

BIO DEUTSCHLAND

Biotechnologie-Industrie-Organisation Deutschland e. V.

Where do innovations come from?

**Working Lunch
Eucope and the SME Union of the EPP
March 22nd, 2010**

**Viola Bronsema, PhD
BIO Deutschland**

Content

Where do innovations come from?

Where does the financing of innovation come from?

Where is there room for improvement of the business environment for innovative entrepreneurs?

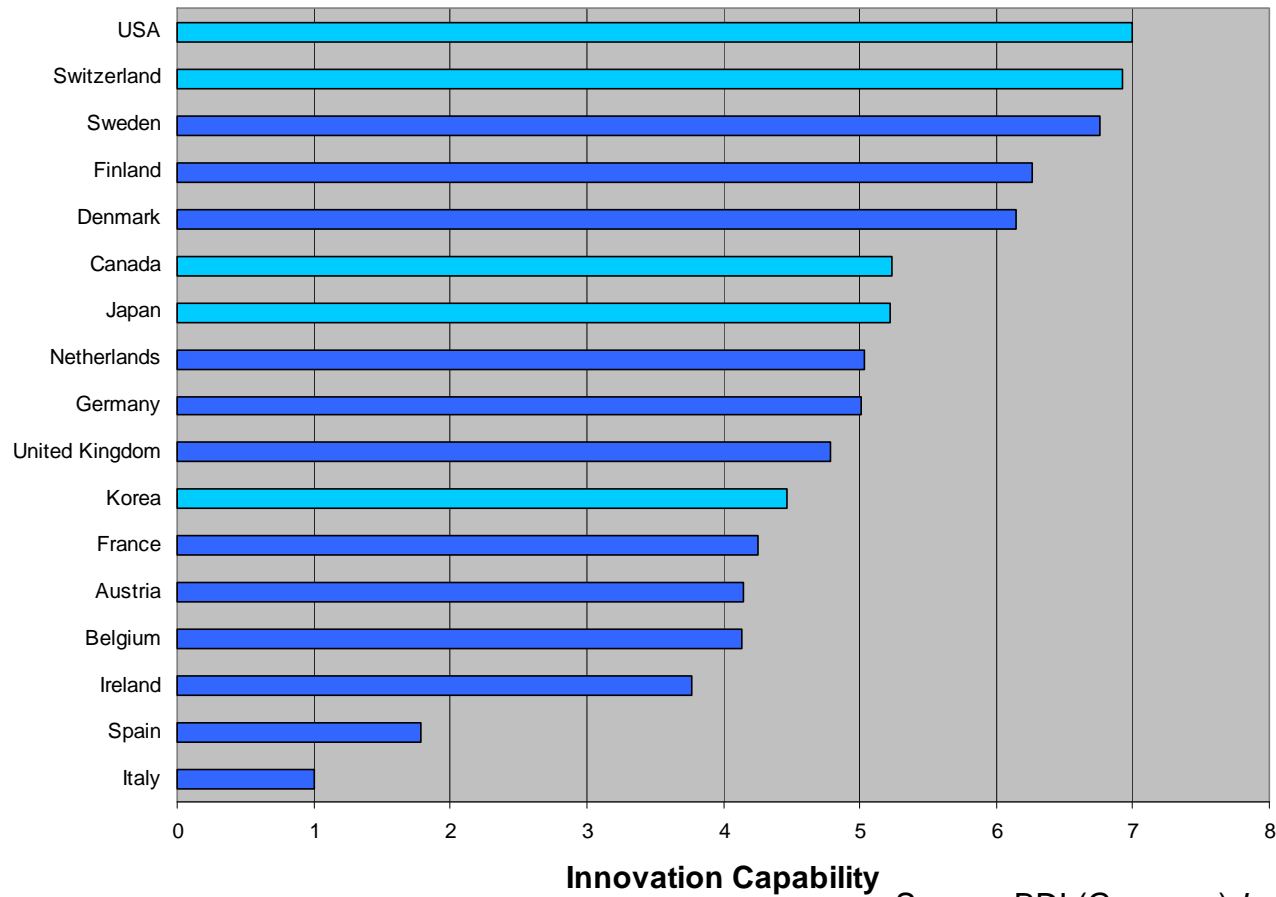
Content

Where do innovations come from?

