

Follow the pathway...



...to Czech biotech



www.czechbio.org



Association of Czech biotech companies



CzechBio - Association of Czech biotech companies

Czech Biotech

Great past, present, promising future

Overall description

Association CzechBio

CzechBio members



Great past

Czechoslovakia used to be extremely strong in traditional biotech

- Crop and animal breeding
- Fermentation industry
- Famous brewery tradion
- Production of wine, ethanol, baker's yeast, fodder yeast

Biotransformations:

- Aminoacid production, cyclosporine A, ergot alcaloids, vitamins, food additives

Among pioneers of antibiotics production – penicillin (October 1949)

World famous school of continuous culture technology (at Institute of Microbiology of Czech Academy of Science)



Current shape of biotech in CZ

Developing cutting-edge biological research

Limited, still increasing cooperation between academia and private companies

Limited interest of the venture capital

So far Czech biotech companies didn't succeed in delivering original biotech product in field of human medicine to the market



Promissing future

- **Strategic long-term research orientations for advanced biotechnology, biomedicine and molecular biology**
- **Incentives for academic-industrial cooperation** (ERDF funds for OP R&D, 4.5 bil. Euro)
- **National applied research support scheme** (Technology Agency of the Czech Republic)
- **Strong network of research institutes** (54 public research institutes with 7.000 employees)
- **Number of ongoing and starting projects** (clusters, centers of excellence, competence centers, etc.)



Successful projects

- 2006:** **CBT** – Centre of Biological Technologies
- 2006:** **FNUSA-ICRC** – Faculty Hospital Saint Anna – International Clinical Research Centre – Mayo clinic
- 2007:** **CEITEC** – Central European Institute of Technology
BIOCEV – **Biotech and Biomed Research Centre**
- 2008:** **Institute of Biotechnology** – part of Academy of Science
- 2008:** **BIOMEDREG** – Biomedicine for Regional Development and Human Resources



Biotech and Biomed Research Centre of CAS and Charles University (BIOCEV)

Joint project of 6 institutes CAS and 2 faculties of Charles University

Research areas

- **Functional Genomic**
- **Cell Biology and Virology**
- **Structural Biology and Protein Engineering**
- **Biomaterials and Tissue Culture Engineering**
- **Development of Diagnostics and Therapeutic Procedures**



Biotech and Biomed Research Centre of CAS and Charles University (BIOCEV)

Project in numbers - total cost of EUR 125 mil., surface area of modern labs 25,500 m², 600 positions to be created , summer 2014 planned start of the trial operation

Education and training - New study programmes, international courses, training in advanced biotech methods, popularization and promotion of biotechnology and biomedicine

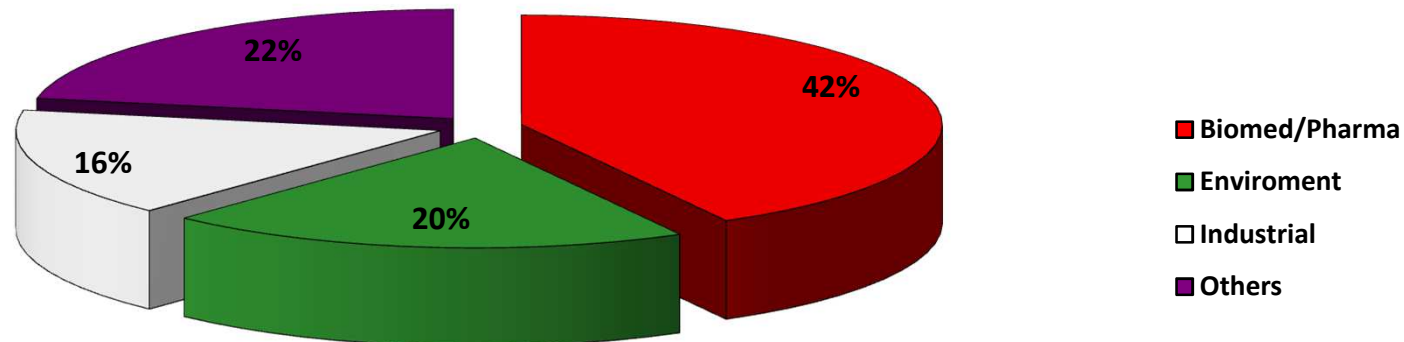
Focus on transfer of research results into practice



Biotech industry in CZ

All together around 45 companies located mostly in the region of Central Bohemia and South Moravia

Directly employed:	2 000 – 2 400 employees
Total yearly turnover:	160 – 200 mil EUR
Average year growth:	12 – 14 %





CzechBio z. s. p. o.

