

Who is Making the Biggest Splash?

September 2006



Thomson Pharma Reviews the Leading Sources of Information on Medical Research

Expert, measured insight into organisations that helped to shape professional opinions on drugs and therapies during June to August 2006.

GlaxoSmithKline (GSK) has made a bigger splash in the world of scientific publishing than any other pharmaceutical company in the last quarter; researchers affiliated with the firm issued 34 articles, abstracts, or scientific posters between June and August 2006, and the quality of those articles was enough to ensure GSK pole position in terms of the impact it made.

The international pharmaceutical industry is among the most important sponsors of scientific research; indeed, Pharmaceutical Research and Manufacturers of America estimates that global investment in research and development (R&D) reached a record \$51.3 billion in 2005. So it is understandable that some of the most widely published authors of scientific articles are affiliated with, or sponsored by, pharmaceutical companies.

But how does their work compare? In its first quarterly review of the scientific literature on drugs and therapies, *Thomson Pharma*SM has assessed the quantity and quality of the materials published by pharmaceutical companies, research institutions and other non-commercial bodies in the three months ending August 2006 to identify which organisation has left the largest footprint.

Our methodology

Clearly, no healthcare professional has enough time to review all the information that comes his or her way – in the form of medical journals containing thousands of articles and abstracts or conferences at which researchers present their findings – but some publications and scientific posters carry more weight than others. We have developed a systematic means of identifying this key subset of resources with our *Message Mapping System*, which determines the articles, abstracts and posters that are most likely to shape professional opinions about particular drugs and therapies.

We have also developed a methodology for evaluating the quality of the materials that meet our criteria. We assess each article, abstract and poster in terms of its scientific content, the appropriateness of the methods used by the investigators and how well the information has been presented. We then assign it a score (called the Thomson Source Score) ranging from 0-100%, with 70% or more generally indicating a well written, thoughtfully designed study. Our unique model has been independently tested on a wide range of healthcare professionals to ensure that it reflects the way in which they think and assess the value of the information they receive.

In this way, we can analyse both the quantity and the quality of the scientific information being published. We can also analyse the activities of individual companies or research institutions by identifying the number of articles, abstracts and posters they have sponsored in key journals and at key conferences, and calculating the average Thomson Source Score for all these materials.

However, the impact a particular organisation makes on the healthcare community is likely to be a product of both the quantity and the quality of the publications it issues. We have therefore multiplied the total number of key articles, abstracts and posters which each organisation has sponsored by the average Source Score for those materials. The resulting Institutional Recognition Score provides an objective, quantitative measure of the impression the organisation has made.

Our findings

Table 1 shows the organisations that have made the biggest stir in the last quarter, based on their Institutional Recognition Scores. Predictably, Big Pharma features prominently: the first eight entries on the list are among the world's leading pharmaceutical companies. They have collectively sponsored 180 articles, abstracts or posters in the leading journals and at the most important conferences over the past three months. The quality of the literature backed by AstraZeneca, Schering and Eli Lilly has been particularly high, with mean Source Scores of more than 80%. The same is true of sanofi-aventis, although its output is less.

Table 1: Organisations that have Made the Biggest Impact in the Leading Sources of Information on Medical Research (June-August 2006)

Sponsor	Number of Articles	Mean Source Score (%)	Thomson Institutional Recognition Score
GlaxoSmithKline	34	78	2652
AstraZeneca	27	83	2241
Eli Lilly	27	82	2214
Pfizer	28	77	2156
Bristol-Myers Squibb	18	75	1350
Merck	18	73	1314
Boehringer Ingelheim Pharmaceuticals	15	79	1185
Schering	13	83	1079
Sepracor	12	85	1020
National Institute of Mental Health (USA)	13	76	988
National Institutes of Health (USA)	14	67	938
Novartis	11	74	814
sanofi-aventis	8	85	680
Neurocrine Biosciences	7	93	651

Note: These analyses span the more than 20 active therapeutic areas currently covered by the *Thomson Message Mapping System*SM.

A couple of very much smaller companies have also made their mark. The San Diego-based Neurocrine Biosciences, which focuses on treatments for neurological and endocrine diseases, deserves a special mention for the sheer quality of its work. Although it sponsored only seven articles, they have a mean Source Score of 93% – a significantly higher rating than that commanded by any other organisation, either academic or commercial. Sepracor, which operates out of Marlborough, Massachusetts, and specialises in developing treatments for respiratory diseases and disorders of the central nervous system, likewise ranks highly on grounds of quality; the 12 articles it sponsored carry a mean Source Score of 85%.

But though commercial organisations dominate our list, they have not had it all their own way. The National Institutes of Health (NIH) is the US federal government's leading research agency, with an annual budget of more than \$27 billion – over half the sum the entire pharmaceutical industry spends on R&D. Between June and August 2006, the NIH sponsored 14 articles, abstracts and posters in the most influential sources of information on medical research. However, the National Institute of Mental Health (NIMH) is actually one of the 27 research centres operating under the umbrella of the NIH – and the NIMH sponsored an additional 13 articles during the same period.

The leading research agencies have given the corporate world a run for its money in yet another respect. We have taken our analysis a stage further, by comparing the mean Source Score for all the articles, abstracts and scientific posters sponsored by the pharmaceutical industry with the mean Source Scores for those sponsored by individuals, research institutes or other non-commercial organisations. Between June and August 2006, the mean Source Score for the literature sponsored by non-commercial bodies was 79%, compared with 74% for that sponsored by the industry. Given the volume of material we have assessed, this is a statistically significant difference ($p=0.002$). It suggests that during the past quarter research institutions have put out work that is of higher quality.

What is also worth noting, however, is the generally robust nature of the scientific materials that are published in the leading information resources healthcare professionals read. Commercial organisations have a vested interest in promoting positive findings, so it would be all too easy to conclude: "They would say that, wouldn't they?" Our research shows that many pharmaceutical companies have good grounds for saying what they say, and say it rather well.

About Thomson Pharma

Thomson Pharma was developed to help pharmaceutical companies make better decisions faster. It integrates information from Thomson Scientific with information from other Thomson sources, including the Financial, Healthcare and Legal and Regulatory groups. Thomson Pharma's core content areas include drug information, intellectual property data, literature and news, company data, chemical information, sequence data and drug target information, enhanced with value-added content resources and powerful search tools. It covers more than 25,000 drugs.

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