



**OrbiMed**  
Healthcare Fund Management

# The Biotech Growth Trust Annual General Meeting

OrbiMed Advisors LLC

London

16 July 2010



# State of the Trust

# Why Invest with OrbiMed?

A Premier Institutional Healthcare Investment Firm With Proven Results

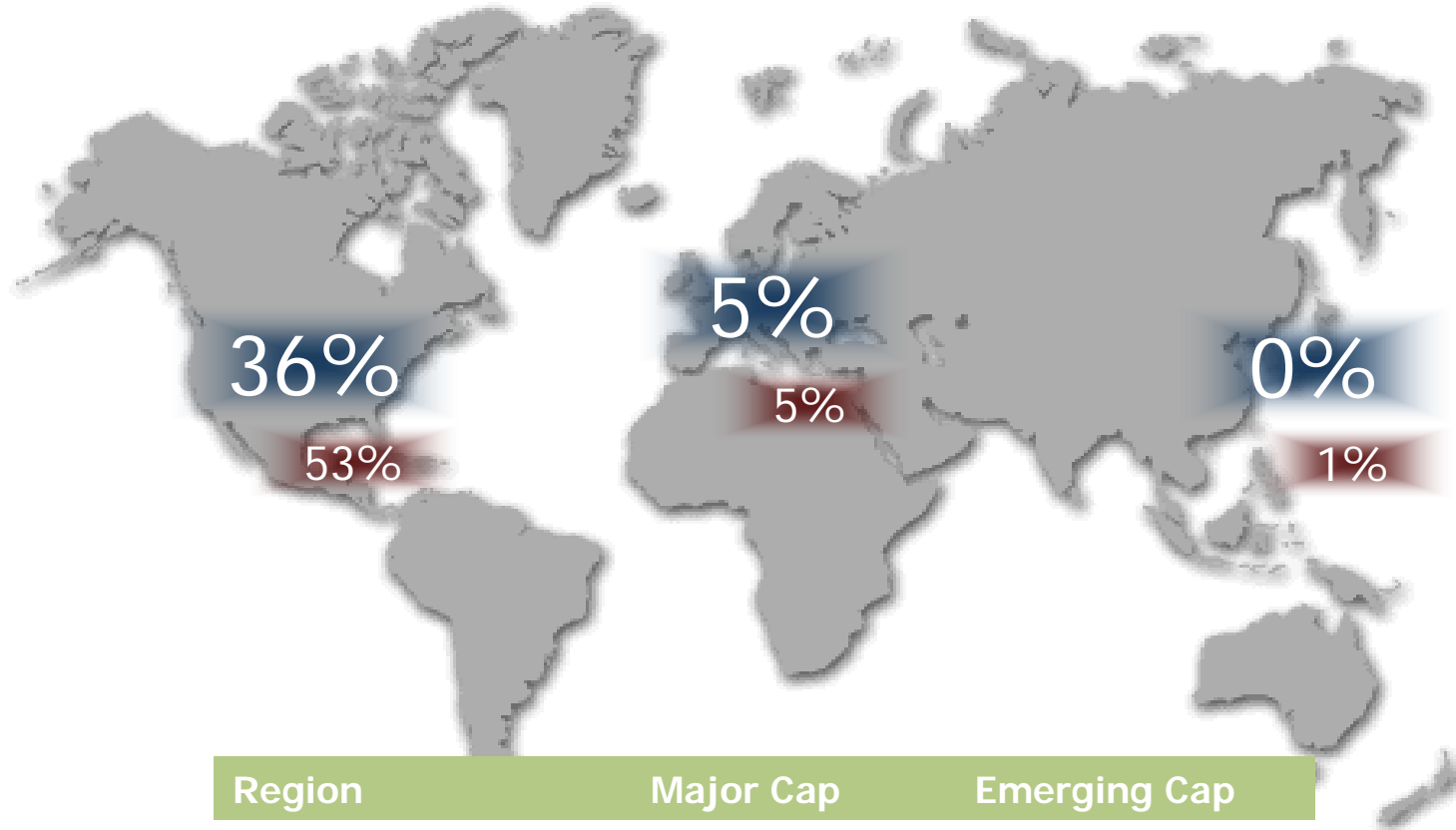
- A premier investment firm focused exclusively on the healthcare sector, with approximately \$5 billion in assets under management
- Unmatched span of activity: healthcare investments across all major geographies, subsectors and company stages
- Over 35 investment professionals across five offices provide a potent combination of scientific expertise, analytical skills and industry experience
- Investment advisory business started in 1989
  - Assumed management of The Biotech Growth Trust in 2005
- Stable organization with institutional infrastructure

# Key Drivers for BIOG Performance

- Capitalize on historic low valuations of major biotech
  - Focus on fastest-growing earnings stories
- Invest in emerging biotech companies with newly launched products or ones in late-stage development
  - Focus on companies that make likely M&A candidates or are about to become profitable
- Invest in the most promising early-stage emerging companies with novel therapeutic candidates
  - Focus on companies whose drug candidates are poised to deliver positive clinical data
- Worldwide strategy

