

enzymatic assay. We also presented genetic arguments that even though 4.5S RNA is known to interact with the translational machinery (3), it is not required for protein synthesis per se. By combining these experimental data with the results of previous studies on 4.5S RNA and the observation of evolutionary conservation, we developed a model in which the *Ffh*-4.5S RNP, by analogy to the mammalian SRP, acts in the earliest step of the secretory pathway. As we acknowledged, other models could also be proposed. The observation that the three *E. coli* periplasmic and outer membrane proteins tested to date may not require the *Ffh*-4.5S RNP to cross the inner membrane is a negative result. However, it certainly cannot falsify our hypothesis, which already takes these data into account. Indeed we stated in our paper that, in agreement with existing genetic data, many proteins may use a posttranslational targeting pathway rather than the putative *Ffh*-4.5S RNP dependent pathway.

We agree that it would have been rather premature to present our hypothesis as a conclusion. However, it is appropriate to propose the most plausible model consistent with the available data, especially if so doing will stimulate thinking about a difficult problem. There is no question that further experimentation using all available approaches will be crucial to settle these issues. The judicious use of "sequence gazing" has already enabled us to isolate the corresponding components of a SRP from yeast, in which a clear link to protein translocation is now apparent (4).

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REFERENCES

1. M. A. Poritz, K. Strub, P. Walter, *Cell* **55**, 4 (1988); H. D. Bernstein *et al.*, *Nature* **340**, 482 (1989).
2. M. A. Poritz *et al.*, *Science* **250**, 1111 (1990).
3. S. Brown, *Cell* **49**, 825 (1987); S. Brown, *J. Mol. Biol.* **209**, 79 (1989); D. B. Bourgaize and M. J. Fournier, *Nature* **325**, 281 (1987).
4. B. C. Hann, M. A. Poritz, P. Walter, *J. Cell Biol.* **109**, 3223 (1989); B. C. Hann, S. Ogg, M. A. Poritz, P. Walter, in preparation.

Unus et Triginta Quoque Anno?

Readers of *Science* should be grateful to Stephen Jay Gould for his gracefully written comment on the meaning of the Royal Society's motto, "*Nullius in verba*" (Letters, 11 Jan., p. 142). In the interest of historical fairness, however, it should be noted that

the same point—that this motto should be understood as a rejection of authority—was made previously in the pages of the same journal by the late Henry Allen Moe (16 Dec. 1960, p. 1817).

Gould should not, of course, be distressed at the repetition after a gap of 31 years. What this happening points up is the inadequacy of scientific abstracting and indexing services, particularly when it comes to contributions to learning that appear in Letters. A pessimist may well suspect that the same contribution will be published again, without citation of either Gould or Moe, about the year A.D. 2022.

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Steroid Therapy Publication Delay

Joseph Palca, in his 30 November article "A storm over steroid therapy" (News & Comment, p. 1196), discusses allegations in the *New York Times* that news of a consensus conference favoring steroid therapy in the treatment of AIDS-related pneumonia was deliberately delayed, at least in part, on account of concern about publication priorities. I am described in the article as being "anxious to clarify" the remarks I had made to the *Times*, "telling *Science* that although the issue of publication status came up, it did not contribute in any appreciable degree to the delay."

Since the article leaves the impression that this last comment was an afterthought on my part, I want to make it clear to *Science* readers, as I did to Palca, that this is exactly what I told the *Times* in the initial interview.

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Buckyballs and Double Bonds

Buckminsterfullerenes (C_{60} and other carbon clusters) are an excellent choice for one of 1990's top ten molecules (12 Dec., p. 1640). However, the structure depicted on page 1641 is incorrect. There are no "double bonds" in buckyballs. What is shown is the formula of $C_{60}H_{36}$, obtained from C_{60} by Birch reduction with Li , NH_3 , t -BuOH (1). This hydrocarbon, with one double bond in each of the five-membered rings, has a hydrogen atom attached to each carbon that is not part of a double bond (a mixture is obtained, and the exact locations of the double bonds is not known). The structure shown destroys the magnificent I_h symmetry of C_{60} , which has all the C-C bonds identical. Readers

who want to picture the correct structure should remove all the double bonds; or they can just look at a soccer ball and imagine a carbon atom at each of the 60 vertices.

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REFERENCES

1. R. E. Smalley *et al.*, *J. Phys. Chem.* **94**, 8634 (1990).

GABAergic Pathway from Zona Incerta to Neocortex: Clarification

Concerning our report of 22 June 1990, "A major direct GABAergic pathway from zona incerta to neocortex" (p. 1553), we would like to point out that the pathway we observed in the adult rat had previously been noted in several other publications. I. Divac *et al.* (1) reported that injections of horseradish peroxidase (HRP) into different neocortical areas in the rat resulted in retrograde labeling of small numbers of neurons in the zona incerta (ZI). L. L. Porter and E. L. White (2) later noticed small numbers of labeled neurons in mouse ZI after HRP injections into the somatosensory cortex. Most recently, C. B. Saper (3) and others (4) have carried out extensive neuroanatomical mapping of neocortical projections from the hypothalamus, including the ZI.

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REFERENCES

1. I. Divac, A. Kosmel, A. Björklund, O. Lindvall, *Neuroscience* **3**, 785 (1978).
2. L. L. Porter and E. L. White, *J. Comp. Neurol.* **214**, 279 (1983).
3. C. B. Saper, *ibid.* **237**, 21 (1985).
4. S. Shiosaka, T. Shibasaki, M. Tohyama, *Brain Res.* **309**, 350 (1984); C. Köhler, L. Haglund, L. W. Swanson, *J. Comp. Neurol.* **233**, 501 (1984).

Erratum: In the article "Nuclear winter" from Gulf war discounted," by Eliot Marshall (News & Comment, 25 Jan., p. 372), Tica Novakov's affiliation should have been given as the Lawrence Berkeley Laboratory, not the Lawrence Livermore National Laboratory. The concentrations of airborne soot reported at various locations should have been given as follows: for greater Los Angeles (summer), a daily average of 5 micrograms per cubic meter; Beijing (winter), a monthly average of 50 micrograms per cubic meter; Yugoslavia (winter), a daily average of 60 micrograms; and London (1-day winter peak in 1952), 750 micrograms, now reduced to less than 15 micrograms.