

Financing Marine Biotech Projects - what's the attraction?

October 2016



How do early stage investors think?

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Sarsia Seed Fund I

Life Sciences and Energy

Established in
2006 with
horizon until
2018 (2021)

- 500+ companies evaluated
- Invested € 30m in 22 companies
- 14 of 22 companies still very active
- Procured € 150m
- Potential proceeds of € 200m

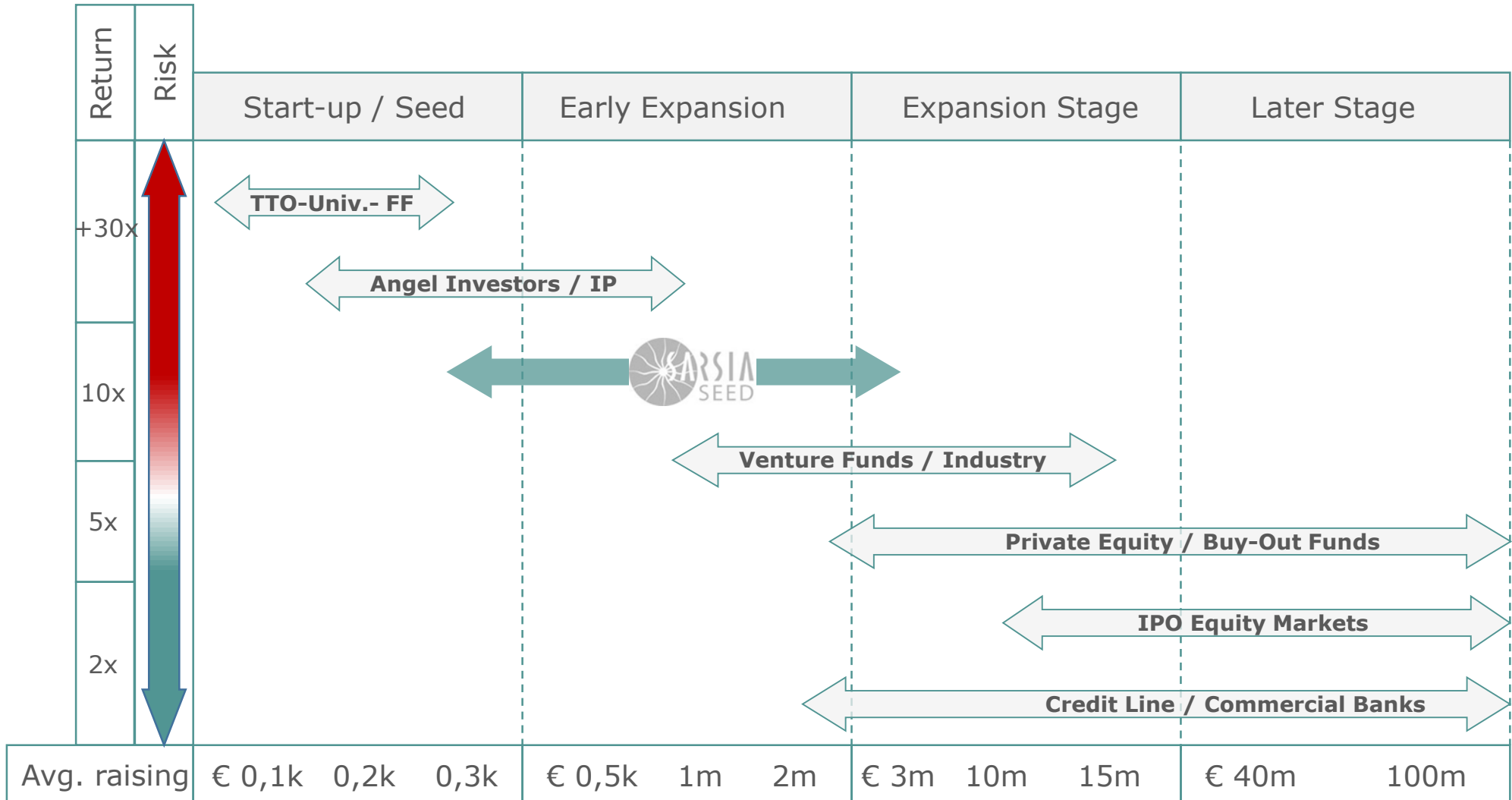
13 Life Science
companies
(bio/farma/
medtech/dx)

€ 100m procured



Stages of Growth for an Entrepreneurial Company

Size and expected return for investors



What are early phase investors looking for?