# Portfolio Exposure

As of 30 June 2010



Region	Major Cap	Emerging Cap
North America	36%	53%
Europe	5%	5%
Far East	0%	1%

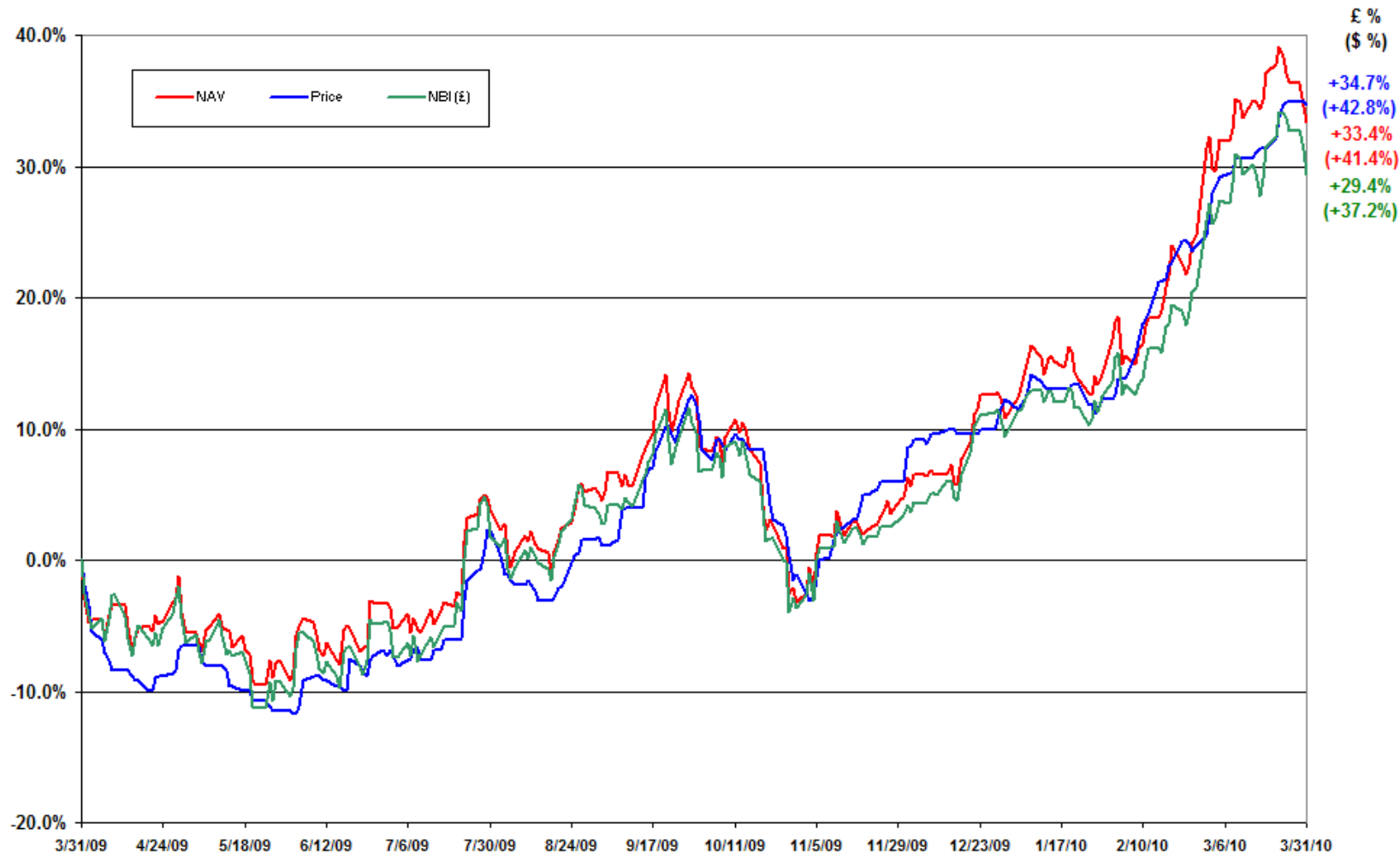
# BIOG Holdings

## As of 30 June 2010

	Market Price \$ Millions	Pct. Value		Market Price \$ Millions	Pct. Value
<b>UNITED STATES</b>			<b>INTERNATIONAL</b>		
<b>Emerging Biotechnology</b>			<b>Europe</b>		
Acorda Therapeutics Inc	1.3	0.9	<b>Emerging Biotechnology</b>		
Affymetrix Inc	2.5	1.7	Actelion Ltd	6.0	3.9
Alexza Pharmaceuticals Inc	2.9	1.8	Medivir AB	<u>2.3</u>	<u>1.5</u>
Allos Therapeutics Inc	5.7	3.8		<b>8.3</b>	<b>5.4</b>
Anadys Pharmaceuticals Inc	0.2	0.1	<b>Major Capitalization</b>		
BioMarin Pharmaceutical Inc	4.9	3.2	Shire PLC ADR	7.4	4.9
Cephalon Inc	2.4	1.6			
Clinical Data Inc	4.2	2.8	<b>Europe Subtotal</b>	<b>15.8</b>	<b>10.3</b>
Cubist Pharmaceuticals Inc	6.9	4.5			
Cytokinetics Inc	0.6	0.4	<b>Far East</b>		
Dendreon Corp	3.8	2.5	<b>Emerging Biotechnology</b>		
Endo Pharmaceuticals Holdings	3.5	2.3	Caduceus Asia Partners	<u>1.1</u>	<u>0.7</u>
Human Genome Sciences Inc	6.0	3.9		<b>1.1</b>	<b>0.7</b>
Illumina Inc	6.0	3.9			
Incyte Corp	2.4	1.6	<b>Far East Subtotal</b>	<b>1.1</b>	<b>0.7</b>
Lexicon Pharmaceuticals Inc	0.6	0.4			
Medicines Co/The	2.7	1.8	<b>INTERNATIONAL TOTAL</b>	<b>16.8</b>	<b>11.0</b>
Momenta Pharmaceuticals Inc	2.7	1.8			
Pharmacyclics Inc	7.3	4.8	Cash	0.4	0.3
Pharmasset Inc	1.7	1.1			
Savient Pharmaceuticals Inc	4.3	2.9			
Transcept Pharmaceuticals, Inc.	2.8	1.9			
Vertex Pharmaceuticals Inc	<u>4.8</u>	<u>3.1</u>			
	<b>80.5</b>	<b>52.8</b>			
<b>Major Capitalization</b>					
Amgen Inc	13.7	9.0			
Celgene Corp	13.4	8.8			
Genzyme Corp	12.2	8.0			
Gilead Sciences Inc	9.7	6.4			
Thermo Fisher Scientific Inc	<u>5.7</u>	<u>3.7</u>			
	<b>54.6</b>	<b>35.9</b>			
<b>UNITED STATES TOTAL</b>	<b>135.2</b>	<b>88.7</b>	<b>TOTAL PORTFOLIO</b>	<b>152.4</b>	<b>100.0</b>

# BIOG Performance During Fiscal 2010

31 March 2009 through 31 March 2010



# Trust Performance vs. Benchmark

Periods Ending 30/06/10	Since OrbiMed Inception (18/05/05)	Since Fundraising (02/12/09)	Calendar YTD 2010	Fiscal YTD 2011	Fiscal 2010 (03/09-03/10)
BIOG NAV (£)	+54.0%	+6.1%	+1.8%	-15.4%	+33.4%
