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This Week

Research Notes

Articles

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Letters

Kamikaze contraception

I was interested by the implications of the finding that the human ovum expresses a chemical that attracts sperm ("Eggs not silent partners in conception," SN: 4/6/91, p.214). However, in the discussion of the study's potential contraceptive implications, perhaps the simplest strategy was not mentioned.

Once isolated, this chemotaxin could be synthesized and mixed with a spermicide such as nonoxynol-9 to encourage the "kamikaze" destruction of sperm and to disrupt any chemical gradient the ovum could maintain, thereby preventing the sperm from finding the ovum. The latter effect is often employed in insect control, using an aerosolized pheromone as a chemical "radar jammer" to keep bugs from finding mates.

This contraceptive strategy would have a number of advantages. For one, it would be easier than synthesizing antibodies to the chemotaxin. And if the compound is not lipid soluble, it would not require alteration. It is an endogenous, locally acting, low-dosage chemical that should be relatively easy to test and could easily be added to existing spermicides and suppositories, requiring no more education or effort on the part of users.

Loren Rauch
Berkeley, Calif.

Making the most of copper

"Disorderly Light" (SN: 4/20/91, p.248) describes current research on copper wire transmission effects. From 1984 to 1987 I took part in a research project investigating the effects of wave-front propagation in copper wire media. We focused our efforts on producing solitons in copper. At that time, solitons were thought to be usable only in optical media, due to the same impurities noted in your article.

We found that although we could create solitons in the copper, they were attenuated in a short distance and could no longer be classified as "pure" solitons. What we did prove, however, was that certain wave fronts produced soliton-like effects and could be used in a data transmission system that produced usable digital data at higher-than-expected frequencies and for much greater distances than theory predicted.

Michael B. Shepperd
Livermore, Calif.

CORRECTIONS

The photo of the sea snail on the May 25 cover was taken by Gary McDonald of the Joseph M. Long Marine Laboratory at the University of California, Santa Cruz.

"ROSAT Revelations" (SN: 6/29/91, p.408) described a newly discovered supernova remnant in the constellation Auriga as the largest remnant ever detected, with a diameter of about 270 million light-years. The actual diameter is 270 light-years, and the remnant — while relatively large — is not the largest known.