



Candex do Brasil Ltda

Intl. Marketing & Investments

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The Brazilian Life Science Industry *Pathways for Growth*

This is an excerpt of a report prepared by PWC Brazil and the Biominas Foundation. The full report can be ordered from these organizations:

PWC: www.br.pwc.com and Biominas: www.biominas.org.br

Brazil has structural and current situational aspects capable of leveraging the development of the life science sector: strong scientific base, leading position in agribusiness and biofuel production, abundant natural resources, growth and aging of the population and ascension of millions of Brazilians to the middle class, increasing demand for and access to health care services. However, capitalizing on these factors will require a proactive and coordinated attitude by members of the public and private sectors and, especially, a long-term vision, which are critical for building a robust and innovative life science industry.

The Brazilian life science industry is undergoing an unique period in its history. The last five years have been marked by the implementation of industrial policies favoring companies in the health and life science areas, with the approval of non-reimbursable funds, establishment of government programs to support internationalization of the sector and progress in university-industry interaction mechanisms.

The government funding programs, however, have not resulted in significant progress in generating economic value for the companies involved. Industry revenues remain relatively stable, mostly made up of companies with annual revenue of R\$1 million or less. The chief difficulties in leveraging growth include internal aspects, such as a clear value proposition, development aligned with the reality of the market, professional management and strategic planning; and external factors, essentially an efficient regulatory process and a more inclusive funding environment.

Despite the modest sales level and small number of jobs generated, Brazilian life science companies, characterized by strong technological content and potential for innovation, can play a fundamental role in the economy. This contribution could range from import substitution and reduction of the trade deficit to development of innovations to meet specific domestic needs, such as diagnostics, vaccines and treatments of endemic tropical diseases, bio-pesticides for very common agricultural blights in Brazil and others. These companies could also solve technological problems and feed the pipeline of medium- and large-sized domestic companies, helping to establish a more competitive industry.

Analysis based on questionnaires answered by 103 industry entrepreneurs revealed the importance given to innovation. Graph 1 shows that 45% of the companies give high or very high priority to developing disruptive innovations, while 66% give high priority to incremental innovations. Graph 2, in turn, reveals that 62.9% of the entrepreneurs consider development and sale of innovative products and services to be the principal parameter for a successful venture.

In order to evaluate their ambitions and references, these entrepreneurs were asked to give examples of successful companies. The respondents very frequently mentioned Brazilian company Alellyx (acquired by Monsanto) and, among the foreign companies, those most often mentioned were Amgen, Genentech (acquired by Roche Pharmaceuticals) and Genzyme (acquired by pharmaceutical company Sanofi), all companies with a strong scientific base and who seek to expand the frontiers of technology.

Therefore, it can be noted that that the majority of Brazilian life science companies are oriented toward innovation. However, this innovative potential has not been reflected in significant or growing economic results. This study focused on understanding the principal obstacles which have hampered industry progress and evaluating the prospects and paths for growth.



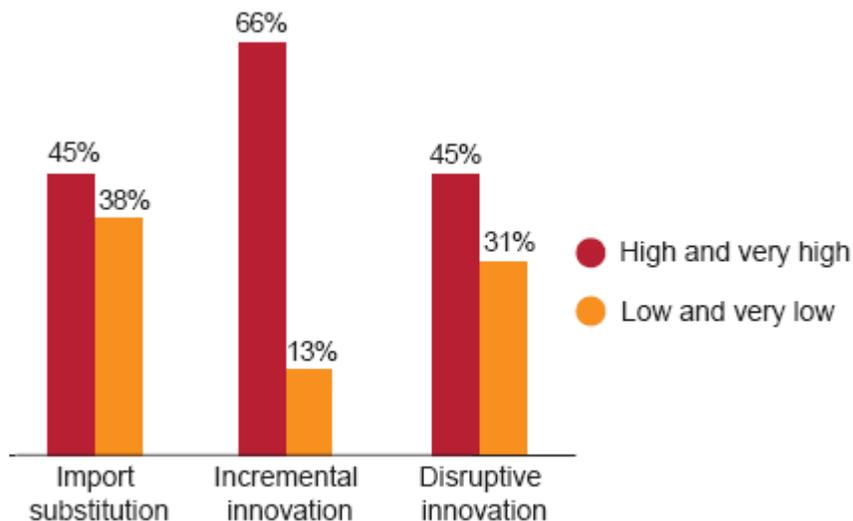
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Graph 1 - On a scale from 1 to 5 (very low, low, average, high, very high), indicate the priority level of your innovation strategy according to the listed objectives



Source: Biominas/PwC Survey, 2011

Graph 2 - In your opinion, which of the following parameters reflect a successful Brazilian life science company? (select the two most important)



