MEHTA PARTNERS

Global Healthcare Investments

OUTLOOK 2009

BioPharma Challenges Remain

Opportunities On the Horizon

BioPharmaceutical Industry Outlook

Mehta Partners' Outlook 2009 – Executive Summary

GLOBAL BIOPHARMA FACING CHALLENGES—SALES & PROFIT TRENDS 2009-12

Sector	Sales Growth (%)	EPS Growth (%)	PE	PEG	EV/ EBITDA	Price/ Book Value	Mkt Cap/ Sales	Net Margin (%)	ROE (%)
Indian Generics	12.0	14.2	10.8	0.8	**6.6**	1.2	1.2	14.2	14.8
Mature Biotech	8.8	11.2	12.2	1.1	**8.7**	2.8	4.4	33.7	21.7
Japan Generic	14.9	11.0	14.8	1.3	**8.8**	1.8	1.2	6.6	**9.5**
Global EU[2]	**1.8**	4.6	11.3	2.5	**5.7**	1.7	2.5	27.8	19.0
Specialty	(0.6)	2.4	11.4	4.8	**7.6**	1.6	2.2	18.9	13.6
Japan Majors	**(0.5)**	2.4	12.8	5.4	**5.9**	1.5	2.2	17.6	**11.6**
Global US	**(0.2)**	0.1	**8.6**	157.6	**5.5**	1.9	2.3	27.5	22.4

Source: Mehta Partners, Company Reports

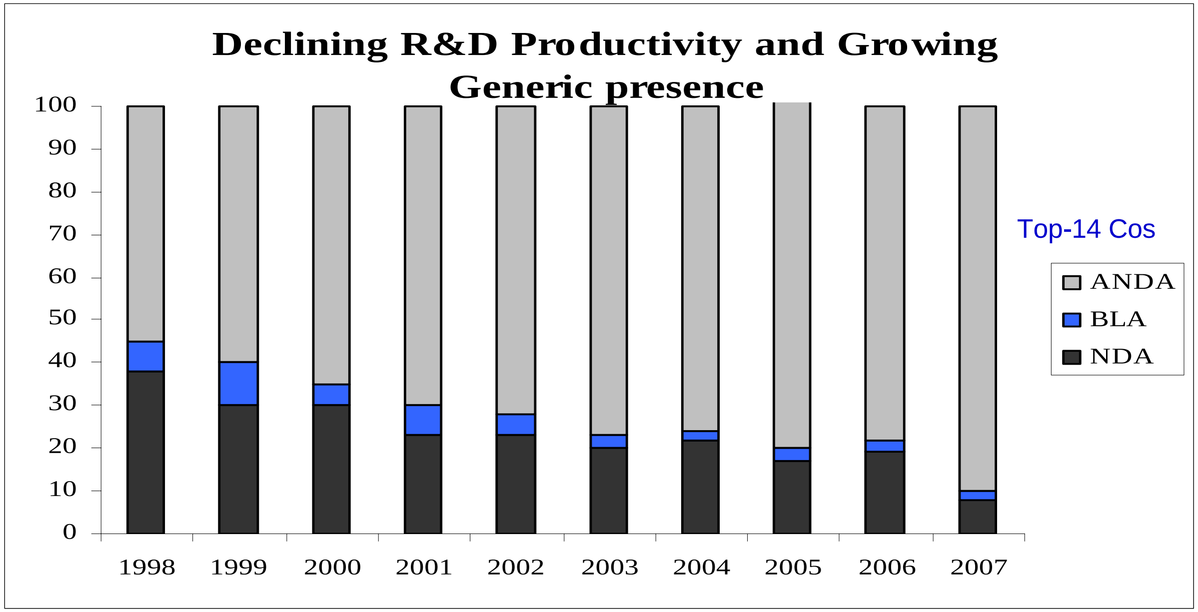
MEHTA PARTNERS

Market Value Leadership Shuffle

- Genentech is ranked sixth by market value; bigger than Abbott, Sanofi or Merck
- Gilead is ranked sixteenth by market value; larger than Lilly or Bristol Myers Squibb
- Celgene market value is twice that of Biogen Idec, larger than Schering Plough and Astellas
- Teva is ranked 19th by market value
- Roche, Bayer, Bristol now Specialty Pharma Companies? Copying Cephalon and Shire?
- Pfizer, Merck, GSK, Novartis, Lilly and many others have emerging markets prioritised

Looking For The Next Batch of Leaders

Historical R&D Productivity = Valuations



Global Pharma Valuations: Declining Trend

	2000	2001	2002	2003	2004	2005	2006	2007	2008
P/E Multiple	32.3	28.2	19.2	20.4	20.1	17.8	19.3	17.2	13.0
P/BV Ratio	13.2	9.0	5.7	5.6	4.1	4.2	5.1	4.3	3.4
P/S Ratio	6.0	5.2	3.4	4.0	3.6	3.4	3.3	3.2	2.5
EV/EBITDA	21.4	16.7	12.7	13.4	11.7	11.1	12.3	10.2	8.3

But Do These Multiples Reflect Challenges Ahead?

