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Letters

Amoebic seesaw

"It's a stretch to imagine how an organism can change its genome depending on its environment," says biologist John Samuelson in "Mystery Amoeba" (SN: 9/30/89, p.216). Maybe so, but substitute "population" for "organism" and perhaps the mystery of the amoeba is cleared up.

Consider two subspecies so closely related that only a single mutation separates them. By chance, benign amoebas occasionally produce virulent offspring, and vice versa, so that there is a kind of equilibrium between them. Normally, though, the benign form is the better competitor and so dominates the population.

Gradually remove the bacterial food source, and the balance shifts in favor of the virulent strain. Restore it, and the benign strain returns to power—yet at all times there remains a faint trace of the minority strain to be detected.

Gregory Kusnick
Sonora, Calif.

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Cover: Sickle cell anemia causes normally doughnut-shaped red blood cells to take on an elongated crescent configuration. Researchers are trying to find ways to prevent this "sickling," which triggers painful and damaging episodes of clogging in small blood vessels. (Illustration: Mallory Pearce/courtesy James E. Bowman, University of Chicago Comprehensive Sickle Cell Center)



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Stroke strategies 'partial at best'

"New therapies brighten stroke horizon" (SN: 11/4/89, p.292) nicely captured the growing hope that some effective therapeutic interventions for stroke may be developed over the next several years. I would, however, correct a couple of inaccuracies.

First, glutamate-receptor blockers had not yet been tested for effectiveness against brain damage in humans. Second, it is unfortunately unlikely that any currently known approach, including glutamate-receptor blockers, would "totally prevent neurological symptoms" in stroke patients. The range of therapeutic strategies discussed in the article could at best be expected to produce a partial reduction in the brain damage caused by a stroke.

Still, even a partial victory against this ancient scourge might be cause for modest celebration.

Dennis W. Choi
Associate Professor of Neurology
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Elephants and equilibrium

Richard Miller (Letters, SN: 9/30/89, p.211) has misinterpreted the intentions of the CITES treaty on the ivory trade. Although he is correct that some southern African countries have reduced elephant poaching by using animal husbandry techniques, his insinuation that these countries should be rewarded by continuing the ivory trade is unconscionable.

These countries are making progress not because they legally cull elephants and sell the ivory, but because their "successes" are based largely on improved regional, political and economic conditions, which are highly unstable. A total ban on the ivory trade would create a permanent state of equilibrium that would be independent of regional political shifts.

If, as Mr. Miller claims, the ban on ivory trade appears to have a negative economic effect on "cull-and-market" conservation, then this is a good indication that the culling-

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