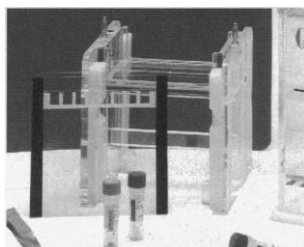


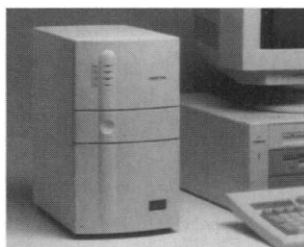
Carbohydrate Analysis

As easy as...

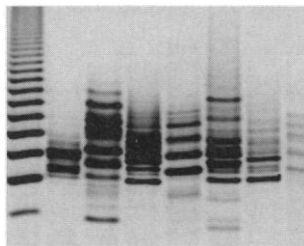
1.



2.



3.



Glyko's FACE (Fluorophore Assisted Carbohydrate Electrophoresis) technology includes everything you need to work with and analyze complex carbohydrates:

- **KITS:** precast gels, gel buffer, all reagents and manuals.
- **IMAGERS:** 14-bit camera, FACE software, enhanced band-finding and resolution of minor bands (sensitivity of 5 pmols). Also use for protein and DNA gel imaging.
- **SYSTEMS:** Pentium MMX 166MHz computer with a 2GB hard drive, 32MB RAM, internal Zip drive, fax/modem, CD-ROM, color ink jet printer and FACE software.
- **EXPERT TECHNICAL HELP**
- **OTHER PRODUCTS AND SERVICES:**
 - Recombinant glycosidases
 - Analytical service for general FACE applications
 - Clinical lab service for Lysosomal storage diseases, plasma/urine levels of heparin
 - QC validation with FACE

1 800 33 GLYKO (334 5956) U.S. only
Phone: 1 415 382 6653, Fax: 1 415 382 7889
www.glyko.com

©1998 GLYKO, INC.
FACE is a registered trademark of Glyko, Inc. PENTIUM is a registered trademark of Intel Corp.



SCIENCE'S COMPASS

Frakes acknowledge (2) that "by prescribing SSTs we eliminate any possibility of "ice-house" conditions through a positive ice-albedo feedback at oceanic grid points." In their view, this constraint is justified "by the geologic rock record which does not indicate global glaciation during the Proterozoic or at any other period in Earth's history." We read the rock record differently.

An alpine glacial interpretation can be ruled out for reasons given in our original report: there were no mountains in the region at the time of the Ghaub glaciation. The glacial deposits occur within a broadly conformable succession of shelf carbonates, extending for more than 400 kilometers landward of the shelf edge where our study was conducted (6). Virtually all the glacial debris is from sources on the carbonate shelf. Mountains did form during the assembly of Gondwana, which involved the closure of oceans flanking the Congo Craton. Our study area, located on the southwestern salient of the craton, was directly affected by closure of the ocean to the west and south (present-day coordinates). The first deformation related to this closure [less than 550 million years ago (7)] folded the entire shelf carbonate suc-

cession enclosing the glacial deposits and clearly postdates the glaciation, which occurred 700 to 750 million years ago. The eastern ocean closed in two stages—680 million years ago and less than 550 million years ago (7), and the mountain belt related to its closure was located 1900 kilometers east of our study area. The dramatic rise in the ratio of strontium-87 to strontium-86 in the Neoproterozoic ocean that is commonly taken to signal an erosion flux associated with the Pan-African orogeny occurs only after the last of the proposed snowball glaciations—580 million years ago (8).

The snowball Earth hypothesis explains the most salient features of the Neoproterozoic sedimentary record, including low-latitude glaciations, banded iron-formations, cap carbonates, and carbon isotopic excursions, but Jenkins and Scotese offer no alternative explanation.

Paul F. Hoffman

Daniel P. Schrag

Galen P. Halverson

Department of Earth and Planetary Sciences, Harvard University, Cambridge, MA 02138, USA

J. Alan Kaufman

Department of Geology, University of Maryland, College Park, MD 20742, USA

References and Notes

1. G. S. Jenkins, *Global Planet. Change* **7**, 321 (1993); B. Longdoz and L. M. François, *ibid.* **14**, 97 (1997).
2. G. S. Jenkins and L. A. Frakes, *Geophys. Res. Lett.* **25**, 3525 (1998).
3. T. J. Crowley and S. K. Baum, *J. Geophys. Res.* **98**, 16723 (1993).
4. T. Van der Hammen, *J. Biogeogr.* **1**, 3 (1974); S. C. Porter, *Quat. Res.* **12**, 161 (1979); M. Stute, P. Schlosser, J. F. Clark, W. S. Broecker, *Science* **256**, 1000 (1992); T. P. Guilderson, R. G. Fairbanks, J. L. Rubenstein, *ibid.* **263**, 663 (1994); D. P. Schrag, G. Hampt, D. W. Murray, *ibid.* **272**, 1930 (1996).
5. J. M. Barnola, D. Raynaud, Y. S. Korotkevich, C. Lorius, *Nature* **297**, 391 (1987); D. Raynaud, J. Chappellaz, J. M. Barnola, Y. S. Korotkevich, C. Lorius, *ibid.* **333**, 655 (1988).
6. R. M. Miller, in *African Basins*, vol. 3, *Sedimentary Basins of the World*, R. C. Selley, Ed. (Elsevier, Amsterdam, 1997), pp. 237–268.
7. J. G. Meert and R. Van der Voo, *Geodynamics* **23**, 223 (1997).
8. A. J. Kaufman, A. H. Knoll, G. M. Narbonne, *Proc. Natl. Acad. Sci. U.S.A.* **94**, 6600 (1997).

CORRECTIONS AND CLARIFICATIONS

In the 13 November NetWatch (p. 1223), the URL for the Left Handed DNA Hall of Fame should have been given as "www.lecb.ncifcrf.gov/~toms/LeftHanded.DNA.html."

In the third line of the legend of table 1 (p. 738) in the report "Rapid identification of subtype-selective agonists of the somatostatin receptor through combinatorial chemistry" by S. P. Rohrer *et al.* (23 Oct., p. 737), "(in nanomoles)" should have read, "(nM)." In the first footnote in the legend of table 2 (p. 739), "(in M)" should have read, "(nM)."

1999 AAAS WILLIAM D. CAREY ANNUAL SCIENCE AWARD

The AAAS William D. Carey Annual Science Award was established in 1989 with funds donated by Bill Golden and David Hamburg to encourage advanced students in science or engineering to participate in the AAAS Annual Meeting. This award provides up to \$300 support for students to attend the 1999 AAAS Annual Meeting. In addition, AAAS will furnish registration fees and a year's subscription to *Science*.

Graduate students are invited to apply for the 1999 William D. Carey Annual Science Award. Consideration for this award will be based on academic achievement and other accomplishments related to the advancement of science. Applicants should submit a curriculum vitae and a 200–300 word description of their research topics to:

AAAS Carey Annual Science Award
1200 New York Ave., NW
Washington, DC 20005
202-326-6670
FAX: 202-371-9849

Deadline is December 18, 1998.