



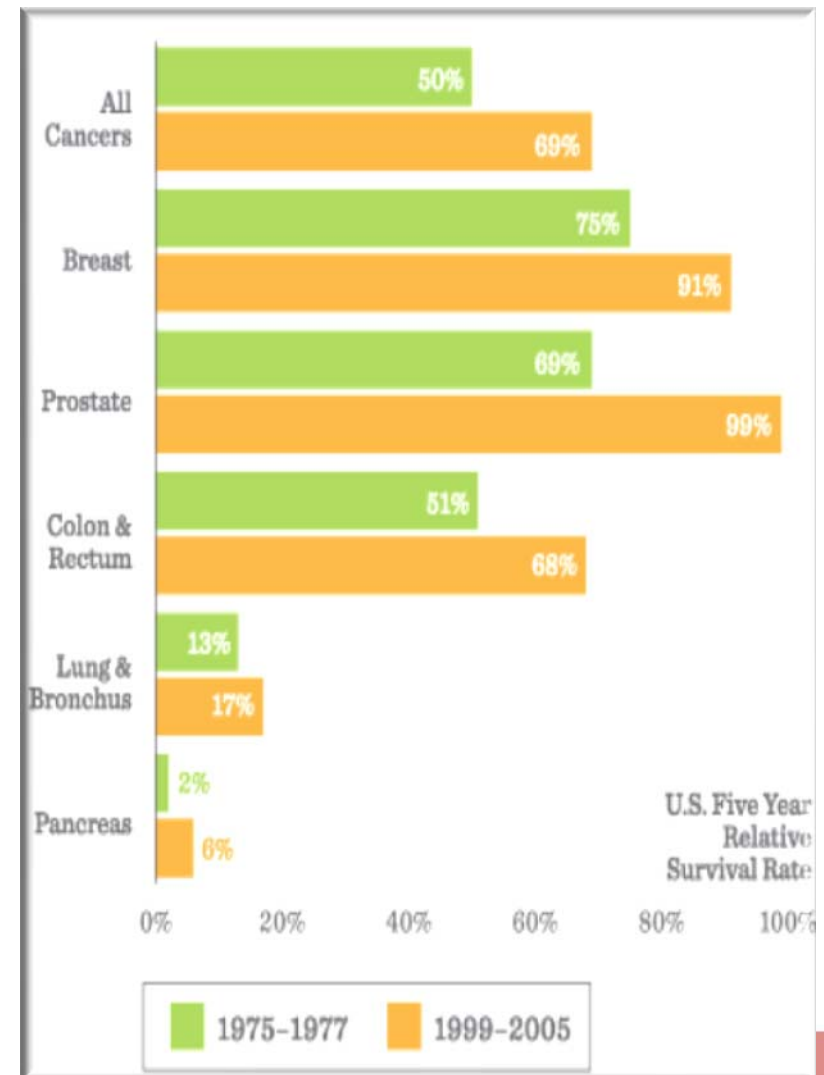
Benefits of Red Biotech

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Biotech – Changing Lives

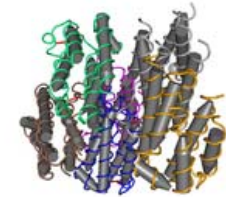
- **Advances in Biotech have made treatments more effective than ever**
 - Increased survival rates in cancer
 - Changed the outlook for multiple sclerosis patients, while the search for a cure continues, biotech-generated treatments help patients stay healthier longer
- **New generation biopharmaceuticals will bring further improvements**
 - Higher target selectivity and specificity
 - Improved drug safety profile
- **Building on the genetic information - treatments can be tailored based on patient profile rather than the “one hat fits all” approach**



Impact on Chronic Diseases

Some examples:

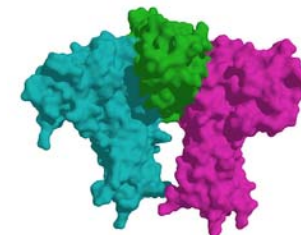
- Multiple Sclerosis - recombinant Interferons



- Diabetes – recombinant Human Insulin



- Anemia - recombinant Erythropoietin



Rare Diseases

Addressing unmet medical needs

5,000 to 8,000 distinct rare diseases affect between 27 and 36 million people, representing **6 to 8% of the total population***

Biological medicinal products have delivered a breakthrough in treating many life threatening rare diseases!

Increasing R&D capacity

Orphan drugs R&D expenditure in the EU has increased by **209%** during the period 2000-2008 **from €150 Millions in 2000 to over €490 Millions in 2008****

Creating highly skilled jobs

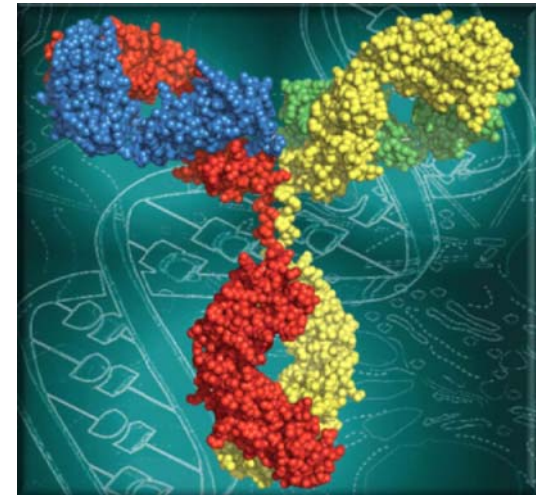
Overall, employment in all departments of companies working on orphan drugs more than doubled between 2000 and 2008 increasing **from about 2,000 in 2000 to more than 5,000 in 2008****

