

Briefings

edited by CONSTANCE HOLDEN

Engineers' Nobel to Microchip Pioneers

Engineers don't feel loved. So the National Academy of Engineering was thrilled when Draper Labs of Cambridge, Massachusetts, decided to endow an engineering version of a Nobel Prize in the memory of a lab founder Charles Stark Draper. ("Doc" Draper developed the navigational system used by Apollo astronauts to get to the moon.)

The first such prize—a whopping \$350,000 designed to get engineering the attention due it and motivate youth—has been awarded to Jack S. Kilby and Robert N. Noyce, who independently invented the integrated circuit in the late 1950s. Kilby, now a consultant and chief technical officer of the Houston Area Research Center, was with Texas Instruments when he created the first integrated circuit. Noyce, head of Sematech in Austin and a co-founder of Intel, was at Fairchild Industries at the time.

The prize will be awarded by the engineering academy every 2 years.

bilities that should be expected of scientifically literate high school graduates. The top two attributes, rated as "essential" by 83% of the respondents, were the ability to "read and understand articles on science in the newspaper" and to "apply scientific information in personal decision-making, for example, ozone depletion and the use of aerosols."

Also ranked highly were:

- "Engage in a scientifically informed discussion of a contemporary issue, e.g., should a child with AIDS be allowed to attend public school."

- "Locate valid scientific information when needed."

- "Read and interpret graphs displaying scientific information."

Interestingly, the belief that "scientific knowledge is worth pursuing even if it never yields practical benefits" was ranked considerably higher by the teachers than by the 195 scientists in the sample.

The most significant finding, according to the AAAS, is that the capabilities rated the most important "are not those that are typically taught in science courses or tested by the National Assessment for Educational Progress. Indeed, "NAEP items focus almost exclusively on the

attitudes and capabilities rated lowest by the survey respondents"—such as designing an experiment, defining basic scientific terms, or explaining a natural process.

Champagne notes that there is a paradox here, since "the attainment of the higher order life skills presupposes the attainment of the lower order school skills."

The survey was a preliminary field test of the questionnaire. A more formal survey will be conducted after questions have been refined.

Math Magazine for Gifted Students

How do the Russians nurture their top young science talent? One way is through a magazine, *Kvant*, specially designed for teenagers gifted in physics and math.

Now the Americans are taking a leaf from the Soviet book with the establishment of a U.S. version of the magazine, called *Quantum*. A new magazine-sized quarterly is to be launched late next year with the aid of a \$366,000 grant from the National Science Foundation. It will be published by the National Science Teachers As-

sociation (NSTA) in cooperation with the American Association of Physics Teachers and the National Council of Teachers of Mathematics.

The idea for the magazine originated with Soviet emigré Edward D. Lozansky, a former writer for *Kvant* who, as a consultant to NSTA, suggested it to the Soviet Academy of Sciences. Physicist and Nobel laureate Sheldon Glashow of Harvard University participated in the arrangements and will be the magazine's physics editor.

According to Elizabeth Tobia of NSTA, *Quantum* will be "somewhat identical" to *Kvant*, which has developed a readership of 300,000 since it was started in 1970. A 48-page pilot issue, to be distributed to schools free next month, will consist of articles translated from the Soviet magazine, including one on "paper sheet geometry" and a feature about waves on water. In the future, the authorship will be about 50–50 Russians and Americans, says Tobia.

The first two issues will be published in runs of approximately 100,000. Subscriptions will be \$9.95 a year. The magazine will be taking advertising and aims eventually to become self-supporting.

Scientific Illiteracy

The nation is supposed to be suffering from a woeful case of scientific illiteracy. But just what that is has eluded precise definition.

So the AAAS conducted a survey of 1400 scientists, teachers, school administrators, and policy analysts to find out what they thought. The results, presented at a AAAS Forum on scientific literacy held in early October, suggest that "the kinds of things they believe are important appear to be quite different than the things that are actually being taught," says Audrey Champagne of AAAS.

Respondents were asked to rate the importance of 15 capa-



Why is this man smiling? Physicist and Nobel laureate T. D. Lee of Columbia University has the Chinese-American scientific community and others abuzz, if not aghast. Last month, he appeared on the front page of the New York Times and on network news—grinning and hand in hand with China's senior leader Deng Xiaoping. In the wake of recent events in China, the chummy meeting has shocked those who see it as a perfect piece of propaganda for Deng, conveying the message that everything is back to normal. Lee has long had a special relationship with the Chinese government, but this time he has gone too far, angry scientists opined in a flurry of commentary transmitted via an electronic bulletin board on BITNET. In a letter made available to Science, Lee said that one of the conditions he made before meeting with Chinese leaders is that the Chinese Red Cross publish a list of students and intellectuals killed during the June crackdown. Lee declined to be interviewed by Science. Acquaintances say he's hoping the furor will die down.

Agence France-Presse

Go-Ahead for Colon Cancer Treatment

Now it's official. On 2 October, scientists at the National Cancer Institute announced that a new drug therapy can significantly reduce the death rate from an advanced form of colon cancer. This ends a fight that broke out earlier this year between NCI officials and Charles Moertel of the Mayo Clinic, the principal investigator on the cancer drug study (*Science*, 28 July, p. 346).