NASDAQ Biotech Index (£)	+43.6%	+7.4%	+2.3%	-13.5%	+29.4%
<b>Excess Returns (£)</b>	<b>+10.4%</b>	<b>-1.3%</b>	<b>-0.5%</b>	<b>-1.9%</b>	<b>+3.9%</b>
Est. Currency Impact on NAV	+28.9%	+10.7%	+7.7%	+1.3%	-8.0%
MSCI World Index (£)	+25.3%	-0.1%	-2.4%	-11.3%	+43.7%
FTSE All-Share Index (£)	+3.2%	-6.4%	-7.9%	-12.6%	+46.7%
Russell 2000 Index (£)	+23.5%	+13.8%	+5.4%	-8.8%	+51.4%

Source: OrbiMed Advisors



# Biotech Opportunities: The Next 12 Months

# Healthcare Reform Finally Passes

## Worst case scenario avoided completely

### Market Concern

- Passage of a “public plan” insurance option that could see the government become a significantly larger payor/buyer of drugs leading to **price controls** in the U.S. pharmaceutical market

### What Actually Passed

- Simply, an expansion of the current Medicaid program which dramatically increases eligibility
- Over the next few years, coverage will be extended to an additional **30+ million** Americans
- Importantly, coverage will be executed via private, not public, exchanges
- Plus a positive for Biotech: biotechnology drugs were given 12 years of market exclusivity

### OrbiMed’s View

- In 2014, drug companies will be able to benefit from increased drug volumes
- Certain policies in the new legislation will put mild pressure on near-term earnings, such as:
  - expansion of the Medicaid rebate (2010)
  - new discounts on Medicare Part D drugs (2011)
  - an excise tax on drug makers starting (2011)
- Thus, overall, we expect a mild near-term financial impact to be offset by **volume gains** later
- As concerns over healthcare reform subside, **healthcare industry should rally**



# Healthcare Reform Finally Passes

## Overhang removed – Time to close the gap

- The prospect of healthcare reform served as an overhang on the healthcare sector generally in 2009, leading to **underperformance** of healthcare stocks
- From Feb 2009 (when President Obama first announced his healthcare proposals in his draft budget) to bill signing in March 2010, biotech stocks underperformed the broader market by **~14%**
- Now that the bill has been passed, we expect healthcare to outperform

