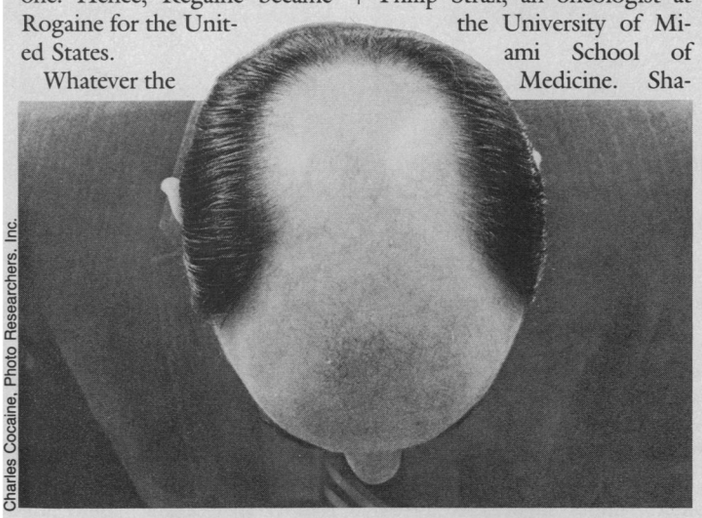
Random Samples:

What's in a Name?

Upjohn Co.'s Rogaine, the new prescription anti-baldness drug that has middle-aged men making appointments with their dermatologists, is called Regaine (get it?) in the other 45 countries of the world where it is marketed. But during the review process, the Food and Drug Administration made what an Upjohn spokeswoman calls "a very mild suggestion" that Regaine sounded too "over-the-counter" and promised something the product can't keep, at least for everyone. Hence, Regaine became Rogaine for the United States.



Charles Cocaine, Photo Researchers, Inc.

Whatever the name, the drug (whose trade name is minoxidil) promises to be a big gain for Upjohn. It must be applied twice daily for 4 months before its effects are noted. Thereafter, it must be applied continuously or the new hair will fall out.

Minoxidil, sold as Loniten, has been used for some years in pill form to fight hypertension. Dermatologists discovered that some patients using the drug experienced increased hair growth. The company has no idea how the drug works to promote hair growth, and notes that it works only on baldness on the crown of the head, and seemingly only for some men.

While no U.S. price has been set, hair-conscious Canadians pay $55 (U.S.) for a month's supply. With some 30 million Americans subject to balding, market analysts say Upjohn, whose sales reached $2.2 billion last year, could gain as much as $250 million in sales over the next 2 years.

Going Far on a B.S.

In a world of Ph.D.'s and M.D.'s, epidemiologist Sam Shapiro has done very nicely with just his bachelors in science from Brooklyn College.

He became a member of the Institute of Medicine in 1974 and has received a number of other honors. Most recently he shared the $100,000 Kettering Prize for Cancer Research with Philip Strax, an oncologist at the University of Miami School of Medicine. Shapiro is the first researcher without an advanced scientific degree to win a Kettering prize, or any other General Motors Cancer Research Award. And he's one of few to win any major scientific award without a doctorate.

The Kettering Prize recognizes his work with Strax in designing the Health Insurance Plan (HIP) study of the efficacy of combined clinical examination and mammography in breast cancer screening. The HIP study "is a classic," says Diane Fink, the American Cancer Society's vice president for professional education. "The meticulousness with which it was designed is a marvel. The data have been reviewed every which way and the results are still incontrovertible."

Since the first results of the 23-year-long study were published in *JAMA* in 1963, more than 30 papers have been authored using data from the study. The definitive book on the study is due this fall from Johns Hopkins University Press.

The study established the combined use of clinical exam and mammography as the most effective way to reduce deaths from breast cancer. The 31,000 women in the study group received clinical exams and mammograms four times a year, while those in the equally large control group received their regular care. Soon the researchers were finding minute tumors that clinical exams alone missed. Five years later, there were 38% fewer breast cancer deaths in the study group. Even today, the study group shows 25% fewer deaths.

Each year 135,000 American women are diagnosed as having breast cancer and 40,000 die of the disease. The American Cancer Society and the National Cancer Institute recommend that women get clinical exams and mammograms every 1 or 2 years from age 40 to 49, and annually after age 50, said Diane Fink, the Cancer Society's vice president for professional education. If women followed such a plan, deaths from breast cancer could be reduced by at least one-third, experts say.

But only about 20% of American women have ever had a mammogram, Shapiro says, and that includes women who have already had one breast lump. The problem is that Medicaid and many private insurers will not cover the $200 or more a mammogram and clinical exam can cost.

The HIP study also led to the development of new films and equipment that make mammography safer than ever, experts say. The radiation dose today is one-tenth of a rad—less hazardous than smoking three-quarters of a cigarette.

Shapiro, now a professor emeritus at Johns Hopkins School of Public Health, says his lack of a doctorate never inhibited his career. "In my day it was possible to make a contribution even though you did not stay in academia long enough to acquire a degree," Shapiro says. At age 74, his contribution thus far consists of some 192 scientific papers.

"It would be virtually impossible for someone in the current era to advance without doctoral training and a degree," Shapiro says, although he doesn't miss the "good old days." "I think [the emphasis on a degree] is a good thing. It reflects the great advances that have been made in the building up of stronger disciplinary knowledge. The training and the degree mean a great deal today."

Guacamole, Anyone?

1 guacamole = Avocado's number.

Sydney Brenner, of the Medical Research Council's Molecular Genetics Unit in Cambridge, and his friend Matthew Meselson of Harvard were having lunch at Woods Hole one day this summer when the guacamole was born. They'd been discussing some recent curious research findings reported in a publication Brenner refers to as *The Journal of Hydro-immunology*, when the guacamole suggested itself.

"You see, Avogadro's number being 6.0225×10^{23}, a maximole is a very large number of molecules and a minimole is a very small number of molecules," Brenner says. "A guacamole depends on Avocado's number, which can be anything you want it to be. So a guacamole is I don't know how many molecules. If one were to pursue certain lines of research using the guacamole. . . ."

Brenner, who shares credit with Meselson for the breakthrough, is proud of the guacamole and says he'd like to keep it a trade secret. "But we don't plan to patent it," he added.

■ GREGORY BYRNE