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Letters

Cataract link: Looking back

In "Sweet news on the risk of cataracts" (SN: 3/24/90, p.189), you report that Paul F. Jacques calls his recent study "the first strong indication that galactose may play a role in adult cataracts."

We have reported on the association between cataracts and reduced levels of galactosemic enzymes, particularly galactokinase, since 1977, including a report on 147 patients in the February 1980 ARCHIVES OF OPHTHALMOLOGY. We found that reduced levels of galactokinase were associated with a greatly increased incidence of bilateral, "presenile" (before age 50) idiopathic cataracts and with an increased incidence of secondary and "senile" cataracts. We concluded that dietary lactose restriction in such individuals could retard or prevent cataract formation, but that the cost-benefit ratio of such therapy would be problematic at best and unlikely to achieve significant patient compliance, given the life-long severe dietary restrictions involved and

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Cover: Since the Brazilian importation of 46 South African queen bees in 1956, these ill-tempered, aggressive stingers have gradually extended their range, and entomologists expect them to cross the U.S. border this year. By studying the bees' genes, researchers hope to determine whether the insects pose a serious threat to U.S. beekeepers and the public at large, or whether these so-called killer bees may have picked up a few manners on their way north. (Illustration: Taina Litwak)

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the excellent results achieved by modern cataract surgery and intraocular lens implantation.

Reports published in the mid-1980s by others have substantiated our findings. We are pleased that additional confirmatory evidence continues to come forth, even if Jacques' "first strong indication" comes 13 years after our initial reports.

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Extending the metaphor

Pecora and Carroll's synchrony of two chaotic voltage systems may be a metaphor for more than "some types of brain responses" ("Chaotic systems that stay in step," SN: 3/24/90, p.191). The researchers may have hit upon the mechanism by which organisms entrain their effectively random biological functions (all bioelectrical, ultimately) to

daily, monthly and annual physical cycles in nature.

I remember 30 years ago watching Fred E. Smith, then at Michigan, model circadian biological rhythms using a piece of string and a weight. His pendulum swung at its specific frequency (the synchronizing signal) regardless of the pattern or frequency of blows he applied to the string. Smith concluded that "of course biological rhythms become entrained." Now, Pecora and Carroll may have provided the mechanism.

Furthermore, they may also have explained the subtle but perhaps life-threatening effects of ELF electromagnetic radiation, such as from distribution power lines and electric blankets. Even the inconsistency of results in the current *in vivo*, *in vitro* and epidemiologic health and safety studies of ELF's might be explained by their findings.

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