- A rapidly growing association of biotech companies, renowned research institutions and Universities operating in CZ
- Aiming at developing Czech biotech industry
- Represents the famous traditional Czech biotech R&D

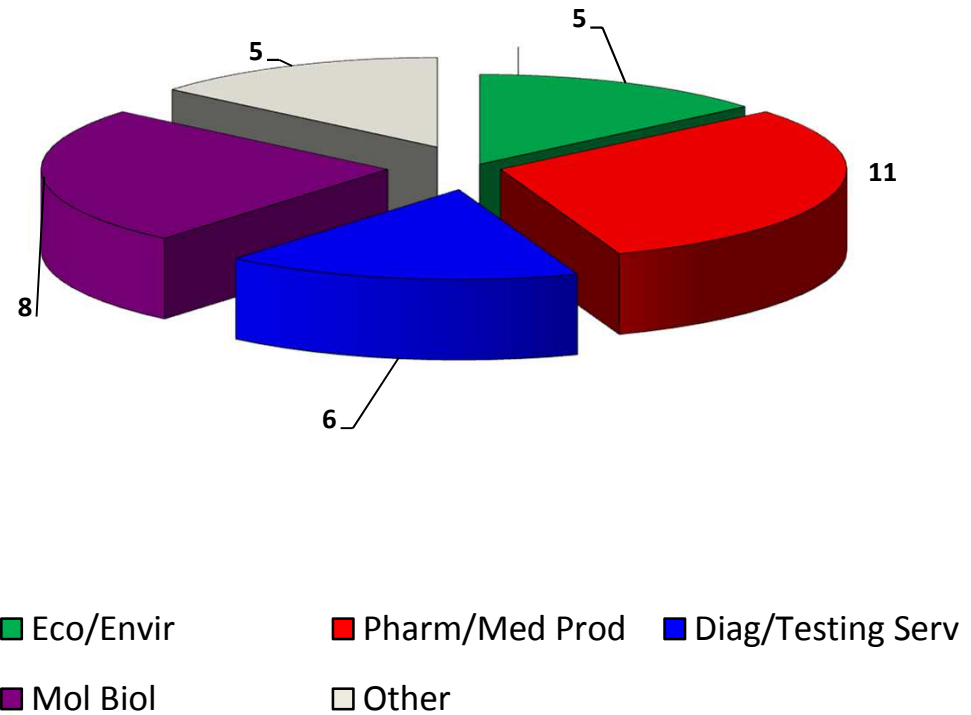
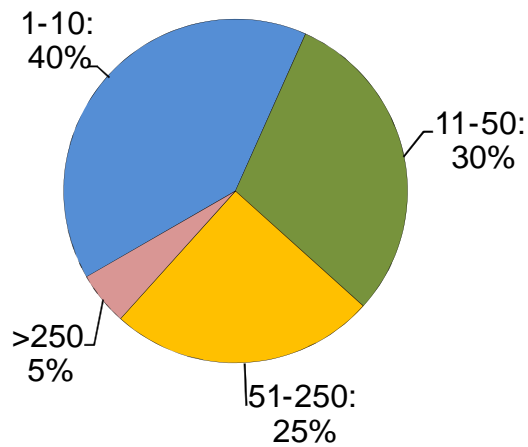
Founding members: 20 private biotech companies

