

State of the Contract Dose Manufacturing Business March 2007

BioPharmos 2007
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Agenda

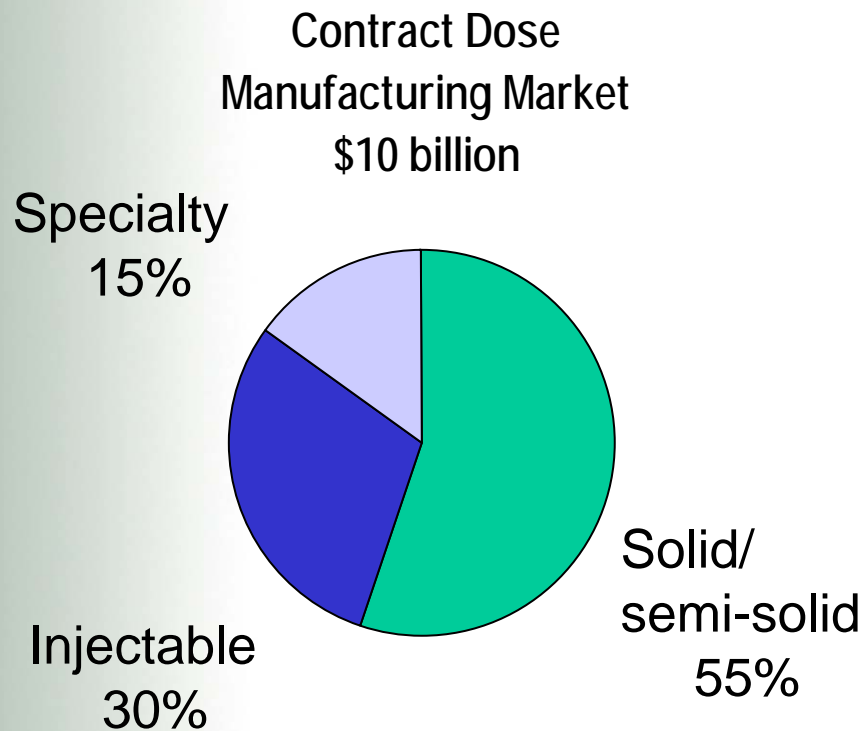
- Industry overview
- Market drivers
- Trends to watch
- Final thoughts

Key points

- A large industry with significant penetration
- Long-term trends are favorable
- Consolidation, new business models will emerge

Contract Dose Manufacturing Overview

A \$10 Billion Market



- Growth rate 5-10%
- Penetration: 25-30%
- Companies:
 - North America 100
 - Europe 300
 - Asia ?

Source: PharmSource Estimates

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Contract Dose Manufacturing Overview

Major contract dose manufacturers

	Revenue	Sites	Solid	Semi	Inject	Spec	NA	EUR
Cardinal Health	\$1,800	38	X	X	X	X	X	X
Patheon	607	14	X	X	X		X	X
Vetter	250	2			X			X
Hospira	290	5			X		X	X
DSM	250	1	X		X		X	
Famar	250	6	X	X	X			X
DPT	200	2		X			X	
Baxter	200	2			X		X	X
NextPharma	185	7	X	X	X			X
Banner	140	3				X	X	X
Haupt Pharma	125	4	X	X	X			X
Ben Venue	100	1			X		X	

•Source: Public reports, PharmSource estimates, \$ million
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Contract Dose Manufacturing Overview

