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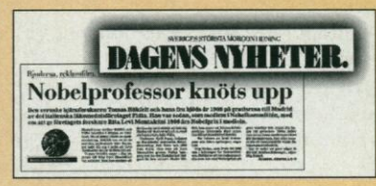
LETTERS

Fundamental issues

Francesco della Valle, founder of the now defunct Italian pharmaceutical company Fidia, asks how such companies can best interact with the academic world in a letter reacting to allegations by the Swedish newspaper *Dagens Nyheter* that Fidia tried to influence the Nobel Prize selection process. The editor-in-chief of *Dagens Nyheter* clarifies his paper's position. Other letters discuss a proposed genetic basis for aggression and sex differences in mathematics test scores.


DAGENS NYHETER.
Nobelprofessor knöts upp

Industry, Academia, and the Nobel Prize

I would like to clarify some points raised by Nigel Williams' article about *Dagens Nyheter*'s reporting on the Nobel Prize for Physiology or Medicine for 1986 (News & Comment, 22 Sept., p. 1663). In the original newspaper articles, *Dagens Nyheter* told about the campaign by the Italian pharmaceutical company Fidia and the efforts to influence Nobel decision-makers. We also said that Rita Levi-Montalcini was not a controversial choice as a Nobel laureate, and we were careful to stress that it was not possible to say whether the campaign had had any effect. When we told about Tomas Hökfelt's contacts with the Fidia company, his comments were given ample space in an adjacent article.

In my later remarks in the newspaper that you refer to (one statement, not two), I reiterated these points. Like my colleague Mats Holmberg, I also expressed my regret and concern that representatives of the Nobel committee had refused to be interviewed as part of our series and had only agreed to address our readers in an intervention of their own. I was also surprised that they stated so categorically that there had not been any campaign at all and by their unwillingness to discuss questions of principle and integrity that can arise with regard to contacts between business companies and scientists, however natural and necessary these may be.

I now see some of these distinguished scholars speculating about circulation wars among Swedish dailies and their relevance to investigative reporting. *Dagens Nyheter* and our colleague *Svenska Dagbladet*, with just a little more than half our circulation, are both subscribed morning papers. Our relative positions in the competitive market have been quite stable the last few years. Subscribed newspapers want to compete with quality and know that goodwill and prestige are precious values in that respect.

I was pleased to see that *Science* labels *Dagens Nyheter* "Sweden's most prestigious newspaper." It is our intention to remain just that.

Anders Mellbourn
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Recent speculations about possible "corruption" in the selection of candidates for the Nobel Prize raise fundamental questions about the mode of interaction between the research-based pharmaceutical industry and the academic world.

What has been insinuated by discredited officials and misinterpreted by journalists as a "campaign . . . to promote the nomination of the Italian neuroscientist Rita Levi-Montalcini for the 1986 Nobel Prize for physiology or Medicine" (*1*) was in fact one of the many expressions of the effort that the pharmaceutical company Fidia, at the time led by me, put into creating an intensive and productive interaction with leading scientific settings, especially those engaged in so-called "fundamental research." It is increasingly becoming clear to the pharmaceutical enterprise, and it has been my firm personal belief for more than a decade (*2*), that fundamental research into the complex biological sequences operating in health and disease is making unprecedented progress and that scientific discovery in this area is a highly productive source of innovation in terms of potential new applications. More and more drug companies are now setting up collaborations with academia by engaging in "intensive research sponsorship."

Throughout the 1980s, Fidia was a name well known to neuroscientists worldwide. The Fidia-Georgetown Institute for the

Neurosciences in Washington, D.C., was established in order to increase the effectiveness of Fidia's research and development efforts. The Fidia Research Foundation sponsored top-level scientific meetings with prestigious lecturers, published authoritative books and journals, instituted awards and scholarships, and created a postgraduate International School for the Neurosciences. These initiatives were expressions of our wish to be as near as possible to the heart of scientific progress and were not even remotely thought of as an improbable means to "corrupt" scientists or to enhance obscure research data.

All of the above initiatives are now defunct, because of the unfortunate reversal Fidia took after I left the company in 1991, but the strategic concept is still very much alive. For more than 4 years, a select group of researchers has been working with me in a new health-care concern, Lifegroup, in intensified interaction with academic centers of excellence, foremost among them the group led by Levi-Montalcini. Her keen intuition about the role of nerve growth factor in the homeostatic interplay between the neurons and immune systems (*3*) led us to discover surprising new leads in immunomodulation and inflammation control (*4*).

As such successful industry-academic collaborations may come under scrutiny, I should like to invite debate about this critical issue. There appear to be no general rules or guidelines, either for academic researchers or for industrialists, about how to perceive and how to live with these interactions. What are the limits beyond which research sponsorship becomes too lavish? What should the independent researcher accept or reject in terms of collaboration with industry? Through public discussion of these questions, we may be able to reach a consensus, guaranteeing the kind of mutually rewarding interaction that both industry and academy pursue.

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Aggression in Mice and Men?

The title of the report "Aggressive behavior and altered amounts of brain serotonin and norepinephrine in mice lacking MAOA" by Olivier Cases *et al.* (23 June, p. 1763) implies a correlation between aggressive behavior and the absence of monoamine oxidase A (MAOA) in mice, and its first sentences go on to draw a parallel with an hypothesized association between MAOA deficiency and "aggressive behavior" in men in a Dutch lineage (*1*). Yet Cases *et al.* describe phenotypic deficiencies in their mice ranging from "head nodding" and "trembling" to "moving backward," "frantic running," hunching, sleep abnormalities, and other developmental problems. Adults show abnormal swimming, hunched posture, and almost parenthetically we learn that they carry a retinal degeneration gene and are blind. Among all these massive and diverse deficits, Cases *et al.* draw attention to one, that resident males attack intruders faster than do mice with MAOA. This then becomes the focus of their statement that "aggression" in mice and men may be directly correlated to a specific gene deficit. Drawing causal or even correlative connections between complex socially defined behaviors and particular cellular and molecu-