Current members: 31 private biotech companies
4 R&D institutions + 1 university



CzechBio – membership base

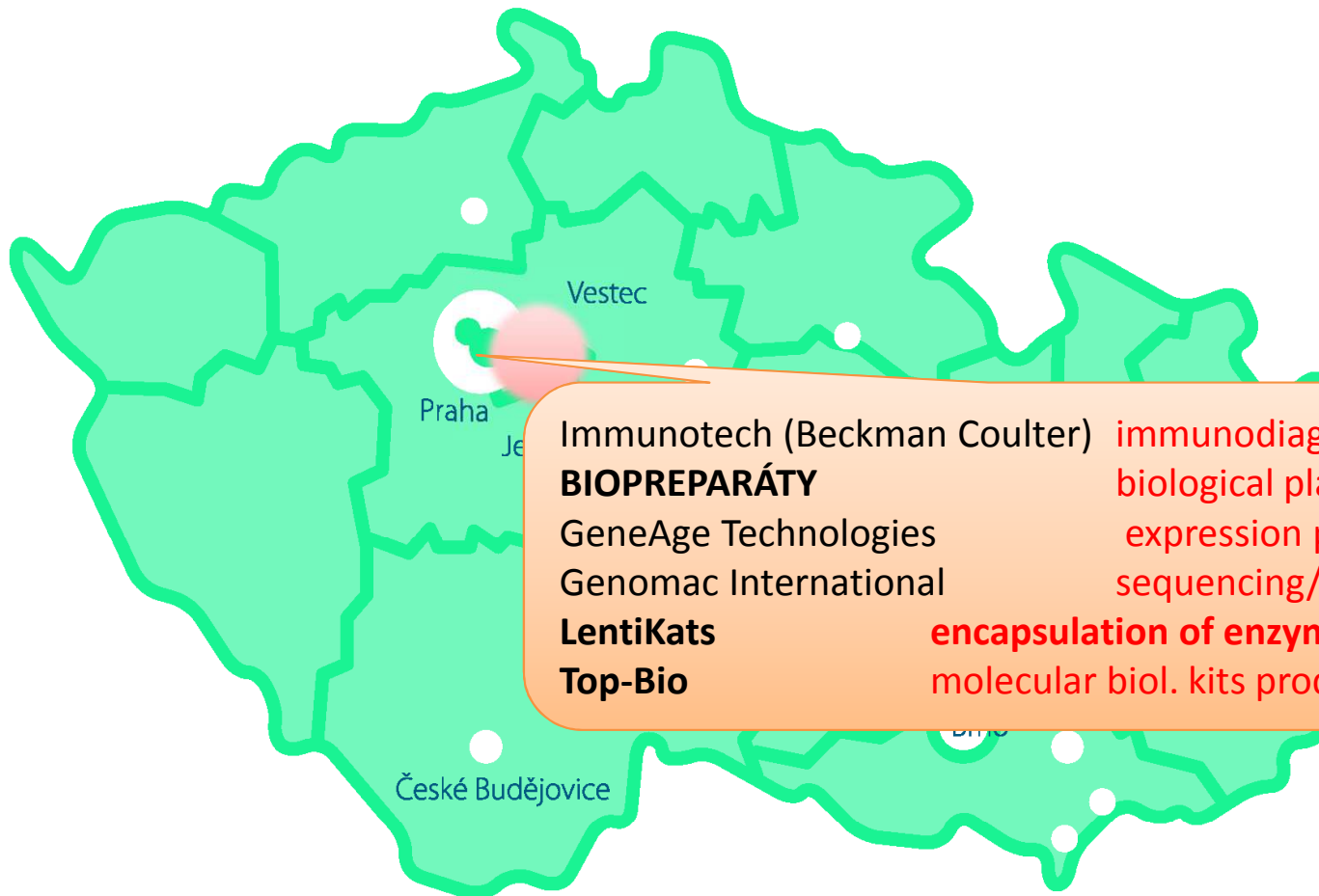
Biotechnology company size in CZ
(number of employees)