Challenges Ahead

Escalating Healthcare Burden is Not Sustainable in Major Markets

- Obama Aiming For Healthcare Inflation Parity With GDP Growth
- Generics vs. Innovative Product Flow—Red Ink Ahead!
  - Biosimilars to Constrain Next Decade as Small Molecules Did Last Decade
  - Generics in Japan—a $25 Billion High Margin Opportunity
  - Generics Offer Some Respite in Healthcare Inflation, Unit Share From 67% to 80%
  - Demise of Authorized Generics + Therapeutic Substitution
- Evidence Based Reimbursement or Comparative Data—Money Back Guarantee!
- Patients Feeling Fine Despite Deferring Healthcare—Further Questioning Pharma Value

Challenges Ahead

- **IP vs. Exclusivity Period — "Are Patents Granted Too Easily?"**
- **Health reforms everywhere, from the US to Japan**
  - From Part D drug rebates to least costly alternative among 115 options in the US
  - Implicit parity for long-listed-drug prices with generics — Discounts from 30% to 50%
  - Pricing freedom no more
- **Will life cycle management strategies remain rewarding?**

Pharma Sales: Past, Present, and Future

USD (m)	2005	2006	2007	2008	2009	2010E	2011E	2012E
Global/Amer.Nor xMex	133,282	136,485	147,208	157,687	160,655	163,745	155,524	145,815
% Chg	3.8	2.4	7.9	7.1	1.9	1.9	-5	-6.2
Global/Europe west	145,769	162,530	178,006	184,896	191,721	197,260	198,565	194,747
% Chg	13.2	11.5	9.5	3.9	3.7	2.9	0.7	-1.9
Global/AsPac.Japan	37,539	38,797	40,619	49,356	50,510	50,799	48,505	47,762
% Chg	4	3.4	4.7	21.5	2.3	0.6	-4.5	-1.5
SpecialtyPharma/Amer.Nor	8,028	10,049	11,503	11,584	11,964	12,635	13,439	11,319
% Chg	11	25.2	14.5	0.7	3.3	5.6	6.4	-15.8
SpecialtyPharma/Europe we	9,589	10,654	10,093	12,143	12,801	13,683	14,558	14,851
% Chg	3.7	11.1	-5.3	20.3	5.4	6.9	6.4	2
SpecialtyPharma/AsPac.Ja	3,009	2,915	2,412	2,872	2,903	2,918	2,842	2,832
% Chg	35.9	-3.1	-17.3	19.1	1.1	0.5	-2.6	-0.4
MatureBioTech/Amer.Nor xl	16,680	20,284	23,233	27,035	29,787	32,460	35,447	37,816
% Chg	22.6	21.6	14.5	16.4	10.2	9	9.2	6.7
MatureBioTech/AsPac.Othe	2,090	2,147	2,656	3,139	3,813	4,899	6,572	8,697
% Chg	0	2.7	23.7	18.2	21.5	28.5	34.1	32.4
Generics/AsPac.Japan	810	877	917	1,212	1,441	1,633	1,865	2,108
% Chg	42.6	8.3	4.6	32.1	18.9	13.3	14.2	13.1
Generics/AsPac.India	4,558	6,473	7,921	9,106	10,251	11,435	12,836	14,341
% Chg	45.8	42	22.4	15	12.6	11.6	12.3	11.7
TOTALS	**361,353**	**391,211**	**424,569**	**459,031**	**475,846**	**491,468**	**490,152**	**480,288**
% Chg Total	9.8	8.3	8.5	8.1	3.7	3.3	-0.3	-2

Source: Mehta Partners, Company Reports

Rising Star Macro Overview

Acorda**,** AMAG, Arqule, Auxilium, **BioMS,** Incyte, **Intercell, Intermune,** Isis, **LifeCycle,** Ligand, **Myriad,** Nektar, Neurocrine, **NicOx,** Rigel, Sequenom

Parameters For RS Investment Success

- ***Cash Reserves – One of the Important Parameters for Stock Selection…*****Cash for at least 18 months** to sustain burn/investments in PhII and PhIII clinical development of own pipeline.

- **Disciplined R&D expenditure.**

- **Partnership with a large company** for at least one of its compounds that validates the promise, while reducing risk

- A **First in Class or Best in Class** compound.

- Ability to develop drug for an **Unmet Need**.

- Innovative and **Proprietary Cutting Edge Technology** and/or discovery platform.

- Track record to bring a compound from the **Bench to Proof of Concept** stage and (in a handful of circumstances) to the market place.

Drug Development at What Cost?

"Average cost" per NMEs at RS is ~$1.9b vs. Global's avg cost per NMEs is ~$5.6b

Company	Cumulative Burn ($, m)	NME launched	Late Stage Compounds	Net Cash ($, m)
Acorda	324.1	1	1	263.0
Alnylam pharma	242.9	0	2	420.1
Arena	656.5	0	2	149.3
Arqule	322.8	0	2	149.7
Basilea pharma	452.3	1	2	296.1
BioMS	115.6	0	1	80.5
Durect	265.2	0	1	62.3
Galapagos	87.4	0	0	32.3
Incyte	1,130.9	0	5	(143.8)
Intercell	150.8	0	6	264.2
Intermune	723.1	0	2	178.0
Lifecycle	84.6	0	3	142.7
Ligand	610.0	1	3	72.3
Myriad	190.1	1	1	308.0
Neurocrine	674.4	0	1	(12.0)
NicOx	245.0	0	2	195.0
Rigel	468.4	0	3	136.8
SeattleGenetics	283.4	0	3	187.0
Sequenom	510.9	0	3	111.8
Total	**7,538.4**	**4**	**43**	

Company Name	NME Approvals (1999-2008)	Cumulative R&D Spend in $m (1999-2008)	Compounds in PhIII (as on Nov'08)	Cum. Burn/ no. of Products ($m)
Novartis	14	47,193	18	2,622
Pfizer	13	67,658	6	9,665
Glaxo	8	43,621	14	3,116
Merck	7	34,500	8	4,312
SGP	7	18,543	11	1,686
BMS	6	24,213	7	3,459
Wyeth	6	24,378	5	3,483
Sanofi-Aventis	6	32,881	21	1,495
Eli Lilly	4	26,568	8	3,321
Roche	4	45,462	5	9,092
AstraZeneca	3	35,529	8	3,553
J&J	3	52,363	5	10,473
Abbott	2	18,279	1	18,279
Novo Nordisk	2	9,525	1	9,525
Total	**85**	**480,713**		

Source: Mehta Partners

MEHTA PARTNERS

Recession to Foster a Symbiotic Relationship

- Fair Value of Select RS companies in current market conditions and desperate need of Global Pharma to acquire late-stage pipeline from RS companies tilts negotiation in favor of RS.

