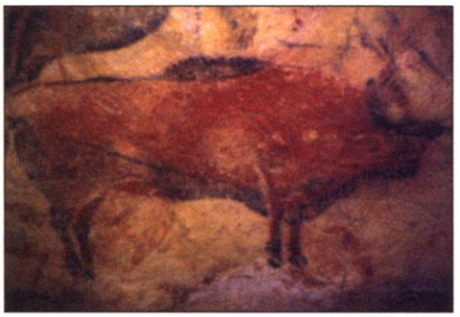


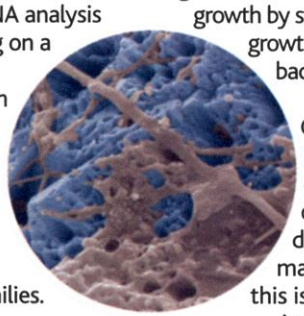
Endangered bison in main chamber of Altamira caves.

Cave Paintings in Jeopardy

Spanish authorities are contemplating temporarily closing the famous caves at Altamira in northern Spain, following the discovery of bacteria that are eating away at 16,000-year-old cave paintings.

For more than 2 decades, only 40 people a day have been allowed in the caves—down from 3000 in the 1970s. But precautions have apparently failed to stem deterioration.

A team led by microbiologist Cesareo Saiz, of the Spanish Scientific Research Council, first discovered in 1999 that Altamira galleries were coated by scattered colonies of what appeared to be actinobacteria, a common organism found in soils and water. Recently, DNA analysis of bacteria growing on a sample of red iron oxide pigment from a bison painting revealed that 95% of the organisms were bacteria belonging to the acidobacteria and proteobacteria families.

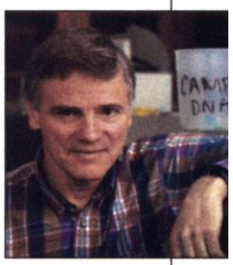


Bacteria

Although the acidobacteria could not be cultured, the scientists report in the 21 May *FEMS Microbiology Letters* that close relatives of the strain are able to degrade hematite—a pigment in iron oxide—in lab cultures. That would explain fading pigment, says Saiz. But, he adds, more studies are needed to learn how the bacteria act and to figure out how to protect the paintings. One solution might be to turn down the lights, which enhance bacterial growth by stimulating the growth of algae on which bacteria feed.

Microbiologist Orio Ciferri of the Italian University of Pavia, an expert on microbial degradation of art materials, says that this is "a very interesting finding but, unfortunately, tells us very little about when and how the microbial community was established."

Prize Time Again in Kyoto



Hood.

Pioneering work in automating amino acid sequencing has paid off big for geneticist and biotechnologist Leroy Hood, earning him one of three 50-million-yen ($415,000) Kyoto Prizes for 2002.

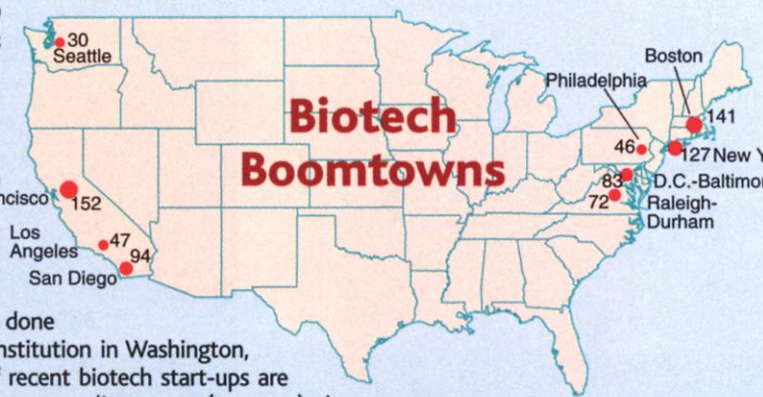
Hood developed an automated DNA synthesizer in 1984; in 1986, he presented the world with its first automated DNA sequencer, which allowed the human genome to be decoded in years instead of decades.

The 63-year-old Hood, previously on the faculty at the California Institute of Technology in Pasadena and at the University of Washington, Seattle, is now president of the Institute for Systems Biology in Seattle.

This year's prize in mathematical sciences will go to Mikhael Gromov, 58, of the Institute des Hautes Etudes Scientifiques, near Paris, who defined "the relationships between the global structure of a space and local properties of a spacelike curvature."

A third prize in the arts goes to Japanese architect Tadao Ando. The awards will be presented by the Inamori Foundation at a November ceremony in Kyoto.

Biotech Boomtowns



With almost 300 biotech companies between them, San Francisco and Boston dominate the U.S. biotech scene, according to a survey of almost 1200 firms in the 51 largest urban areas, done by the Brookings Institution in Washington, D.C. About 75% of recent biotech start-ups are located in just nine metropolitan areas (see map), the study found, as are 75% of companies employing over 100 employees. Four other major cities—Chicago, Detroit, Houston, and St. Louis—have done less well in attracting biotech despite their thriving research scenes, the report says, and the remaining 38 cities have few or no biotech firms.

Afghani Role Models

"There are more women, percentage-wise, in the loya jirga than in the National Academy of Sciences."

—Astronomer Margaret Geller, a U.S. National Academy member at the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts, referring to the recent gathering of Afghanistan's leadership in Kabul. Two hundred (12.5%) of the 1600 loya jirga participants were women, whereas 139 (7%) of the academy's 1991 members are women.

Name That Clone II

Scientists are still struggling over how best to make the distinction clear in the minds of the public and politicians between cloning to make babies (bad) and cloning for research and developing new treatments (good). At a seminar at Johns Hopkins University last month, scientists insisted on "nuclear transplantation" in place of the now-discarded "therapeutic cloning" (which, some have pointed out, might be construed as cloning to remedy infertility). However, across the pond, scientists have another idea. Anne McLaren, a developmental biologist at the Wellcome Trust in Cambridge, U.K., came up with a more Churchillian term at a recent meeting in Denmark: "cloning for stem cells." No euphemisms, and it gets at the heart of the difference, she says.

Any better ideas? Readers are urged to let *Science* know.

CREDITS: (TOP) CESAREO SAIZ; J. BEDOYA, J. C. CANAVERAS, AND S. SANCHEZ (MNCN, CSIC)