

## The Industry–University Interface

In terms of history, it was not so very long ago—less than a century—that scientists and inventors worked in virtual isolation in their laboratories. Along with a colleague or two at most, they conducted studies and experiments that led to some of mankind's greatest achievements and discoveries.

Thanks to the motion picture industry, many of us have had an opportunity to view top quality films with star performers who portrayed the lives and major accomplishments of Madame Curie, Paul Ehrlich, Thomas Edison, Wilbur and Orville Wright, Louis Pasteur, Alexander Graham Bell, and various other such notables.

But times have changed, and dramatically so.

Today, the overwhelming proportion of research is conducted by big scientific or technical teams, at big industrial firms, or at big universities, or at big government institutions. And as the complexity of contemporary research continues to grow, even those big operations apparently are not large enough to capably handle the kind of research job that sometimes needs to be done.

Antitrust legislation often presents a hurdle for companies that might otherwise contemplate banding together in joint efforts. However, joint efforts between industry and academia do not present these same legal difficulties. This is not to say that there are no legal problems. By no means. We are aware that there are many legal considerations involved in academia–industry joint ventures that often require significant paperwork, much justification, and what usually seems to be an inordinate amount of time. But as severe as these constraints may be, they are not as severe as those presented by the antitrust laws.

Early this year, in the February issue, we already commented on this overall subject under the heading "Universities for Hire." At that time, we termed the issue of jointly sponsored Academe/Industry Research as the current "great debate" within university and some industry circles. Our conclusion then was that if all involved exercised good will, pragmatic approaches, and honest attitudes, the big concern regarding erosion of ethics and academic freedom could be averted.

Nothing dramatically new has happened since then by way of a solution to the issues and concerns that were then prevalent. However, there is growing interest in the subject as research—especially in the fields of bioengineering and biotechnology—has become increasingly complex and expensive.

Indeed, in late August of this year, the National Science Foundation released a study that it had commissioned the consulting firm of Arthur D. Little, Inc., to conduct on its behalf. The resulting report, entitled "Study of Federal Biotechnology Policy Issues," identified two top biotechnology issues meriting federal attention. One of these was the subject of university–industry relationships.

Just a few weeks earlier, the incoming President of the American Association of Colleges of Pharmacy, Robert D. Gibson of the University of California School of Pharmacy, concluded his presidential address by calling attention to the issue as one that is emerging for schools of pharmacy. He correctly noted that, for some time, it has already been a concern for other disciplines and particularly bioen-

gineering. Now, he stated, it is developing as an issue in pharmacy schools, and he urged giving it appropriate attention *before* it became a problem, rather than *after*.

In considering the subject, Dr. Gibson listed four areas in which industry/academia joint research ventures or partnerships might impinge:

- *Suppress the free transfer of information, thereby inhibiting the advancement of the science related to pharmacy.*
- *Undermine the development of the basic sciences by diverting faculty interests to problems of immediate commercial interest.*
- *Negatively affect the quality of instruction in our schools.*
- *Distort traditional academic values and goals.*

He plans to take certain positive steps during his presidential term to face these issues and, hopefully, to develop some guidelines that might provide helpful direction to schools of pharmacy.

In the meantime, the need to work out some suitable, mutually acceptable arrangement is definitely there. Just this past March, an editorial in *Science* was entitled "Graduate Education: Signs of Trouble." The author, John Brademas, called attention to the growing problems of financing graduate education and suggested industry support as a key solution. In turn, industry has a vested interest because its future research and technical talent will come from today's graduate schools.

Finally, a group of five clinical pharmacologists from Pfizer Pharmaceuticals coauthored a "commentary" article that was published in the April 1984 issue of *Clinical Pharmacology and Therapeutics*. Appropriately, their article was titled "University and Pharmaceutical Industry Cooperation: The Need to Plan for the Future."

Their article was refreshingly candid. In the opening paragraph, they began by noting the "history of mutual mistrust" and went on to state that: "It has been said by way of hyperbole that industry wants only to pick academia's brains, whereas universities are mostly interested in picking industry's pockets. Yet the potential for gains by both sides encourages the bridging of what once seemed a wide psychologic and programmatic gap."

Proceeding then with a very balanced view of the issue, they analyzed in significant depth the specific area of joint or cooperative research projects in the area of clinical pharmacology relating to drug development. Although their emphasis was particularly directed at pharmaceutical industry relations with medical schools, their ideas and views all apply equally to pharmacy schools.

After noting a series of specific benefits deriving from collaboration—some to the university, others to industry—they concluded that, although the idea of cooperatively conducted research is far from being a new development, the need for such arrangements has recently become far more important to both "camps." Moreover, going beyond the need for such arrangements merely for survival, they see these carefully developed relationships as presenting a potentially significant new benefit for the entire health care community.

This is a view in which we fully share!

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*Editor's Note:* Dr. Feldmann's editorials are an expression of personal opinion and do not necessarily reflect views or policies of APHA. The editorials are intended to be provocative and to stimulate thinking. Readers having reactions, either pro or con, are invited to submit them for publication in the *Open Forum* section.