Letters

Information Dissemination: Whatever Happened to the Weinberg Report?

William D. Carey's editorial, "A policy-oriented R & D budget" (17 Feb., p. 733), has given "excellent marks" to President Carter's new R & D budget and its reflection of an "investment mentality" looking to long-term returns from scientific discovery and development. Such results will be better assured if Carey's "new funding methods [which] may need to be devised and tested" finally include recognition that the information dissemination process is an integral part of research and development, as long ago called for by the President's Science Advisory Committee in Alvin Weinberg's 1963 PSAC report (*1*). This would surely mean that a proper return on the public investment in scientific research and development is dependent on systematic (though fractionally small) allocation of a proportion of that investment to the successive stages of dissemination and access: publication, intellectual access through secondary bibliographic services (including their electronic format), and physical access through the knowledge stores in libraries and other information facilities.

In opposition to this purposeful information transfer process are two regrettable trends which should concern both the research community and the taxpayer. One is the growing tendency within the government itself to see information as a commercial commodity (witness the recent proposal for an Assistant Secretary of Commerce for Communications and Information), with the attendant corollary that those who will have access are those who can pay for it, despite its origination through public funds. Public information is thus viewed as a proprietary product, rather than the justification for the original research investment decision and the energy essential to all institutions and organizations in post-industrial society. The other trend is reflected in a preliminary statement on national information policy by the American Library Association which calls for "all information to all people in all forms at all levels of comprehension" and thus fails to note that some priority is required to be given to the dissemination of results of carefully selected, publicly supported R & D programs.

Academic and research scientists have several opportunities especially just now to speak up for the investment in new knowledge and its dissemination process. A principal objective of the 1979 White House Conference on Libraries and Information Science is to generate input and needs assessments by information users; two-thirds of the delegates to that meeting and to the preceding Governors' conferences in each state will be drawn from outside the library/information community, and their voice will carry great weight. Within the AAAS, of course, appropriate attention to these concerns could be incorporated in its annual analysis of the R & D budget and in the June Science Policy Colloquium. Only if the investment return, for example, the information produced, is made actively available to those who can use it will the President's R & D program deserve the "excellent marks" for which it appears to have the potential.

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References

1. Panel on Science Information, President's Science Advisory Committee, *Science, Government, and Information: The Responsibilities of the Technical Community and the Government in the Transfer of Information* (Government Printing Office, Washington, D.C., 1963).

Liposomes: Clinical Potential

I would like to clarify a statement in the article "Liposomes: Research applications grow" (Research News, 10 Mar., p. 1056), which leaves the reader with the impression (i) that I am working with liposomes because of their potential as drug delivery systems, and (ii) that I am ". . . one of the pessimists regarding the potential medical applications of liposomes. . . ."

The research being carried out in my laboratory using liposomes is directed toward problems which are of general interest to the cell biologist. Liposomes have been used by us, and by others, (i) to alter the phospholipid and cholesterol content of cells, (ii) to bypass the permeability barrier to normally impermeant solutes, and (iii) to promote cell-cell fusion. Additional uses of liposomes in cell biology will undoubtedly be found as we learn more about the ways in which they interact with cells. I am most enthusiastic and optimistic about such applications of liposomes and believe they can provide us with basic information about membrane structure and function. A by-product of these studies may be that they will also lay the groundwork for the intelligent use of liposomes in projected clinical applications.

Regarding their clinical potential, a more accurate characterization of my viewpoint [and that of J. N. Weinstein, a collaborator with me on a recent review article (*1*)] is that I am critical rather than "pessimistic." Liposomes are envisioned as a pharmacological capsule for delivery of therapeutic agents in treatment of conditions such as diabetes, enzyme deficiencies, heavy metal poisoning, and neoplasms. Before such applications are possible, much further systematic work will be required. For example, the ability of liposomes to cross cell and anatomical barriers and the possibility of "targeting" liposomes to particular cells or tissues need to be determined. It is well to keep in mind that, as with other technologies, passage from demonstration of the phenomenon to practical applications is likely to be an arduous process.

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References

1. R. E. Pagano and J. N. Weinstein, *Annu. Rev. Biophys. Bioeng.* **7**, 435 (1978).

Human β-Endorphin Available

Samples of human β-endorphin are available, on a limited basis, for nonclinical use. This material has been synthesized by Dr. C. H. Li for distribution by the Psychopharmacology Research Branch of the National Institute of Mental Health, primarily to assist in psychopharmacological research, as well as in other mental health research. Interested, qualified investigators should write to me synopsizing their projected use of this material and specifying the minimum quantity needed.

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