Source: Biominas/PwC Survey, 2011



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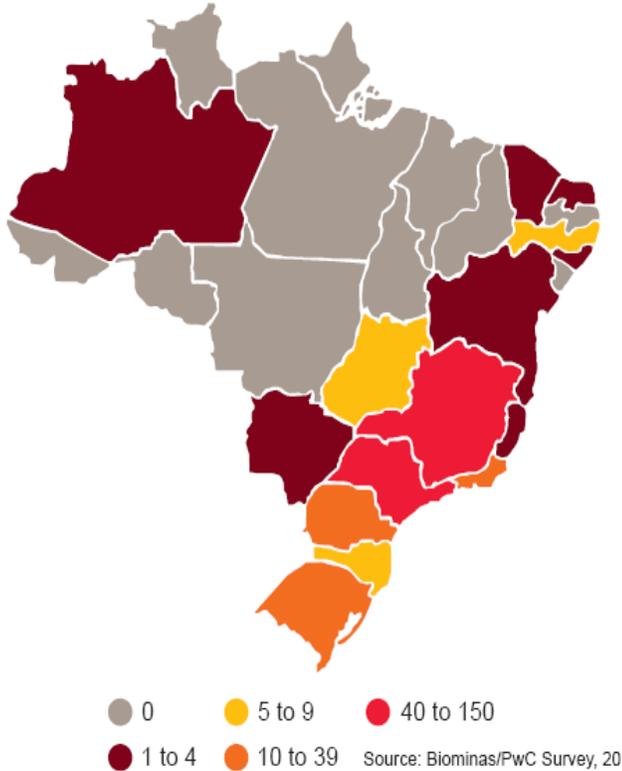
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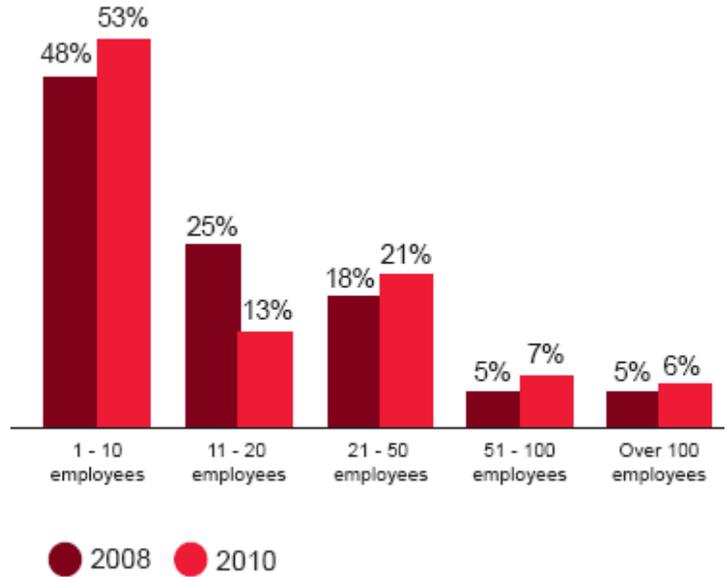
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Industry profile

Geographical distribution of life science Companies

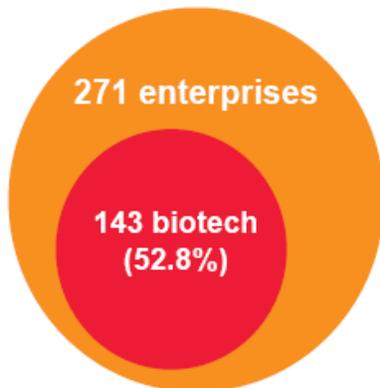


Companies by number of employees: 2008 vs. 2010

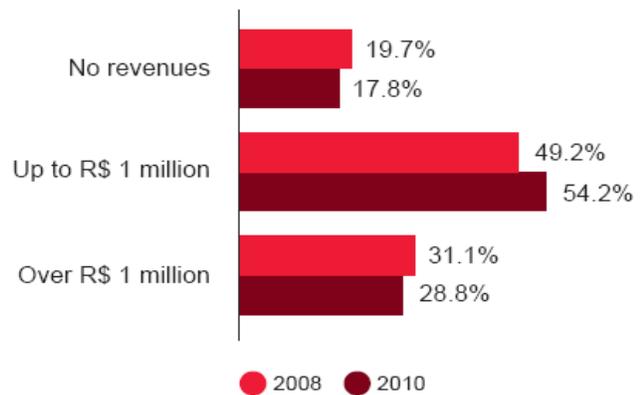


Source: Biominas/PwC Survey, 2011 and Study of the Brazilian Life Science Companies, Biominas, 2009

Biosciences enterprises x Biotech Enterprises



Companies by Gross Revenue Classification: 2008 vs. 2010



Source: Biominas/PwC Survey, 2011 and Study of the Brazilian Life Science Companies, Biominas, 2009



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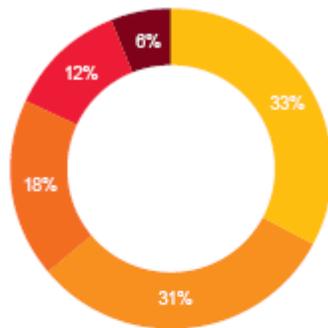
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Most representative states and regions

Region	State	Number of companies	% of Brazil
Southeast (74.9%) 203 companies	São Paulo	103	38.0%
	Minas Gerais	83	30.6%
	Rio de Janeiro	16	5.9%
South (14.4%) 39 companies	Rio Grande do Sul	19	7.0%
	Paraná	14	5.2%

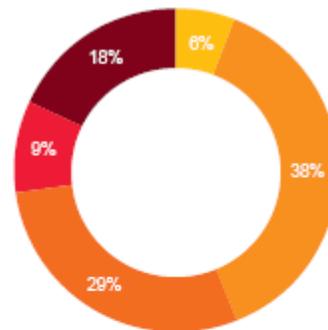
Companies by application



- Human health
- Agribusiness
- Reagents
- Mixed
- Environmental

Source: Blominas/PwC Survey, 2011

Companies by age



- 2 years or less
- 2 to 5 years
- 5 to 10 years
- 10 to 15 years
- Over 15 years

Source: Blominas/PwC Survey, 2011