Where does the financing of innovation come from?

Where is there room for improvement of the business environment for innovative entrepreneurs?

Innovations come from European countries



Source: BDI (Germany) *Innovationsindikator 2009*

Member States of the EU

Innovations come from dynamic entrepreneurs

23 million SMEs in the EU stand for:

- 99% of the European undertakings
- 100 million jobs
- 60% of the GDP

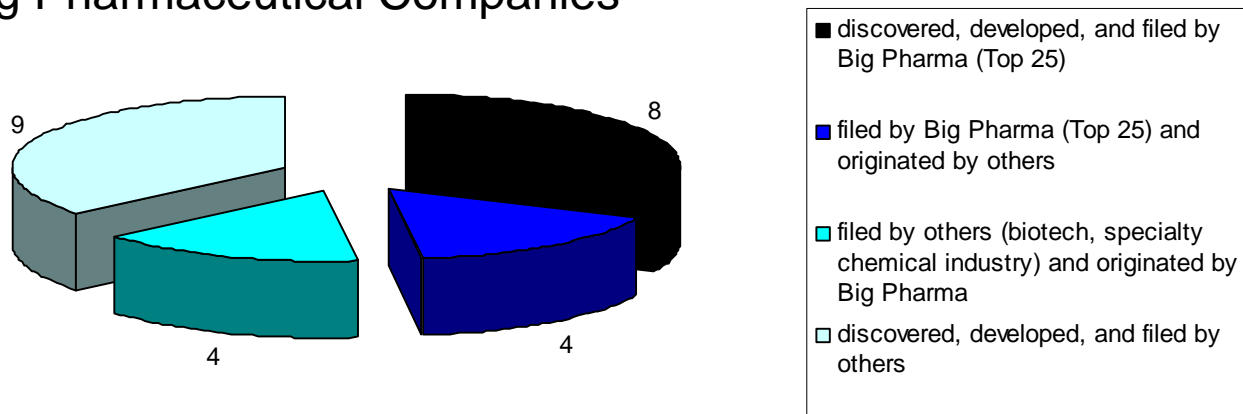
Source: EU Commission 2009 – Handbook on Community State Aid Rules for SMEs



Innovations come from different corporations

Of the 25 compounds approved in 2009 (Food and Drug Administration (FDA) NCE/NBE* approvals without vaccines):

- 8** (32%) NDAs*** were discovered, developed, and filed by Big Pharmaceutical Companies