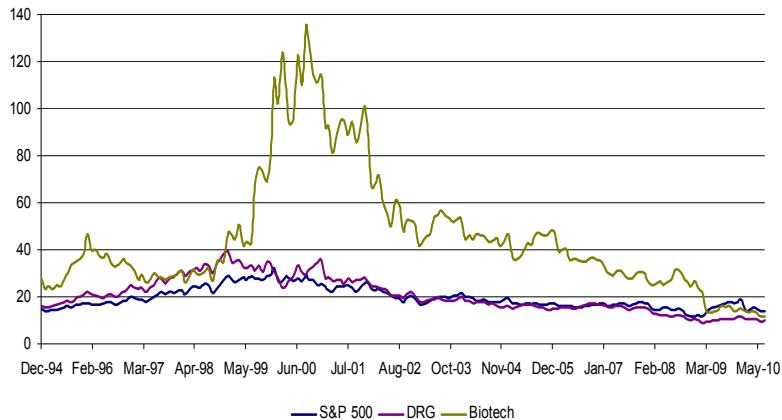
### NBI relative performance vs. S&P 500



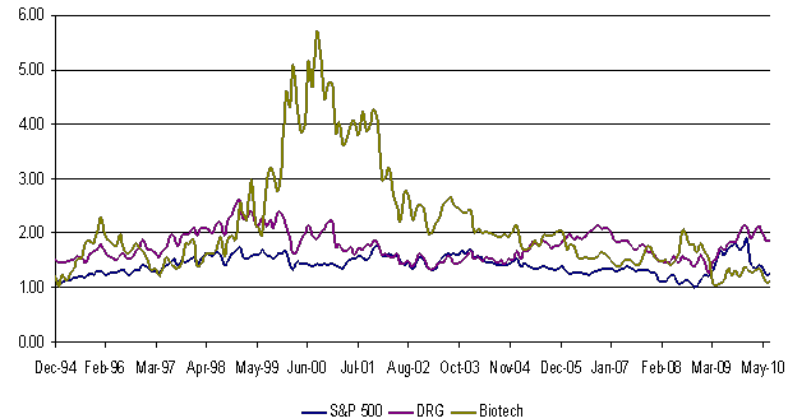
# Historic Low Valuations for Major Biotech

## Valuation still at 15 year lows on absolute and relative basis

Comparative Forward P/E Multiples



Comparative PEG Ratios



Median	Major Biotech	U.S. Large Pharma	Europe Large Pharma
Revenue CAGR 2010-2013	8.5%	-1.9%	2.5%
Long-term EPS CAGR	13.8%	4.2%	4.1%
P/E (2011)	10.2x	9.8x	9.6x
PEG (2011)	0.8x	1.8x	2.1x

- Valuations remain at a 15 year low for biotech on both P/E and PEG basis
- Despite having superior projected revenue and EPS growth rates, major biotech trades at a roughly equivalent P/E to both US and European large pharma. On a PEG basis, major biotech trades at a significant discount to pharma.
- We believe value will eventually be recognized in Major Biotech

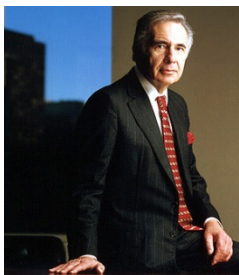
Major Biotech: AMGN, BIIB, GENZ, CELG, and Gilead Sciences U.S. Large Pharma: ABT, BMY, JNJ, LLY, MRK, and PFE European Large Pharma: AZN, BAYN, GSK, NOV, ROG, and SNY



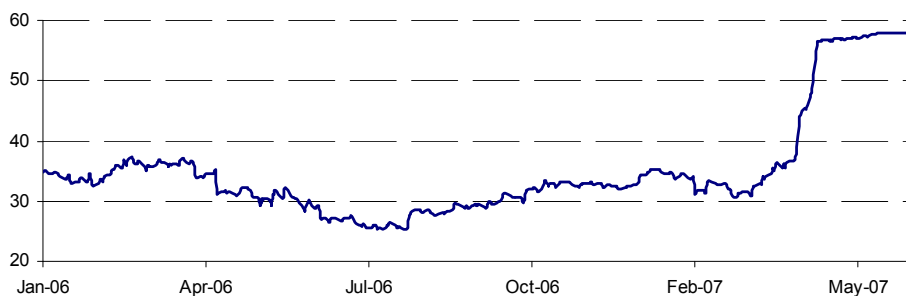
# Valuations so low that activist investors getting involved

## Genzyme and Biogen Idec have activist involvement

- Activist investors are beginning to recognize the value in Major Biotech
  - ▶ Icahn and Relational Investors have significant stakes in Genzyme and collectively have 5 out of 13 Board seats
  - ▶ Icahn owns 6% of Biogen Idec and has 4 of 12 Board seats
- Icahn Partners has successfully unlocked biotech value in the past
  - ▶ Owned MedImmune when it was sold to AstraZeneca in 2007 for \$15.6bn (a 53% premium)\*
  - ▶ Owned ImClone Systems when it was sold to Eli Lilly in 2008 for \$6.5bn (a 51% premium)
- These examples show the significant value embedded in biotech



MedImmune



ImClone Systems



\*Premium calculated from day MedImmune announced it had retained Goldman Sachs for a strategic sale