Source: www.czechbiotech.com



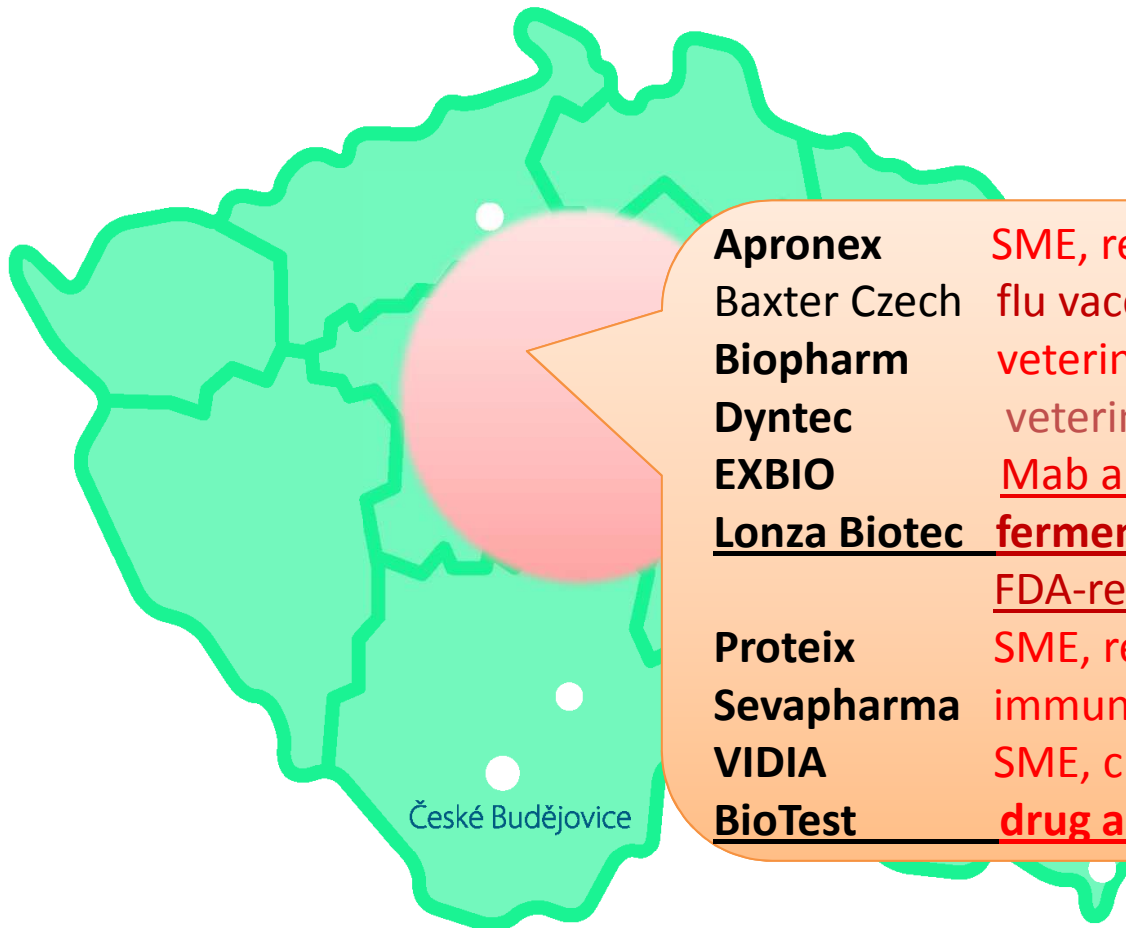
Selected biotech companies - Prague



Immunotech (Beckman Coulter) **immunodiagnostics**
BIOPREPARÁTY **biological plant protection**
GeneAge Technologies **expression profiling**
Genomac International **sequencing/genotyping**
LentiKats **encapsulation of enzymes, various app.**
Top-Bio **molecular biol. kits producer SME (<5)**