*) New Chemical/Biological Entities

***) includes 3 mAbs generated by Medarex

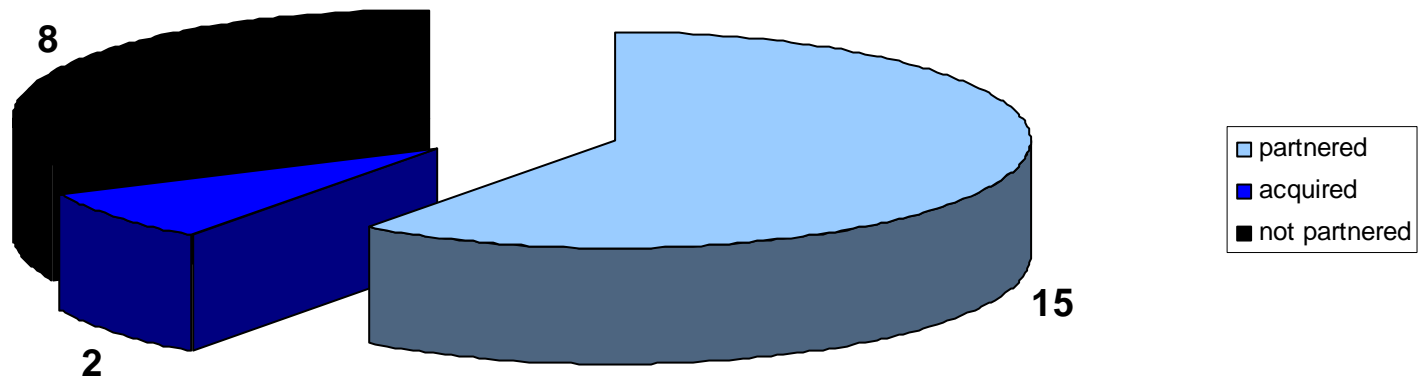
***) New Drug Applications

Source: FDA, Boehringer Ingelheim GmbH 2010, and other

Innovations come from partnering

Of the 25 compounds approved in 2009 (FDA NCE/NBE approvals without vaccines):

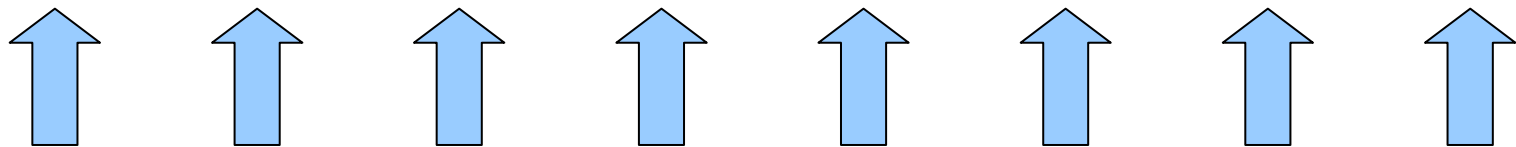
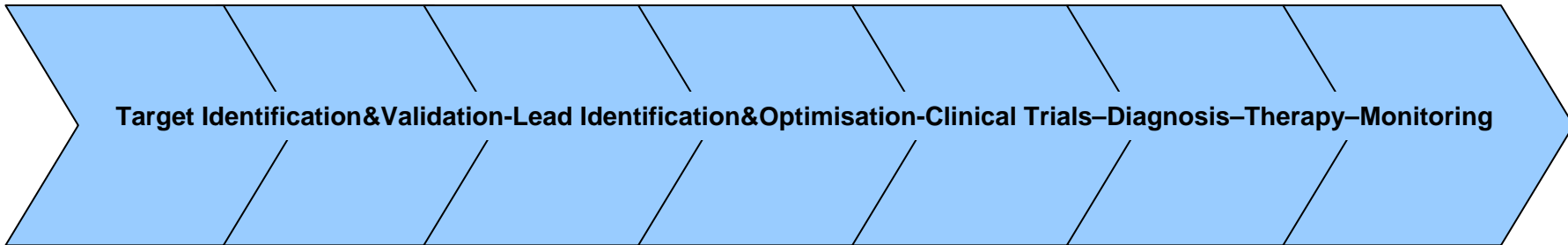
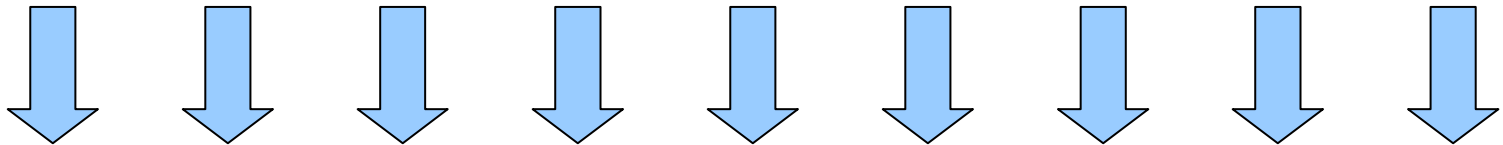
- 68% were subjected to a licensing/acquisition transaction