Company	Net Cash ($m)		FCF ($m)	
	2008E	2010E	2007A	2010E
Pfizer	22,300.0	37,800.0	11,890.0	19,279.0
Roche	18,545.5	27,190.1	5,747.0	9,107.0
Novartis	**4,182.0**	**16,650.0**	**6,661.0**	**11,162.0**
Sanofi Aventis	(210.0)	13,020.0	9,856.0	15,143.0
Wyeth	7,700.0	13,000.0	4,607.0	4,800.0
Merck	4,700.0	12,700.0	5,389.0	7,323.0
Bristol Myers	2,400.0	6,740.0	2,056.0	4,785.0
Eli-Lilly	1,100.0	6,600.0	4,104.0	5,555.0
Novo Nordisk	1,562.9	4,482.8	1,389.0	2,037.0
AstraZeneca	(5,500.0)	3,258.0	(8,731.0)	8,108.0
Abbott	(5,400.0)	1,800.0	5,984.0	7,172.0
Schering-Plough	**(4,279.0)**	**715.0**	**2,012.0**	**2,809.0**
GSK	(10,540.0)	(1,105.0)	11,880.0	11,275.0
Total	**36,561.4**	**142,850.9**	**62,844.0**	**108,555.0**

Source: Mehta Partners

Late-stage Pipeline is more Scarce than Cash

Deals Over Just 2-Months (Dec 08-Jan 09)

Originator	Licensee	Drug Name	Phase	Indication	Upfront (m)	Peak sales ($m)	% RS Ownership
Auxilium	Pfizer	Xiaflex	III/II	Dupuytren's contracture/ Peyronie's disease	$75	1,000	$410m in milestones + Double digit royalties
Exelixis	BMS	XL184 and XL281	III and I	XL 184, XL 281	$195	750	$485m in milestones + Double digit royalties
Alnylam	Cubist	ALN-RSV01	II	Respiratory Syncytial viral Infection	$20	300	$102.5m in milestone + Double digit royalty
Dow Pharma	Valeant	Acanya clindamycin + other programs	Marketed, PhII (3) + PhI (1)	Skin Acne and other Dermatology products	$285	400	fully acquired
Map Pharma	AstraZeneca	budesonide	III	Pediatric Asthma	$40	500	$275m regulatory milestones + upto $585m sales milestone
Pierre Fabre	Forest	F2695	II	Depression	$75	750	Undisclosed Milestones and royalties
Avexa	Progen	Apricitabine	III	HIV infection	$61.1m	750	56% by Progen and 44% Avexa
Indevus	Endo	Nebido, testosteron depot and octreotide	Registered, PhIII	Male hypogonadism and acromegaly	$370m + $270m in milestone s	750	Fully acquired
S*BIO & BTG	Onyx	SB1518, SB1578 and BGC 945	PhI and PC	Cancer and Autoimmune	$38	750	$72m in milestone (BTG) + undisclosed royalties (BTG, S*BIO)
Memory	Roche	CNS programs	PhII	CNS focused pipeline portfolio	$50 ($0.61/share, 319% premium)		Fully Acquired
CV Therapeutics	Astellas	Cardiovascular programs	Marketed, Mid-stage	Cardio-focused pipeline portfolio	$1b ($16/share, 41% premium)		Still Pending

Targeting Unmet Needs

Company	Mkt Val ($m)	Indication	Compound	Peak Sales ($m)	Partners
Tercica	Acquired	Acromegaly, Short stature in children	Somatuline Depot, Increlex	500 +250	Ipsen
Dyax	158	CABG. HAE	DX-88	250+150	Cubist, Dompe pharma
Inspire	189	Dry Eye	Prolacria, Retasis	500	Allergan
Auxilium	864	Dupuytren’s contracture, Peyronie’s disease, and Frozen Shoulder syndrome	Xiaflex	900	None
Jerini	Acquired	HAE	Icabitant	200	Shire
Isis	1,108	He FH, HoFH	Mipomersen	1,200	Genzyme
Intermune	404	IPF	Pirfenidone	1,200	None
BioMarin	1,769	Aldurazyme	MPS I	300	Genzyme
NicOx	484	OA Pain w/o CV risk	Naproxcinod	750	None
Basilea	1,225	Oral Dermatitis (CHD)	Toctino	500	None
Rigel	197	Oral RA drug	R788	1,000	None
Acorda	581	Oral-MS co-morbidities-	Fampridine-SR	700	None
Alnylam	752	RSV-therapeutic	ALN-RSV01	750	Kyowa Hakko (JP)
BioMS	174	SPMS_MS	Dirucotide	2,000	Lilly
Eyetech	Acquired	Wet AMD	Macugen	750	OSI pharma
Genentech	76,520	Wet AMD	Lucentis	2,000	Roche

