

bone diseases, and heart defects (3). Also, several clinical trials are in progress (4). In addition, there are promising results with other adult stem cells that perhaps we may yet learn how to grow effectively (5). We do not yet know enough about adult stem cells or ESCs to make dogmatic statements about the limitations of either.

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References

1. D. J. Prockop, *Science* **276**, 71 (1997).
2. S. Bruder et al., *J. Cell Biochem.* **64**, 278 (1997); M. F. Pittenger et al., *Science* **284**, 143 (1999); D. C. Colter et al., *Proc. Natl. Acad. Sci. U.S.A.* **97**, 3213 (2000).

Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the previous 6 months or issues of general interest. They can be submitted by e-mail (science_letters@aaas.org), the Web (www.letter2science.org), or regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

3. R. Pereira et al., *Proc. Natl. Acad. Sci. U.S.A.* **95**, 1142 (1997); Z. Hou et al., *Proc. Natl. Acad. Sci. U.S.A.* **96**, 7294 (1999); E. J. Schwarz et al., *Gene Ther.* **10**, 2539 (1999); S. Makino et al., *J. Clin. Invest.* **103**, 696 (1999); J. Chen et al., *Stroke* **32**, 1005 (2001).
4. E. M. Horwitz et al., *Blood* **97**, 1227 (2001).
5. K. A. Jackson et al., *J. Clin. Invest.* **107**, 1395 (2000); P. A. Zuk et al., *Tissue Eng.* **7**, 211 (2001); D. Orlic et al., *Nature* **410**, 701 (2001); A. A. Kocher et al., *Nature Med.* **7**, 430 (2001); D. Krause et al., *Cell* **105**, 369 (2001).

AS THE PRIMARY AUTHOR OF A RECENT PAPER in *Tissue Engineering* (1) detailing a multipotential cell line in liposuctioned fat (PLA cells), I am responding to the discussion of that paper in Vogel's News Focus article. The recent public attention of our work has not deluded us into thinking we have found the "ultimate" stem cell. Indeed, we still have a way to go to conclusively prove that these multipotential cells are indeed stem cells.

We agree with the various comments that our findings might be due to contamination of the fat depot with hematopoietic or mesenchymal stem cells (HSCs and MSCs) from bone marrow, a possibility we discuss in our paper. However, the likelihood that our high differentiation levels could be achieved by contamination by these cells seems remote. HSCs and MSCs are likely to be found in negligible amounts in fat. Even so, if PLA cells are another MSC or HSC

population, to the clinician it is of no consequence. Ultimately, all that matters is a reliable source of multipotential cells that achieve the desired results in the clinic.

Finally, in response to the criticism that we "report[ed] no sign that the [PLA] cells could become nerve cells or...pancreatic cells," our manuscript was an initial study meant to characterize only the mesenchymal potential of PLA cells. Perhaps the take-home message from our results is that stem cells might be found in several tissues other than the established sources.

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References and Notes

1. P. A. Zuk et al., *Tissue Eng.* **7**, 211 (2001).

Prospects of a Revived OTA for Congress

THE WORKSHOP TO DISCUSS RENEWING A science advisory capacity for the U.S. Congress is the topic of David Malakoff's News of the Week article "Memo to Congress: get better advice" (22 Jun., p.

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2229). As a workshop participant, I dispute Malakoff's characterization of H.R. 2148, the bill introduced by Representative Rush Holt (D-NJ) to reauthorize the Office of Technology Assessment (OTA). For an event that could have had characteristics of a religious revival—half of its attendees had been either employees, contractors, or advisors of OTA—the workshop was pragmatic and analytical.

Framed by speeches from U.S. Representatives Sherwood Boehlert (R-NY), Vernon Ehlers (R-MI), Amo Houghton (R-NY), and Holt, and letters from U.S. Senators Ted Stevens (R-AK) and John Rockefeller (D-WV) lamenting Congress's need of better technical advice, the workshop established a dialectic between the advocacy by "policy works" of a new mechanism for advice and the perception that Congress only needs what it says it needs. Although there was no "consensus on what might convince Congress to change its mind," there was consensus on four points of institutional design for any advisory mechanism. It would need to be (i) robustly bipartisan and bicameral, (ii) a functional part of Congress (like a support agency or the staff of a joint committee), (iii) staffed with a significant number of in-house people, but with the flexibility to use contractors, and (iv) able

to provide a variety of information services to a variety of congressional clients (1).

That this consensus sounds like a modified version of the old OTA is neither accident nor bias; it is the opinion of the participants based on their experience and scholarship. Holt's bill, certainly not "dead on arrival" with more than three dozen bipartisan cosponsors, signals that Congress might be beginning to resolve the conflict that eliminated OTA and to deliberate on a plan to improve its deliberations.

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References and Notes

1. M. G. Morgan, "Improving science and technology advice for the U.S. Congress: briefing notes," in preparation.

Increase Competition to Stabilize Drug Prices

DONALD KENNEDY'S CONDEMNATION OF Senator Ron Wyden's (D-OR) proposal to punish research universities by taxing successful technology transfer that leads to profitable pharmaceuticals is, for the most part, well reasoned (Editorial, "Drug

prices: real problem, wrong solution," 8 Jun., p. 1797). As Kennedy observes, royalty revenue streams that flow to universities from commercial licenses contribute negligibly to a drug's eventual price, and the incentive of royalties spurs technology transfer and creates a positive feedback loop that benefits all stakeholders.

More fundamentally, however, Wyden's proposal seems an attempt to tax our way out of a market failure, one marked by an insurance-based reimbursement system, stultifying regulation, and a shrinking number of research-based drug companies. Taxation is a solution that cannot work. But neither can Kennedy's suggestion that universities "think again about whether it's wise to press for continued royalty payments on real 'blockbuster' drugs, especially those serving the most vulnerable populations."

It would be better to address drug pricing by increasing the competition among drug manufacturers so that they are forced to compete on price. One way would be to reduce the huge regulatory costs and time required to bring drugs to market. Reducing the burden of government regulation by opening up the drug review process to third-party, extragovernmental review would streamline and improve the quality

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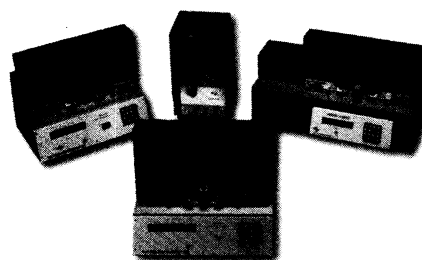
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