Source: Boehringer Ingelheim GmbH 2010

Innovations come from biotechnology

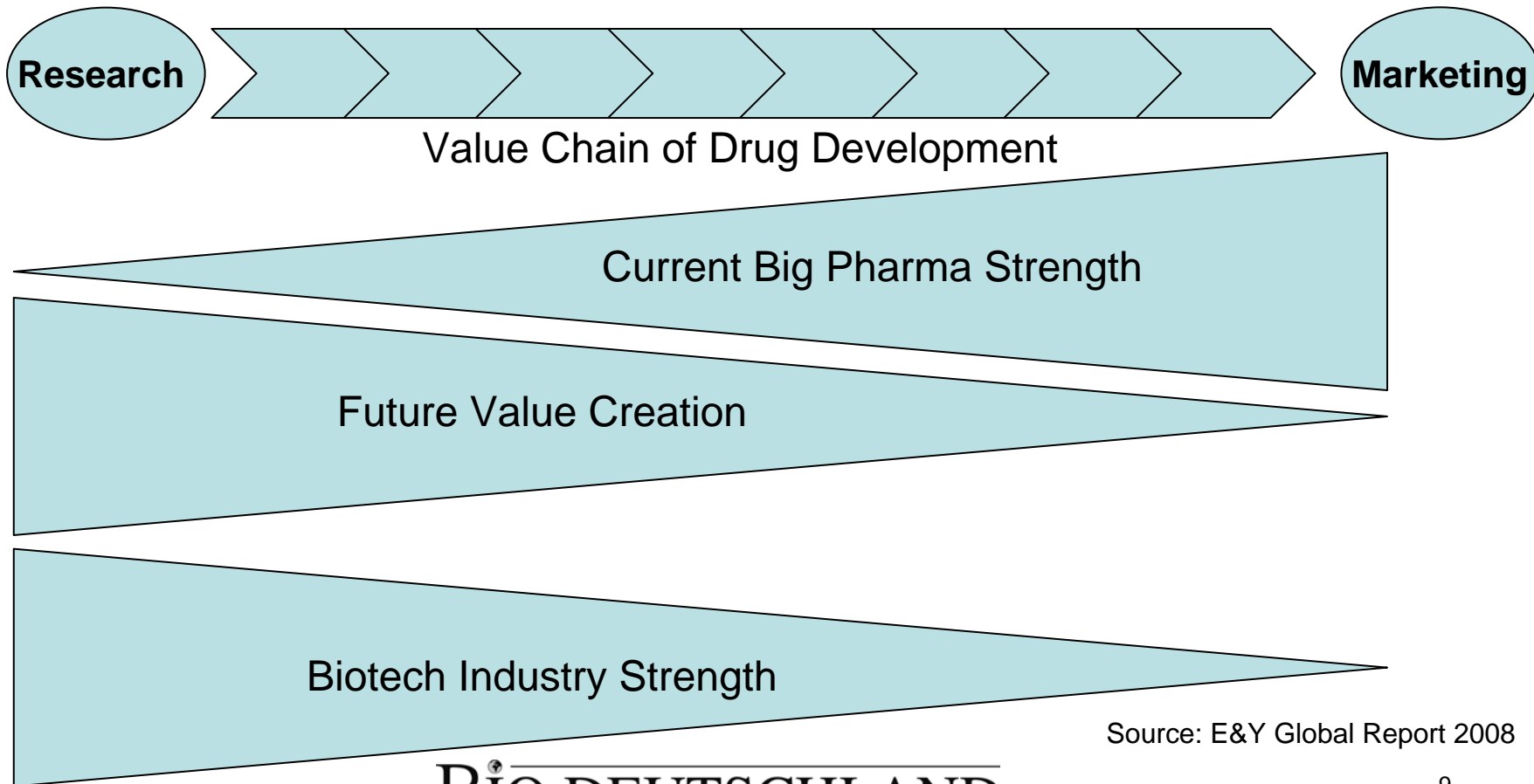
Genomics, Proteomics, Metabolomics, Synthetic Biology, RNAi, rDNA, mAb, Rational Drug Design, Combinatorial Chemistry, HTS



Models, markers, enabling technologies, tools, platforms, information technology, personalised medicine

Innovations come from personalised medicine

Personalised medicine shifts the focus of drug development in favour of patients – and biotech:



Source: E&Y Global Report 2008

Innovations come from investments

1,000,000,000	US \$ investment
1,000,874	hours of work
6,587	experiments
423	researchers
1	drug

