



Potentials in the Biotech Sector in the Czech Republic

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Czech Republic – basic data

Data for Q2 2009

GDP	-4.9% (compared with Q2 2008) +0.3% (compared with Q1 2009)
Unemployment	8,4%
Inflation	3,1%
Population	10,4 mil.
Life expectancy	women 79,9 years men 73,7 years
Membership:	EU, NATO, Schengen area



Why Czech Republic??

- The pharmaceutical industry in the Czech Republic is one of the most developed of the CEE countries
- High standard in life-sciences related academic and institutional framework
- Active biotechnology clusters
- Developed infrastructure and support services, technology parks, incubators
- High level of biotech services - Contract opportunities - CROs – Clinical tests of medicals

The pharmaceutical industry in the Czech Republic is one of the most developed of the CEE countries

- The Czech market for pharmaceuticals was the third largest in the region in 2008
- Long tradition in drug production, strong industrial branch, however with a high proportion of production of generics
- Many companies that specialize in active pharmaceutical ingredient sourcing and contract manufacturing
- Recent major investments:
 - Barr Pharmaceuticals
 - Lonza Biotec
 - Baxter International,
 - AstraZeneca
 - Otsuka Pharmaceutical,
 - TEVA Pharmaceuticals
 - Beckman Coulter, etc.

High standard in life-sciences related academic and institutional framework

- Extensive network of universities offering life sciences education programmes
Close to 56000 students, 7400 graduates (2008/2009)
- About 300 biotechnology research institutes or workplaces, in that
90 institutes - development of human/veterinary diagnostic, therapeutic systems
121 entities – active in the microbial and cell biotechnology field
- Some of the institutes with internationally recognised results :
 - Institute of Biotechnology
 - Institute of Molecular Genetics
 - Institute of Organic Chemistry and Biochemistry
 - Institute of Physiology
 - Institute of Experimental Medicine
 - Centre of Cellular Therapy and Tissue Replacements

Active biotechnology clusters

CEITEC (Brno)

Bioinformatics, 15 members



Nanomedic (Dol.Dobrouč –Pardubice)

Medicine-pharmaceutic cluster, 20 members



Biotech Complex (Vestec-Prague)

Currently a cooperation of 5 start-ups with the Institute of Molecular Genetics ASCR



Top-Bio s.r.o.



MedChemBio (Olomouc)

New initiative since 5/2009, research in the area of drugs for treating cancer and infectious diseases

CzechBio Association of Biotechnology companies (Prague)

Initiated by Institute of Biotechnology, 30 members



Soon coming ...

International Clinical Research Center (Brno)

EU's Largest Platform for Medical, Biotech Research to Open in 2012

- Multipurpose centre for advanced clinical research in the areas of oncology, cardiovascular, neurosciences
- Joint project of Mayo Clinic USA (strategic partner), the International Clinical Research Center in Brno, Brno university of Technology, Academy of Sciences and Masaryk university



BIOCEV Biotechnology and Biomedical Research Centre of the Academy of Sciences and Charles University (Vestec, Prague)

International centre for advanced biotechnology and medical research to open in 2012

CEITEC Central European Institute of Technology (Brno)

Centre of Excellence conducting research in the area of quality of life and human health to open in 2015

Growing number of biotechnology companies, start-up and spin-off SMEs

Most successful areas:

Human and veterinary pharmaceuticals, diagnostics, fermentation technologies, use of biotechnologies in waste treatment and environment protection, animal and plant biotechnologies

Number of companies: about 100

Size of the companies: mainly SMEs, nearly two-thirds of enterprises have less than 20 employees.

Production focus mainly:

- Vaccine production
- Microbial manufacturing of biopharmaceuticals
- Generic drugmakers
- R&D of veterinary products
- R&D of monoclonal antibodies
- Production of ELISA kits, research of antibodies



Monoclonal and polyclonal antibodies
 Antibody-based diagnostic kits
 Immunodiagnostic reagents
 Immunoanalytical tools
 ELISA diagnostic kits
 Recombinant proteins

Source: Czechinvest

Biotech services - Contract opportunities

CROs – Clinical tests of medicals

- A strong growth in clinical research in the Czech Republic over the past years due to the adoption of FDA (US) and EMEA (EU) compatible regulations, more and more pharma companies frequently outsourcing non-core activities
- Increasing number of specialised, high standard, contract research organisations - currently about 25 companies
- ACRO – CRO´s Association services
- Trend to focus on a full service model - a complete range of services from the early stage of development to post-approval research.
- Challenges of the CROs:
 - recruitment of qualified employees due to ever increasing number of the projects and contracts
 - growing competition from West EU countries,
 - stricter regulations/rising costs



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