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## *Competitor Intelligence Profile*

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## Competitive information gathering and analysis in biotechnology

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Corporate biotechnology feeds on information about science and business developments that are constantly changing and that are leveraged by all participants to achieve a competitive edge. Given the vast amounts of information involved, it is important for companies to have some systematic way to gather, filter and respond to information that is relevant to their development. This can be achieved by establishing either dedicated or virtual competitive intelligence systems, that deliver intelligence digests to decision makers within their companies. Other industries, such as the manufacturing and service industries, offer useful models of such systems that they use every day. These systems can be emulated by most biotechnology companies without undue strain to their limited resources.

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### 1. Introduction

Success in the corporate practice of biotechnology is the result of many factors. These certainly include excellent science, a market-driven focus, top personnel in both the science and management fields, and, of course, appropriate funding. To achieve success in a field whose rate of change and progress is as dramatic as that in biotechnology is, however, a daunting task. Not only are the above factors necessary, but an often overlooked tactical 'device' that is part of the arsenal of all successful companies is the ability to gather, analyse and be pro-active on the basis of good competitive information. Why should corporate biotechnology practitioners even consider this issue? If so, how can an effective and efficient system be put in place that offers a competitive advantage? What can be learnt from appropriate examples? These issues are addressed in this article.

### 2. Basic concepts

It is first of all very important to agree that when we talk about 'competitive' information, we are not merely referring to information that pertains to the activities of other companies that we perceive as our competitors. This would be too narrow, and although critical, it would miss the broader context. For the purposes of the discussion herein, the term 'competitive' will mean information that relates to other companies that are in the same area, naturally, and also information that is not necessarily about competitor companies, but that makes us more competitive: examples include latest relevant technical developments from non-competitors, advance notice of funding policy changes etc. Another term that we will use

**Table 1:** Examples of competitive intelligence systems.

Company	Intelligence system characteristics
AT&T	Advanced internal integration Focused on customers and competitors Supports operations and strategic planning
Kodak	Advanced information management Focused on market and competition Supports marketing and strategic planning
Motorola	Company-wide integrated system Focused on competitors Supports CEO and senior management

Source: JP Herring (1997) [2].

here is that of 'competitive intelligence', which is different to 'competitive information'. Here 'intelligence' means actionable information, i.e., knowledge that we actually use to do something (it is important to keep in mind that inaction is just as valid a response to such knowledge under certain circumstances as is action). The US National Security system provides us with a good working definition of 'intelligence' in this context: it is '...knowledge and foreknowledge of the world ... the prelude to ... decision and action' [1]. Here, it is important to note the use of 'foreknowledge', which refers to future developments and their evaluation relative to the present. In addition, 'prelude to decision and action' suggests that somehow we must try to have a system in place that will help us to capitalise on the competitive information that has been gathered. In biotechnology, effective anticipation and pro-active response to future developments is a hallmark of success.

Not only is it necessary to understand the nuances of competitive intelligence, but as the definitions above suggest, a system is necessary that will help gather, analyse and then suggest specific responses on the basis of the knowledge that has been obtained. This is the essence of a so-called 'intelligence system', which can be defined as 'the organisational means to systematically collect, analyse and disseminate information as intelligence to users who can act on it' [2]. It is important to note in this description the reference to those people in a company or entity that can take the responsibility of action on the basis of the filtered information that is presented to them. Information gathering for its own sake is of very little use to biotechnology - or any other competitive enterprise -

if it is not made use of in terms of helping to define a specific action or response.

### 3. Established intelligence systems

Some examples of actual intelligence systems are in order here. In fact, such systems are prevalent in areas other than biotechnology. According to a 1993 survey by the US-based Conference Board, 5% of US multinational firms have complete competitive intelligence systems embedded in their operations, and 9% of European multinational firms also have such systems. These companies are typically from the manufacturing or service sectors, where the presence of a competitive intelligence system is a necessity, given product life-cycles and the extraordinary competitive circumstances such companies find themselves in. **Table 1** gives actual examples of such systems.