Technology

- Founded in good science
- Something new or much better
- Protectable (IPR)

Team, management, founders

- Must know their technology
- Experience from industry, sale
- Trustworthy
- Coachable, ability to handle change

Market

- Ability to grow big fast
- Big and growing market
- Scalability
- Unicorn potential

Business model and Return on Investment

- Scalable businessmodel
- Low risk / Low return (2x – 0,7 probability of success)
- Medium risk / medium risk (5x – 0,3 probability of success)
- High risk/ high return (10x – 0,1 probability of success)

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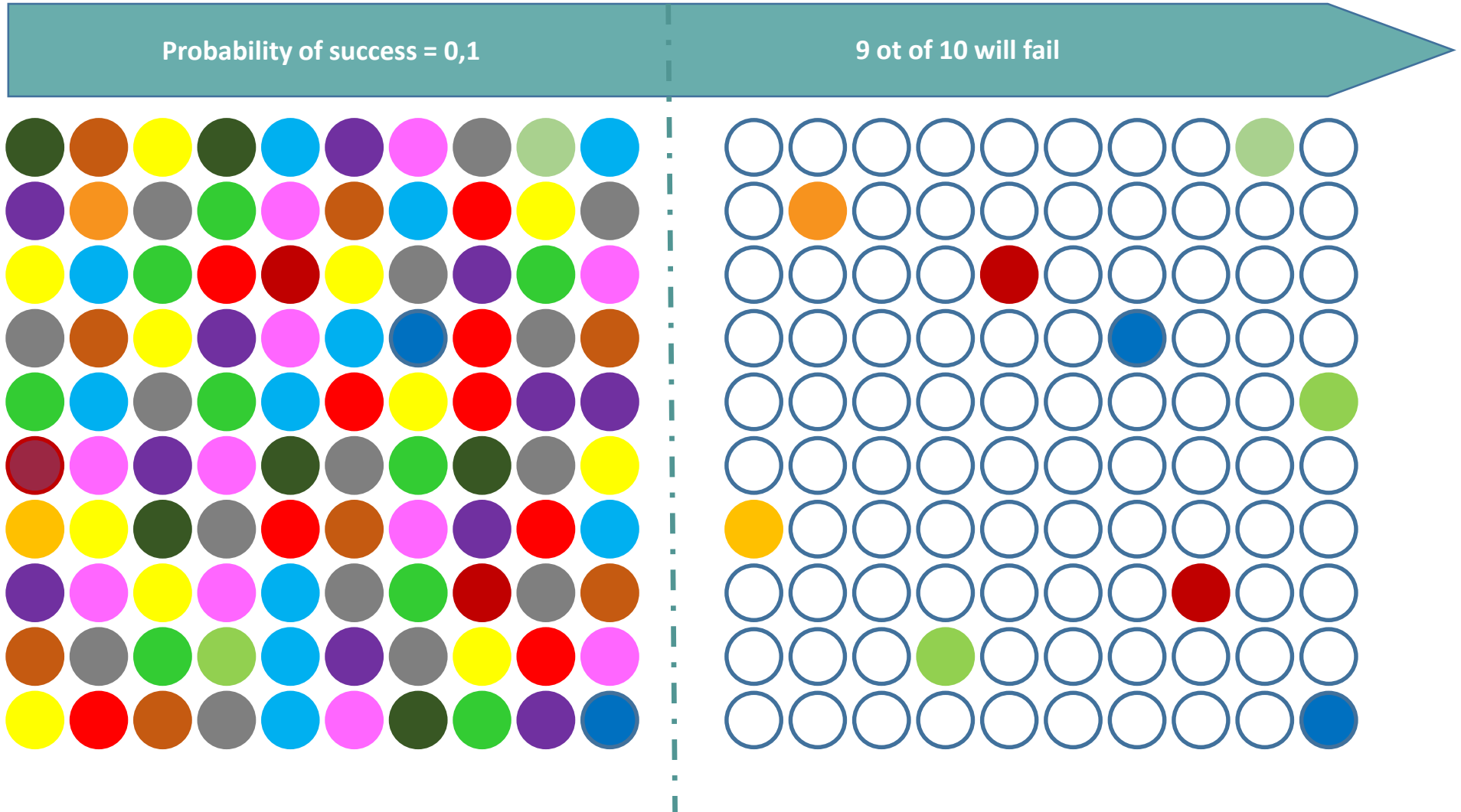
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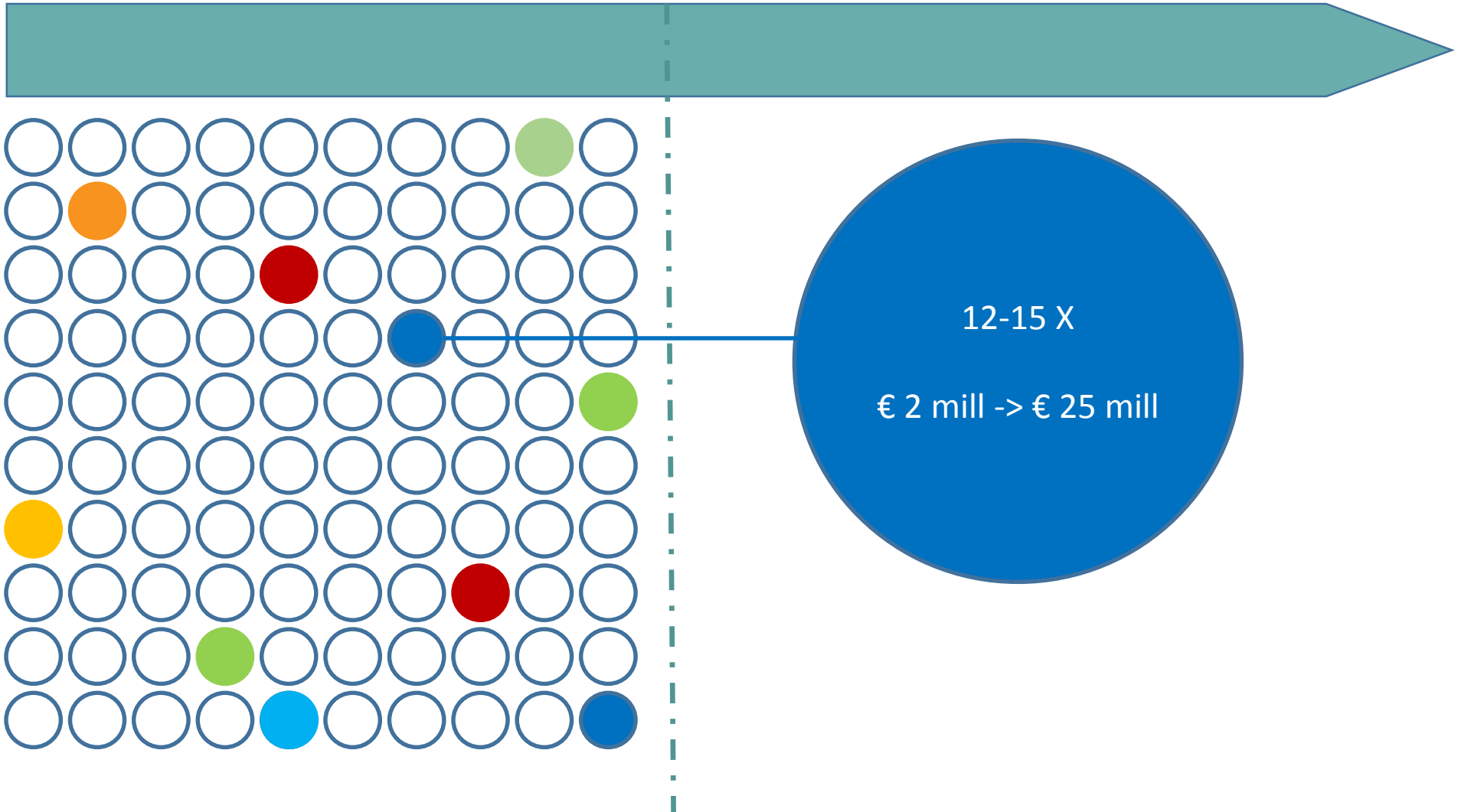
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Historically, early phase also means very high risk



