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VENTURE VALUATION

THE VALUATION EXPERTS

European Biotech & Pharma

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May 2014 | Tokyo

Overview

VENTURE VALUATION

1. Venture Valuation
2. Trends in the EU Biotech & Pharma
3. Overview European Biotechs / Clusters

Valuation Valuation

VENTURE VALUATION

Mission	Independent assessment and valuation of technology driven companies / products in growth industries
	Biotechgate.com – the Global Life Sciences Database
Offices	HQ: Zurich with representative offices in Europe, North America and Asia
Employees	20 people in Switzerland / UK / Canada / Singapore / India
Clients	Pharma, Biotech and Investors such as Novartis Venture Fund, GSK, European Investment Bank, 4SC, Arpida/Evolva, Celtic Pharma Biotech Associations / Governments like Biocom, Medicon Valley, BioHouston SwedenBio, BIOTECanada, Maryland

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Industry Trends: 1. M&A

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M&A in big Pharma:

- Novartis, GSK, Lilly => almost USD 30bn
- Pfizer, AstraZeneca => USD 106bn+
- Bayer, Merck => USD 14.2bn

Focus, consolidation, pressure for new products in the pipeline

Industry Trends: 2. Licensing

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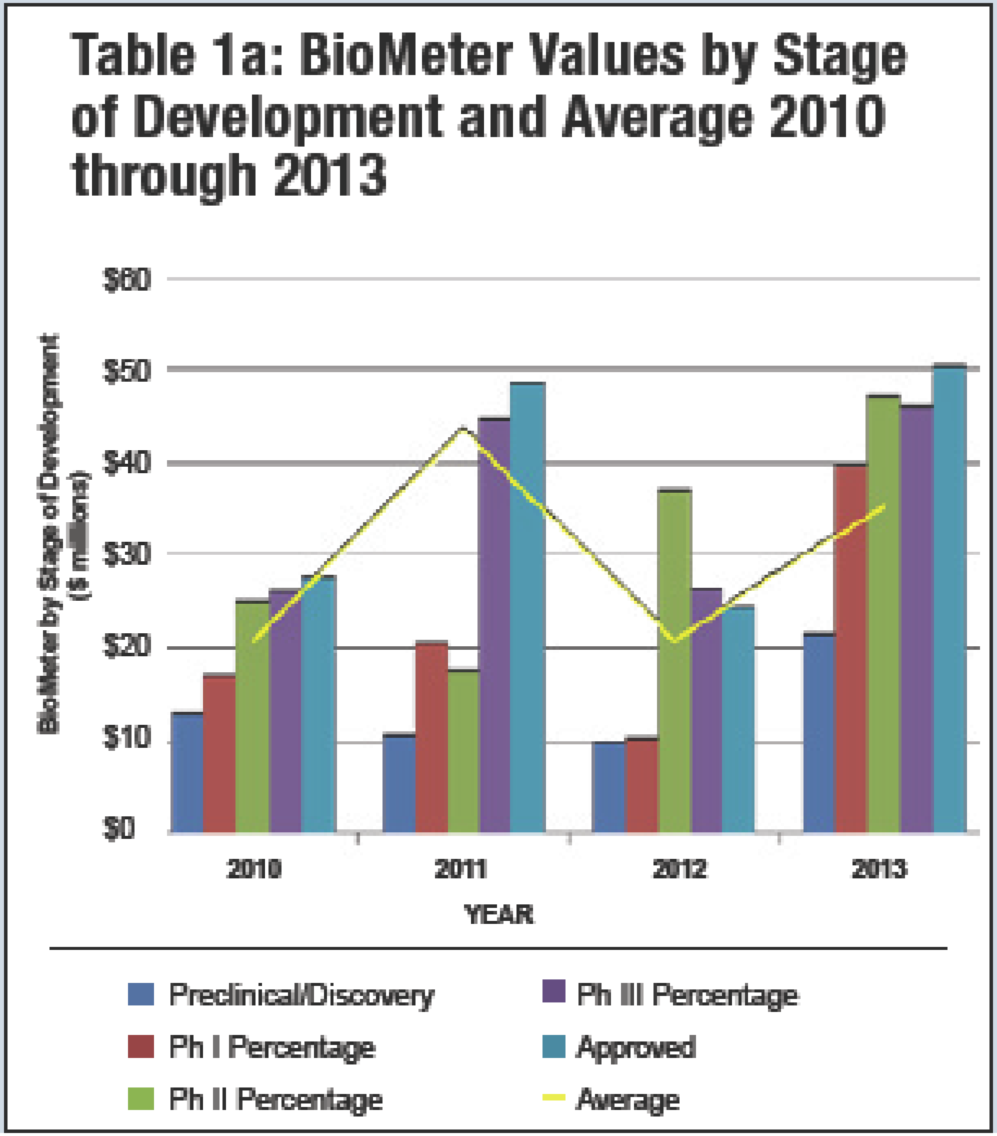
Pharma pressure leads to more deals and higher value deals

Deals 2014:

Immunocore Ltd., UK with MedImmune: USD 320m per program

Santaris Pharma A/S, DK, with Roche: USD 148m per product

Source: BioMeter, MoFo, 2014



Industry Trends: 3. Financing

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New investors

- Less VC
- More corporate investors
- More family offices
- More grants / Government

=> more difficult for EU companies to find financing

Industry Trends: 3. Financing

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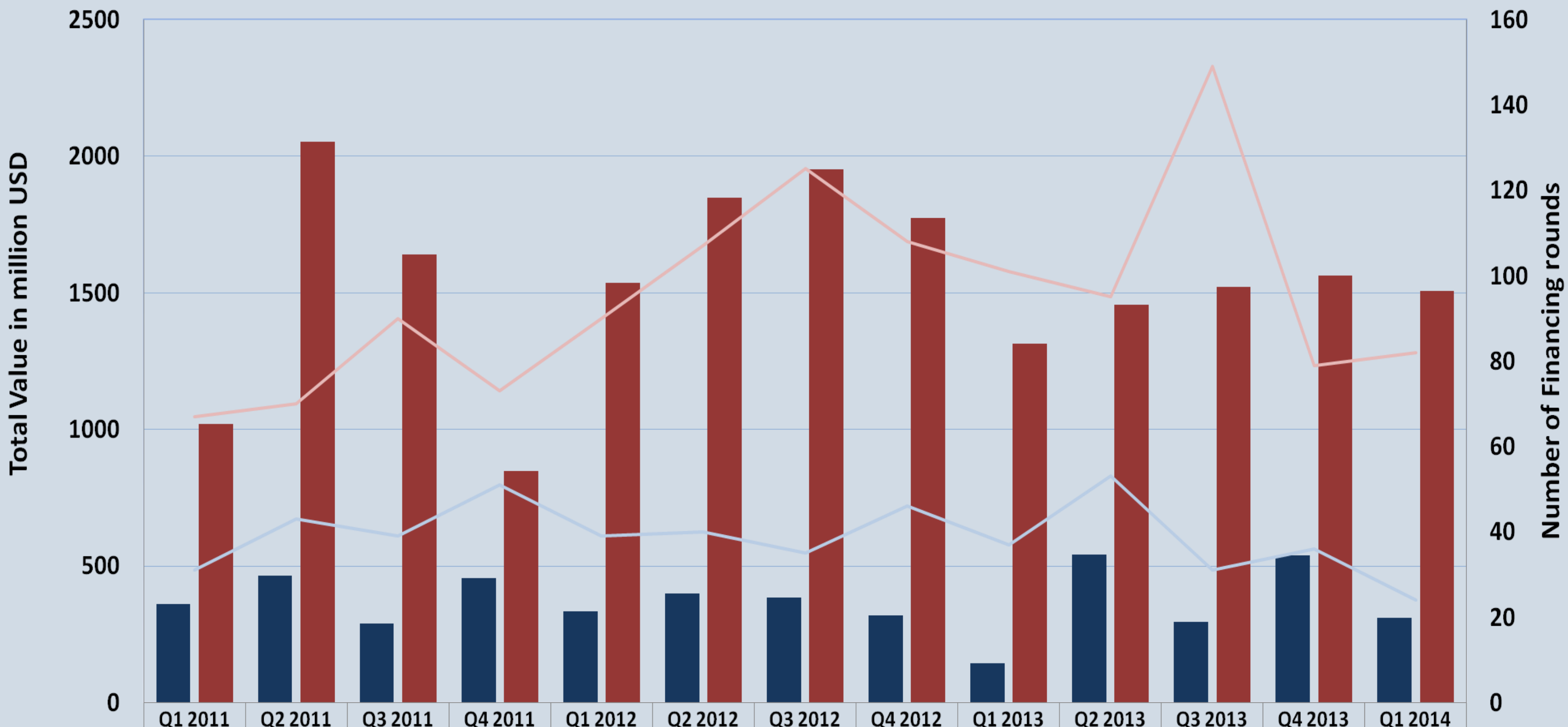
Source: Biotechgate.com, 2014

Quarterly Biotech and Medtech VC Financing Rounds - E.U. vs U.S.



	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014
Financing Value EU ($)	361	465	288	454	335	400	383	318	145	541	294	539	312
Financing Value US ($)	1018	2052	1641	848	1537	1847	1951	1775	1312	1456	1520	1563	1505
No. of Rounds EU	31	43	39	51	39	40	35	46	37	53	31	36	24
No. of Rounds US	67	70	90	73	90	107	125	108	101	95	149	79	82