The bond between bevacizumab, the antibody in the anti-tumour drug Avastin and the VEGF (Vascular Endothelial Growth Factor)

2009 F. Hoffmann-La Roche Ltd



www.roche.com 08/09

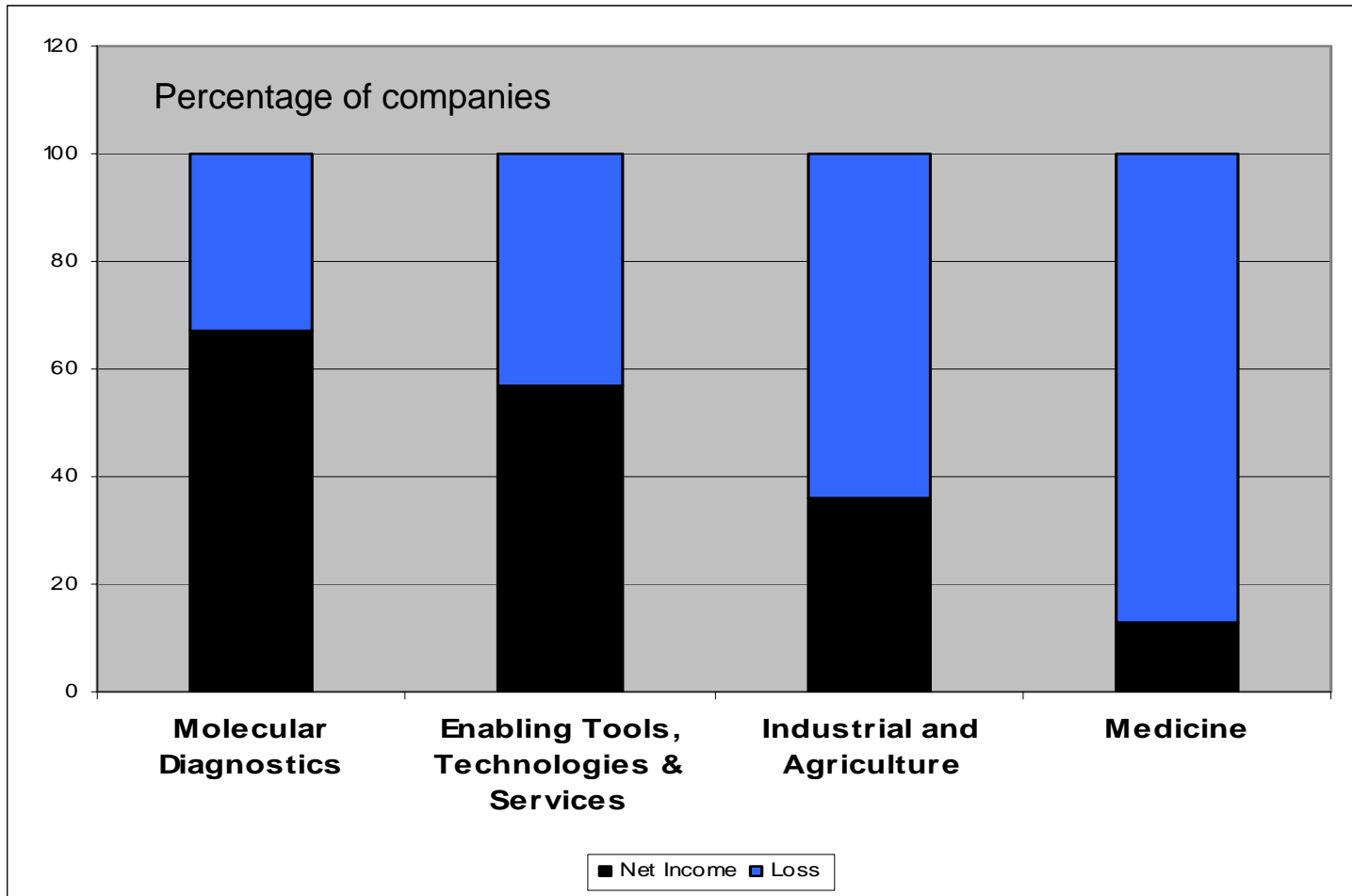
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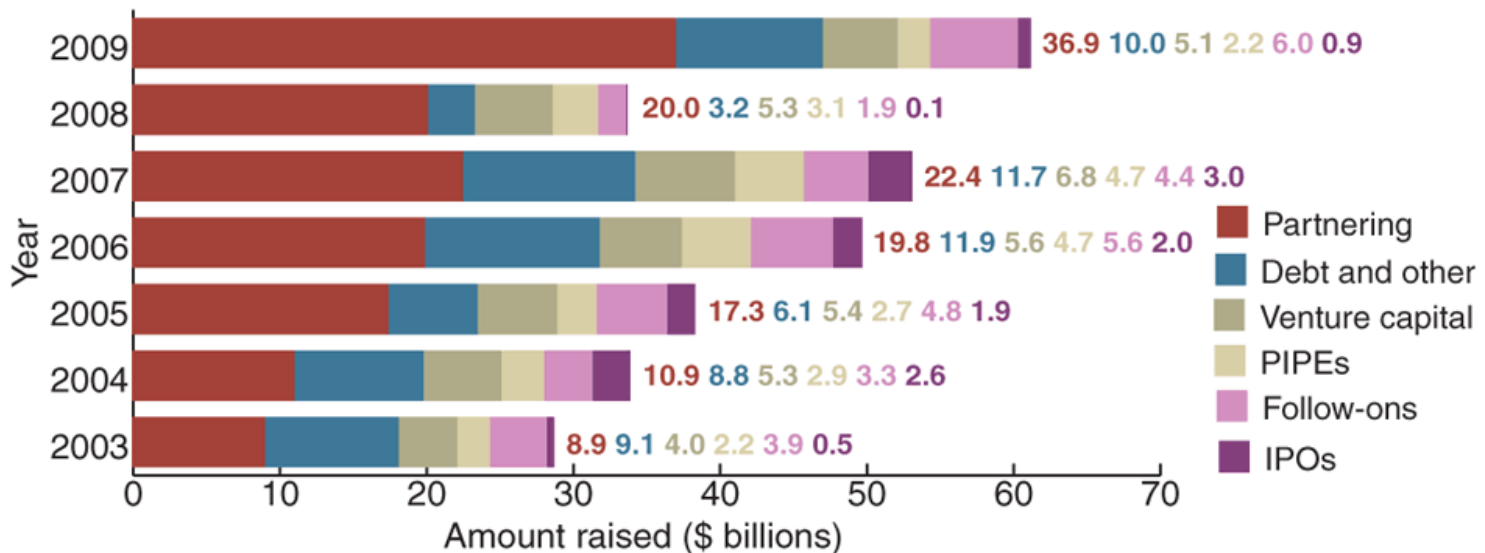
Financing of innovation (sometimes) comes from profit