# M&A Activity Continuing at a Steady Pace

Depressed valuations make biotech attractive to acquirors

Announce Date	Target	Acquirer	Deal Size	Premium Paid
06/30/10	Abraxis BioScience	Celgene	\$2.9 billion + CVR	14% + CVR
04/12/10	Javelin Pharmaceuticals	Hospira	\$140 million	64%
03/09/10	Facet Biotech	Abbott Laboratories	\$402 million	206%*
03/01/10	OSI Pharmaceuticals	Astellas Pharma	\$2.9 billion	41%
09/03/09	Sepracor	Dainippon Sumitomo	\$2.3 billion	28%
07/22/09	Medarex	Bristol Myers	\$2.4 billion	90%
07/14/09	Noven Pharmaceuticals	Hisamitsu	\$428 million	22%
05/29/09	CuraGen Corp	Celldex Therapeutics	\$95 million	50%
05/21/09	Cougar Biotechnology	Johnson & Johnson	\$970 million	16%
03/12/09	CV Therapeutics	Gilead	\$1.4 billion	25%
02/27/09	Arana Therapeutics	Cephalon	\$210 million	69%
01/30/09	Tepnel	Gen-Probe	\$132 million	126%
01/13/09	Targanta	Medicines Co.	\$50 million	72%
01/05/09	Indevus	Endo Pharmaceuticals	\$370 million	45%
11/24/08	Omrix	Johnson & Johnson	\$465 million	18%
10/30/08	Genelabs	GlaxoSmithKline	\$57 million	430%
10/06/08	Imclone	Eli Lilly	\$6.5 billion	51%
07/25/08	Acambis	Sanofi Aventis	£275 million	65%
07/23/08	Arius Research	Roche	CAD \$191 million	15%
07/21/08	Genentech	Roche	\$41.3 billion	16%
07/15/08	Lev Pharmaceuticals	ViroPharma	\$443 million	49%
07/10/08	Speedel	Novartis	\$880 million	94%
07/08/08	SGX Pharmaceuticals	Eli Lilly	\$64 million	119%

\*Premium calculated from stock price prior to BIIB's initial take-out bid

Source: OrbiMed Advisors



# BIOG has benefited directly from M&A activity

Consistent track record of identifying companies suitable for acquisition

## BIOG portfolio companies acquired

Announce Date	Target	Acquirer	Deal Size	Premium Paid
03/01/10	OSI Pharmaceuticals	Astellas Pharma	\$2.9bn	41%
05/21/09	Cougar Biotechnology	Johnson & Johnson	\$970mm	16%
01/30/09	Tepnel	Gen-Probe	\$132mm	126%
01/05/09	Indevus	Endo Pharmaceuticals	\$370mm	45%
10/06/08	ImClone	Eli Lilly	\$6.5bn	51%
07/21/08	Genentech	Roche	\$41.3bn	16%
05/29/08	Kosan	Bristol-Myers	\$190mm	233%
10/18/07	Aspreva	Galenica	\$915mm	16%
04/27/07	MedImmune	AstraZeneca	\$15.6bn	53%*
10/17/06	ICOS	Eli Lilly	\$2.2bn	25%
10/02/06	Myogen	Gilead Sciences	\$2.5bn	50%
12/14/05	Abgenix	Amgen	\$2.2bn	54%
09/07/05	ID Biomedical	GlaxoSmithKline	\$1.4bn	12%

\*Premium calculated from day MedImmune announced it had retained Goldman Sachs for a strategic sale

# Acquisition Candidates in the Trust

Company	Asset	Potential Acquiror
Affymetrix	Genetic analysis platform	Large life sciences tools companies
Allos Therapeutics	Folotyn	Celgene, Biogen Idec
BioMarin Pharmaceutical	Phenoptin, Aldurazyme, Aryplase	Genzyme, Shire
Clinical Data	Vilazodone, Stedivaze	Specialty Pharma
Cubist	Cubicin	Big Biotech, Big Pharma
Dendreon	Provenge	Big Biotech, Big Pharma
Human Genome Sciences	Benlysta	GlaxoSmithKline
Medivir	HPV assets	Johnson & Johnson
Onyx Pharmaceuticals	Nexavar	Bayer
Savient	Krystexxa	Amgen, Big Pharma
Shire	Vyvanse, Elaprase	Big Pharma
Vertex Pharmaceuticals	Telaprevir	Johnson & Johnson

# New Product Breakthroughs Forthcoming

Several biotech blockbusters to be introduced soon

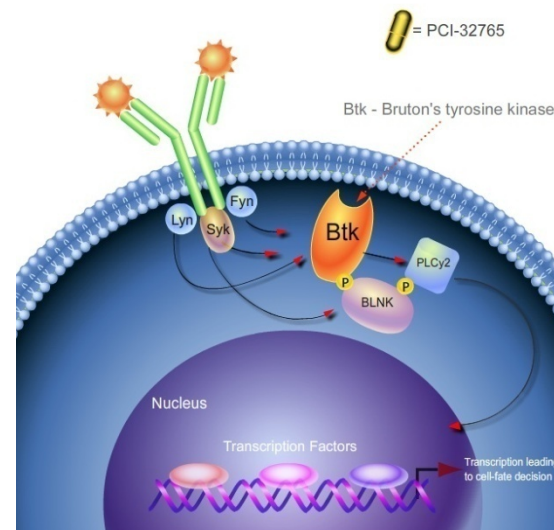
Product	Marketer	Indication	Launch Year	Revenue Potential
Tyvaso	United Therapeutics	Pulmonary Hypertension	2009	\$200 million
Folotyn	Allos Therapeutics	T-cell Lymphoma	2009	\$500 million
Arzerra	Genmab/Glaxo	CLL	2009	\$500 million
Fampridine	Acorda	Multiple Sclerosis	2009	\$500 million
Cinryze	ViroPharma	Hereditary Angioedema	2009	\$250 million
Denosumab	Amgen	Osteoporosis	2010	\$5 billion
Krystexxa	Savient	Gout	2010	\$500 million
Benlysta	HGS/Glaxo	Lupus	2010	\$2 billion
Provenge	Dendreon	Prostate cancer	2010	\$2 billion
Telaprevir	Vertex	Hepatitis C	2011	\$5 billion