Source: Mehta Partners

Journey From Discovery To Marketplace

Company	Mkt Val ($m)	Drug	Launched (L)/ Registered (R)	Partner	Indication	Est. Peak Sales ($m)	Yr of Profitability
Acorda	581	Fampridine-SR	R	None	MS-Co Morbidities	700	2011
		Zanaflex	L	None	Spasticity.	70	
Auxilium	864	Testim Gel	L	None	Sexual Dysfunction	150	2011
Basilea	1,225	Toctino	L	None	CHD	400	2012
		ceftobiprole	R/L	J&J	MRSA	800	
CV Therap.	505	Ranexa	L	None	Angina	1,000	2010
		ACEON	L	Solvay	Hypertension	500	
Intercell	1,190	JEV vaccine	R	Novartis and CSL	Traveler's Vaccines-JEV	600	2009
Ligand	126	Avinza	L	Elan	Pain	220	2011
		Fablyn	R	Pfizer	Osteoporosis	440	
		Bazedoxifene	R	Wyeth	Osteoporosis	440	
		Promacta	L	GSK	ITP	1,000	
Myriad	2796	BRACAnalysis, Melaris; Colaris, TheraGuide 5-FU	L	None	Predictive and Personalized Medicines	1,200	2009

Source: Mehta Partners

MEHTA PARTNERS

Mature Biotech Macro Overview

Celgene, CSL, Cubist**, Genzyme**

Mature Biotech: Near Term Strengths

1. Net Present Value (NPV) of marketed products >85% of the current market capitalization.

2. Leadership in synergistic therapy areas to its marketed products

3. Longer Patent Protection and R&D productivity not as bad as Global Pharma

4. Managements proactively refocusing to avoid the same fate as that of Global Pharma

Will the Pipeline Deliver?

Company	Cum. R&D expenses 1998-2008 ($m)	Cum. spend for R&D compound acquisitions ($m)	Total R&D spend 1998-2008 ($m)	NMEs approved 1998-2008	Compounds in PhIII (as on Nov'08)	Avg peak sales of launched products	Est. avg peak sales late stage compounds	R&D product-ivity
Celgene	1,890	3,237	5,127	4	4	1,013	588	125%
Gilead	2,876	4,075	6,951	6	3	1,200	483	124%
Genzyme	3,878	4,715	8,593	10	6	400	1,033	119%
Onyx	624	-	624	2	2	225	131	114%
BioMarin	569	316	885	3	-	250	-	85%
Amgen	19,969	21,900	41,869	6	4	1,567	963	32%
Total			**64,049**	**31**		**4,655**	**3,198**	

Source: Mehta Partners

How Good a Return Do These Numbers Suggest?

R&D Success - How to Measure?

Independent	Mkt Cap (11/26/2008, $m)	New Entrants to MB Club	Mkt Cap (11/26/2008, $m)	Acquired
Actelion	5,619	Alexion	2,646	Chiron
Amgen	59,227	BioMarin	1,634	Endo
Cangene	255	Intercell	1,175	Icos
Celgene	24,275	Myriad	2,827	Ilex Oncology
Cephalon	4,850	Onyx	1,545	Imclone
Cubist	1,418	**Candidates for MB Club**		Immunex
Elan	2,938	Amylin	966	Medimmune
Enzon	226	Basilea Pharma	762	MGI Pharma
Genentech	79,218	Crucell	867	Millennium
Genzyme	17,505	CV Therapeutics	556	Omrix
Gilead	41,018	Emergent Biosolutions	641	Pharmion
Morphosys	445	GenMab	1,873	Praecis
OSI Pharma	2,155	Indeveus	186	Synergen
Protein Design	1,120	Isis Pharma	1,113	Tularik
Sepracor	1,287	NPS Pharma	280	**Merged**
United Therap.	1,291	Vertex Pharma	3,712	Biogen Idec
Viropharma	903			Serono-Merck

Source: Mehta Partners, Bloomberg

$400 Billion Market Value, 50 Companies, 30 Years

Indian Generics Macro Overview

Cadila, Dr. Reddy's, Ipca

Indian Generics: Global Generics Opportunity

- Generic penetration is a global phenomenon driven by

  (1) Need to reduce healthcare burden by inexpensive yet quality drugs in regulated markets and

  (2) Need for quality products that can replace innovator's products in Emerging Markets.

- Besides geographic diversification, the globalizing Indian Pharma are capitalizing both on branded and pure generics.

Indian Generics: Challenges To Going Global

- The largest generics markets – the US, UK, Germany are increasingly commoditized
- And many other regulated markets are going the same way
- Emerging markets, though lucrative, carry the risk of a sudden change in government policies (Romania, China) and credit risks (Russia)
- Challenges of cultural diversity

Indian Generics: Regulated Markets – In Summary

- Low cost manufacturing remains a must to penetrate the pure generics market.
- In countries with low generics penetration, focus on commoditized generics may offer an entry point
- In countries with high generics penetration, focus on complex technology and a product basket too needed for superior returns

Integrated manufacturing with complex chemistry skills

Indian Generics: Emerging Markets = Branded Generics

- Characteristics of the healthcare system of emerging markets are significantly different than that of developed markets – often opposite.

- Growth drivers for emerging markets are rising GDP and preference for quality products ultimately enabling branding

- Branded generics have significant advantages, including (1) brand longevity rather than just patent window and (2) better margins

- Require investments in brand creation, and competitive shifts still do not assure predictable sales.

