Letters

Takeover Bid: Chiron's Discussions with the Media

Douglas Powell's article "Science and PR north of the border" (News & Comment, 22 Dec., p. 1555) implies that Chiron Corporation and some of its employees may have discussed unpublished results from our vaccine clinical trials with Canadian media to obtain political (and indirectly financial) advantage during the takeover bid for Connaught BioSciences. We believe the article is biased and misleading and would like to present a more factual account of the events.

As partially described in the article, CIBA-GEIGY and Chiron bid to acquire Connaught BioSciences, in competition with Institut Merieux of France. Any successful foreign bidder for a Canadian company must satisfy the requirement of Investment Canada, a government agency, that the bid be of "net benefit to Canada." Our case was based in part on the argument that the relevant vaccine technology developed by the Biocine Company, a 50-50 joint venture between CIBA-GEIGY and Chiron, would be made available to Connaught. During the course of the takeover bidding, the issue of Connaught's acquisition by a foreign company became a highly visible political issue. As a result, Canadian authorities asked our group to present our case to the public at large, particularly because Merieux had been conducting a very public campaign.

To describe our technology in more detail, we selected Geoffrey Rowan, a reporter from the *Toronto Globe and Mail*, who earlier in the takeover had visited Chiron and published a profile of the company. Dino Dina, director of our vaccine program, briefed Rowan on the overall program, including updates on all vaccine projects in development: herpes simplex 2, AIDS, malaria, hepatitis C, influenza, and cytomegalovirus. Dina presented Rowan with the level of detail we provide to financial analysts, stockholders, and other interested parties and which is common practice in our industry.

In discussing progress in developing an AIDS vaccine, Dina described human clinical trials conducted in Switzerland, providing Rowan with information that had previously been presented in scientific meetings. In particular, he reviewed results that had been presented first by André Cruchaud at the Summer 1989 World Health Organization conference in Switzerland and subsequently by Sergio Abrignani at the Cold Spring Harbor Vaccine Meeting in September 1989, by Dina at the AIDS summit at Yverdon les Bains, Switzerland, in September 1989, and by Dietmar Braun and Kathelyn Steimer at the National Conference on Viral Diseases AIDS meeting in Florida in October 1989.

Several of these meetings were attended by the press, who reported the results. The Yverdon meeting was reported in *Science* by Jeremy Cherfas (News & Comment, 6 Oct., p. 23), who characterized Dina's talk as "one of the most welcomed talks at the meeting," in which "promising data from a trial in human volunteers of a vaccine consisting of one of the outer proteins of human immunodeficiency virus (HIV) grown in yeast cells" were presented.

In his discussions with Rowan in December 1989, Dina placed these results within the context of new developments in the vaccine field where recombinant antigens which have the potential for safety and increased efficacy are combined with new adjuvants that enhance immunogenic response. We did not reveal to Rowan previously undisclosed results. Rowan's story did not appear, and we did not press Rowan or his editors for an explanation.

Douglas Powell, the author of the 22 December *Science* article, subsequently contacted Larry Kurtz, our public relations officer, to inquire whether unpublished information had been provided to Rowan. Kurtz explained that no unpublished results had been discussed. He provided Powell with 39 pages of published scientific articles, newspaper and magazine stories, abstracts, and company publications on various aspects of preclinical and clinical trials as well as underlying science for our vaccines, which reflected the information Dina had discussed with Rowan.

We at Chiron are trying to balance legal, financial disclosure obligations with the traditional scientific practice of peer review. In particular, we try to treat public expectations, particularly on an issue as sensitive as AIDS, with great care. We believe we acted appropriately throughout our bid to acquire Connaught and would like the record to reflect this.

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Patent Court Scientist

While I share the enthusiasm for the nomination of Alan D. Lourie to the federal circuit court for patent appeals (Briefings, 9 Feb., p. 633), I would like to point out that there already *is* a scientist serving on the court—Circuit Judge Pauline Newman, who has both a doctoral degree and professional work experience in chemistry. Judge Newman has been serving on the Court since 1984.

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Organoids and Genetic Drugs

Barbara J. Culliton gave an excellent description of our work in the article "Gore Tex organoids and genetic drugs" (News & Comment, 10 Nov., p. 747). However, two additional credits should be provided.

A three-dimensional structure made of biodegradable materials and carrying cells has been implanted in animals by Joseph P. Vacanti, Robert Langer, and their colleagues. This system has been under investigation for several years (*1, 2*).

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1. J. P. Vacanti *et al.*, *J. Pediatr. Surg.* **23**, 3 (1988).
2. J. P. Vacanti, *Arch. Surg.* **123**, 545 (1988).

Department Size and Quality

The British controversy over department size versus quality (News & Comment, 19 Jan., p. 278) has an eerily familiar ring to us. Perhaps the discussion would benefit from a reminder of observations we made 18 years ago (*1*).

We looked into the relationship between the size of U.S. academic departments and one measure of their academic quality. The measure we used was ranking among the nation's "top-rated" graduate departments in a 1970 survey by the American Council on Education. These rankings reflected the judgment of hundreds of professionals in each field, surveyed by questionaire. Moreover, they pertain to graduate training and therefore deal with perceived quality of research at least as much as, and probably more than, the character of teaching. Therefore, we believe these rankings bear as good a relationship to scientific "quality" (whatever that is, exactly) as the crude metric of publication output used in the British studies.

There was no significant correlation between departmental size and rank order in the fields of philosophy, physics, and physiology. In economics, Spearman's rank order correlation test showed a positive correlation at the 5% significance level; in biochemistry, there was a *negative* correlation at the 1% significance level. There is little evidence in these numbers for the notion that bigger is better.

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REFERENCES

1. J. A. Gallant and J. W. Prothero, *Science* **175**, 381 (1972).

Correction: Copy Numbers of HIV-1 RNA

In our 16 December 1988 report "Unexpectedly high levels of HIV-1 RNA and protein synthesis in a cytocidal infection" [M. Somasundaran and H. L. Robinson, *Science* **242**, 1554 (1988)], HTLV-IIIb–infected C8166 cells grown in the presence of leu3a were reported to contain 400,000 to 2,500,000 copies of HIV-1 RNA per cell. Recent work (*1*) indicates that such cells contain substantially lower copy numbers of viral RNA (~40,000 copies per cell). Repeat studies on the high levels of protein synthesis are in agreement with the reported results.

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REFERENCES

1. H. L. Robinson, D. M. Zinkus, M. Somasundaran, in preparation.

Erratum: In Barbara J. Culliton's article "Gore Tex organoids and genetic drugs" (News & Comment, 10 Nov., p. 747), it should have been noted that the structural analysis of the implant connections, including the micrographs shown on page 747, were performed by Christian C. Haudenschild at the Mallory Institute of Pathology, Boston University of Medicine, Boston, MA. His name should have been listed in the photo credit. The legend for the bottom photomicrograph should have read, "Below, a view in cross section confirms the presence of abundant vessels lined with endothelial cells and surrounded by several layers of smooth muscle cells. Two profiles without lumen resemble neural structures, but their precise identity remains to be investigated."