

SCIENCE'S COMPASS

measured protein levels, not mRNA levels. None of the studies mentioned is directly comparable with ours, given that different tissues respond differently to calorie restriction, as shown in a study that examined the expression of several heat shock-factor proteins in eight tissues (5).

It is well known that oxidative stress induces a heat shock response and that calorie restriction reduces markers of oxidative stress in several tissues. Therefore, our observation of an overall reduction in the expression of heat shock-related proteins in mice on calorie restriction is consistent with previous biochemical observations. Regarding our lack of detection of oncogenes and tumor suppressor genes, we note that skeletal muscle is largely a post-mitotic tissue (that is, the cells are terminally differentiated). Our detection of some lymphocyte antigens is expected, given that lymphocytes are likely to be present in the vasculature. Our overall gene expression profile was consistent with skeletal muscle because most of the highly transcribed genes encoded structural components of muscle fibers and other muscle-specific transcripts.

Although we have not performed confirmatory Northern blots for these partic-

ular data, we have performed TaqMan quantitative polymerase chain reaction to validate our microarray data in a similar study with the cerebral cortex of mice. Our results agree with previous observations that Affymetrix oligonucleotide-based microarrays are quantitative and highly reproducible. Finally, we necropsied all animals and only studied tumor-free animals.

Richard Weindruch

Department of Medicine, Veterans Administration Hospital, Geriatric Research, Education and Clinical Center, Madison, WI 53705, USA

Tomas A. Prolla

Departments of Genetics and Medical Genetics, University of Wisconsin, Madison, WI 53706, USA

References

1. A. R. Heydari *et al.*, *Dev. Genet.* **18**, 114 (1996).
2. K. B. Aly *et al.*, *Mech. Ageing Dev.* **76**, 11 (1994).
3. J. A. Ehrenfried, B. M. Evers, K. U. Chu, C. M. Townsend Jr., J. C. Thompson, *Ann. Surg.* **223**, 592 (1996).
4. G. S. Gerhard and E. Kauffman, *Gerontologist* (abstr.) **38**, 16 (1998).
5. J. M. Dhahbi, P. L. Mote, J. B. Tillman, R. L. Walford, S. R. Spindler, *J. Nutr.* **127**, 1758 (1997).

Philanthropy with Modest Means

In his News Focus article "Philanthropy's rising tide lifts science" (8 Oct., p. 214), Jon Cohen highlights the recent influx of

giving in science. But while nouveau foundations with enormous endowments might make waves within the scientific community, we at the Burroughs Wellcome Fund (BWF) (one of relatively few biomedical philanthropies) are concerned that this article might create a misperception that science philanthropy requires megabucks, and might dissuade those of modest means from supporting research.

Modest grants, given in the right place and at the right time, can have a significant effect, a notable example being the support of young scientists. From our experience, if a foundation wants to support innovation and creative thinking, giving to the rising generation of scientists is among the best ways to accomplish that goal. As Cohen points out, foundations can give young scientists a measure of freedom from the strictures of the federal grantmaking system. But perhaps more important, we add value by supporting budding careers with portable grants, spending flexibility, career advice, and a built-in network of colleagues and mentors.

Given the enormous hurdles that young scientists face in establishing themselves, foundations have a crucial role in seeding

Sandler Program for
Asthma Research

SPAR

SEEKING INVESTIGATORS FROM ALL FIELDS

The Sandler Program for Asthma Research seeks to attract outstanding basic scientists from all fields to study the pathogenesis of asthma. Two levels of awards will be supported, with an average of \$2.3 million in new awards each year:

Investigators will be funded at two levels:

Senior Investigators - \$250,000/year for three years
Junior Investigators - \$125,000/year for three years

Application is open to investigators within the United States. The application deadline is March 1, 2000 for funding July 1, 2000.

For further information and application forms, please contact our website:

<http://www.sandlerresearch.org>

Or you may contact us by phone, FAX, e-mail, or mail.

415 514-0730 (phone)
415 514-0734 (fax)
wongm@sandlerresearch.org (e-mail)

Sandler Program for Asthma Research
Box 0509 UCSF
4 Kirkham Street, Suite 216
San Francisco, CA 94143-0509

Thinking about
SUBSCRIBING or RENEWING?

Have your credit card handy
and ring us on

Europe:
+44 (0) 1223 326500

USA:
+1 202 326 6417

Or email us your details at
membership@aaas.org

SUBSCRIPTIONS MADE EASY
Science

Circle No. 58 on Readers' Service Card

SCIENCE'S COMPASS

nascent careers and providing them the resources to flourish. However, as John Schaefer of Research Corporation says in the article, communication has been lacking among these foundations. The BWF, along with the Howard Hughes Medical Institute and the American Cancer Society, is convening private funders in February 2000 to discuss how philanthropy can respond to gaps and opportunities in research training.