Industry Trends: 3. Financing - IPO

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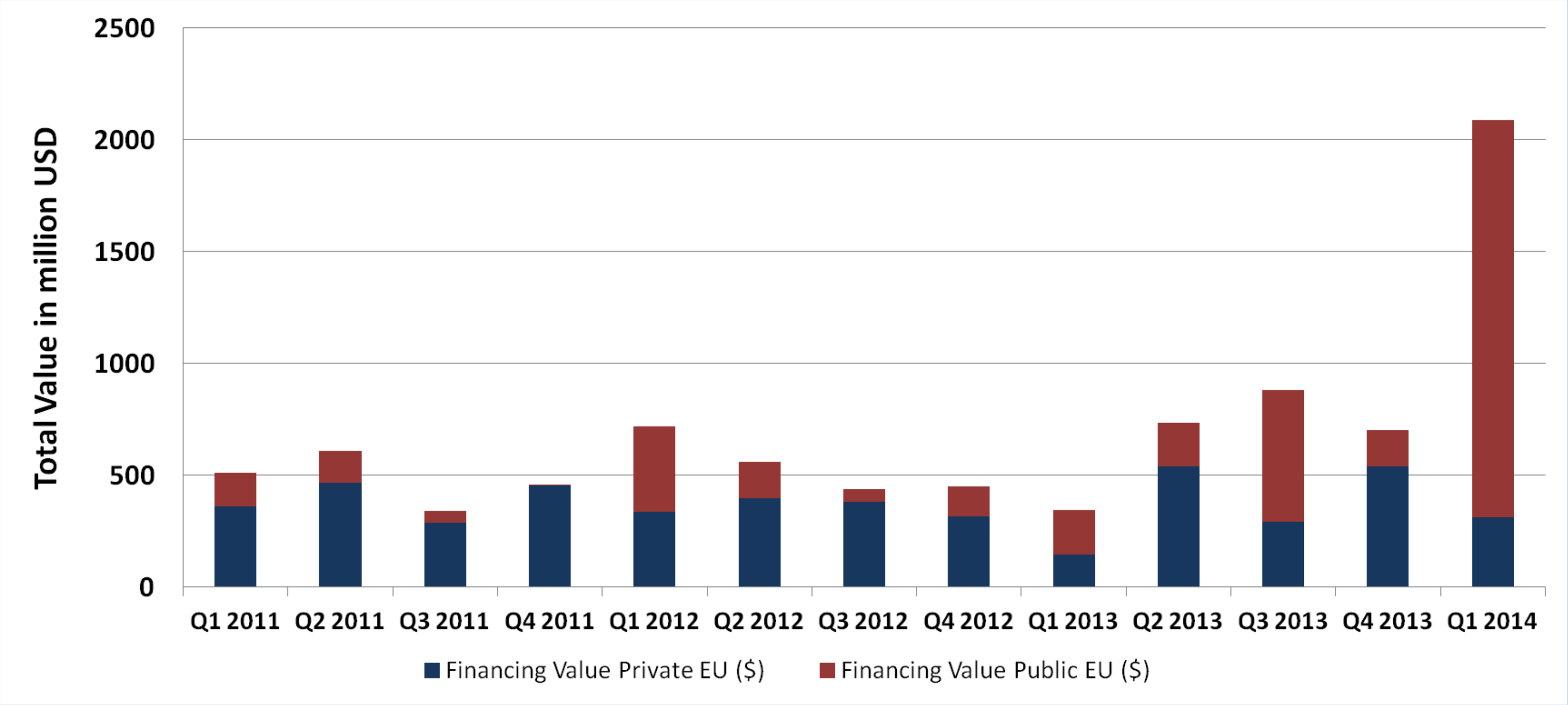
Source: Biotechgate.com, 2014



Industry Trends: 3. Financing 2014

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Company	Sector	Amount (in Million EUR)	Ownership	Country
QIAGEN B.V.	R&D Services	528	Public	Netherlands
Circassia Limited	Therapeutics/Diagnostics	240.6	Public	United Kingdom
Flamel Technologies	Therapeutics/Diagnostics	76.2	Public	France
Transgene SA	Therapeutics/Diagnostics	65.5	Public	France
Vectura Group plc	Pharmaceuticals	62.6	Public	United Kingdom
Glycotope GmbH	Therapeutics/Diagnostics	55	Private	Germany
Horizon Discovery	R&D Services	48.1	Public	United Kingdom
Nanobiotix	Therapeutics/Diagnostics	20.3	Public	France
invendo medical GmbH	Medical Technology	20.3	Private	Germany
Verona Pharma plc	Therapeutics/Diagnostics	16.8	Public	United Kingdom

Industry Trends: 4. Hot: Orphan diseases

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- High price (EUR 1’000 to EUR 400’000)
- Less competition, fast-tracked, lower-cost late-stage development and marketing
- Market size: USD 127bn by 2018 (16% of total prescription)
- Gross profit margins of over 80% (industry average 16%)
- Of 43 brand blockbusters 18 were approved solely for orphan
- Gleevec (original orphan to non-orphan) (9’000 to 120’000 patients)
- Biotechs more suited => small community, family, patient groups

=> M&A , partnerships and IPO opportunites

Industry Trends: 4. Hot: Orphan diseases

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Company	Country	Date	Financing round	Amount (m USD)	Lead product
UNIQURE	Netherlands	Feb 14	IPO	91,80	approval stage
GANYMED	Germany	Nov 13	Private round	61,40	phase II stage
OPSONA THERAPEUTICS	Ireland	Oct 13	Private round	45,00	phase II stage
ABLYNX NV	Belgium	Feb 13	Post-IPO	43,00	phase II stage
WILSON THERAPEUTICS AB	Sweden	Apr 14	Private round	40,00	phase I stage
TIGENIX NV	Belgium	Nov 13	Post-IPO/Debt	30,00	phase II stage
ERYTECH PHARMA	France	May 13	IPO	24,10	phase III stage
TXCELL	France	Apr 14	IPO	22,10	Company strategy
INDEX PHARMACEUTICALS	Sweden	Feb 14	Private round	20,00	phase III stage
ERYDEL SPA	Italy	Jul 13	Private round	19,90	Delivery system in phase II
PHARMALINK AB	Sweden	Oct 13	Private round	15,00	phase II stage