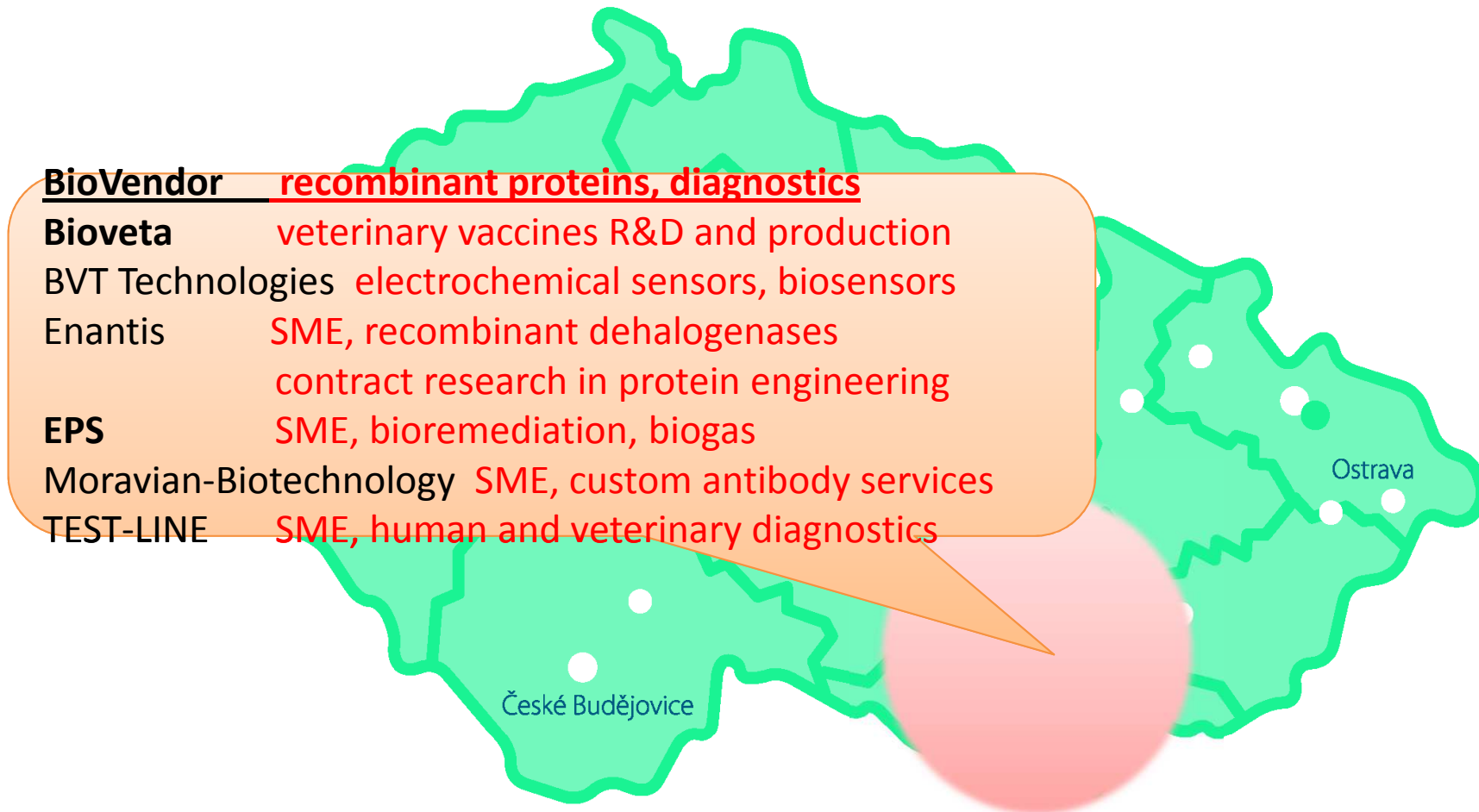
Sel. biotech companies – Central Bohemia



Apronex	SME, recombinant proteins (5 p)
Baxter Czech	flu vaccine production site
Biopharm	veterinary drugs, pharmacology
Dyntec	veterinary drugs, R&D of vaccines
EXBIO	<u>Mab and reagent producer</u>
Lonza Biotec	<u>fermentation plant and R&D</u> <u>FDA-registered pharma enzymes</u>
Proteix	SME, recombinant proteins (3 p)
Sevapharma	immunological preparations
VIDIA	SME, clinical diagnostic kits
BioTest	<u>drug and biologicals testing ,R&D</u>

