



Science For A Better Life

HealthCare

## Bayer R&D Investor Day 2005

December 8, 2005 | London



# Bayer HealthCare



Bayer R&D Investor Day 2005

**Competence in Life Cycle Management –  
Maximising the Value of Trasyolol**

**Kemal Malik**

Head of Global Development and Compliance  
Bayer HealthCare

## Forward Looking Statements



This presentation contains forward-looking statements based on current assumptions and forecasts made by Bayer Group management.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in our public reports filed with the Frankfurt Stock Exchange and with the U.S. Securities and Exchange Commission (including our Form 20-F). The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

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## Key Messages



- New indications, new formulations and combinations offer additional growth opportunities for marketed products
- Life cycle management of marketed products provides an attractive risk-reward balance
- Increased usage and new indications to raise peak sales potential of Trasylol to > € 500 million

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## Trasylol - Adding Value through Expanding Usage and New Product Indications



- Trasylol (aprotinin) is a significant biotechnology compound with attractive growth potential
- Future growth is driven by both increased usage within open heart surgery as well as by new indications
- Shift from the naturally sourced protein to recombinant product
- Trasylol has a peak sales potential of > € 500 million

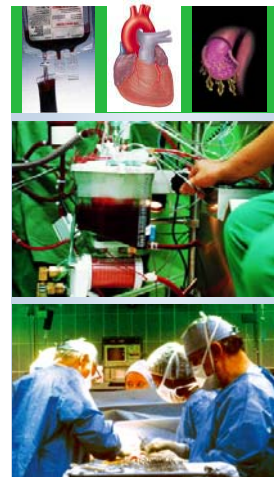


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## Trasylol Reduces Blood Loss in Open Heart Surgery



- Trasylol is a natural broad spectrum proteinase inhibitor obtained as a protein from bovine lung
- Trasylol modulates the systemic inflammatory response (SIR) associated with cardiopulmonary bypass (CABG) surgery
- By modulating SIR, use of Trasylol in CABG results in reduced bleeding and a decreased need for blood transfusion
- Use of Trasylol improves clinical outcome and reduces overall cost of cardiopulmonary bypass surgery



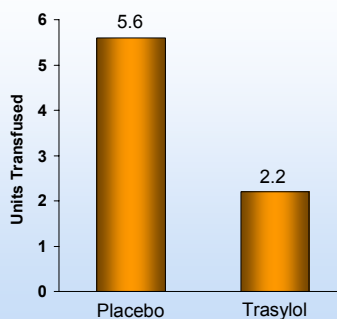
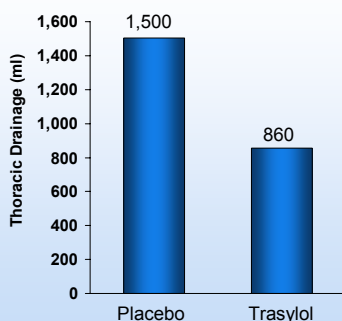
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## Impressive Clinical Efficacy in Cardiopulmonary Bypass Surgery



Reduction of thoracic drainage by 42%  
( $p < 0.001$ )

Reduction of transfusion requirement by 60%  
( $p < 0.001$ )



Repeat cardiopulmonary bypass operations

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Source: Lemmer et al. J Thorac Cardiovasc Surg 1994;107:543

## Further Potential for Blood Saving in Major Surgery



- Use of blood-sparing agents in cardiopulmonary bypass procedures increased from 45% in 1997 to >70% in 2004
- Need for more effective blood management is the main growth driver
- Trasylol continuously gaining market share in cardiopulmonary bypass surgery driven by changing clinical practice allied with strong clinical efficacy
- Major surgery associated with significant blood loss and transfusion requirement opening up additional market opportunities:

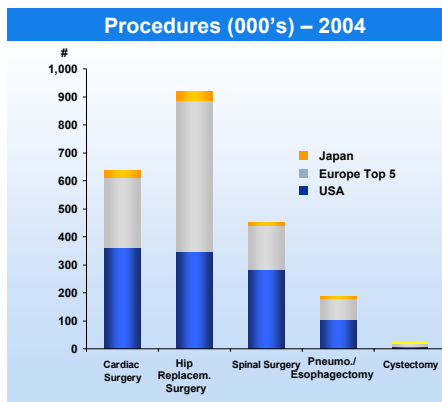
	Indication	Average percentage of patients getting blood transfusion	Average transfused blood volume (units)
<b>Orthopedic</b>	Hip surgery	45	1.9
	Knee surgery	32	1.7
	Spinal surgery	23	4.3
<b>Cancer</b>	Pneumectomy	29	2.3
	Cystectomy	49	3.5

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# Maximizing the Potential of Trasylol through New Indications



	Development in new indications	sNDA / MAA
Cardiac	CABG	Approved
	Total Hip Replacement	2006e
Orthopedics	Spinal Surgery	2007e
	Pneumo. / Esophagectomy	2008e
Oncology	Cystectomy	2008e

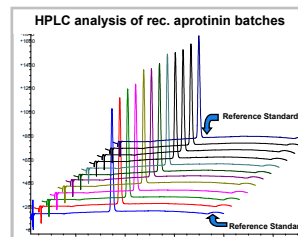


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# Recombinant Aprotinin - Leveraging our Expertise in Recombinant Technology



- Innovative production process for aprotinin, the active ingredient of Trasylol
- Technology shift from naturally sourced protein to recombinant product as already realized with factor VIII
- Overcomes constraints due to natural sourcing
- Yeast expression system
- Well established, proprietary manufacturing process
- NDA submission targeted for 2009



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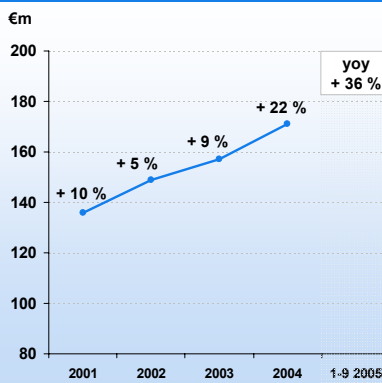
## Trasylol – A Growth Story that is Expected to Continue



- Double digit yoy growth rates expected to continue
- Increased usage in open heart surgery
- Approaching additional indications in major orthopedic and cancer surgery
- Technology shift to recombinant product on track

Peak sales potential > € 500m

Global annual sales of Trasylol



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## Committed to Achieving Our Milestones



- Commencement of studies in new indications in 1H'06
- Submission of sNDA/MAA for Trasylo<sup>l</sup> hip replacement indication in US and other key global markets in 2H'06
- Commencement of clinical PK study for recombinant aprotinin in 1H'06
- Submission of IND for recombinant aprotinin in the US in 1H'06



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