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The human search engine [paper reports editorial]

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Full Text

In the past, 'jobbing' scientists could keep up to date with the latest scientific developments by attending conferences and reading the journals. Now there are more than 4000 biomedical journals, and an equally overwhelming number of conference schedules to choose from. More recently, the information technology explosion has provided scientists with search engines such as PubMed, and the number of journals offering online access continues to increase. This technology has also provided a facility for offering literature searches that are tailor-made for the scientist. Now, the scientific community can access scientific developments in the comfort of their own office. But to date, these facilities only provide a channel for identifying studies by title or abstract which might be of potential interest to readers. In general, this system does not provide raw data. How can investigators keep up and access the most recent groundbreaking research in their given discipline? And how do they know where to look?

The paper notification initiative is in its relative infancy. In some respects it is a variation on the 'News and Views' theme. Texts vary from journal to journal, usually providing a commentary, but while they identify important work, this innovation invariably means a trip to the library for interested parties. The Current Science Group are working hard to remedy this through a new group of journals focusing on multidisciplinary research in areas defined by clinical medicine (such as *Arthritis Research*, *Critical Care* and *Breast Cancer Research*). These new journals are in the process of establishing an online reporting system that will provide an efficient and timely updating service. Full reports will be available to subscribers, but bibliographic details will be available to all. The principal objective is to communicate important scientific developments so that they are both permanent and visible to the community. The recent announcement that the National Institutes of Health (NIH) will create PubMed Central, a repository for the electronic distribution of original life sciences research reports, will surely promote this (see http://www.nih.gov/welcome/director/pubmedcentral/pubmedcentral.htm and http://www.nih.gov/welcome/director/pubmedcentral/ebiomedarch.htm). But there are numerous practical issues to be overcome. For example, how should search parameters be defined? How can such a wide scientific base (even confined to arthritis) be covered efficiently? How much detail should be reported? While the solutions to some of these problems are yet to be resolved, effort is being spent on trying to address some of these issues.

The current paper reporting system for Arthritis Research aims to utilize a core of international reporters with expertise in one or more of the disciplines that comprise arthritis research. Each reporter is an independent investigator in his/her own right, and is only too aware of the problems outlined above. Specifically, a core team of 16 scientists function as section leaders with insight into the major developments in the fields of autoimmunity and autoantibodies, bone and cartilage biology, gene

therapy, genetics and molecular targeting, inflammation and molecular pathology, pharmacology and therapeutics, and signalling and gene regulation. Each section leader is now in the process of acquiring a team of four or five members, providing a human search engine of more than 50 reporters. This facility has made it possible to scan large numbers of journals, selected by team reporters because their contents are likely to harbour scientific gems of interest to the arthritis community. The number of journals scanned is currently estimated at around 110, with impact factors ranging from 2.0 to 38.9. Rapid identification of important work and fast reporting means that a detailed synopsis of the data becomes accessible to the scientific community online within a time frame that, at least for many laboratories, might coincide with, or even precede, the delivery of the print copy. While the format of reports can never replace the original work, it is detailed enough for readers to appreciate the methods, to interpret the results for themselves, as well as to obtain a feel for the significance of the work based on comments from scientists familiar with the field. Those readers interested in a more detailed understanding of a report can follow an online link to PubMed abstracts, or to the full text online when available.

The first set of reports are published herein. Emphasis is being placed on reporting basic research that explores pathogenic mechanisms and which may have future implications for therapy. All reports will be archived such that they can be accessed according to date or topic, and subsequent issues of the journal will serve to highlight some of the more significant developments published over the previous two months. So far, the subject matter reflects the research interests of the reporters but, with a team of around 50, it should be possible to establish a broad and balanced set of reports over the coming months. If we fail to report an important development, *Arthritis Research*needs to know about it (ar@cursci.co.uk). It is hoped that the depth and scope provided could make for an important resource accessible to clinicians as well as scientists involved in arthritis work, but who may not be familiar with recent progress in every aspect of arthritis research.

The success of this reporting system will depend on a critical mass of reporters, selective and quality reporting with respect to depth and scope, and timely presentation of studies. If specific themes become a feature of *Arthritis Research* these can be further facilitated by integrating reports of papers pertinent to the commentaries, reviews and/or a particular primary research communication published in that issue of the journal. For me, one of the gratifying things to have come out of the first set of paper reports is just how much outstanding arthritis-related work is being published in the high-impact journals. It's out there if you can find it - but if you can't, or it takes too long, try accessing the paper reports section of the *Arthritis Research* web page.