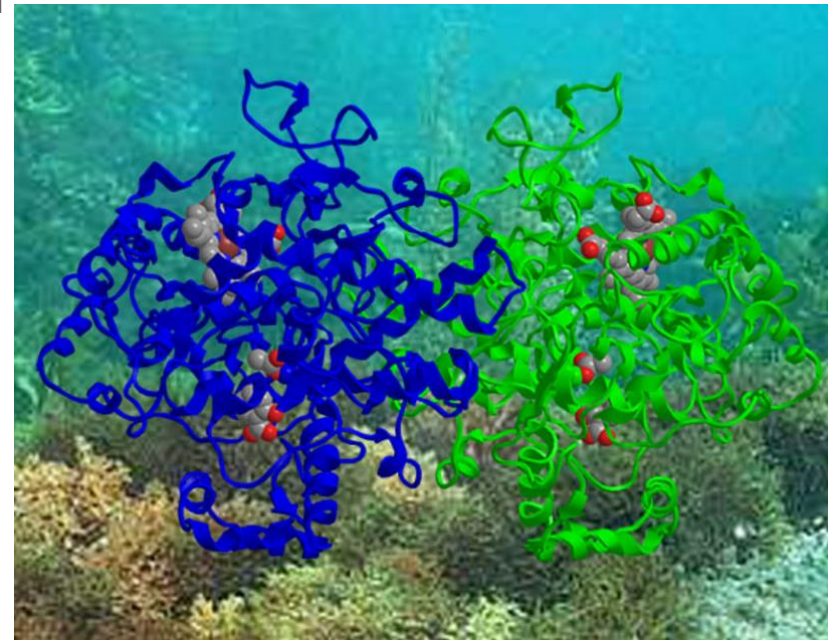
Asymmetrical Risk Distribution



Typical scenario I

A research group has found 1-3 «marine» enzymes that may be of interest to industry

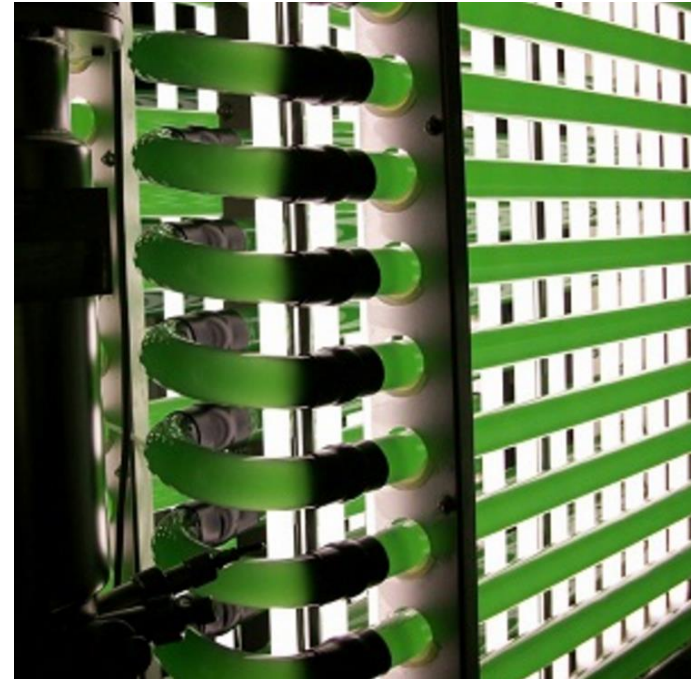
- no company established
- TTO plans for licence approach
- market size unknown
- no substantial industrial interest can be documented
- difficult IPR situation due to unknown industrial application



Typical scenario II

A company has been established to grow microalgae and cyanobacteria for production of high value fine chemicals