Indian Generics: Domestic Market Still the Backbone

- Domestic pharma market grew by 12% annually over the past couple of years due to several reforms that have helped:
  - **Reduce fragmentation by weeding out unhealthy competition from several unorganized players**
  - **Increase the importance of branding**
  - **Increase average pricing – unlike several years in past**
- We expect the reforms to have a long lasting effect and thus forecast 12-15% annual growth rate over the next 5 years
- Domestic market offers cash flow for Indian companies to invest in the global generic opportunities

India Generics Sales: Past, Present and Future

Generics/AsPac.India AsPac.India	'00-'07 CAGR	'07-'08 % Chg	'08-'09 % Chg	'09-'10 %Chg	'09-'11 CAGR	'09-'13 CAGR
Aurobindo		6.2	15.5	11.5	11.7	11.8
Biocon Ltd	37.5	41.8	22.1	20	15.9	14
Cadila	25.8	17	25	14.4	13	10.7
Cipla	25	16.1	17.5	12.8	12.4	11.3
Dishman	261.8	25.8	14.7	16.6	16.4	16
Dr. Reddy's	29.1	16.4	14.2	11.8	11.5	10.9
Ipca		18.6	17	15.5	14.9	13.6
Lupin	20.4	24.2	12.8	12.3	11.8	10.5
Piramal		11.5	6.6	11.6	8.9	10.1
Ranbaxy	24.3	2.9	3.5	7.7	8.7	10.8
Sun Pharma	31.4	25	9.4	7.4	14.8	12.7
Subtotal	**30.6**	**15**	**12.6**	**11.6**	**11.9**	**11.5**

Source: Mehta Partners, Company Reports

Emerging Markets

From 10% share of global pharma sales (and little profits) in the 1980s, rapidly expanding middle class commands about one-quarter share today

If the current trends continue, three broadly equal regional shares are likely next decade

- Europe, North America, ROW or emerging markets
- How may current economic turmoil affect these markets?

Emerging markets are much more diverse than the EU, but need more assurance for quality products

- Branded generics offer a sustainable and superior margin growth
- Several countries beginning the R&D journey

Reputation for quality, combined with cutting edge education needed

- Significant investments of time and money

A Different Parallel and Autonomous Management Structure

Two Major Growth Avenues

- Cost-Effective Innovative Therapeutics

  Access to All Who May Benefit!

- Growing Middle Class in Emerging Markets

  “Out of Pocket” Market

Of Course, a Clear Headed, Disciplined Management Critical

Generic Acceptance in Major Markets

Country	Value Share (2007) %	Volume Share (2007) %	Out of Pocket Spend as % of total healthcare (2006)
Australia	30.0	>60*	32.8
Canada	18.1	44.5	29.6
France	**8.5**	**17.0**	**20.3**
Germany	20.3	54.0	23.4
Italy	**3.5**	**7.0**	**22.9**
Japan	**5.2**	**16.8**	**17.8**
Netherlands	19.5	50.0	18.2
Spain	**6.1**	**12.0**	**27.5**
Sweden	15.8	>30*	18.8
UK	20.8	65.0	12.6
US	23.6	63.0	12.6

Source: OECD Health Data, June 2008

MEHTA PARTNERS

Therapeutic Substitution + Evidence Based Reimbursement = ??

BioSimilars On the Horizon

Company	Product	US Patent Expiry	EU Patent Expiry	Sales ($m) 2008E	Sales ($m) 2013E
Genzyme	Cerezyme	2013	Expired	1,229	1236
	Synvisc	2012	2013	264	484
	Renagel/ Renvela	2012/ 2013		684	885
Celgene	Vidaza	2011	2018	235	668
Gilead	Hepsera	2014	2011	352	563
Amgen	Epogen	2013	2013	2500	1926
	Neupogen /Neulasta	2013/ 2015	2013/ 2015	4576	3128
	Aranesp	2024	2014	3300	2553

Source: Company Reports, Mehta Partners

Major Movers In Market Share Rank
Several Indian Pharma Companies to Enter the Top-50 by 2012!

Company	Gain >3	Rank 2007	Rank 2012	Company	Drop >3	Rank 2007	Rank 2012
Celgene	9	41	32	**Forest**	-12	27	39
Aurobindo	9	56	47	**King**	-10	36	46
Dr. Reddy's	7	45	38	**Kyorin**	-7	53	60
Gilead	6	25	19	**Kissei**	-7	59	66
Ranbaxy	6	40	34	**Actelion**	-6	47	53
Bicon Ltd	6	65	59	**Santen**	-6	50	56
Cipla	5	48	43	**Merck KGaA / Serono**	-4	18	22
Wockhardt	5	55	50	**Akzo**	-4	24	28
Genzyme	4	28	24	**Pfizer**	-3	1	4
United Therap.	4	67	63	**Dainippon Sumitomo**	-3	33	36
Shire	3	34	31	**H. Lundbeck**	-3	37	40
Cephalon	3	38	35	**Ono**	-3	46	49
Nicholas Piramal	3	51	48	**Valeant**	-3	49	52
Sun Pharma	3	54	51	**Imclone**	-3	52	55
Lupin		57	54	**Sawai**	-3	62	65
				Nichi-iko	-3	64	67

Note: MP projection of 2012 rank is based on bottoms-up financial models and sales projections.

Source: Mehta Partners, Company Reports

Opportunities

- Innovation
  - **Justifying Risk Capital**
  - **Incentivizing Right Team**
  - **Patiently Praying for Pipeline Productivity**
  - **Potential Major Growth Cycle After X5-Years**
- Emerging Markets
  - **Rapid Growth If Market Forces Survive**
  - **Improving Margins in Many Markets**
  - **Manufacturing “Out-In Sourcing”**

Challenge of Parallel Autonomous Managements!