*Source: European Commission

**Source: OHE

Red Biotech Today and by 2020

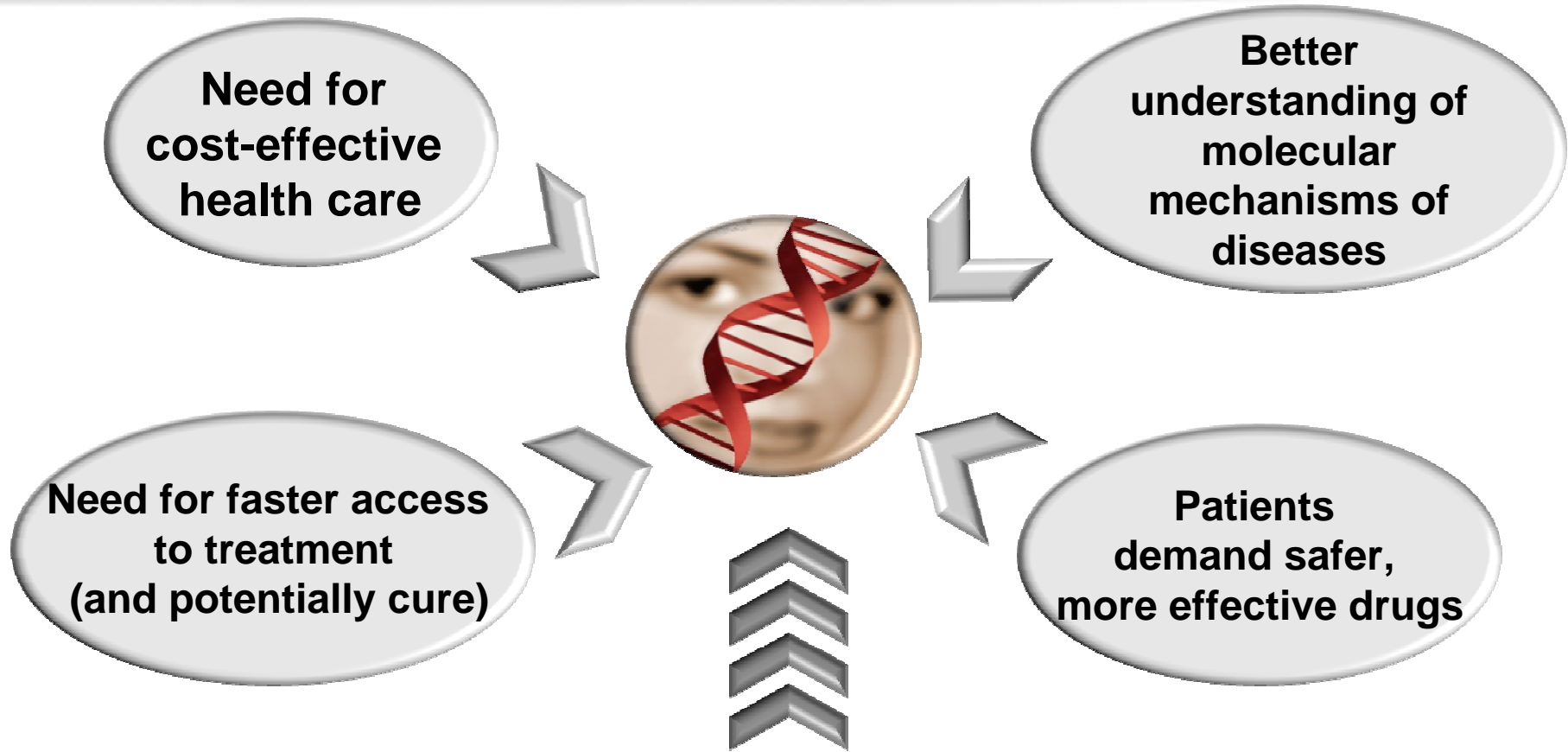
- In 2014, **50% of the top 100 drugs** will be biotech medicines**
- By 2015, healthcare biotechnological knowledge will be used in the development process for **all** new pharmaceuticals**
- More than **350 million patients** benefiting from medicines manufactured through biotechnology*
- Treatment or prevention of cancers, heart attacks, stroke, multiple sclerosis, leukaemia, diabetes, rare and other diseases*
- **650 new biotech medicines and vaccines** currently being tested for more than 100 diseases*



* Source: PhRMA

** Source: OECD

Societal needs drive the shift towards new treatments and modes of action



Biopharmaceuticals will play a decisive role in finding answers to the challenges ahead

Personalised Medicine

- Until today: One size fits all
 - Classical pharma/medicine
- Today and tomorrow: Prêt-à-porter
 - Stratified medicine
- The future: Tailor made
 - Personalised medicine, delivering the right treatment for the right patient at the right time



vs.



On the horizon:

A collection of specific treatments adapted to the patient to take into account the variability of individuals within the human population

Conclusions

Biotechnology

has changed the therapeutic landscape for many severe diseases
has the potential to bring a new revolution through personalised medicine

**As EuropaBio Members we are committed to
benefits for patients!**

We therefore

- Embrace personalised medicine and are ready to tackle the new challenges for drug development together with all the partners involved in healthcare

However

- Stronger interactions and partnership with the authorities throughout the R&D process will be key to make new personalised medicines a reality
- Significant changes need to happen in order to see the materialisation of stratified/personalised medicines before 2020 and deliver the promise of biotechnology