Source: OrbiMed Advisors LLC

# Case Study: Pharmacyclics

## From promising target to potential breakthrough product

- Pharmacyclics was previously a troubled company off the radar screens of most investors
- The company is currently developing PCI-32765, an inhibitor of the Btk protein
- Background on Btk:
  - Bruton's Tyrosine Kinase (Btk) is an essential component of the B-cell receptor signaling pathway.
  - Inappropriate B-cell receptor signaling is implicated in the proliferation and survival of malignant B cells.
  - Down-regulating Btk with PCI-32765 has the potential to treat patients with non-Hodgkin's Lymphoma (NHL) and chronic lymphocytic leukemia (CLL), as well as patients with autoimmune diseases.
- Although Btk has been viewed as a promising target for some time, developing inhibitors has been a difficult task. PCI-32765 is a specific, covalent inhibitor which is administered orally once daily.



# Case Study: Pharmacyclics

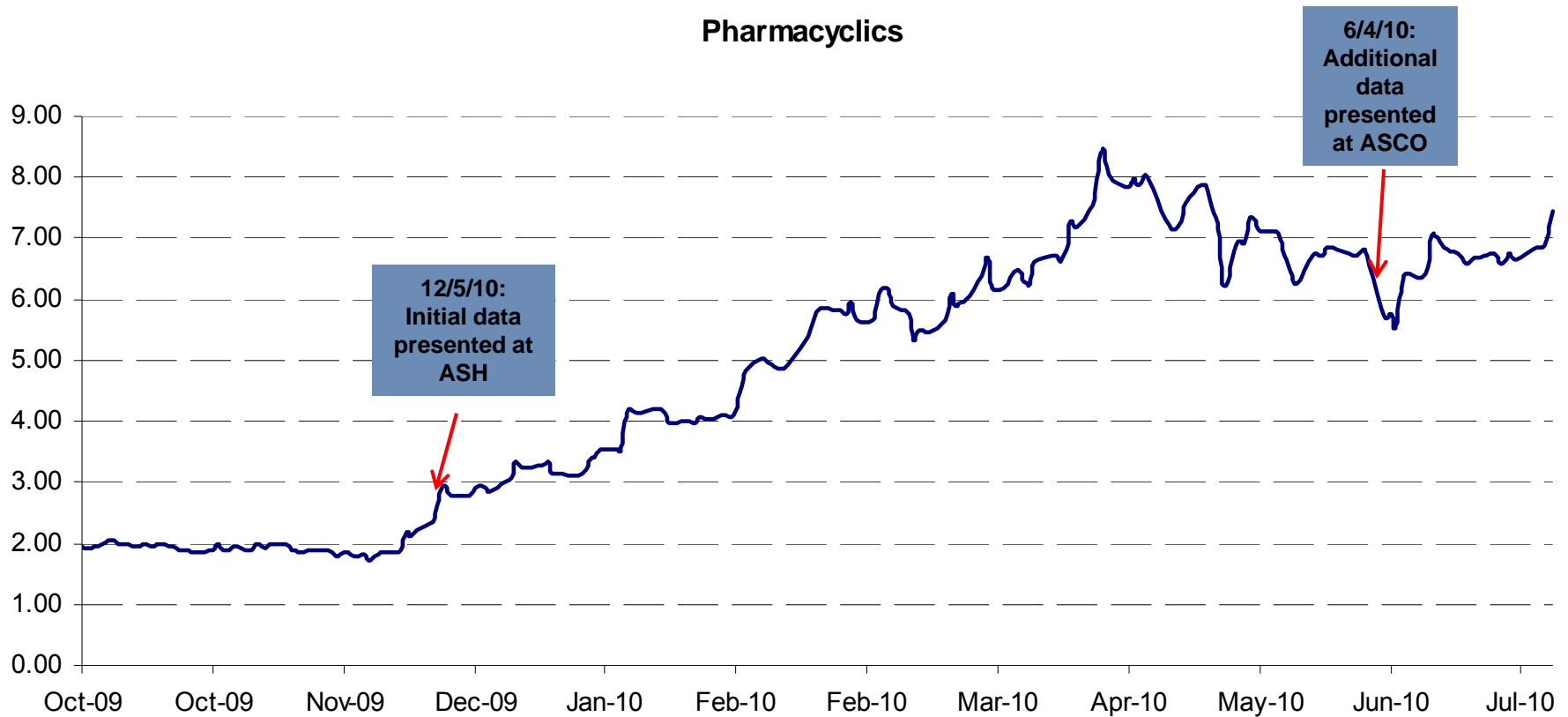
## From promising target to potential breakthrough product

