


To the surface

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ZYMETECH

Research of cold adapted enzymes

- Focus on biotechnology at the University of Iceland
- Large grant to explore bioactive molecules from by-products of seafood and agricultural industries – should benefit industry
- Resulted in vast knowledge of marine enzymes



UNIVERSITY OF ICELAND

Cooperation with a British pharma company

- Developing medicine from krill enzymes
- Aims
 - Economical production
 - Expression in yeast
- Knowledge and equipment
- Research on cod enzymes



Zymetech Founded : 1999



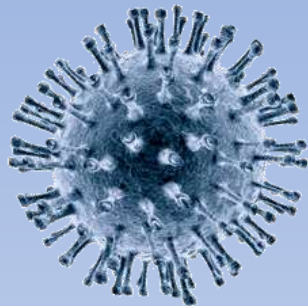
One of the oldest biotech company in Iceland

Patent on utilization of cod enzymes in cosmetics and medical products

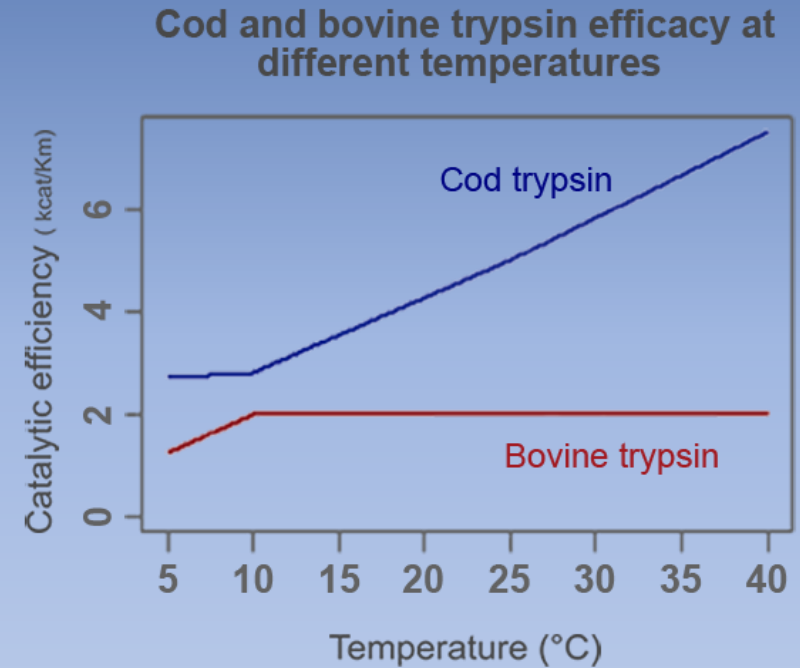
First product on market 2000



- Higher activity
- Anti-bacterial and anti-viral properties
- Dermatology



Avian flu virus (H5N1)



Zymetech and Enzymatica Cooperation

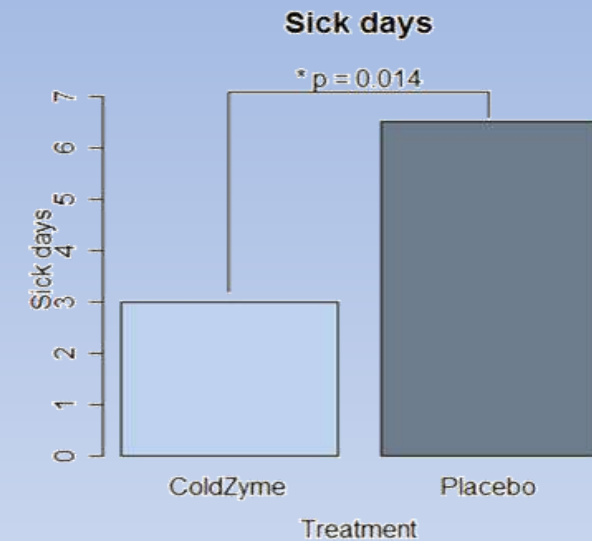
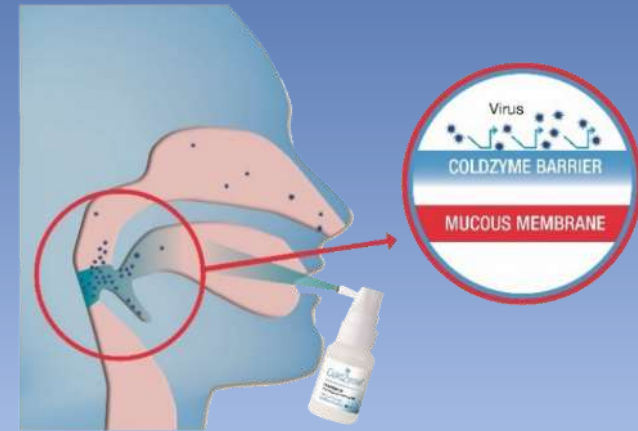


- Enzymatica markets a product developed by Zymetech (ColdZyme)
- Clinical trial and medical device registration 2013
- Companies merged in 2016 – complementary
- New production facilities in Iceland 2017



Can prevent common cold
Can shorten the duration of common cold

- Enzymes isolated from underutilized side-product
- Very high value compared to cod filets and food supplements
- Most recommended cold product in Swedish pharmacies
- ColdZyme paves the way for new products



- **Difficult for a start-up company**
- **High cost – long time**
- **Clinical trials**
- **Regulations**
- **Access to market**
- **Access to venture capital**



- **Basic research**
- **Clinical trials**
- **Registrations**
- **Flexibility and adaption**
- **Cooperation with larger companies**
- **Innovation in every step**
- **Educated and experienced people**



- **Contribution to science**
- **Scientific articles – credibility**
- **Usability of products**
- **Production process**
- **Information to partners**
- **Registrations – regulations**
- **Patents**



Example of how research-driven innovation has created a valuable product from an underutilized side-product

Knowledge gained from research gives competitive advantage on market

Developing a medical product takes longer time than expected

Flexible and patient funding is needed

Thank you