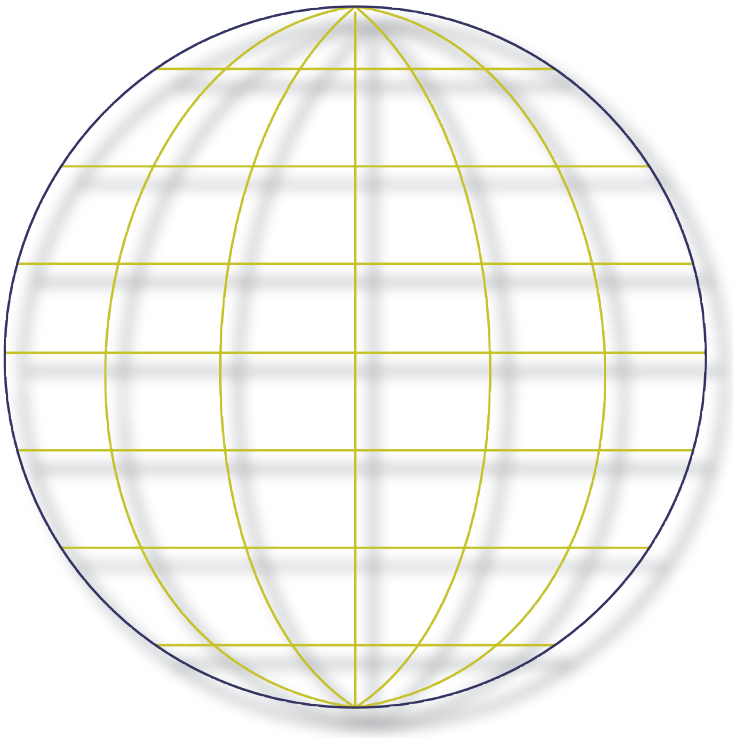
Reap What You Sow?

International Biotech Clusters: a Global View



Interest in biotechnology clusters is growing. Where are the successful hotspots of tomorrow? What will make them successful? Do established clusters have to worry? Data collected from recent studies and global biotech databases such as www.biotechgate.com reveals some interesting trends.

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Mature Clusters

The US is the founder of modern biotech and the powerhouse of the industry with examples of huge clusters. San Diego houses a top-ranked US biotech cluster, and Biocom, the industry association of Southern California represents nearly 700 biotechnology and biotechnology-related companies in this area (fig. 1). The region has a great number of companies with promising potential, including Ascenta Therapeutics, Phenomix Corporation and TargeGen (FiereceBiotech).

Across the pond, the biotechnology industry is maturing. A recent EU funded study of Western European biotech companies showed these 18 European countries surveyed contained 2,163 companies compared to 1991 in the US (Critical I, 2006). However, the similarity ends there, with the US employing twice as many staff (190,500 vs. 96,500 in the EU-18), investing nearly three times as much in R&D (US$ 21 billion vs. US$ 7.6 billion) and generating nearly twice the revenues (US$ 41.5 billion vs. 21.5 billion). Debt-financing clearly demonstrates the differing maturity of the two markets; with the US accessing 10 times the amount of debt as the EU (Mitchell, 2005).

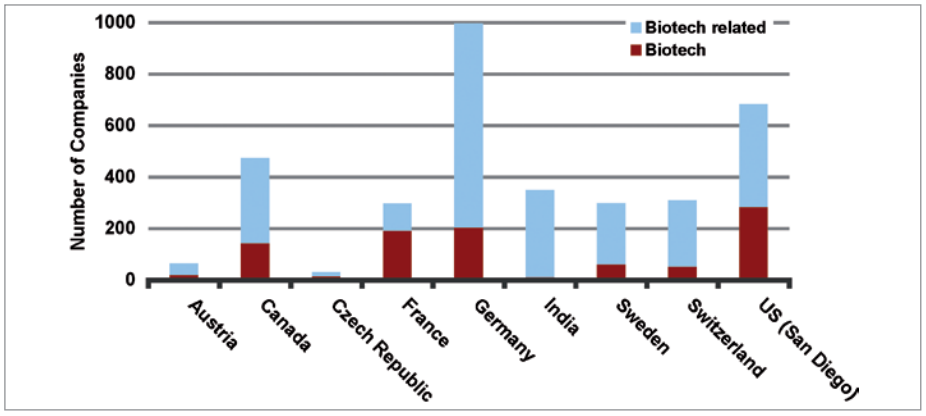

Fig. 1: Number of companies in selected countries operating in red biotechnology and biotechnology related (other green or white biotech, instrumentation, services and diagnostics) as listed on the global life sciences database, biotechgate. The scale of biotechnology in individual clusters in the US is clear: the San Diego cluster (Biocom) alone is as large as the total biotech industry of major European players and dwarfs that of the Czech Republic. However, investment in technology transfer and business incubators prepares new-comers for competition in the coming years. Source: www.biotechgate.com.