- A phase I trial of PCI-32765 was initiated in April 2009 for refractory B-cell NHL and CLL
- Initial data were presented in a poster session at the American Society of Hematology conference in December
  - ▶ For the 16 patients at the two lowest doses, five patients responded to the drug. Relatively little toxicity was seen.
- We followed up with key clinical investigators and thought leaders about the potential of the compound
- Following positive due diligence, the Trust initiated a position in PCYC.
- At the American Society of Clinical Oncology meeting in June, Pharmacyclics presented updated phase I data
  - ▶ 9 out of 11 (82%) evaluable patients with CLL responded
  - ▶ 3 out of 4 (75%) patients with mantle cell lymphoma responded
  - ▶ Side effects were modest
- This robust activity in heavily pretreated patients should lead to accelerated pathways to the market

# Case Study: Pharmacyclics

From promising target to potential breakthrough product

- PCYC share price driven by strong clinical data



# Positive Catalysts and Newsflow for the balance of 2010

## Plenty of catalysts to drive momentum in the sector

- Pivotal data expected soon:
  - ▶ Vertex's Telaprevir (Hepatitis C infection)
  - ▶ Onyx's Carfilzomib (Myeloma)
  - ▶ Isis' Mipomersen (Hypercholesterolemia)
  - ▶ Incyte's INCB18424 (Myelofibrosis)
  - ▶ Regeneron's VEGF-EyeTrap (Wet AMD)
- Significant regulatory decisions expected:
  - ▶ Theratechnologies' Tesamorelin (HIV lipodystrophy)
  - ▶ Savient's Krystexxa (Gout)
  - ▶ Human Genome Sciences' Benlysta (Lupus)
  - ▶ Vivus' Qnexa (Obesity)
  - ▶ Arena's Lorcaserin (Obesity)
  - ▶ Amylin's Bydureon (Diabetes)

### Upcoming medical conferences



(VRTX/VRUS/MVIRB)



(HGS/SVNT)



(INCY/PCYC/CELG)



# Investment Outlook

# Biotechnology Outlook for 2010

- Now that healthcare reform legislation has passed, we believe biotech is poised to outperform the market. Even in down markets, we think biotech can be defensive, just as it was in 2008.
- On a historical basis, biotech valuations are at the lowest levels in 15 years. The P/E multiples relative to the companies' growth prospects are at a significant discount to pharma.
- Several clinical and regulatory catalysts are due to occur over the next 12 months, and there are a number of blockbuster drugs due to be introduced over the next couple of years.
- FDA appears to be approving drugs on a more timely basis (Genzyme's Lumizyme and Amgen's Prolia both approved early).
- The pace of M&A should remain robust. BIOG has benefited from this M&A activity historically and will continue to do so in the future.



# Appendix

# OrbiMed Investment Professionals

## Partners

**Samuel D. Isaly, *Managing Partner***  
 B.A.: Princeton University  
 M.Sc. (Econ.): London School of Economics

**Sven H. Borho, *CFA, Partner***  
 University of Bayreuth  
 M.Sc. (Econ.): London School of Economics

**Carl Gordon, *Ph. D., CFA, Partner***  
 B.A.: Harvard University  
 Ph.D.: Molecular Biology, M.I.T.

**Michael Sheffery, *Ph.D., Partner***  
 B.A.: Princeton University  
 Ph.D.: Molecular Biology, Princeton Univ.

**Jonathan Silverstein, *J.D., Partner***  
 B.A.: Denison University  
 J.D./M.B.A.: Univ. of San Diego

**W. Carter Neild, *CFA, Partner***  
 B.A.: Emory University  
 M.B.A.: University of Chicago

**Geoffrey Hsu, *CFA, Partner***  
 A.B.: Harvard University  
 M.B.A.: Harvard University

## Public Equity

**Richard Klemm, *Ph.D., CFA***  
 B.A.: University of California, Berkeley  
 Ph.D.: Molecular Biology, M.I.T.

**Trevor Polischuk, *Ph.D.***  
 Ph.D.: Neuropharmacology, Queen's Univ.  
 M.B.A.: Queen's University

**Kuhn Tsai, *M.D.***  
 A.B.: Harvard University  
 M.D./M.B.A.: University of Chicago

**William Sawyer**  
 B.S.: Pharmacology, Rutgers University  
 M.B.A.: New York University

**C. Scotland Stevens**  
 B.S.: UNC Chapel Hill  
 M.B.A.: University of Pennsylvania

**Tadd Wessel**  
 B.A.: Biology, Princeton University

**Matt Rizzo**  
 M.B.A.: Duke University

**Jung Ryu**  
 B.A.: Dickinson College

## Private Equity

**Samuel Wertheimer, *Ph.D.***  
 B.A.: Johns Hopkins University  
 M.P.H.: Yale School of Public Health  
 Ph.D.: Immunology, NYU School of Medicine