Innovative BD Opportunities Remain Scarce

- Cancer
  - **Accounts for over a third of the industry R&D**
  - **Successes Proving Lucrative**
  - **Cost: Benefit Increasingly Questionable**
  - **Competitive Landscape More Confused**

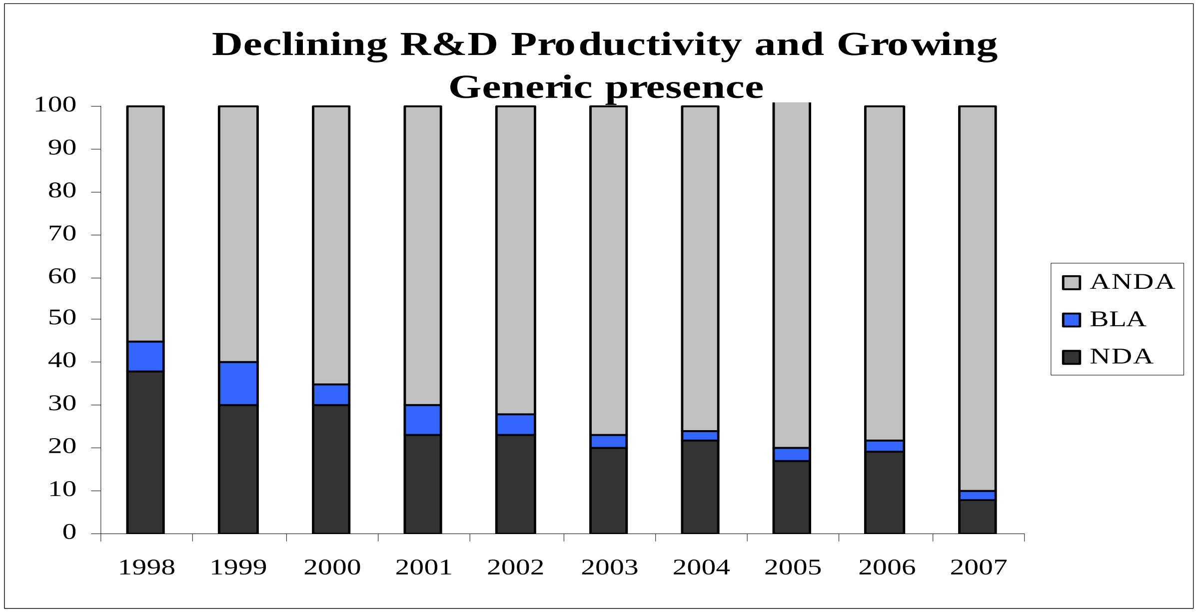
- Diabetes
  - **Science Still Maturing, FDA Cautious**
  - **Need and Opportunity Growing**
  - **Truly Effective Drugs May Sell Themselves On the Web**

Even Generous Selection Criteria Yield Only a Few Choices

Global Pharma Macro Overview

J&J, Novartis, Schering Plough

Valuations & R&D Productivity go Hand in Hand



Global Pharma Valuations: Declining Trend

	2000	2001	2002	2003	2004	2005	2006	2007	2008
P/E Multiple	32.3	28.2	19.2	20.4	20.1	17.8	19.3	17.2	13.0
P/BV Ratio	13.2	9.0	5.7	5.6	4.1	4.2	5.1	4.3	3.4
P/S Ratio	6.0	5.2	3.4	4.0	3.6	3.4	3.3	3.2	2.5
EV/EBITDA	21.4	16.7	12.7	13.4	11.7	11.1	12.3	10.2	8.3

Will This Trend Continue?

Untenable Trends

Another Decade Before R&D Yields More Sustainable Flow:

- The 14 global companies reported 2007 pharma sales of ~ $360 billion
- Their R&D spend in 2007 was $65 billion
- Over the next 8-years, to balance patent expiries and normal sales erosion, these 14 companies will need an estimated 25 NMEs/year (or 2 NMEs/company/year to simply maintain 2007 sales base of $360 billion
- Cumulative R&D spending will exceed $500 billion over these 8-years
- For our entire 350 company universe, the US FDA approved only 18 NMEs in 2007, which somewhat improved to 24 NMEs last year!

Global Pharma Sales: Past, Present and Future

Global/Amer. Nor xMex	'00-'07 CAGR	'07-'08 % Chg	'08-'09 % Chg	'09-'10 %Chg	'09-'11 CAGR	'09-'13 CAGR
Abbott	20.5	11.5	1.7	7.7	5.5	2.3
Bristol-Myers	0.3	12.4	5.2	5	-1.4	-7.6
Lilly	8.4	2.9	6.3	7.9	5.5	-0.6
Merck	4.3	-3.6	2.8	-1.8	-0.9	-4.5
Pfizer	10.6	-0.6	-2.1	-1.7	-8.9	-9.5
Schering-Plough	2.1	61.1	3.3	4.2	4.4	4.9
Wyeth	9	4.6	1.7	-1.2	-6	-2.8
Subtotal	**7.4**	**7.1**	**1.9**	**1.9**	**-1.6**	**-3.4**
Europe west						
AstraZeneca	9.9	-0.4	0.6	-0.3	-3.3	-3.6
GlaxoSmithkline	7.6	-7	1.9	2.6	1.6	0.6
Novartis	6.4	8.8	5.5	5.9	5.6	1.9
Novo Nordisk	17.3	13	9	6.7	4.1	1.5
Roche	16.6	13.6	6.2	1.3	2.1	2.3
Sanofi-Aventis	40.9	4.5	2.8	3.3	1.2	-2.9
Subtotal	**13.1**	**3.9**	**3.7**	**2.9**	**1.8**	**-0.1**