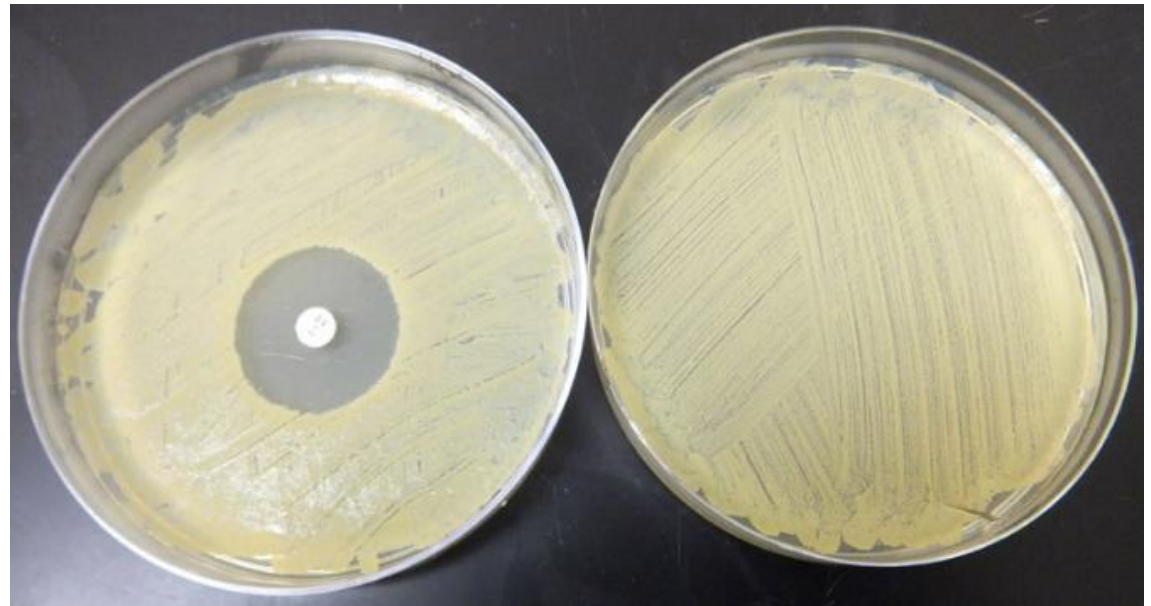
- production-based not technology based
- needs a lot of money for construction of expensive production facility
- don't know exactly what the products will be
- don't know who is going to buy the product
- don't know the size of the market



Typical scenario III

A new company has been established on the basis of identification of a marine bacterium with interesting antibacterial properties against eg. MRSA

- active molecule not identified
- active molecule probably not a protein
- bacterial production not upscaled
- no IP since compound is unknown



What we like to see?

Companies based on technologies coming out of consortia between industry and research

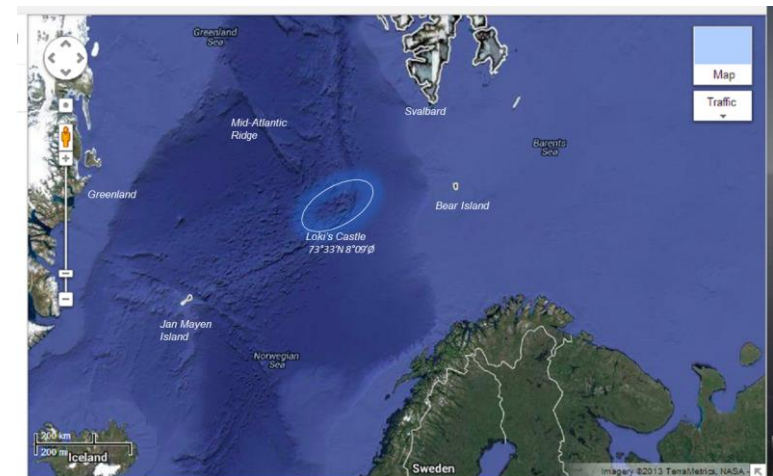
- products to serve great unmet industrial need confirmed by the industrial contribution
- industry delivers problems and substrates
- research isolates, characterizes and clones enzymes
- research applies substrates from industry
- industry contributes with partial funding
- soft money available provided venture/seed -funding

Example



Enzyme development for Norwegian biomass - mining Norwegian biodiversity for seizing Norwegian opportunities in the bio-based economy

The Norwegian University of Life Sciences University of Bergen
 Bergen, Dept. of biology
 University of Bergen,
 Uni Research, Centre for Applied Biotechnology
 Sintef Materialer og kjemi
 University of Tromsø, NorStruct,
 Borregaard AS
 Biomega AS
 Norilia
 Alkymar



What we like to see?