Regional perspective

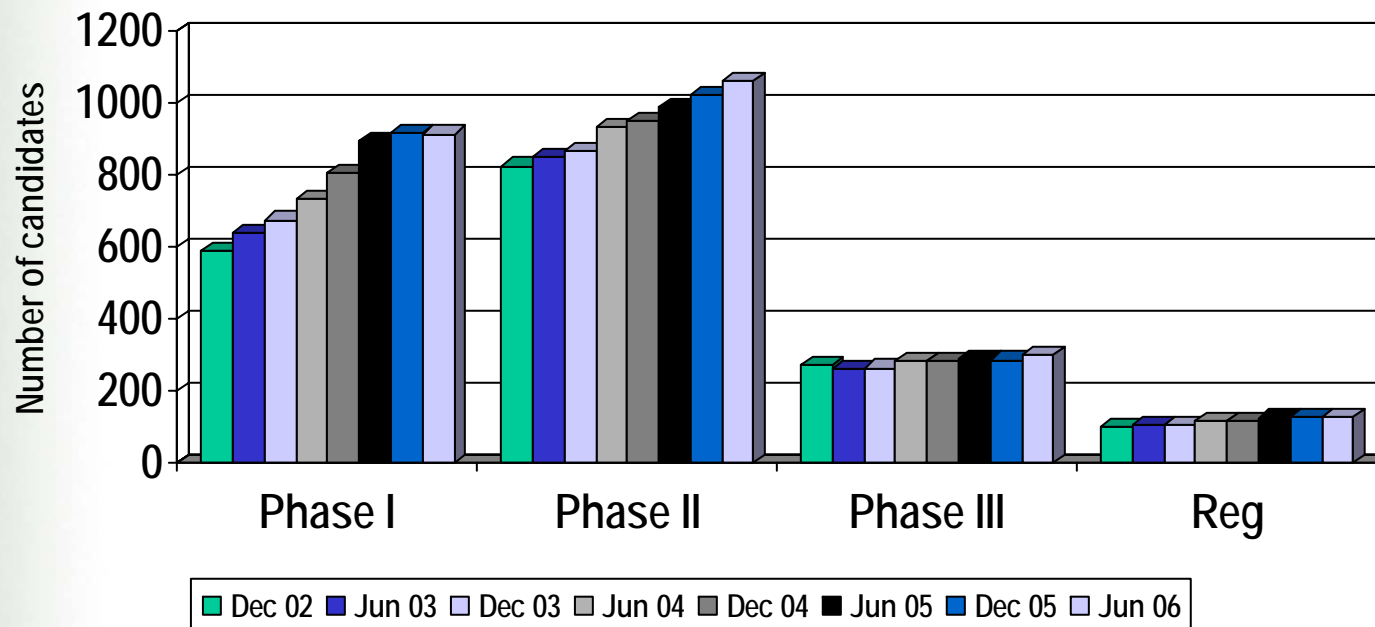
	North America	Europe	Asia
	Healthy, but a scramble	Overcapacity	Focus on generics
Opportunity	<ul style="list-style-type: none"> – Demand seems steady – Principal locus for NME opportunities 	<ul style="list-style-type: none"> – Localized markets – Generics important, under attack from Asia – Early stage companies not supported well 	<ul style="list-style-type: none"> – Local markets mostly OTC and generic – GMP players focus on US/EU generics exports – Japan opening to CMOs
Supply Base	<ul style="list-style-type: none"> – Easy entry for small and/or specialty players – Large players have failed to differentiate themselves 	<ul style="list-style-type: none"> – Few FDA compliant – Sponsors selling excess capacity – Former pharma plants are marginal 	<ul style="list-style-type: none"> – Thousands, but most lack EU/FDA compliance – US/EU CMOs exploring opportunities

Market drivers

Pipeline continues to grow

Global Drug Development Pipeline

Source: IMS and Bear Stearns



Market drivers

Big pharma will drive commercial opportunities

Key Big Pharma Trends

- Focus on cost reduction
 - Rationalizing manufacturing networks
 - Open to outsourcing
 - Supply-base consolidation

- Building pipelines through acquisition

Product acquisitions by top 10 pharma last 18 months

■ Preclinical/Phase I	52
■ Phase II/III	35
■ Marketed	5

Principal acquirers

■ Novartis	22
■ Pfizer	15
■ Roche	12
■ GSK	12
■ Merck	11

Market drivers

Manufacturing calculus is complex

Principal considerations

- Cost
- Security of supply
- Use of older and under-utilized facilities
- Strategic capabilities
- IP protection