Source: Mehta Partners, Company Reports

Japan Macro Overview

Astellas, Chugai, Towa

Tough Road Ahead for Domestic Cos

- Healthcare reforms to usher in:
  - **Decreasing ‘Yakka-sa’**
  - **Domestic companies vulnerable**

Global-JP Companies	Domestic-JP Companies	Generic-JP Companies
Takeda Astellas Daiichi-Sankyo Eisai	Mitsubishi-Tanabe Chugai Dainippon-Sumitomo Kirin-Kyowa-Hakko Kyorin	Sawai Towa Nichi-Iko Nippon-Chemiphar

- Near term risk of one time price-cuts in 2009

High Dependence on Long Listed Products Increasing

Company	Total revenue (¥b)	Domestic revenue (¥b)	Overseas revenue (¥b)	Long listed prod. revenue as % of total sales	
				2008	2013
Mitsubishi Tanabe	409.3	404.7	4.6	78.0	92.1
Kyorin	81.07	78.0	3.0	37.9	40.4
Dainippon Sumitomo	264.0	242.9	21.1	14.7*	39.7
Kyowa Hakko	392.0	375.7	16.3	20.3	31.1
Chugai	344.8	314.3	30.5	29.3	**26.0**

*Excluding Amlodipine

Globalization = Superior Value

- US/EU markets are superior despite their pressure points.
- Unlike in the past, new product pricing is often lower than in the US, which is further aggravated for receiving price cuts.

SUPERIOR BUSINESS RETURNS IN WESTERN MARKETS *

Company	R&D Productivity[1] (x)	ROCE (%)	ROE (%)	O M Excluding R&D expense (%)
		Japanese Global Companies		
Astellas	6.40	17.20	10.40	37.90
Daiichi Sankyo	5.86	17.90	7.00	33.00
Eisai	6.41	19.80	12.90	31.50
Takeda	7.04	17.30	14.70	48.20
Average	**6.42**	**18.05**	**11.25**	**37.65**
		Japanese Domestic Companies		
Chugai	6.07	16.00	11.10	36.00
Dainippon Sumitomo	7.00	11.10	7.90	28.40
Shionogi	6.02	8.7	5.7	30.9
Kyorin	7.38	7.60	4.20	24.60
Kyowa Hakko	4.55	11.30	6.50	17.10
Mitsubishi Tanabe	5.39	13.40	8.70	34.70
Average	**6.06**	**11.35**	**7.35**	**28.61**

*average of previous 5 years
1 Sales/R&D expenditure (x); average of 5 yrs

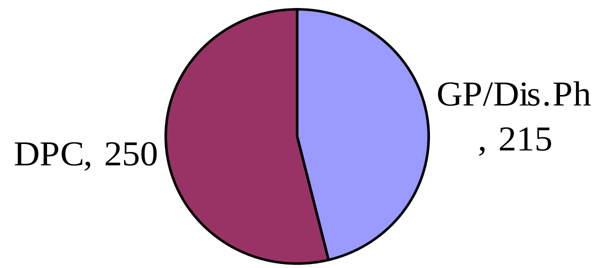
Source: Mehta Partners

MEHTA PARTNERS

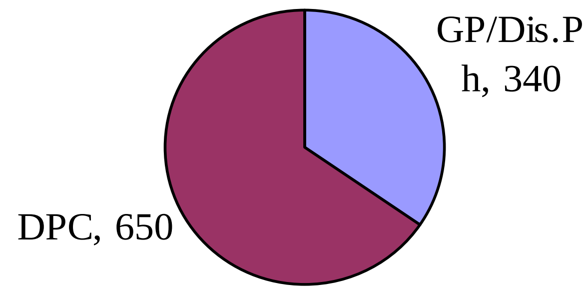
Japan Generics -All set to grow

- Poor generic uptake to date due to:
  - low margins to GPs & pharmacies
  - poor management quality of generic companies
  - psychological barriers
- Generic segment is projected to double by 2012 & triple in size by 2015 backed by pro-generic government reforms.
- Government aims at generic drugs share of 15% by value to current 6.4% by value in total drugs market.
- For generics, marketing/branding capabilities in GP/dispensing pharma market, and distribution capabilities into DPC/large hospitals segment will determine success.
- Near term opportunity lies in GP/dispensing pharma segments, and Sawai and Towa appeared best positioned to leverage benefits from pro-generic reforms.

