logical inhibitors of PARP enzyme activity. These inhibitory compounds have other, additional effects on cells (*2*), and therefore it is not established beyond a doubt that NO toxicity occurs by means of PARP activation. The issue will be resolved by the use of cells with disrupted PARP gene.

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References

1. J. Zhang, V. L. Dawson, T. M. Dawson, S. H. Snyder, *Science* **263**, 687 (1994).
2. B. Kallmann, V. Burkart, K.-D. Kröncke, V. Kolb-Bachofen, H. Kolb, *Life Sci.* **51**, 671 (1992).
3. M. Shimoyama *et al.*, *Physiol. Chem. Phys.* **7**, 125 (1975); M. Nowicki, C. Landon, S. Sugawara, G. Dennert, *Cell. Immunol.* **132**, 115 (1991); J. Hoshino, S. Schalge, B. Drevenstedt, H. Kröger, *Biochem. Int.* **20**, 135 (1990).

Response: Indeed, Kolb's paper (*1*) did deal with nitric oxide (NO) as mediating the toxicity elicited by macrophages in the pancreas. Our study, by contrast, dealt with NO mediating the neurotoxicity of glutamate by damaging DNA and activating poly(ADP-ribose) synthetase (PARS or PARP). Kolb points out that studies using drugs as probes are not necessarily definitive. Because of this, we did not use a single agent, but instead used four distinct PARP inhibitors and showed that their relative ability to prevent neuronal death after stimulation of the glutamate-NMDA receptor closely paralleled their potency in inhibiting PARP. Three of these agents are benzamides in which very small structural changes provide major differences in potency in inhibiting PARP and neurotoxicity.

In addition, we showed that novobiocin, which block mono-ADP-ribosylation, but not PARP, did not provide protection. Our study elucidates the mechanism whereby NO elicits this toxicity, as we directly demonstrated that NO damages DNA, which in turn activates PARP. Besides blocking NO neurotoxicity, PARP inhibitors blocked the toxicity elicited by stimulating glutamate-NMDA receptors, reflecting the neurotoxicity that occurs in vascular stroke. These findings provide a persuasive, if not definitive, case that excitotoxicity acts through NO activation of PARP with attendant depletion of energy stores.

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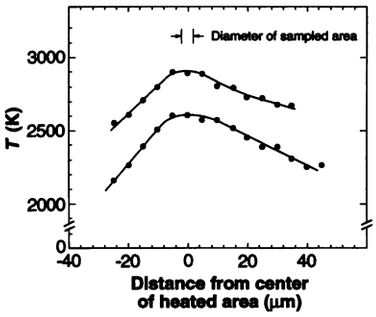
References

1. B. Kallmann, V. Burkart, K.-D. Kröncke, V. Kolb-Bachofen, H. Kolb, *Life Sci.* **51**, 671 (1992).

Perovskite Temperature Profile

In our response of 8 April (p. 280) (*1*) to a comment by D. L. Heinz *et al.* (*2*) about our report of 22 October 1993 (*3*) on the melting of $(Mg,Fe)SiO_3$-perovskite to 625 kilobars, an incorrect curve for the temperature profile in figure 2 (*1*, p. 280) was provided. An already-drafted profile for Ar-laser–heated iron was mistakenly chosen and put on a scale that represented that for most of the CO_2-laser heating profiles that we have. Two actual subsolidus temperature profiles for CO_2-laser–heated perovskite at a pressure of 32 gigapascals are shown below. The profiles are slightly



asymmetric because of the incidence angle of the laser beam in the perovskite melting experiment. This change in figures does not affect the results on the melting temperatures of $(Mg,Fe)SiO_3$-perovskite (*3*) in any way. The original figure 2 in our response was shown to illustrate that temperatures from the heated samples were directly measured from small areas with a diameter of 3 to 5 μm and that the temperature gradients in the center of the heated spot were negligible.

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References

1. R. Boehler and A. Zerr, *Science* **264**, 280 (1994).
2. D. L. Heinz, E. Knittle, J. S. Sweeney, Q. Williams, R. Jeanloz, *ibid.*, p. 279.
3. A. Zerr and R. Boehler, *ibid.* **262**, 553 (1993).

Corrections and Clarifications

In the News article "Finding 'sustainable' ways to prevent parasitic diseases" by Rebecca Kolberg (24 June, p. 1859), mention is made of nylon gauze that is being distributed worldwide free of charge to filter Guinea worm larvae from drinking water. The cloth is donated by E. I. Dupont de Nemours & Company, Inc., and Precision Fabrics Group for distribution by Global 2000, Inc.