



Biotechnology and Venture Capital in Switzerland and Europe

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Agenda



- Biotechnology in Switzerland / Europe
- Market trends in Europe
- Venture Capital in Switzerland / Europe
- Valuation of Biotechnology Companies
- Venture Valuation

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Swiss Biotech



Switzerland is not all about Cheese and Chocolate



It is also about Biotech/Pharma, Medtech and Nanotech

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Swiss Biotech



- 120 Biotech Companies
- 120 other Companies with Biotech activities
- 70 new founded companies within 5 years
- Renowned Universities
 - Federal Institutes of Technology: ETHZ and EPFL
 - University of Basel, Geneva, Lausanne and Zurich
- Switzerland has one of the highest per capita scientific publication rate

Source: Swiss Biotechnology Industry Guide, 2001

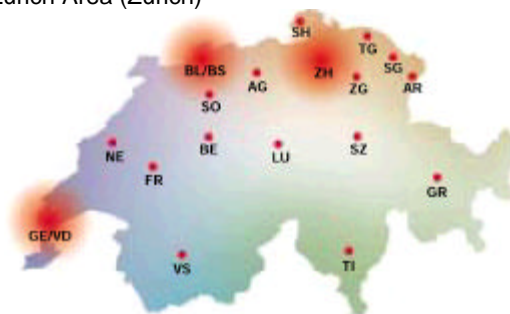
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Swiss Biotech



3 main clusters

- BioAlps (Geneva, Lausanne)
- BioValley (Basel)
- Greater Zurich Area (Zurich)



Source: Location Switzerland, 2001

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Swiss Pharma/Biotech



The Swiss multinationals

| | |
|----------|----------|
| Novartis | (listed) |
| Roche | (listed) |
| Serono | (listed) |
| Lonza | (listed) |
| Syngenta | (listed) |

Examples of innovative start-ups

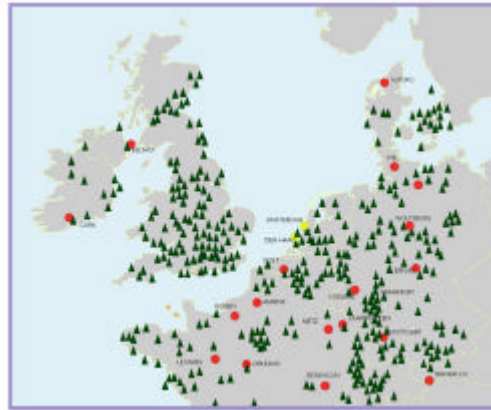
| | |
|------------------------|----------------|
| Actelion | (listed) |
| Cytos Biotechnology | (to be listed) |
| Geneprot | (private) |
| Modex acquiring IsoTis | (both listed) |
| Prionics | (private) |

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European Biotech



Main geographical Clusters



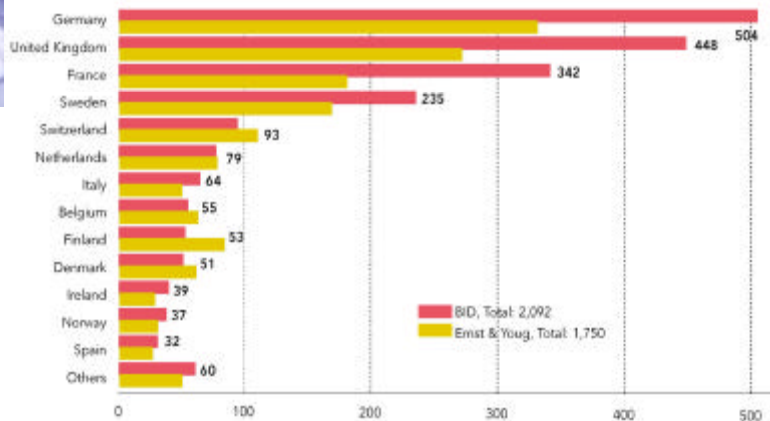
Source: BID, University of Siena, 2001

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European Biotech



Number of dedicated Biotechnology Companies



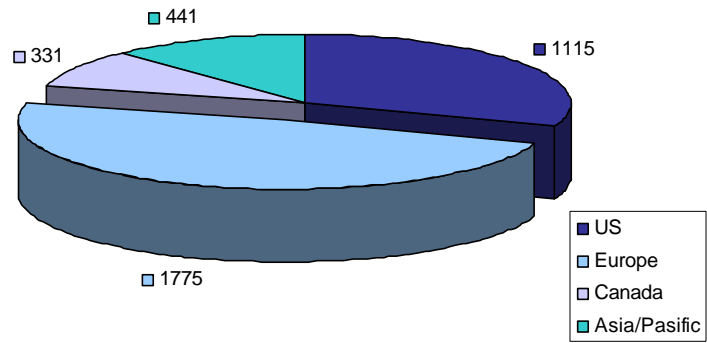
Source: BID, University of Siena, 2001

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European Biotech



Private Biotechnology Companies



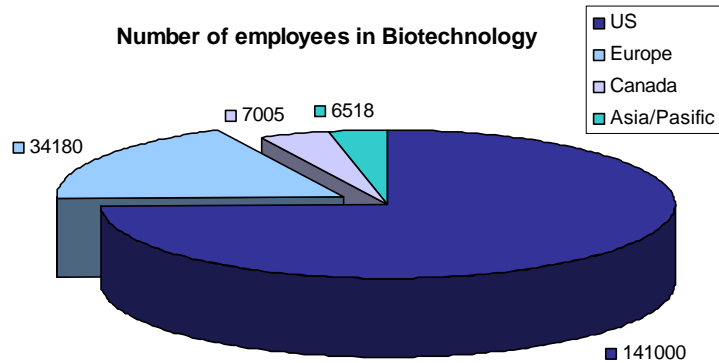
Source: Ernest&Young, The Global Biotechnology Report 2002