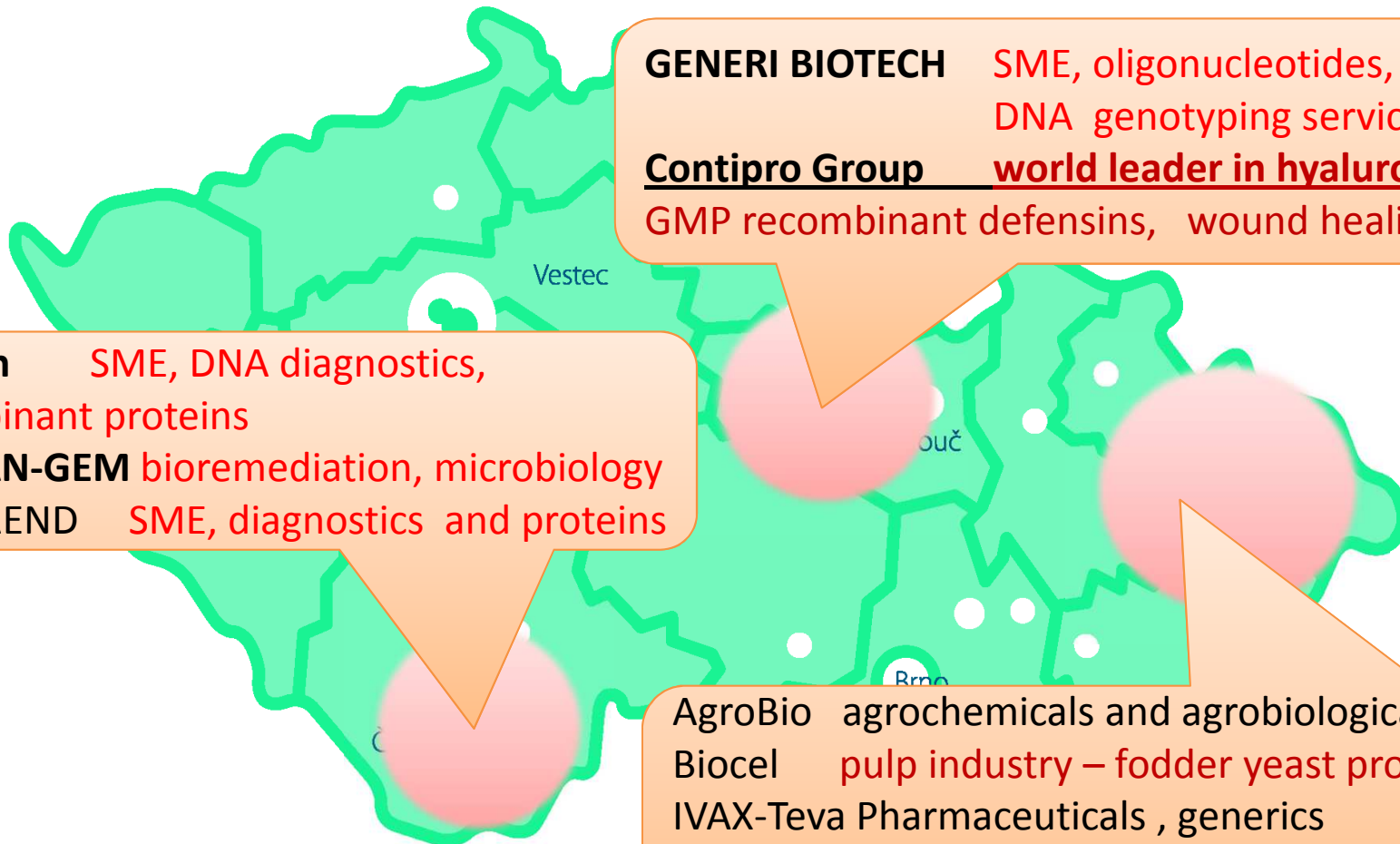


Sel. biotech companies – South Moravia





Sel. biotech companies – remaining regions



GENERI BIOTECH SME, oligonucleotides, DNA genotyping services
Contipro Group world leader in hyaluronic acid
GMP recombinant defensins, wound healing R&D

Protean SME, DNA diagnostics, recombinant proteins
ENVISAN-GEM bioremediation, microbiology
GEN-TREND SME, diagnostics and proteins

AgroBio agrochemicals and agrobiologicals
Biocel pulp industry – fodder yeast producer
IVAX-Teva Pharmaceuticals, generics
Ascoprot Biotech SME (5 p.) rec. proteins
OlChemIm SME, phytohormones, antibodies (5 p)



CzechBio offers:

- Guidance through the Czech biotech sector
- Partnership with academic institutions and biotech companies offering wide range of biotech services, products
- Comprehensive database of biotech companies to be approached
- Partnership in R&D activities
- Representation in number of expos & trade fairs
- Active participation on regular expert seminars and mingling sessions
- Use of our laboratory equipped with UFLC chromatography and unique colons



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Thank you

...to Czech biotech



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