RANDOM SAMPLES

edited by CONSTANCE HOLDEN

New Roles for AZT?

While newspaper headlines last week were touting AZT's role in preventing transmission of the AIDS virus to fetuses, less publicized scientific reports were hinting at other roles for the drug: attacking diseases such as a type of leukemia and psoriasis.

Both diseases involve an abnormal proliferation of cells, which AZT may help curtail. In a study published in the 29 June *New England Journal of Medicine*, Parkash Gill and Alexandra Levine of the University of Southern California report that they and their co-workers tested a combination of AZT and interferon-α in 19 patients who had a highly lethal form of adult T cell leukemia-lymphoma, caused by human T cell lymphotropic virus type I (HTLV-I). Four were also infected with HIV. The researchers report, however, that 11 patients had "major responses" to the treatment, including five complete remissions.

The trial did not have a control group; nonetheless, Gill, an oncologist, says, "This combination clearly gives responses that are durable at least in some percent of the cases." The investigators theorize that the rapidly growing cancer cells are, in effect, targeted because they soak up the most AZT.

"If the data's correct, it's a substantial advance," says Robert Gallo, whose lab at the National Cancer Institute discovered HTLV-I. A smaller study with similar findings is reported in the same issue by a group led by Olivier Hermine of Paris's Hôpital Necker.

On the psoriasis front, dermatologist Madeleine Duvic of the University of Texas, Houston, Medical School and her colleagues reported in the June *Journal of the American Academy of Dermatology* that AZT cleared up most of the psoriasis in four of 12 chronic sufferers. Duvic, who cautions that this was a preliminary study, speculates that AZT, which disables a key enzyme that HIV needs to copy itself, may slow skin cell proliferation. Dermatologist Gerald Weinstein of the University of California, Irvine, calls the study "very interesting," but says better psoriasis treatments already exist.

Both groups hope to test these novel AZT approaches in larger, controlled trials.

Periodic Confusion

Like squabbling parents, rival organizations of chemists continue to battle over names for six recent additions to their family of elements. Last month the American Chemical Society (ACS) decided to defy the international element-naming body, the International Union of Pure and Applied Chemistry (IUPAC) and move ahead with the christening.

Their list: rutherfordium (Rf) for element 104, hahnium (Ha) for 105, seaborgium (Sg) for 106, nielsbohrium (Ns) for 107, hassium (Hs) for 108, and meitnerium (Mt) for 109. The names for all but element 109 are at odds with proposals by IUPAC, which also wants to switch rutherfordium to 106 and hahnium to 108. Following protests from chemists around the world, IUPAC postponed final ratification until 1997.

Faced with the name vacuum, the chemists "had to make some sort of decision for our own purposes," says Michael Bowen of the ACS. If the parties fail to reach eventual agreement, of course, chemists could follow the lead of many of today's parents and give the elements hyphenated names.

Bomb Theory Exploded

Conspiracy theorists have been having a field day in the aftermath of the 19 April bombing of the Oklahoma City federal building that killed 168 people. Seismographic readings, they claim, prove that more than one bomb was involved.

An instrument located 25 kilometers away in the city of Norman recorded three traces of seismic waves racing away from the bomb site, spaced about 10 seconds apart. That means there were two or more bombs, say conspiracy fans who contend the truck bomb could have been just a cover for others set off by the federal government to embarrass the militia movement.

But four U.S. Geological Survey seismologists have investigated these claims and say the conspiracy-mongers' theory just won't fly. "We can clearly state that there were not two blasts tens of seconds apart," says Thomas Holzer of the Menlo Park, California, office. The scientists figured this out by monitoring another explosion—the final demolition of the building—with four seismographs. After explosives brought the hulk down, two prominent wave traces, about 10 seconds apart, appeared in Norman. Holzer says they represent two sets of waves that separated as they traveled. "The principles are pretty straightforward. What we're looking at is what goes on in earthquakes—different seismic waves moving at different speeds" in different parts of the crust, he says. The third trace back in April was probably the bomb blast, says Holzer. The demolition only produced two traces because its blast was too small to be detected.

Raymon Brown of the Oklahoma Geological Survey in Norman says he and his colleagues want to look more closely at the seismograms before making a final judgment. But it looks as though die-hard conspiratorialists will have to find themselves another theory.

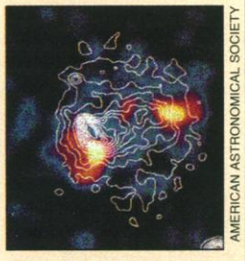
Physics in the Infosphere

NEWS FROM THE NET

The journals of two major scientific societies are getting into the cyber-swim this month. One is *Astrophysical Journal Letters* (*ApJL-E*), published by the American Astronomical Society (AAS), which is offering readers a vastly expanded store of information through referral and search features. That includes tapping into the Astrophysical Data Service, maintained by the Smithsonian Astrophysics Observatory, for abstracts and full texts of most references.

The *ApJL-E* is available on-line free to anyone with access to the World Wide Web (http://www.aas.org) thanks to a $450,000 grant from the National Science Foundation. NSF's Morris Aizenman says the project was funded because it was "an exciting idea that we hadn't seen before." He notes that the system will contain a new feature—"forward referencing"—which means every time a paper is referenced, the citation will also be attached to the paper itself. AAS's executive director, Peter Boyce, says he's hoping for a lot of feedback from readers, but he already expects most to be hooked on the electronic journal by January 1997 when they have to start paying for it.

The *Physical Review Letters*, published by the American Physical Society (APS), will have less dramatic new capabilities, but, says associate publisher Maria Lebron, it will be an "enhanced" version of the hard copy—with access to all other issues and a data bank. The electronic journal will be free for the next 6 months to institutions that already subscribe. Individual APS members can get a cut-rate 1-year subscription for $75. The address: assocpub@aps.org.



AMERICAN ASTRONOMICAL SOCIETY

Available on the computer nearest you. Satellite images show x-ray emitting gas *(white)* on galaxy cluster.