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European Biotech



Number of employees in Biotechnology



Source: Ernest&Young, The Global Biotechnology Report 2002

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European Biotech



- Fundings of European start-ups are smaller than those of their US/Canadian counterparts
- European Biotech sector maturing
- Few big Biotech companies => less partnering opportunities
- Many small, recently founded companies
- Governmental support in some countries (Germany, France)

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Market trends



- From exit-strategies to maintaining investment => larger, later funding rounds
- IPO window shutdown has not stopped VC Investment in European biotech
- VCs are used to wait between 6 to 15 years for a drug to reach the market => more long-term oriented investors
- Some funds pay back their funds to investors
- Pool of experienced managers from big pharma companies

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Innovative Financing



- Reversed merger i.e. Cytos in Switzerland
- Consolidation - Cash meets product pipeline i.e. British Biotech and Morphosys, Modex and IsoTis
- Financing / Partnership with strategic Investor (big pharma, big biotech)
- Additional Venture Capital financing round

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Venture Capital Scene



Venture Capital Firm Total Invested

| | | |
|-------------------------|----|-----------|
| 1. Alta Partners | 24 | \$532,1 m |
| 2. Novartis BioVentures | 17 | \$384,5 m |
| 3. MPM Capital | 17 | \$557,3 m |
| 4. 3i | 15 | \$308,9 m |
| 5. Forward Ventures | 13 | \$275,0 m |
| 6. CDIB Ventures | 12 | \$306,6 m |
| 7. J.P. Morgan Partners | 12 | \$383,8 m |
| 8. Lombard Odier | 12 | \$256,4 m |
| 9. HBM BioVentures | 11 | \$261,9 m |

Source: VentureReporter.net, Summer 2002

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Venture Capital Scene



Results from 1st Quarter 2002

- European VC investment fall 32% (from EUR 1.7 bn to 1.2 bn) => Germany alone 76%
- Still strong Biotechnology Investments
- Deal size grew by 20%
- Less deals (from 401 to 259)

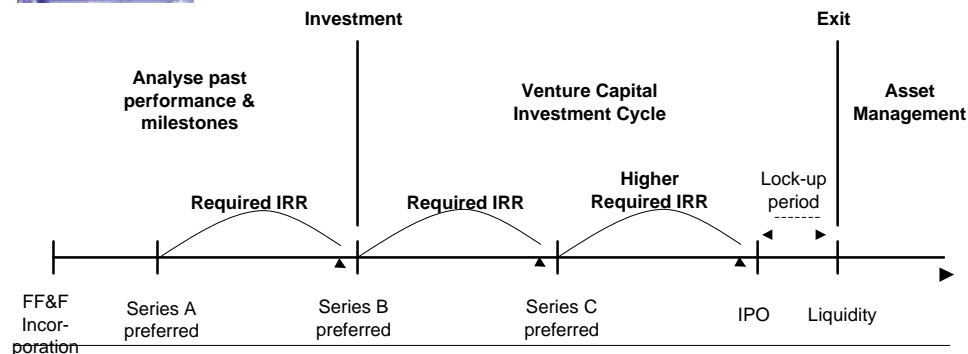
Source: E&Y and VentureOne, 2002

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Venture Capital Cycle



- Understand the Venture Capital Cycle
- Look at the whole Company Life Cycle



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Biotech Valuation Issues



- Volatility of quoted companies
- Difficulty due to long cycle
- Traditional valuation methods unsuited
- Industry lacks transparency (number of companies and therapeutic approaches)
- Multiple forms of competition (capital supply, IP, partnerships, market share & sales force)
- Importance of understanding the VC cycle
- Influence of public capital markets

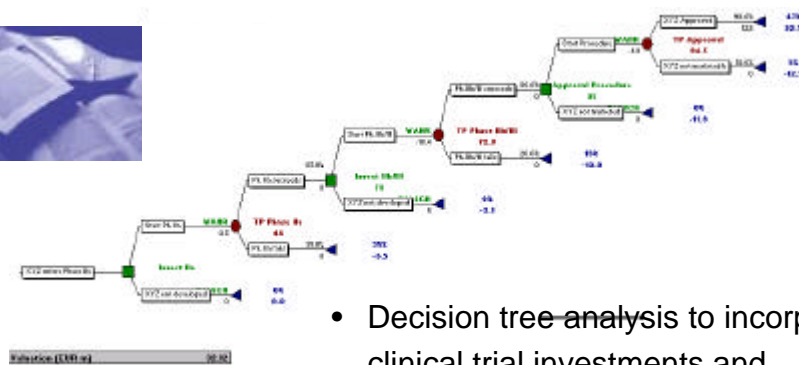
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Valuation approaches



- Operations-based methods:
 - ⇒ *business plan, fundamentals*
 - Market-based methods:
 - ⇒ *price, trends, comparison difficulties*
 - 5 methods:
 - Discounted Cash Flows/DTA } Operations meth.
 - Real Options/Monte Carlo } Operations meth.
 - Venture Capital method ⇒ Mixed meth.
 - Market Comparables } Market meth.
 - Comparable Transactions } Market meth.
- ⇒ *use several methods and weigh depending on the company valued*

Drug Project Valuation



- Decision tree analysis to incorporate clinical trial investments and transition probabilities
- Possibly Monte Carlo simulations

Factors to influence value



Soft factors are essential ...

- Management
- Market
- Science & Technology

... and the company stage

to define the risk profile of company

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- Experts Finance / Biotech / Medtech
- Not a venture capitalist
- Customers are investors and companies
- Experience in USA/Canada and Europe
- Systematic / Validated Approach

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