HIGHLIGHTS

RESEARCH FUNDING

The ties that bind

An ever-increasing proportion of biomedical research is funded by industry. In 2000, the National Institutes of Health estimated industry's share of the total investment to be 62%, representing a doubling of the estimate for 1980. As the relationships between academia and industry become closer, the question of whether or not these ties are influencing the outcomes of published biomedical research becomes more pressing. Contributing to this debate, a recently published meta-analysis in the *Journal of the American Medical Association* reports a significant correlation between industry sponsorship and the publication of pro-industry conclusions.

In their substantial analysis of studies published on the topic of conflict of interest between 1980 and 2002, Bekelman *et al.* looked at three main areas: the frequency of financial arrangements between industry and academic investigators or institutions, the impact of such relationships, and how they were managed. Data were drawn from 37 published studies, of which 10 dealt with the extent of financial relationships, 23 were concerned with the effect of such relationships on published findings and 8 looked at financial management.

The authors found that around a third of investigators at academic institutions had personal financial ties with industry sponsors. They also point out the relatively new phenomenon of academic institutions themselves holding extensive equity in companies, and the consequent shift that might result in institutional priorities.

When assessing the impact of funding on research outcomes, the authors defined a pro-industry conclusion as a study outcome that was favourable to the industry sponsors, such as showing that a therapy produced by the company was superior to existing therapies or placebo. Combining the data from articles that examined 1,140 studies led to the conclusion that industry-sponsored studies were significantly more likely to reach favourable conclusions than comparable nonindustry studies.

Among the possible reasons for this difference, the authors cite the findings of four papers that show that industry preferentially supports study designs that tend to give positive results, such as the use of placebo rather than comparison therapies in controlled trials. The greater disinclination to publish negative data by industry-sponsored researchers is also likely to contribute to the observed bias.

Despite the widespread nature of financial relationships, the policies adopted by federal agencies and academic institutions towards managing these entanglements were found to vary greatly. The same seems to be true of biomedical journals, as most do not require disclosure of financial conflicts of interest and most of those that do find that few articles contain such disclosures.

The *JAMA* study, which focused heavily on clinical research, is of particular relevance at a time when clinical trials are rapidly transferring from an academic to an industrial setting, with contract research organizations now consuming more than 60% of industrial clinical research funding. Although conflicts of interest can take many forms, and financial conflicts of interest are just part of the equation, the results of this study underline the need for further research into the extent and impact of financial relationships, with a view to the setting of balanced, standardized procedures for disclosure, to which the majority of institutions and individuals will adhere.

Adam Smith

References and links

ORIGINAL RESEARCH PAPER Bekelman, J. E., Li, Y. & Gross, C. P. Scope and impact of financial conflicts of interest in biomedical research. *J. Am. Med. Assoc.* **289**, 454–465 (2003)

FURTHER READING van Kolfschooten, F. Conflicts of interest: can you believe what you read? *Nature* **416**, 360–363 (2002)