

LETTERS

Company matters

The "important and original contributions to the scientific elucidation of the biology of interleukin-1 (IL-1)" made by "rank and file" researchers at Immunex is described by the former head of the IL-1 project group there (below, the IL-1 β molecule). A sociologist who is "somewhat surprised to discover" that sociologists are said to be "afraid of biological ideas" assesses the state of his discipline. And "A cautionary tale," an editorial about problems that can arise when industry funds university research, is discussed by six writers.



IMMUNEX

Interleukin-1 Research

Despite the allegations being made in the Cistron *vs.* Immunex case (E. Marshall, News & Comment, 30 Aug., p. 1162), and despite the obvious irregularities of peer review and research reporting that permeate the whole matter, there remains an undeniable fact—rank and file scientists at Immunex made important and original contributions to the scientific elucidation of the biology of interleukin-1 (IL-1). In this light, Lawrence Bogorad's statement (quoted by Marshall) that "Immunex employees were stealing" is most upsetting to me and, I am sure, to my former teammates.

From 1983 until 1986, I was head of the IL-1 project group at Immunex. During that time, we achieved a total purification to homogeneity of IL-1 β (1). We determined several partial amino acid sequences from this material in preparation for oligonucleotide-based cloning. Only after we had done this work, which I believe shows that we were truly at the forefront of IL-1 research, did Steven Gillis make us aware of the sequence in Philip Auron's manuscript. Should we have stopped at that point?

As it happened, we pressed on, and although we are now accused of misappropriating Auron's sequence information (2), we nonetheless continued to make ground-breaking discoveries about IL-1 that others, including our accusers, appear to have missed. We discovered a second gene for IL-1 (3) and found that IL-1 α is active in its full-length form, whereas IL-1 β must be cleaved in half before it becomes active. We developed high-level production processes for both IL-1 α and IL-1 β (4) and carried them forward into preclinical testing. We identified and

cloned the type-I IL-1 receptor (5). Pursuing the activation of IL-1 β (6), we discovered the ICE protease that now stands as a key member of the apoptosis-inducing family of proteolytic enzymes. Yes, Auron and his coworkers cloned IL-1 before we did, but our perseverance and hard work led to much that is of value today.

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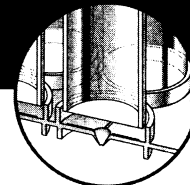
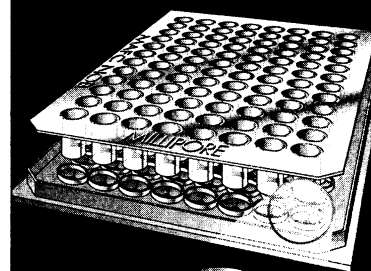
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On Sociological Biophobia

The idea that sociologists are somehow afraid of biological ideas is indeed a "random sample" (Random Samples, 23 Aug., p. 1049). It is probable that for any arbitrary pair of disciplines there is at least one person in each of those disciplines who attributes decline in his or her own discipline to ignorance of the other.

Sociology, however, is probably the most catholic of the social sciences at the present time. It has a postmodern corner, but it also has a rational choice corner, a Marxist corner, an ethnographic corner, a "grand theory" corner, a conversational analysis corner, and so on. After all, isn't it one of the basic insights of modern

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