how pollutants shift from the lower parts of the atmosphere into the troposphere and how that affects global climate.

The goal of the 10-week summer program coordinated by

AAAS is to bridge the worlds of science and policy for the good of the Fellows as well as the EPA, says AAAS program manager Claudia Sturges. EPA project officer Karen Morehouse agrees.

"The Fellows allow the EPA to get a project going that might [go undone] because of staffing" that is tight or limited to certain fields, says Morehouse. She offers the example of 1991 Fellow Mary Bober, a University of California physiologist who is investigating a new method to determine the toxicity of water through use of genetic tests.

As for Bober, "Working for the EPA gives [me] a perspective on what's involved in environmental decision making on the federal level."

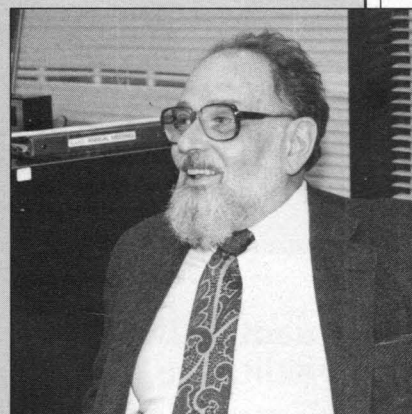
That kind of real-world understanding, says Morehouse, is perhaps the most important reason EPA has chosen to fund



1991 Environmental Science and Engineering Fellows (L-R): Robert G. Croy, Cambridge Environmental Inc.; Mary A. Bober, University of California-Santa Barbara; Mark A. Brown, Hazardous Materials Laboratory; Vera Brankovan, Bristol-Myers Squibb Pharmaceutical Research Institute; Charles A. Cole, Pennsylvania State University; Keith A. Matthews, Dewey Ballantine; Marvin Fleischman, University of Louisville; Hilary I. Inyang, University of Wisconsin; Christine A. Paszkiet, Cornell University; and Eric A. Pani, Northeast Louisiana University.

In Memory of Arthur Herschman

Physicist and former AAAS Meetings and Publications head Arthur Herschman, 62, died of cancer 29 May at his home in Alexandria, Virginia. He had retired this spring 17 years after joining the AAAS staff. Prior to AAAS, Herschman was active in the national physics community as director of Information Programs for the American Institute of Physics in New York and editor for *The Physical Review* and for *Physical Review Letters*. He was a Fellow of the AAAS and the American Physical Society, and a member of Phi Beta Kappa, Sigma Xi, and other societies. He will be sorely missed.



the AAAS program for the last 10 years.

"The Fellows go away with a very much revised idea of not only what EPA is like, but what the entire federal decision-making process is like," says Morehouse. "[They learn] how to make proposals that win." ♦

—CHRISTINA STEEN JENSEN

officer Nan Broadbent at 202-326-6440 by August 15th. ♦

Call for SLAAS Delegate

AAAS has been invited to send a delegate to the 47th Annual Session of the Sri Lanka Association for the Advancement of Science (SLAAS), set for 2 to 6 December 1991 in Colombo. The theme: "Science for Everyday Life." The delegate is invited to deliver a lecture to the relevant SLAAS section. Members who will be in the area in December or who know of colleagues on sabbatical in the region should contact Laura Mann at AAAS, 202-326-6664 before 1 October. If interested, please send a C.V. along with your application to Mann at AAAS, Directorate for International Programs, 1333 H St., NW, Washington, DC 20005. Although no travel funds are available, AAAS will provide per diem for the meeting. ♦

Reviewers Wanted

You can help select the year's best TV and radio reports about science for the prestigious AAAS-Westinghouse Science Journalism Award.

Broadcast entries range from entomology to buckyballs to space exploration and must be screened for scientific accuracy. If you live in the Washington, D.C., area or will be traveling here during late August, we need your help at AAAS headquarters in reviewing broadcast entries in your discipline. If interested, please call senior communications