Last summer, the therapy, a combination of levamisole and 5-fluorouracil, looked highly promising. But Moertel insisted it was too soon to tell if the treatment actually saved lives or just postponed the cancer's recurrence. NCI director Samuel Broder and his predecessor, Vincent DeVita, disagreed—vehemently.

An updating of the study data now confirms that the drug combination reduces the mortality of people with Dukes' C colon cancer by about one-third, a potential savings of some 4000 lives per year. NCI officials, with Moertel's concurrence, have therefore notified physicians that they should consider giving the therapy after surgery. Levamisole is not sold in this country but can be obtained from the NCI.

Permanent R&D Tax Credit Moves Ahead

After years of lobbying, the business and research communities appear to be on the verge of convincing Congress to make permanent the 20% tax credit allowed companies for research expenditures.

Both the House Ways and Means and the Senate Finance committees have passed legislation for the R&D credit, as well as the 20% credit allowed companies that support university-based research. Both bills contain similar, revised formulas for measuring companies' R&D spending and calculating

the credit. These are supposed to overcome problems with the current system, which can lower the value of the credit for companies with sudden spikes in their R&D spending.

Industry and university lobbyists, however, are not breaking out the champagne quite yet. The tax credits are part of an extension package attached to budget-balancing legislation for fiscal year 1990. Chances are that the measures will survive, but that will not be clear until House-Senate conferees meet later this month.

Dallas HIV Survey Proceeding

So far no one has claimed the prize in a bid by Dallas gays to discourage participants in a government survey, launched on 30 September, to determine the prevalence of HIV antibody in the population.

Federal health officials are offering \$50 to Dallas residents who agree to provide a blood sample and complete a questionnaire on risk behaviors associated with AIDS. But the Dallas Gay Alliance opposes the project and is offering \$100 to the first person who brings in an uncompleted questionnaire. The questionnaire lists risk behaviors and asks the respondent how many (but not which ones) apply to him or her.

Conducted by the Centers for Disease Control, the survey involves 1200 households and is intended to lay the groundwork for a national survey on HIV prevalence. A pilot effort attempted in Washington, D.C., last year failed because of strong local opposition. A smaller project involving 300 households was subsequently completed in Pittsburgh.

William Waybourn, president of the Dallas Gay Alliance, says gays oppose the survey despite precautions to protect anonymity because it still may be possible to identify participants. He also says enough information already exists about seroprevalence in Dallas and

Activists Call for Procter & Gamble Boycott

Animal rights groups, back from what seemed like a summer vacation, have launched their fall offensive with a call for a nationwide consumer boycott of Procter & Gamble products.

Several groups, including People for the Ethical Treatment of Animals, accuse P&G of trying to put together a secret industry-funded war chest—in the form of a proposed Animal Testing Coalition—to battle the animal righters. According to company

spokesperson Linda Ulrey, activists have been circulating a copy of a preliminary memo they stole last July, in which P&G officials recommended a "nationwide educational program" on the need for animals in research. The memo suggested a budget of around \$17.5 million, with a P&G contribution in the neighborhood of \$150,000.

Ulrey says the company is "rather surprised" that it is being targeted. Procter & Gamble has spent \$10 million over the past 10 years on the development of animal alternatives and is a pioneer in the use of the "low volume" Draize eye irritation test, which uses fewer rabbits and more diluted solutions than the traditional test. Ulrey says the company has reduced overall animal use by one-third in the past 5 years. But it still uses an undisclosed number of animals for its growing drug business.

Elsewhere on the animal front: CBS television has made a movie out of the celebrated case of Jenifer Graham, the California teenager who helped spur passage of a new state law on "students' rights" when she refused to dissect a frog in biology class. "Frog Girl: The Jenifer Graham Story" will be aired on 17 October. That's the bad news for scientists. The good news is that this year's Miss America, Debbye Turner, loved to dissect frogs. And today, she's a student in veterinary school.



Miss America didn't have to kiss any frogs to get where she is, but she liked to dissect them.

worries that local health officials will use the survey as an excuse to hold up spending on AIDS care until the results are in.

Baltimore Asked to Head Rockefeller

The headline in the first edition of the 4 October issue of the *New York Times* put it this way: "Fraud Inquiry Figure Asked to Lead Rockefeller U." In later editions the same day the headline was changed. "Nobel Prize Winner Asked to Head Rockefeller U.," it said.

Both headlines referred to David Baltimore who has been offered the job, as expected (*Science*, 29 September, p. 1441), by unanimous vote of the

Rockefeller University trustees.

University officers and colleagues of Baltimore's have told *Science* they found the first headline "outrageous" and "terribly unfair," but none wished to be quoted.

Baltimore's much publicized run-in with Congress over allegations that someone fabricated data for a paper he coauthored had been raised publicly by some Rockefeller faculty as a reason not to offer him the job. But the trustees rejected any suggestion that he be blamed for an inquiry in which he was never personally accused of misconduct. "We looked into the issue and are convinced that there is absolutely nothing there," says Rockefeller trustee Richard Furlaud. Baltimore is still considering the offer.