Enriqueta Bond*
Marth Peck†
Karyn Hede*

Burroughs Wellcome Fund, 21 T. W. Alexander Drive, Research Triangle Park, NC 27709-3901, USA

*President, †Vice President of Programs, and
*Communications Manager, BWF

The Bible Code

In the Random Samples item "Bible code bunkum" (24 Sept., p. 2057), there is a description of findings by mathematician Eliyahu Rips of Hebrew University and two colleagues that "names of famous rabbis were located closer in the text to their own dates of birth and death than to those of other rabbis." As

one of the authors of a paper (1) in which a flaw in the study by Rips *et al.* (2) is reported, I wish to point out that this is not what they found. The names of most rabbis are actually closer in the text to the dates of birth and death of other rabbis than to their own dates ("closer" is defined in a complicated mathematical fashion that does not correspond to the intuitive sense suggested by their letter arrays). What Rips *et al.* found is that the "distances" between rabbis' names and their own dates are, on average, less than one would expect by chance.

Most misreports of the Bible code findings tend to present the findings as neater than they actually are. However, the Random Samples item got the main point across—whatever "code" is found in the book of Genesis can be replicated in any other text of comparable length.

Maya Bar-Hillel

Department of Psychology, Hebrew University, Jerusalem 91905, Israel

References

1. B. McKay, D. Bar-Natan, M. Bar-Hillel, G. Kalai, *Stat. Sci.* 14 (no. 2), 150 (1999).
2. D. Witztum, E. Rips, Y. Rosenberg, *Stat. Sci.* 9 (no. 3), 429 (1994).

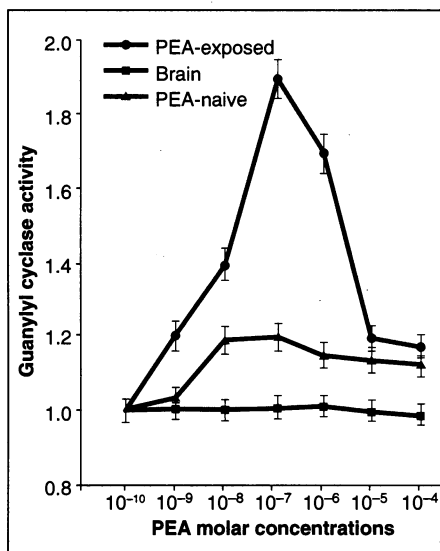
CORRECTIONS AND CLARIFICATIONS

In Marcia Barinaga's News article "Salmon follow watery odors home" (22 Oct., p. 705), the graph on page 706 showing guanylyl cyclase activity in response to PEA was incorrectly labeled. The green squares should have been labeled "brain" and the orange triangles should have been labeled "PEA-naive." The corrected figure appears at right.

In the second paragraph of the News Focus article "Does life's handedness come from within?" (12 Nov., p. 1282) the first name of Puru Jena was misspelled.

Table 1 of the report "Osmium isotope constraints on ore metal recycling in subduction zones" by Brent I. A. McInnes *et al.* (15 Oct., p. 512) had incorrect units listed for two column headings. The unit over columns 3 through 12 should have read "ppb," not ppm, and the unit for the γ Os column should have had a percent sign, not a per mil sign.

In the News Focus article "Fighting fire with fire" (David Malakoff, 17 Sept., p. 1841), the intended exotic hosts of the weevil *Rhinocyllus conicus* should have been identified as *Carduus* species, including musk thistle (*C. nutans* complex), not Russian thistle. Svata Louda *et al.* (Reports, 22 Aug. 1997, p. 1088) showed that *R. conicus* has attacked five kinds of native North American thistle and speculated that it could threaten a related rare species in the future, not that it had already attacked the rare species. Louda and Daniel Simberloff were critical of the U.S. Department of Agriculture's decision to release an exotic thistle-feeding beetle, not weevil. The California "weedy thistle" attacked by the mistakenly released fly is starthistle (genus *Centaurea*), which is distantly related to true thistles (genus *Carduus*).



BioSource



ELISA Kits

New Cytoscreen™ ELISA Kits

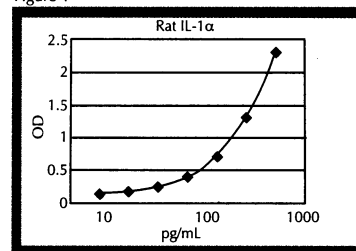
| Human | Rat |
|---------|--------|
| Eotaxin | IL-1α |
| HGF | IL-1RA |
| MIP-1α | IL-13 |

Also available - Mouse, Primate, Swine
and a complete line of Human ELISAs

The Most Extensive Line of Rat ELISAs

- One and two-plate ELISA kit format available
- 14 different rat parameters

Figure 1



Show Me! Figure 1- Rat IL-1α standard curve.
The Cytoscreen™ kit specifications: sensitivity <2.5
pg/mL, range= 7.8 - 500 pg/mL.

For research use only.

BIO SOURCE
INTERNATIONAL
(800) 242-0607 • FAX: (805) 987-3385
e-mail: tech.support@biosource.com
www.biosource.com

Circle No. 37 on Readers' Service Card