The examples given in **Table 1** illustrate a number of key points. For example, intelligence systems are supported typically by advanced information gathering and analysis technology. Second, these systems deliver specific types of information that are important strategically to each company, for example marketing, or competitor-specific information. Thirdly, all these systems have specific recipients for their products, and it should not be assumed that every member of senior management or others get, or should, get this actionable information.

The examples in **Table 1** do not come from the biopharmaceutical industry, where conditions are somewhat different. First, we must recognise that all major companies and a lot of the smaller ones have in-house library services that are fully proficient at gathering, storing and presenting rudimentary clipping-service type report abstracts to whoever wishes them. However, whether they have an intelligence system organised along the lines given above is highly variable. What such companies often have are so-called 'technology assessment' offices. There may be one in Europe, one in the US and one in Japan. Their function is to monitor science and business developments in their geographical regions, and to report back any interesting opportunities for out- or in-licensing and collaborations, in addition to basic competitor monitoring. Also, these offices may be the first port of call for smaller companies wishing to present themselves to the bigger parent companies. As such, biopharmaceutical company technology

assessment offices can be thought of as opportunity identifiers, and not merely as threat alert services [3].

One particular aspect of such offices, or others that serve similar functions, is that they often focus on pre-defined trigger events that have been identified as preambles to significant corporate situations that require immediate responses. One example of a trigger event is the reporting of successful Phase II clinical trial results by biotech companies. This means that there is a very high probability that a Phase III trial will follow. Since significant value has been created once a drug lead has achieved such Phase II results, large pharmaceutical companies will often decide at this point to get involved and establish a strategic alliance. Hence, foreknowledge or anticipation of successful Phase II results is a key trigger event in the biopharmaceutical industry, and is a key deliverable by competitive intelligence systems in the field. Another example of a trigger event is the issuing of a patent. Since biotechnology is particularly rich in patenting activities, knowledge and foreknowledge of these events is a critical competitive advantage.

It is instructive to keep in mind that many of the best-known pharmaceutical companies participate in the so-called Pharmaceutical Documentation Ring (PDR), first established in 1958, and with a total of 29 members as of July 1999. This network was established so that its members could themselves exchange non-confidential information about data gathering and analysis methods. The PDR holds regular conferences where issues including archiving, data mining, document searching etc. are discussed [4].

#### 4. A typical competitive intelligence digest

The intelligence systems referred to above aim to inform in a pro-active manner and to deliver actionable information. The actual deliverable of such a system is often referred to as a competitive intelligence digest, which is nothing more than a representation of the actionable information tailored to the requirements and needs of each company. Before we develop a working example of such a competitive intelligence digest that can be used by biotechnology companies, it is important to understand the real nature of the information needs of such companies.

In essence, there are two types of information required by a biotechnology company: one is science

Figure 1: Example of an intelligence digest [6].

Report number/ Internal reference		Date delivered:
Category: clinical; science; business; patents		Period covered:
Contributors:		
Events	Relevance to company	Interpretation - Action options (Threat; Opportunity; Reactive; Pro-active)
Relevance to prior actions:		
Current digest methodology (sources, interviews etc.):		

and the other is business. Ultimately, in both cases the nature of the information is the same. Whether from the science side or the management side, what is required is knowledge of one's own field, of related fields, and also of the broader contextual parameters that characterise the industry as a whole.

With the above in mind, a good intelligence digest would have to deliver actionable information in all three information areas, namely specific, broader, and finally contextual. It is also important to remember that if actionable information is based purely on information that is gathered from third party public sources, one runs the risk of delivering actionable information that carries with it the same biases as the source, which is a very significant danger indeed [5]. The key to good competitive intelligence digests is that they stem from intelligence systems that begin with information that is publicly available, and use this as a basis to get further data directly from human sources. In other words, the intelligence system begins by gathering public data, and then this third-party data is integrated with information obtained directly from human sources. Finally, company-specific context is used to deliver this information in an actionable format, namely one that will enable decision makers to take decisions and act in an informed way. A typical working structure of a competitive intelligence digest is shown in **Figure 1**.

