

SCIENCE'S COMPASS

ships, research funds, or science prizes, it would create a large pool of new funds for science. This plan would require willingness and effort on the part of the Indian educational establishments to develop comprehensive databanks of their graduates and to approach their alumni for donations. The current attitude in most Indian universities seems to be one of disinterest, neglect, and even hostility toward their graduates.

The Indian Institutes of Technology (IITs) are one of the few success stories of Indian education. The IITs are said to be the best gifts to the United States and Canada because a large proportion of their graduates are working in those countries. Imagine the difference it would make if all graduates from the IITs started a fund for an endowment in their respective alma mater.

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Too Mammoth an Undertaking

In his News of the Week article "Siberian mammoth find raises hopes, questions" (29 Oct., p. 876), Richard Stone describes the excavation of a presumably well-pre-

served mammoth and the possibility of researchers attempting to resurrect the species. It is a matter of debate if it is desirable to "create" mammoths or other extinct species. However, it would never work. The excavated organic material is thousands of years old, and cloning requires a cell with a complete and undamaged genome. Just a single DNA base in the wrong place could lead to lethality or severe genetic disorders.

A number of DNA studies on mammoths have been published (1), and the retrieval of single-copy nuclear DNA has re-



Not the place to be if this ice-bound mammoth were cloned, but cloning seems an unlikely prospect.

cently been reported (2), but even the best preserved permafrost specimens yielded fragmented and damaged DNA.

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References

1. For example, see, E. Hagelberg *et al.*, *Nature* **370**, 333 (1994); H. Yang, E. M. Golenberg, J. Shoshani, *Proc. Natl. Acad. Sci. U.S.A.* **93**, 1190 (1996); M. Noro *et al.*, *J. Mol. Evol.* **46**, 314 (1998).
2. A. D. Greenwood *et al.*, *Mol. Biol. Evol.* **16**, 1466 (1999).

NSF Urban Systemic Initiatives

In their Editorial "Science learning, science opportunity" (*Science's Compass*, 8 Oct., p. 237), National Science Foundation (NSF) Director Rita R. Colwell and National Science Board Chairman Eamon M. Kelly give a glowing but what seems a largely unfounded report on the accomplishments of the NSF systemic reform initiatives. The authors cite as evidence an increase in student performance in mathematics in Chicago, Illinois (61 out of 62 high schools), and a tripling of students passing science and mathematics advanced placement (AP) tests in Dallas, Texas.

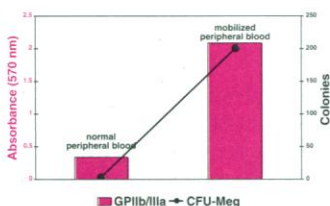
Although it is true that Chicago public high schools have shown increases in standardized (Illinois Goals Assessment Pro-

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THE CONNECTIONS MAP:

A graphical interface to a wealth of information on signaling molecules and their relations. Randall Moon, Howard Hughes Medical Inst., Univ. of Washington presents the Wnt/ β -catenin pathway.

ORIGINAL PERSPECTIVES AND REVIEWS:

Caroline Hill and Richard Treisman, Imperial Cancer Research Fund, London question whether transcriptional array technology is providing new insights into the control of gene expression.

David Rothwarf and Michael Karin, Univ. of California, San Diego summarize the recent flurry of new information on signaling through the transcription factor NF- κ B.

Alan Whitmarsh and Roger Davis, Univ. of Massachusetts on a mitogen-activated protein (MAP) kinase kinase that actually switches from an inhibitor to an activator of its target MAP kinase.

AND MUCH MORE!

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References

¹ **Phylogenetic Resolution within the Elephantidae Using Fossil DNA Sequence from the American Mastodon (*Mammut americanum*) as an Outgroup**

Hong Yang; Edward M. Golenberg; Jeheskel Shoshani

Proceedings of the National Academy of Sciences of the United States of America, Vol. 93, No. 3. (Feb. 6, 1996), pp. 1190-1194.

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