German example from 2007, n=164 – E&Y German Report 2008

Financing of innovations comes from partnering

The boost in partnership promises to US biotechs and follow-on financings pushed industry funding to \$61.3 billion, up 82% from 2008.



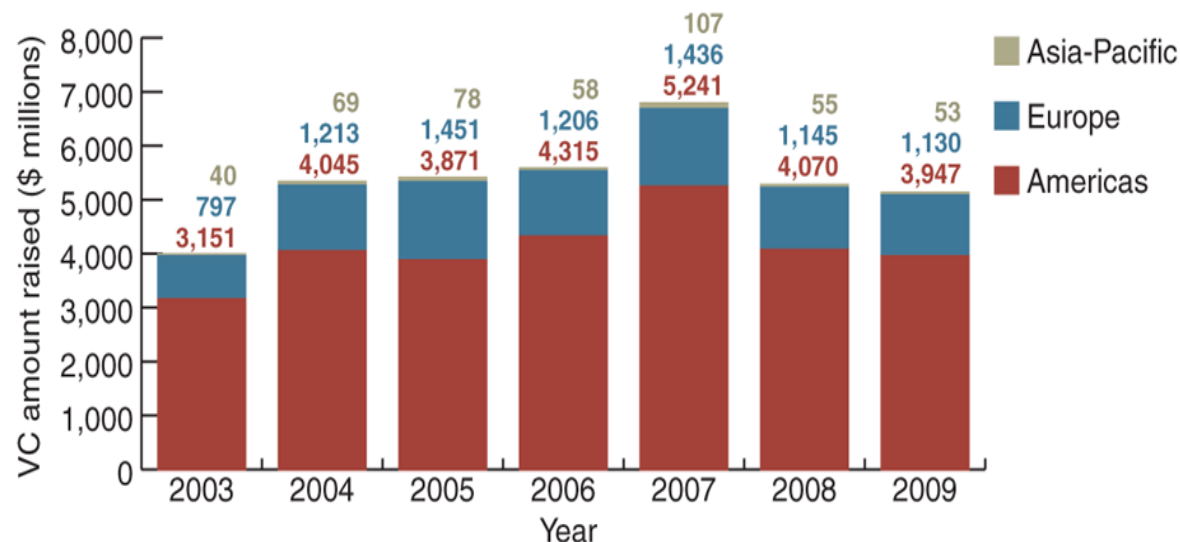
Partnership figures are for deals involving a US company. Source: BCIQ: BioCentury Online Intelligence, Burrill & Co.

PIPEs, private investments in public equity; IPOs, initial public offerings

Nature Biotechnology 28, 116 (2010)

Financing of innovation comes from private equity

Venture money fell slightly last year, as private companies raised \$5.1 billion versus \$5.3 billion in 2008.

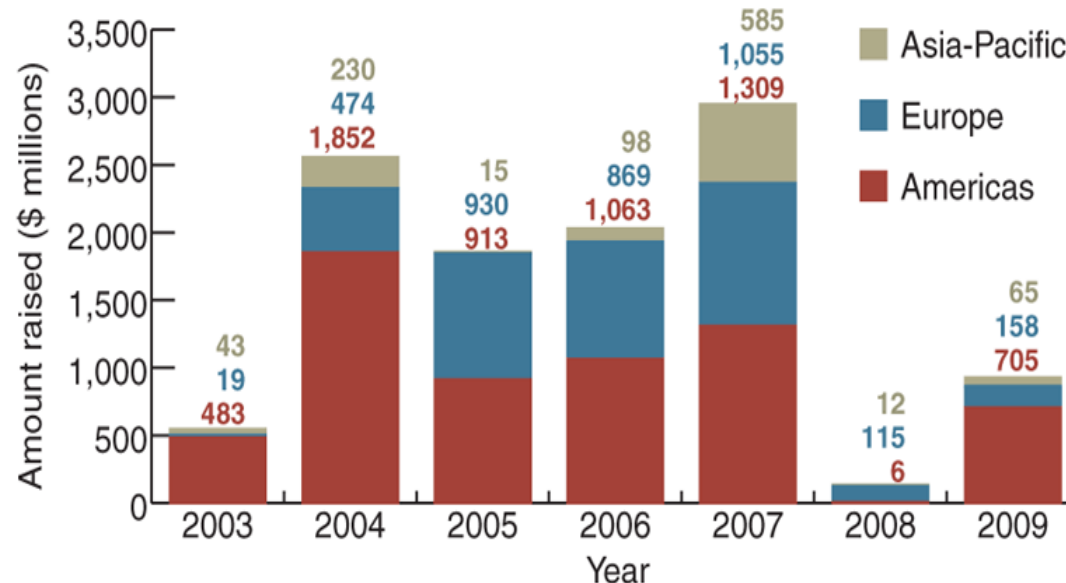


	2003	2004	2005	2006	2007	2008	2009
Americas	184	190	182	204	223	212	196
Europe	77	82	95	81	105	101	87
Asia-Pacific	5	6	9	8	9	6	4

Table indicates number of VC investments and includes rounds where the amount raised was not disclosed. Source: BCIQ: BioCentury Online Intelligence

Financing of innovation comes from the stock market

The North American IPO market showed signs of life, with four companies raising \$705 million versus only one raising \$6 million in 2008.

