

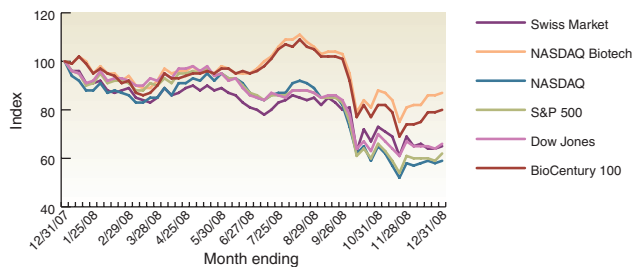
2008—down, but not out

Walter Yang

The biotech sector received \$20 billion less in funding in 2008 than the previous year. Public equity markets were particularly hard hit, with IPOs (initial public offerings), follow-ons and PIPEs (private investment in public equity) all down 35% or more compared to 2007.

Stock market performance

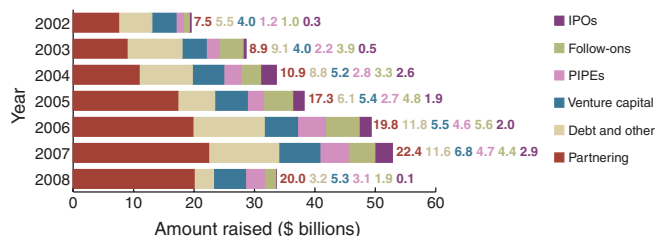
The overall markets were off more than 30% on the year, whereas the BioCentury 100 index was down 20%.



Venture financings were also off one-fifth from the \$6.8 billion posted in 2007. Funding from partnerships came in at \$20 billion, compared with \$22 billion for 2007. In general, biotech indexes performed better than the Dow Jones Industrial Average and Standard & Poor's 500.

Global biotech industry financing

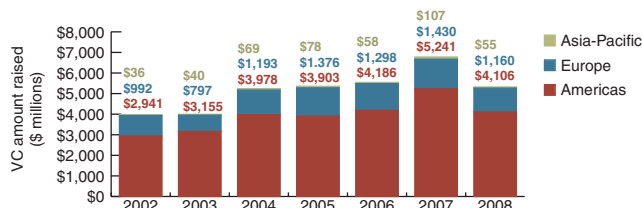
Including partnership promises to US companies, biotech financing dropped to \$34 billion from \$53 billion in 2007.



PIPEs, private investment in public equity; IPOs, initial public offerings. Source: BCIQ: BioCentury Online Intelligence, Burrill & Co.

Global biotech venture capital (VC) investment

Private companies raised about \$5 billion in 2008, similar to levels seen in 2004–2006.

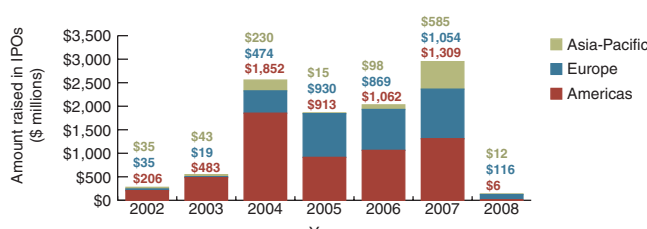


Year	2002	2003	2004	2005	2006	2007	2008
Americas	200	184	186	182	195	217	207
Europe	91	77	79	92	81	101	93
Asia-Pacific	6	5	6	9	8	9	6

Table indicates number of VC investments. Source: BCIQ: BioCentury Online Intelligence

Global biotech initial public offerings (IPOs)

Only six IPOs were completed in 2008, and only one of those listed in the US.



Year	2002	2003	2004	2005	2006	2007	2008
Americas	5	8	34	18	25	23	1
Europe	3	1	12	24	21	21	3
Asia-Pacific	2	5	6	3	3	7	2

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

Notable 2008 deals

IPOs	Company (lead underwriters)	Amount raised (\$ millions)	Percent change in stock price since offer	Date completed
	MolMed (Banca IMI, Societe Generale)	\$85.4	-50%	29-Feb
	Ipsogen (Bryan, Garnier & Co.)	\$18.6	-19%	10-Jun
	PCI Biotech (Fondsfinans)	\$12.0	-45%	10-Jun
	Fluorotechnics	\$7.0	-1%	24-Oct
	Bioheart (Dawson James)	\$5.8	-81%	19-Feb
	Genera Biosystems (Domain Capital)	\$4.8	-52%	21-May

Venture capital	Company (lead investors)	Amount raised (\$ millions)	Round number	Date closed
	OncoMed (Adams Street Partners)	\$169.0	2	12-Dec
	Portola (No lead)	\$130.0	3	9-Jul
	Pacific Biosciences (Deerfield, Intel Capital)	\$100.0	5	14-Jul
	Radius Health (MPM Capital, Wellcome Trust, MPM Bio IV NVS)	\$82.5	3	20-Nov
	Ganymed (ATS Beteiligungsverwaltung)	\$82.2	4	18-Nov
	Proteolix (Nomura Phase4 Ventures)	\$79.0	3	8-Sep
	Gemin X (Caxton Advantage Life Sciences Fund, Caxton Global)	\$76.0	3	30-Jun

Mergers and acquisitions	Target	Acquirer	Value (\$ millions)	Date announced
	Genentech	Roche	\$43,700	21-Jul
	Millennium	Takeda	\$8,200	10-Apr
	Applied Biosystems	Invitrogen	\$6,700	12-Jun
	ImClone	Eli Lilly	\$6,500	6-Oct
	LifeCell	Kinetic Concepts	\$1,700	7-Apr
	Speedel	Novartis	\$900	10-Jul

Licensing /collaboration	Researcher	Investor	Value (\$ millions)	Deal description
	Actelion	GlaxoSmithKline	\$3,246.8	Co-develop and co-commercialize phase 3 insomnia compound almorexant outside of Japan
	Isis	Genzyme	\$1,900.0	Develop mipomersen and follow-on compounds to treat high cholesterol
	Acceleron	Celgene	\$1,878.0	Jointly develop and commercialize ACE-011 to treat cancer; option for three other programs
	Archemix	GlaxoSmithKline	\$1,427.5	Develop and commercialize aptamer therapeutics to treat inflammatory diseases
	Amgen	Takeda	\$1,177.0	Received Japanese rights to 12 compounds and partnered to develop motesanib
	PDL (now Facet)	Bristol-Myers	\$1,155.0	Develop and commercialize multiple myeloma monoclonal antibody (mAb) elotuzumab (HuLuc63); option to include PDL241
	Exelixis	Bristol-Myers	\$1,000.0	Develop and commercialize phase 3 XL184 and phase 1 compound XL28
	Alnylam	Takeda	>\$1,000.0	Five-year collaboration to develop RNA interference therapeutics

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