Companies with technological solutions to solve major problems in high volume food production

- sustainable non-antibiotic disease and pest control
- increased shelf life
- better exploitation of residual raw materials

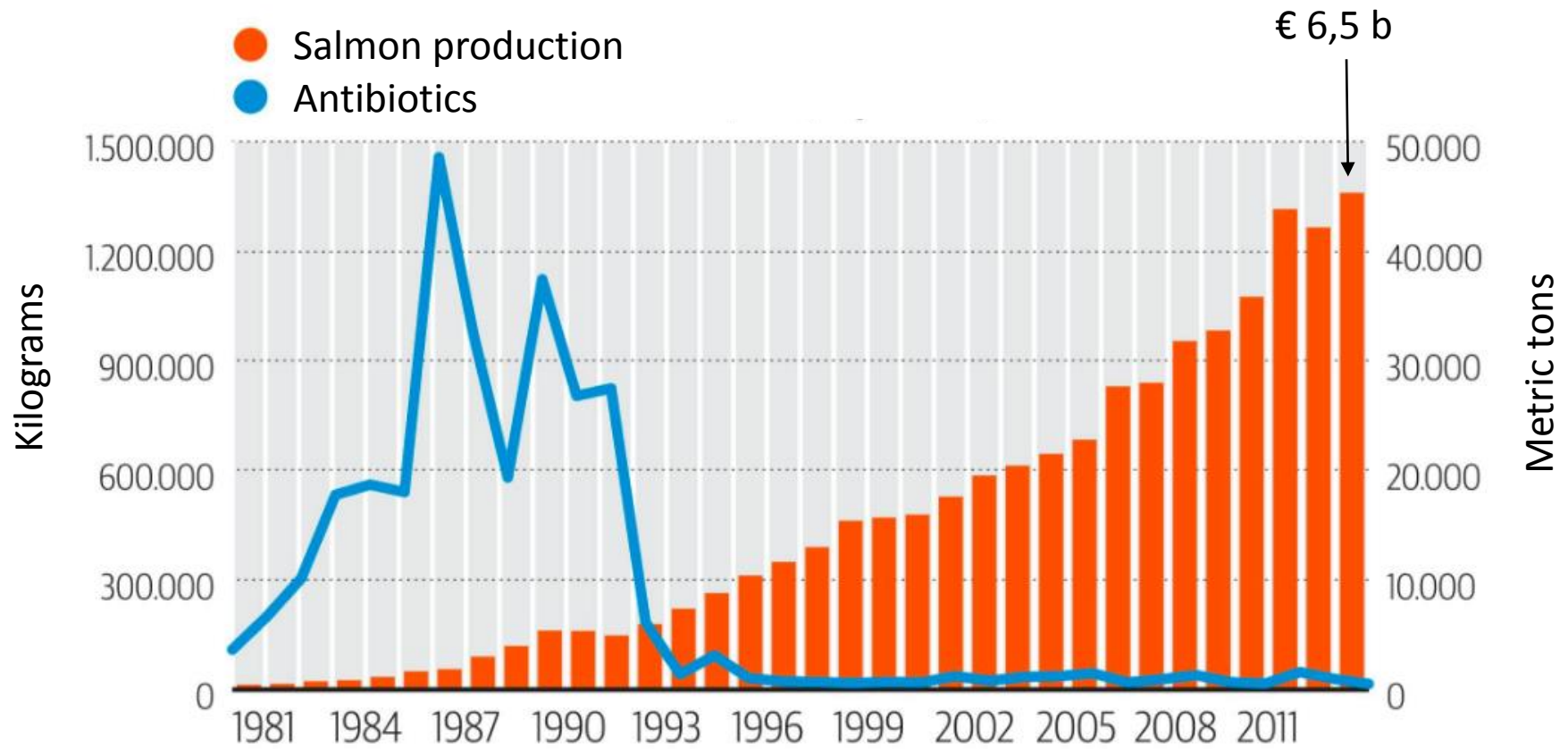


Examples (outcome from NorZymeD)

Use of enzymes from marine microorganisms for hydrolysis of fish residual raw materials into peptides which are palatably suitable for human consumption



Example



Example



Fish vaccines are always based on biotechnologically manipulated marine pathogenic microorganisms

- whole cells/viruses
- surface proteins
- DNA

What we like to see?

Companies with characterized molecules (small molecules or macromolecules) with proven therapeutic activity in animal models

- major medical indications (infection, cancer, metabolic syndrome)
- orphan indications
- molecules with chaperon activity



Sarsia 's marine biotech portfolio



BIOFORSKNING

Marine spermine for treatment of psoriasis

BLUE LIMIT AS



Formulated feed for shrimp larvae

Hepmarin

Salmon heparin for application as anticoagulant in human medicine



“Magic” ingredient in fish feed pellets allowing addition of water to achieve moist feed properties



Water-“soluble” Omega-3

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