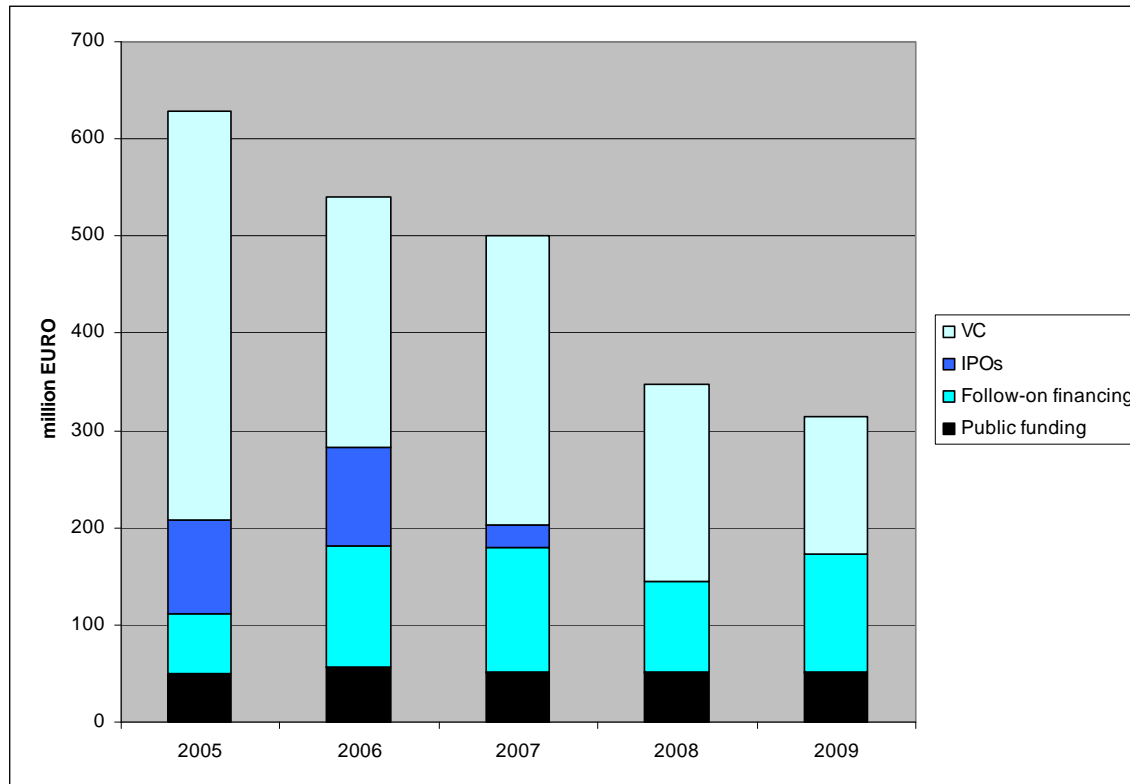


	2003	2004	2005	2006	2007	2008	2009
Americas	8	35	18	26	23	1	4
Europe	1	12	24	21	21	3	3
Asia-Pacific	5	6	3	3	7	2	3

Table indicates number of IPOs. Source: BCIQ: BioCentury Online Intelligence

Financing of innovation comes from public funding

German example (million EURO)



Source. biotechnologie.de 2010

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Where is there room for improvement of the business environment for innovative entrepreneurs?

Where is there room for improvement of the business environment for innovative entrepreneurs?

- The Access to the European Investment Bank's Risk Sharing Financing Facility (RSFF) could be improved for innovative companies which usually are not granted loans and credits from commercial banks.
- The venture capital market could be supported.
- A new EIB investment vehicle could generate increased risk capital for joint investments with VCs.
- EU grants for translational research and clinical proof-of-concept studies performed by SMEs could be established.
- Biotech SMEs could be helped to better access funding under the European Commission's Seventh European Programme for Research (FP7).
- The IMI's IP policy and the funding model could be revised

Source: EuropaBio 2010

Thank you for your attention!

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