Positioning for Success

Although Europe lags behind the US in terms of revenues, there are signs of a promising future. This includes maturing pipelines, increased M&A and licensing activity from the pharmaceutical giants and examples of strong financial results. Outside of the US, established clusters are developing sustainable pipelines. For example, Canada also has a rich and diverse array of biotech companies, with nearly 500 listed in the Canadian life sciences database (fig. 1).

With a large number of early stage companies with innovative ideas and later stage companies with promising clinical pipelines, European biotech is on the move. The Swiss, with over 300 companies in four primary clusters, are supported by a strong tradition in pharma-

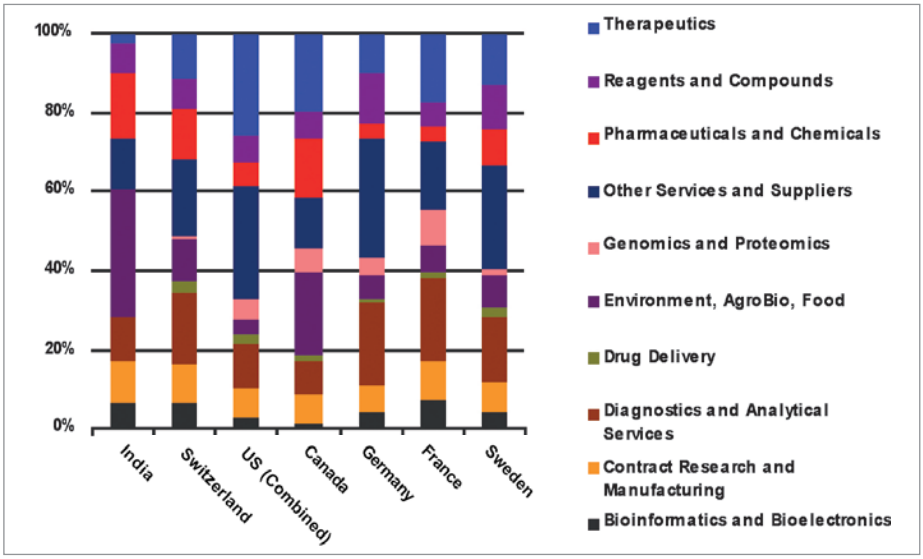

Fig. 2: Biotech company categorisation in selected countries expressed as a percentage of total national companies suggests differentiation of industry infrastructures. The strong position of therapeutic biotech is upheld in the US, with countries such as Canada and India exploiting key agricultural resources for green biotech. Source: www.biotechgate.com.

ceuticals and academic research. Several recent high profile IPO's along with the success of biopharmaceutical companies such as Actelion consolidates Switzerland's position as an international biotech hotspot. The UK has developed great potential with numerous national clusters and rich and diverse product pipelines, and Sweden also has a disproportionately high number of biotech companies for its size.

National and Federal Interest in Biotech

National and Federal interest in Biotech intensifies, with the EU refocussing actions to promote a competitive and sustainable European knowledge based economy and investment in biotech being actively encouraged. An EU-FP6 project to gather data on the biotech scene in the new member states sheds light on early stage clusters in countries such as the Czech Republic, Hungary and Poland (www.14allbio.eu). With funding opportunities from Brussels, tech transfer incubators and national biotech associations have appeared with the aim to support and develop the biotech infrastructure and to attract financing from international investors.

Challenges

The seeding of new clusters does, however, create new challenges. In the new EU member states, competition for federal and private investment is likely to increase. Many countries with developing biotech sectors are likely to differentiate themselves from the more mature biotech clusters of established nations by exploiting key resources. For example, nations such as India have the potential to exploit vast natural resources for green biotech purposes. Information from biotechgate suggests that approximately one third of the 350 Indian companies operate in green biotech. The future: aware of the potential of biotechnology, nations are developing carefully targeted strategies to compete in the global arena.

References

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