Biotechnology is replete with good examples of the usefulness of systems such as the one above. For example, how would it be possible to be aware in a pro-active manner of competitive developments in all the platform technologies of modern biotechnology,

such as genomics, proteomics, combinatorial chemistry, high-throughput screening and others? Combinatorial chemistry alone has at least 180 participating companies [6]. A simple passive effort of information gathering would be totally inadequate in today's world, and would lead to nothing but follower-type behaviour.

### 5. Establishing a corporate intelligence effort

It is often argued that few companies have the luxury to be able to establish a proper competitive intelligence system, akin to the examples given earlier on. In fact, establishing such a system is cheaper and easier than one might first think.

First, it is not necessary to hire in extra people to carry out the task. In all companies senior scientists and managers actually carry out the tasks that would be required to produce a rue intelligence digest. These tasks, however, are simply never integrated into a digest, and most companies do not have a person whose responsibility it is to perform this task. Depending on the size of the company, an intelligence system can consist of anything from one to five or more people who already work for the company, with their associated costs, but nothing more. In this mode, which is the best one for most biotechnology companies, the intelligence system does not have full-time employees, but is a virtual one. In practice, specific tasks, such as primary information gathering, interviews, and finally integration are assigned to already existing employees who should come from both the science and also the management sides. These employees would spend no more than two full days per month on the system delivering a monthly digest, which is a good frequency for such efforts (anything more regular would run the risk of becoming noise). Since a critical component of the process is the integration of the data and delivery of actionable information, this would be the responsibility of one or two senior individuals. In this mode, any company can instigate a basic intelligence system, without fear of costs or wasted resources. The opportunity cost is actually an opportunity gain, because nothing in the activities and deliverables of the team of people who carry out the intelligence task is outside the normal purview of these individuals in a biotechnology company [7].

### 6. Expert opinion

In an industry characterised by a very rapid rate of change, with technical, business and intellectual property advances that are all leveraged constantly to achieve competitive advantage, whoever knows more in advance and responds to that knowledge typically wins. This is the arena of competitive intelligence systems, which are nothing more than systematic efforts to gather, filter, analyse and then present in a way that is useful for action any information that is relevant to a company. If proof is required that such systems are necessary or useful, one needs only to look at common household company names to realise that all these companies have such systems in place. It stands to reason that biotechnology should have such systems also, and indeed some companies do. The resources required are not significant; if the system is not a dedicated but a virtual one, the rewards are likely to be quite significant.

### Bibliography

Papers of special note have been highlighted as:

- of interest
  - of considerable interest
1. US National Security agencies, referenced by [2].
    - Useful definitions of competitive intelligence
  2. HERRING J: **Presentation at Wharton School of Business, Penn. USA.** *The Futures Group* (1997).
    - Relevant concepts in information gathering.
  3. HERRING JP: **Scientific and technical intelligence: the key to R&D.** *J. Bus. Strategy* (1993) **14**(3):10-12.
    - Very relevant information regarding competitive intelligence systems in companies.
  4. DUBOSC Y, MULLEN A, OTTO C: **Multinational pharmaceutical companies gather in Berlin for PDR AGM.** *Drug News Perspect.* (1998) **11**(1):58-63.
    - Interesting information on pharmaceutical industries' information gathering practices.
  5. MULLEN A, BLUNCK M, KALBFLEISCH E, MOLLER E, ROHBECK HG: **Assessment from an industrial user perspective, of some major competitor information files on pharmaceutical development products.** *J. Inf. Sci.* (1997) **23**(1):9-23.
    - Very relevant review of biopharmaceutical industries' information gathering practices.
  6. Biovista: **Combinatorics Industry Review & Company Database.** *www.biovista.com* (1999).
    - Appropriate case study of a biotechnological platform technique.

7. Persidis A: **Corporate intelligence in biotechnology.**  
*Drug Discovery Today* (1999) **4**(5):204-208.
- Up-to-date review of relevant information gathering and analysis practices.

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