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European Biotechs / Biotechgate Partners

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BIOVALLEY The Life Sciences Network
BIO.NRW Cluster Biotechnologie Nordrhein-Westfalen
medicon Valley
one nucleus
Alsace BioValley
naturejobs.com
Swiss Biotech Association
UNIVERSITY OF OXFORD

Source: **Biotechgate.com**

EuropaBio The European Association for Bioindustries
LIFE SCIENCE STOCKHOLM-UPPSALA LIFE SCIENCE
invest in skåne part of business region skåne
COPENHAGEN CAPACITY
life science zurich
BaselArea
The Swedish Life Science Industry Organization swedenBIO
MedicalDelta Health Science & Technology
biocat
BIOVALLEY DEUTSCHLAND e.V.

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Cluster Report 2013:

European Life Sciences Clusters

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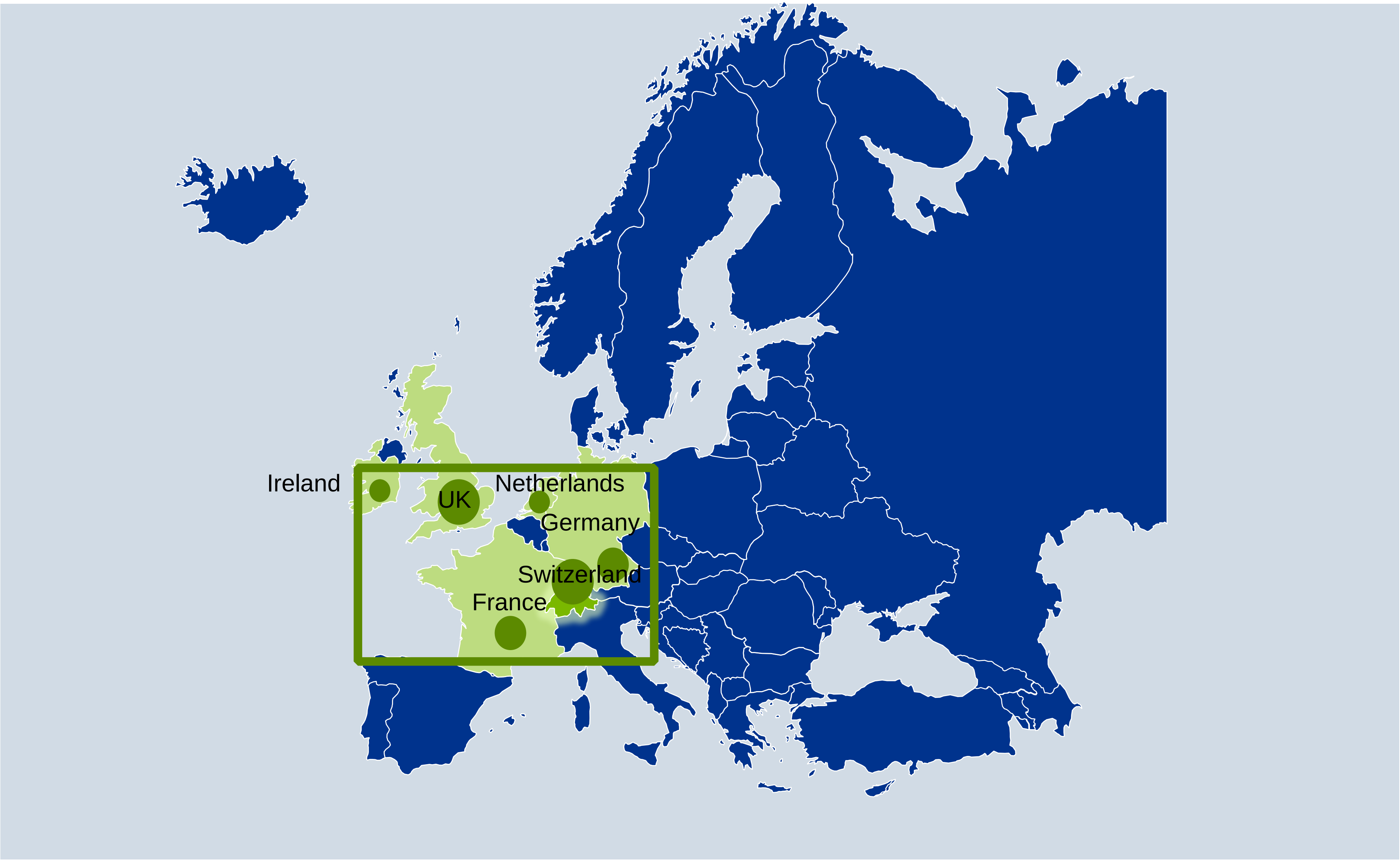

