LETTERS

At the edge

Carl Sagan is remembered as one who could "skillfully communicate the power and beauty" of scientists' work to the public. The costs of colliders and "marine protected areas" are discussed. Vigilance in safeguarding the integrity of clinical trials is stressed. And three writers emphasize "the experimental nature of Biosphere 2" (right, Biospherian at work).

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Bright Star

The editorial "Bright star among billions" by Stephen Jay Gould (31 Jan., p. 599) was a fine tribute to a distinguished scientist. It did, however, reveal an unfortunate aspect of contemporary science that likely would have puzzled our scientific predecessors: the belief that popularization of science necessarily involves trivialization and inaccuracy. If the future confirms—as some fear—that support of scientists and their work peaked in our time, those seeking explanations could do worse than reread Gould's editorial. How well we encourage and support scientists who can skillfully communicate the power and beauty of their work to the public may largely determine whether the golden age of science is history. Carl Sagan was indeed a bright star.

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Sagan's final book, *The Demon-Haunted World: Science as a Candle in the Dark*, epitomizes Sagan's main message (*1*). Most important, it provides an antidote to the obscurantism or "New Age" claptrap of those who would seize on myth and magic as answers to the problems of mankind, no matter how valid the personal succor these may provide to some.

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References

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Was Sagan really "the greatest [science] popularizer of the 20th century, if not of all time?" It is interesting to know that Sagan dwarfed several other luminaries of the 20th century, including H. G. Wells, Julian and Aldous Huxley, J. B. S. Haldane, Lancelot Hogben, George Gamow, Arthur C. Clarke, and Isaac Asimov, to name a few!

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LHC "Price Tag"

The dollar figures quoted in Alexander Hellemans' article "CERN sets sights on an early LHC [Large Hadron Collider]" (News & Comment, 3 Jan., p. 19), could be misinterpreted in the absence of appropriate clarifications. In particular, the $2 billion quoted as LHC's "price tag" includes the accelerator, but not the detectors, and is based on accounting practice at CERN (the European particle physics center). On the other hand, the $530 million from the United States is to fund equipment and materials for both accelerator and detectors, and the amount of that equipment and materials is determined on the basis of U.S. Department of Energy (DOE) and National Science Foundation (NSF) accounting practices. Unlike the DOE-NSF costing procedure, CERN accounting excludes a number of elements such as research and development and a substantial fraction of labor costs, which CERN covers and accounts for separately. Thus, the figures of $2 billion and $530 million are not at all comparable.

DOE-NSF accounting practices would place the cost for the LHC accelerator and detectors at about $6 billion, with about two-thirds for the accelerator and one-third for the detectors. It is against these figures that the proposed U.S. contribution should be compared, namely, $200 million by DOE for the LHC accelerator and $330 million (DOE and NSF) for the two detectors. All of the U.S. accelerator funding and the vast majority of the detector funding will be used to provide materials and equipment from U.S. industry, national laboratories, and universities.

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Marine Biodiversity Budget

Ecosystem protection is a crucial strategy for conserving biological diversity (*1*), but the Clinton Administration's fiscal year 1998 budget proposal reveals a striking disparity between U.S. spending on protected areas on land and in the sea. It asks Congress for $1.6 billion for the National Park Service to manage 374 units totaling 344,000 square kilometers of land and $3.1 billion for the Forest Service to manage 159 units totaling 772,000 square kilometers of land. But its budget request for the National Oceanic and Atmospheric Administration's National Marine Sanctuaries Program is only $13.2 million—two orders of magnitude less—for 12 units totaling 47,000 square kilometers of sea.

Funding for terrestrial protected areas is inadequate, but resources dedicated to marine protected areas are so meager that the commitment of the United States to protecting marine biodiversity deserves a fundamental reevaluation before the next federal budget goes to Congress.

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References

1. E. A. Norse and R. E. McManus, in *Environmental Quality 1980* (Council on Environmental Quality, Washington, DC, 1980), pp. 31–80; G. K. Meffe and C. R. Carroll, Eds., *Principles of Conservation Biology* (Sinauer, Sunderland, MA, 1994).

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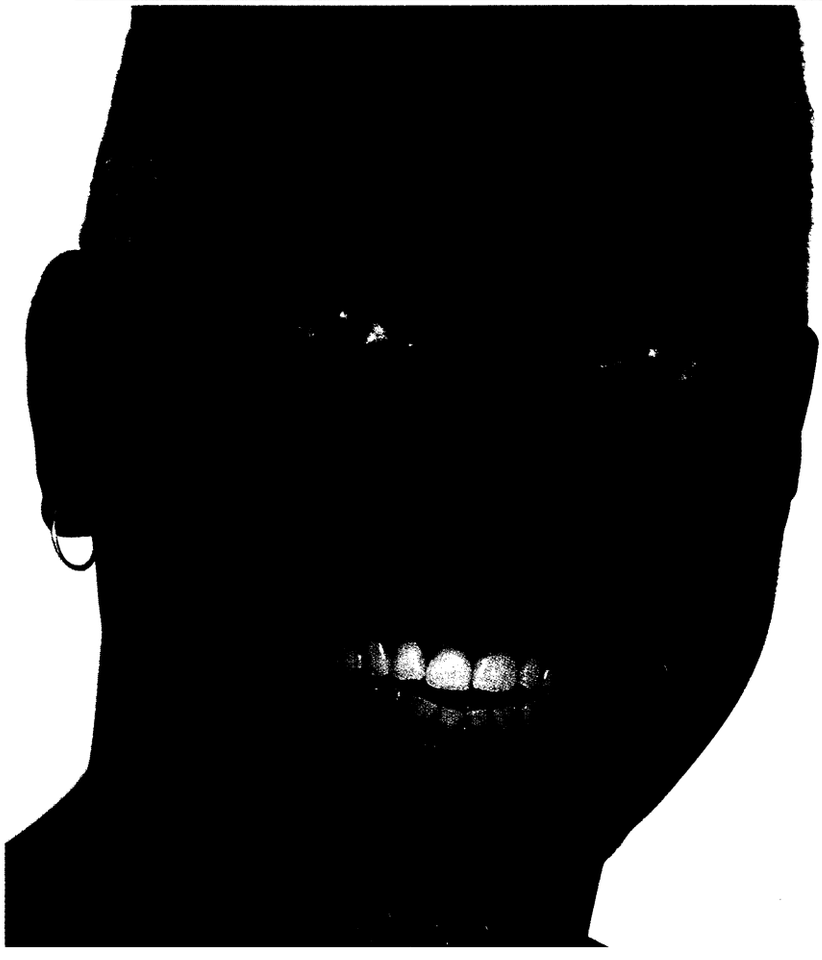
Aspirin and Stroke

Martin Enserink's article about the Second European Stroke Prevention Study (ESPS 2) study (News & Comment, 20 Dec., p. 2004) raises two issues that merit serious attention: (i) fraud in scientific research and (ii) the ethics of using placebos in situations where there is already an effective treatment.

There can be no place in scientific research for unreliable data or for the people who perpetuate fraud. This issue came to light with respect to this study because quality control procedures put in place by Boehringer Ingelheim detected suspicious data from one of the 60 participating centers. We fully informed the Dutch health authorities, notified the authorities at the institution in question, and cooperated fully with their investigations. We regret that the hospital director was unable to establish either guilt



Malcolm is imp
by the new Pre
Protease be
it's a GST
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"Not being a protein chemist, I just want to clone the gene, express it, isolate the protein and move on," says Malcolm Zellars, who's working on his post-doc at Tufts University Medical School in Boston, Massachusetts, USA.