Complicating factors

- Tax management
- Government subsidies
- Labor laws (esp. EU)
- Facilitating approvals
- Exchange rate exposure management

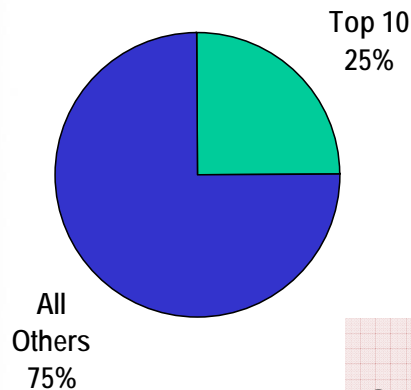
Challenge for CMOS

How to address this “total cost” calculus?

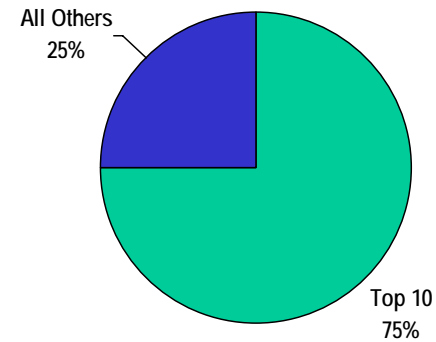
Trends to watch

Dose CM industry ripe for consolidation

Contract Dose Manufacturing Market Share



Contract Clinical Research Market Share



Dose CMOs

Solid dose	> 100
Injectable	> 75
Prefilled syringe	> 25
Softgel	> 10

Source: PharmSource estimates

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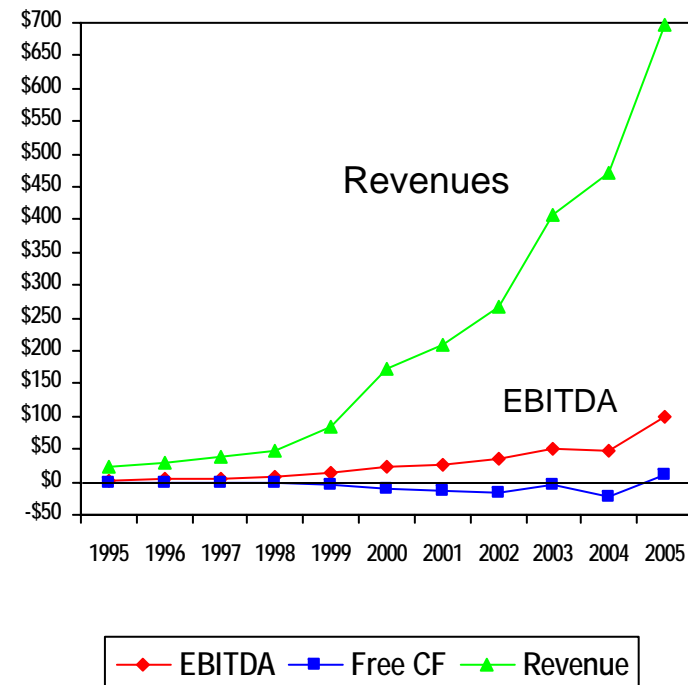
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Trends to watch

New business models will emerge

- Patheon, Cardinal models not successful
 - High investment costs
 - Marginal profitability
- Single dose, single site focus has worked best
 - Vetter, DPT
- Operations must be focus
 - Utilization
 - Continuous cost improvement
 - Project management

Patheon Strategy Has Not Been Profitable



Source: Patheon annual reports

Final thoughts

- Asian manufacturers will tackle generic opportunity ahead of CM
- Strength of the Euro will be a continuing competitive problem for European CMOs
- Entering a new phase for CMO industry