Cluster Report 2013

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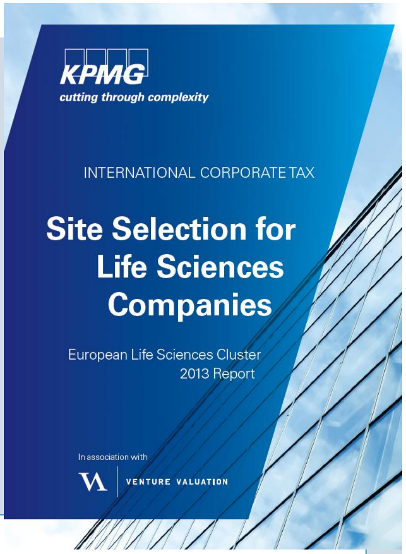

Study on 6 European key clusters

Finance, HQ, Biz environment

Based on Biotechgate database

France	• Solid LS industry focusing on **nutraceutical and cosmetics** • 60% of French LS companies undertake in-house **R&D**. This is the highest proportion in Europe • Second largest number of regional HQs of non-domestic LS companies
Germany	• Highest number of LS companies of any European country with focus on **Medical Devices** • Largest number of **global HQs of domestic LS** • Largest LS **workforce** in **absolute** numbers

Cluster Report 2013

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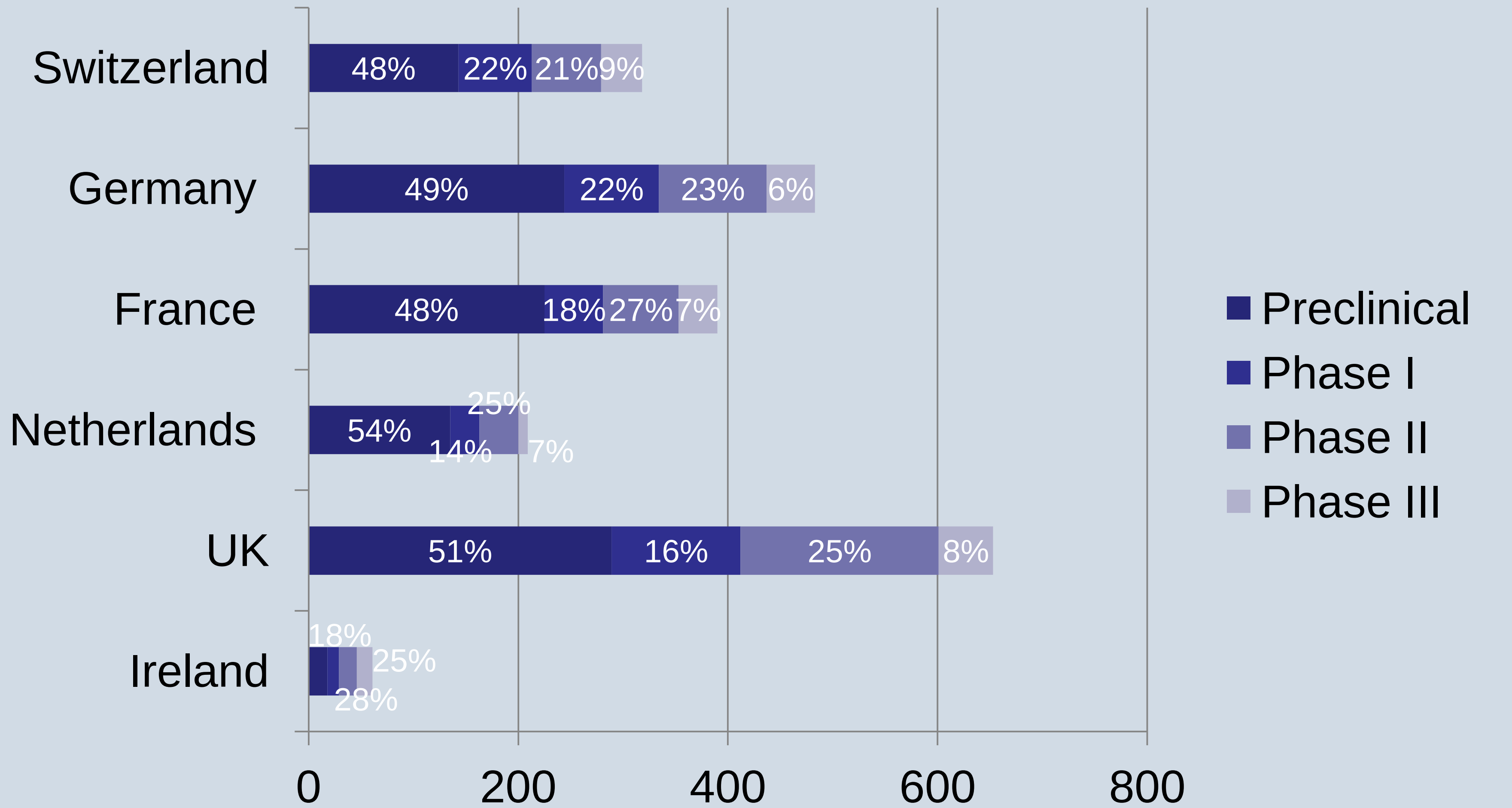
Ireland	• Second largest LS **workforce relative** to the active population • Attractive location for **manufacturing** for domestic and foreign LS companies
Netherlands	• Diverse LS industry with particular strength in **Medical Devices and Biotechnology** • Attractive to regional **HQs of non-domestic** LS companies for their **R&D**
Switzerland	• Strong LS clusters with large number of **global HQs** of domestic companies • Largest number of **regional HQs of non-domestic** LS companies • Highest LS **workforce relative** to the active population
United Kingdom	• Europe‘s largest cluster **in Biotechnology Therapeutics and Pharmaceuticals** • Strong in **R&D** and large LS **workforce** • Surpassed Germany to record the most **financing** raised for LS companies in 2011 and 2012