FY 2008A
~6.4% of Market share



FY 2012E
~12.5% of Market share



Source: Company Reports, Mehta Partners

Japan Pharma Sales: Past, Present and Future

Global AsPac.Japan	'00-'07 CAGR	'07-'08 % Chg	'08-'09 % Chg	'09-'10 %Chg	'09-'11 CAGR	'09-'13 CAGR
Astellas	162.4	14.1	0.7	-0.1	0.1	1.1
Chugai	8.7	8.7	14.5	9.6	8.8	7.2
Daiichi-Sankyo*	1.4	13.7	-4.5	-2.5	-0.7	-0.9
Eisai*	9.5	17.8	4.9	-4.4	-14.7	-14.1
Kyowa Hakko	99.7	85.3	-10.1	-0.5	-0.2	0
Shionogi	-10.2	21.4	7.3	7.8	7.1	3.5
Takeda	7.5	32	4.7	1.8	-3.4	-1.4
Tanabe/Mitsubishi	9.9	17.7	2.9	1.7	1.6	1.3
Subtotal	**8.5**	**21.5**	**2.3**	**0.6**	**-2**	**-1.2**
SpecialtyPharma/AsPac.Japan						
Dainippon Sumitomo	111.5	15.4	-0.3	-2.4	-4.2	-4.6
Kyorin	3.8	29	4.3	7.1	5.8	5.3
Subtotal	**24.6**	**19.1**	**1.1**	**0.5**	**-1**	**-1.3**
Generics/AsPac.Japan						
Nichi-iko	62.3	42.6	24	20	17.7	16
Nippon Chem	52.5	23.9	9.7	9.4	10.5	12
Sawai	3	30.4	28.9	9.6	14.7	15.3
Towa		28.1	11.5	10.6	9.8	9.3
Subtotal	**26.3**	**32.1**	**18.9**	**13.3**	**13.8**	**13.5**

Source: Mehta Partners, Company Reports

Specialty Pharma Overview

Shire, United Therapeutics

Specialty Pharma Overview

- Avoiding R risk and conducting prudent D is no longer unique, leading many specialty pharma companies to flog products with poor cost: benefit profile, aggravated by poor patent protection

- Current recession likely to weed out such products, as patients seek value and save money

- Strong niche focused companies to continue to do well and form the basis for our analysis and recommendations of companies with limited near term risk to sales, superior profits, and a steady pipeline

- Lifecycle management and many lifestyle approaches unlikely to be successful

"It's the Economy…"

US Pharmacies Filled Fewer Prescriptions in 2008, as Patients Are More Cost-Sensitive

- **Decreasing sales trends of lifestyle or elective products**
  Allergan experiencing a slowdown in the Aesthetics market: Breast implants and Botox drop as early as Q108, and the company predicts a "challenging" 2009.

EFFECT OF THE ECONOMY ON ALLERGAN'S QUARTERLY SALES

	Q107	Q207	Q307	Q407	Q108	Q208	Q308
Breast Aesthetics ($m)	**69**	**79**	**70**	**81**	**79**	**89**	**73**
Quarterly Growth	*18%*	*14%*	*(12%)*	*16%*	*(3%)*	*13%*	*(18%)*
Year over year growth		*22%*	*29%*	*38%*	*13%*	*12%*	*4%*
Botox ($m)	**268**	**307**	**297**	**340**	**316**	**348**	**318**
Quarterly Growth	*(2%)*	*15%*	*(3%)*	*15%*	*(7%)*	*10%*	*(8%)*
Year over year growth		*24%*	*25%*	*24%*	*18%*	*13%*	*7%*
Facial Aesthetics ($m)	**43**	**49**	**49**	**61**	**53**	**64**	**58**
Quarterly Growth	*125%*	*14%*	*0%*	*24%*	*(13%)*	*21%*	*(9%)*
Year over year growth		*175%*	*226%*	*220%*	*23%*	*30%*	*18%*

Source: Company Reports

- **Cheaper (Generic) alternatives exist gaining favor**
  A single generic drug entry can challenge an entire therapeutic area, as Sepracor's Lunesta prescriptions have dropped -11.2% YoY to generic Ambien, and Forest's Lexapro is losing share to generic versions of Celexa, Zoloft and others

Economic Risk Factor Analysis

Company	Relative Economic Pressure	Competitive/IP Risk	Pipeline Risk	Comments
Allergan	High	Medium	Medium	Aesthetic sales could suffer from economic downturn, as well as competition from Reloxin (launch 09)
Cephalon	Medium	High	High	Nuvigil conversion critical and further M&A necessary for growth
Ipsen	Low	Low	High	Expectations for Reloxin and Taspoglutide may be high
Forest	Medium	High	High	Pipeline remains poor with me-too products like Milnacipran and aclidinium
King	Medium	High	Medium	Pricing and label of Remoxy could limit uptake and growth
Merck KG	Medium	Medium	High	LCD sales and margins declining; Mylinax (MS) appears high risk
Shire	Low	Medium	Medium	Adderall XR generics could be offset by HGT growth
Sepracor	Medium	High	High	Lunesta sales could suffer with Ambien CR generics and pipeline remains limited
United Therapeutics	Low	Medium	Medium	Market currently has low expectations for inhaled and oral remodulin

= Top Specialty Pharma Pick

Source: Mehta Partners, Company Reports

Specialty Pharma Sales: Past, Present and Future

SpecialtyPharma Amer.Nor xMex	'00-'07 CAGR	'07-'08 % Chg	'08-'09 % Chg	'09-'10 %Chg1	'09-'11 CAGR	'09-'13 CAGR
Allergan	21.7	9.9	3.3	6.2	5.8	3.9
Forest	51.9	4	8.2	5.4	9.1	-2.4
Cephalon	17.1	5.1	5.8	4.4	3.9	-14.7
King	19.3	-29.7	-13.9	-2	0.3	-8.8
United Therap.		39.9	29.6	38.8	29	20
Subtotal	**21.9**	**0.7**	**3.3**	**5.6**	**6**	**-2.8**
Europe west						
Ipsen		14.4	4.8	6.8	6.9	6
Merck KGaA/Serono	13	15.8	11	10.3	7.9	4.4
Shire	20.2	35.4	-6.6	-2.2	3.1	4.1
Subtotal	**17.1**	**20.3**	**5.4**	**6.9**	**6.6**	**4.5**

Source: Mehta Partners, Company Reports