**David Bonita, *M.D.***  
 A.B.: Harvard University  
 M.D./M.B.A.: Columbia University

**Rishi Gupta, *J.D.***  
 B.A.: Biochemical Sciences, Harvard Univ.  
 J.D.: Yale Law School

**Chau Khuong**  
 B.S.: Biology, Yale College  
 M.P.H.: Yale School of Public Health

**David Darst**  
 A.B.: Harvard University  
 M.B.A.: Harvard University

**Vivian Liu**  
 B.A.: Biology, Stanford University

## Venture Partners

**Klaus Veitinger, *M.D., Ph.D.***  
 M.B.A.: INSEAD, France  
 M.D./Ph.D.: University of Heidelberg

## Asia Private Equity

**Nancy Chang, *Ph.D.***  
 B.S.: National Tsing Hua University  
 Ph.D.: Biological Chemistry, Harvard Univ.

**Jonathan Wang, *Ph.D.***  
 M.B.A.: Stanford University  
 Ph.D.: Molecular Neurobiology, Columbia Univ.

**Sunny Sharma, *M.D.***  
 M.B.A.: I.I.M., Bangalore  
 M.D.: Christian Medical College, Ludhiana

**Swati Bansal, *C.F.A.***  
 B.E.: BMS College of Engineering, Bangalore  
 M.B.A.: ICFAI University, Hyderabad

**Lefei Sun, *Ph.D.***  
 B.S.: Tsinghua University  
 Ph.D.: Neurosciences, Johns Hopkins Univ.

**Trency Gu, *Ph.D.***  
 B.S.: Biology, Shanghai Jiatong Univ.  
 Ph.D.: Molecular Biology, Shanghai Jiatong Univ.

**Thomas Schuetz, *M.D., Ph.D.***  
 M.D.: Harvard Medical School  
 Ph.D.: Genetics, Harvard

## Trading

**Andrew Kanarek, *CFA***  
 B.S.: New York University  
 B.E.: Stevens Institute of Technology

**Jason Kahn**  
 B.S.: University of Wisconsin

**Kevin Olsen**  
 B.S.: New York University

**Mohammad Ayach**  
 B.S.: Mathematics, Stony Brook Univ.

## Finance

**Eric Bittelman, *CPA***  
 B.A.: S.U.N.Y Stony Brook  
 M.B.A.: Baruch College

**Donald Bennett, *CPA***  
 B.A.: St. Johns University

**Kerrie Swingle**  
 B.A.: Drew University

**William Price**  
 B.S.: Villanova University  
 M.B.A.: Fordham University

**Emily Fung**  
 B.S.B.A.: Washington University



# BIOG Portfolio Management Team



**Geoffrey C. Hsu, CFA**, is a General Partner of OrbiMed. He joined the firm in 2002 as a public biotechnology analyst. Prior to joining OrbiMed, he worked as a financial analyst in the healthcare investment banking group at Lehman Brothers. Mr. Hsu received his A.B. degree summa cum laude from Harvard University and holds an M.B.A. from Harvard Business School. Prior to business school, he spent two years studying medicine at Harvard Medical School.



**Richard D. Klemm, Ph.D., CFA**, joined OrbiMed in 2000 as a public biotechnology analyst. He completed a Ph.D. from the Massachusetts Institute of Technology in Molecular Biology in 2000. Dr. Klemm has published scientific articles in the fields of DNA replication and transcription. He received a B.A. from the University of California, Berkeley in 1994 with majors in molecular and cell biology and economics.



**Sven H. Borho, CFA**, is a founding General Partner of OrbiMed. Mr. Borho is a portfolio manager for OrbiMed's public equity funds and he heads the firm's trading efforts. He started his career in 1991 when he joined Mehta and Isaly as a Senior Analyst covering European pharmaceutical firms and biotechnology companies worldwide. In 1993, Mr. Borho became portfolio manager to investment funds under management. Mr. Borho studied business administration at Bayreuth University in Germany and received a M. Sc. (Econ.) from The London School of Economics; he is a citizen of both Germany and Sweden.



**Carl L. Gordon, Ph. D, CFA**, is a founding General Partner of OrbiMed and Co-Head of Private Equity. Mr. Gordon is active in both private equity and small-capitalization public equity investments. He was a senior biotechnology analyst at Mehta and Isaly from 1995 to 1997. He was a Fellow at The Rockefeller University from 1993 to 1995. Mr. Gordon received a Ph.D. in Molecular Biology from the Massachusetts Institute of Technology. His doctoral work involved studies of protein folding and assembly. He received a Bachelors degree from Harvard College.



**Samuel D. Isaly** is a founder and the Managing Partner of OrbiMed. Mr. Isaly has been active in global healthcare investing and analysis since 1968 when he joined Chase Manhattan Bank in New York. During his career, Mr. Isaly has been a pharmaceutical analyst with Merrill Lynch, Legg Mason and SoGen Swiss International. Mr. Isaly created OrbiMed's asset management business in 1989 through OrbiMed's predecessor organization, Mehta and Isaly. Mr. Isaly has a B.A. in Economics from Princeton University and a M. Sc. (Econ.) from The London School of Economics.