Cluster Report 2013: Product in development



→Overall, all countries have a healthy pipeline

→Ireland has only little research activities but a more even distribution with a higher percentage of phase III products

Cluster Report 2013: Numbers of Global and Regional HQ‘s

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Number of Global and Regional HQ's						
	France	Germany	Ireland	Netherlands	Switzerland	UK
Global HQ	57	109	16	17	41	71
Main activities	R&D (74%)	Manufacturing (72%)	Manufacturing (69%)	R&D (59%)	Manufacturing (66%)	R&D (58%)
Regional HQ	22	14	8	8	29	17
Main activities	Manufacturing (73%)	Manufacturing (36%)	Manufacturing (63%)	R&D (63%)	Manufacturing (38%)	R&D (65%)

→ Germany has the most global HQ’s

→ Switzerland has the most regional HQ’s of non-domestic LS companies

→ Most of the HQ’s in France, the Netherlands and UK are performing R&D in their respective country

→ The main activity in their respective country of the HQ’s in Germany, Ireland and Switzerland is manufacturing

Swiss Biotech Industry

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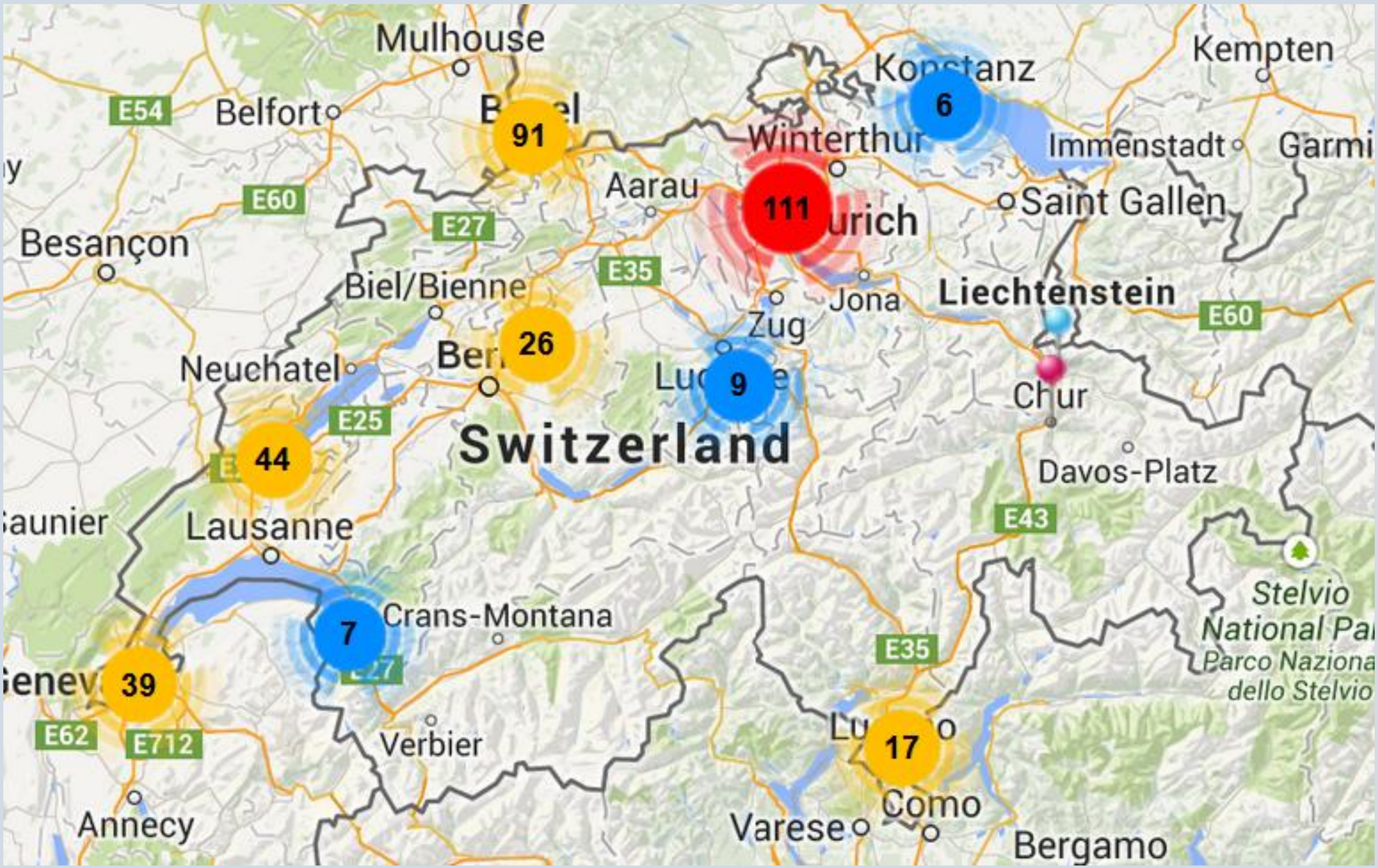

Cluster Report 2013: Number of Life Sciences Companies

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Number of Life Sciences Companies								
	France	Germany	Ireland	Netherlands	Switzerland	UK	*Total 6 Countries*	*Total Europe*
Biotechnology	647	980	60	296	334	645	2'962	5'127
Biotech Therapeutics	151	155	14	71	98	180	669	1'142
MedTech	145	582	42	172	340	138	1'419	2'267
Pharma	71	83	13	31	68	85	351	723

→ Germany has the most LS companies

→ UK has the most Biotech Therapeutics companies

→ Germany has the most MedTech companies

→ UK has the most Pharma companies

→ Switzerland has most companies per one million active population

Cluster Report 2013

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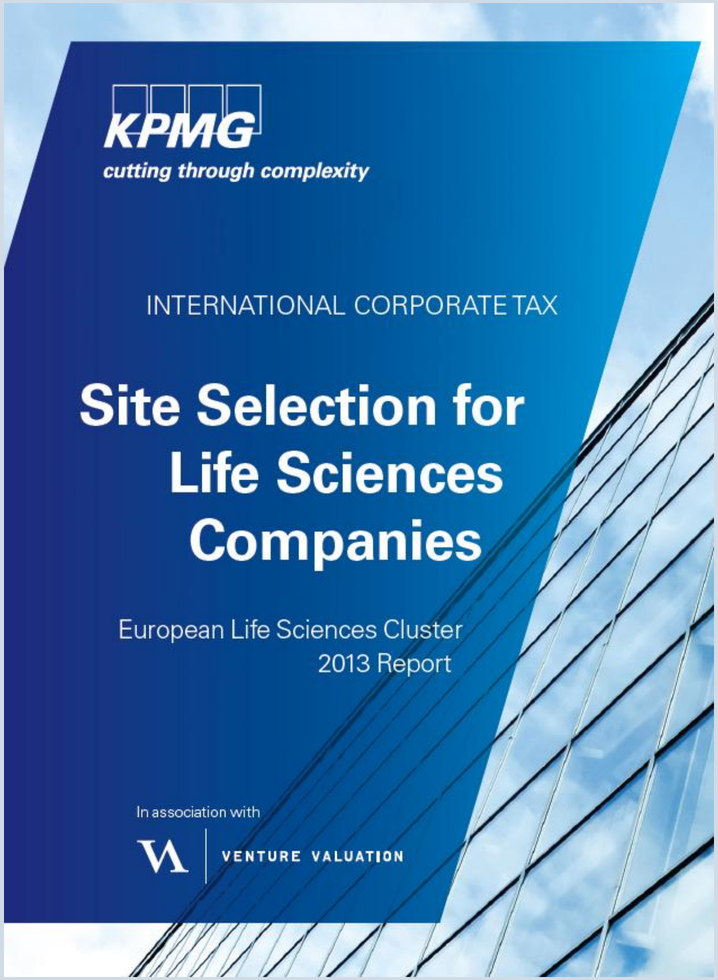

=> Details in KPMG Presentation (page 1-13)

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Industry Trends: 3. Financing

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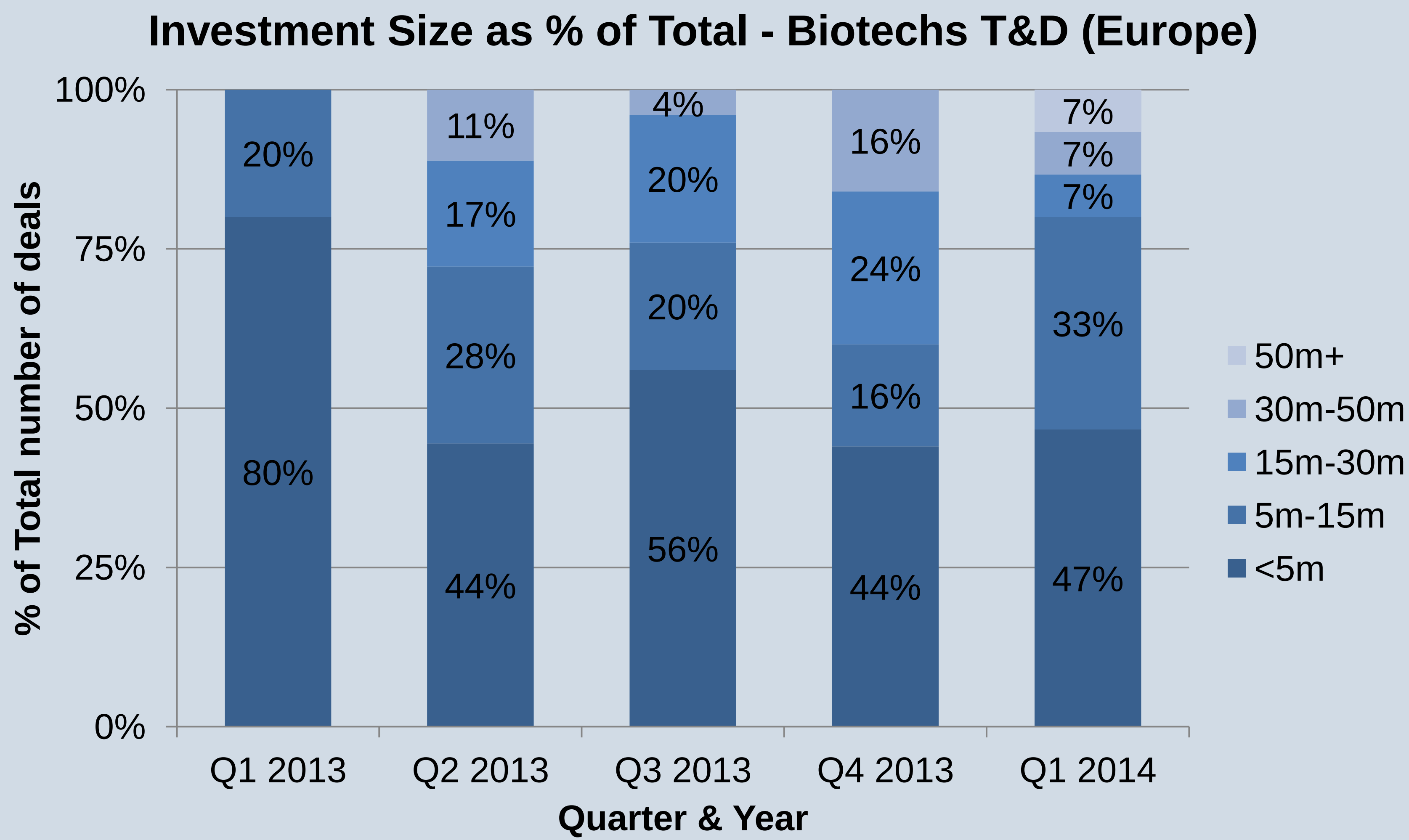

Cluster Report 2013: Main Activities of Life Science Companies

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Main Activities of all Life Science Companies	R&D	Manufacturer	Research on contract basis	Shared Services
France (n=881)	60%	44%	14%	8%
Germany (n=1649)	31%	57%	10%	7%
Ireland (n=117)	54%	53%	6%	19%
Netherlands (n=499)	42%	37%	11%	5%
Switzerland (n=744)	39%	45%	7%	9%
UK (n=868)	51%	28%	16%	10%

Note: Other companies not included under these activites are engaged in out and in -licensing, services, suppliers or involved in other activities

→ Approximately 50% of LS companies undertake R&D in their respective country

→ France and UK have particularly high R&D activity

Cluster Report 2013: Number of Life Sciences Companies

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→ Germany has the most LS companies

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→ Germany has the most MedTech companies

→ UK has the most Pharma companies

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Cluster Report 2013:
Number of Employees in the Life Sciences Industry

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Number of Employees in the Life Sciences Industry						
	France	Germany	Ireland	Netherlands	Switzerland	UK
Biotechnology	6'000	30'000	4'000	2'150	19'200	23'000
MedTech	40'000	87'000	24'000	9'500	40'000	64'000
Pharma	97'600	103'000	17'000	16'900	36'700	78'000
Total	*143'600*	*220'000*	*45'000*	*28'550*	*95'900*	*165'000*
Active Population	*51.0 m*	*71.0 m*	*3.6 m*	*13.9 m*	*6.6 m*	*51.9 m*

→ Germany has most employees in the LS industry (absolute numbers)

→ Switzerland has most employees in the LS industry (relative numbers)

Cluster Report 2013: Products in Development

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Products in Development						
	France	Germany	Ireland	Netherlands	Switzerland	UK
Strongest Indication	Oncology	Oncology	Digestive system	Oncology	Oncology	Oncology
Strongest Pre-clinical	Oncology (74)	Oncology (93)	Digestive system (5)	Oncology (39)	Oncology (36)	Oncology (34)
Strongest Phase I	Oncology (17)	Oncology (41)	CNS (4)	Oncology (6)	Oncology (19)	CNS (12)
Strongest Phase II	Oncology (18)	Oncology (48)	Digestive system (4)	Oncology (11)	CNS (11)	Oncology (10)
Strongest Phase III	Oncology (9)	Oncology (18)	Mental & behavioural disorders (5)	Oncology (3)	Oncology (8)	Infectious Diseases (4)

→ Most of the countries are developing in the oncology and CNS sector

→ Ireland is developing in the digestive system as well as in the Mental & behavioral disorders sector