

# Investors Meeting

**May 27th – 28th, 2010**

**GRIFOLS**

# Grifols Management Team

Name	Position
Victor Grifols	Chairman / CEO
Ramón Riera	VP Marketing & Sales
Alfredo Arroyo	CFO
Greg Rich	CEO Grifols Inc
Juan Ignacio Twose	VP Industrial
Shinji Wada	CEO Biomat USA
Toni Paez, M.D.	Clinical Operations Manager
Chris Healey	V. P. Governmental Public Affairs
Nuria Pascual	Dep.Finance Director / IR Officer

# Grifols Investors Meeting – Agenda Day 1

## Thursday, May 27<sup>th</sup>, 2010: Phoenix (Arizona)

- |   |       |
|---|-------|
| – <i>Pick up at hotel (Sheraton Phoenix)</i>              | 07:30 |
| – <i>Reception of participants</i>                        | 08:00 |
| – <b>Plasma Economics</b>                                 | 08:30 |
| – <b>Q1 Results</b>                                       | 09:00 |
| – <b>Financial review</b>                                 | 09:30 |
| – <i>Coffee Break</i>                                     | 10:00 |
| – <b>The Incredible Journey of a Plasma Donation</b>      | 10:30 |
| – <i>Coffee Break</i>                                     | 11:45 |
| – <b>Plasma procurement overview</b>                      | 12:00 |
| – <b>Site visit: donor centre</b>                         | 12:30 |
| – <b>Q&amp;A</b>  | 13:30 |
| – <i>Lunch</i>  | 13:45 |
| – <i>Transport to airport &amp; Flight to Los Angeles</i> | 14:30 |

## Thursday, May 27<sup>th</sup>, 2010: Los Angeles (California)

- |   |       |
|---|-------|
| – <i>Pick up at the hotel (Sheraton Pasadena - Langham)</i> | 19:30 |
| – <b>Dinner at Grifols Premises</b>                         | 20:00 |
| – <i>Transport to hotel</i>                                 |       |

# Grifols Investors Meeting – Agenda Day 2

## Friday, May 28<sup>th</sup>, 2010: Los Angeles (California)

- *Pick up at hotel (Sheraton Pasadena - Langham)* 07:30
- **Market Overview** 08:30
- **Impact of US healthcare reform** 09:30
- *Coffee Break* 10:00
- **Capex** 10:30
- **R & D Review** 11:00
- *Coffee Break* 11:45
- **Site visit: Flebogamma DIF & Coagulation** 12:00
- **Q&A** 13:00
- *Lunch* 13:30
- **Site visit: Minifrac\*** 14:30
- *Transfers to airport*

*\* Optional, gowning required*



**This presentation contains forward-looking statements based on current assumptions and forecasts made by Grifols 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.**

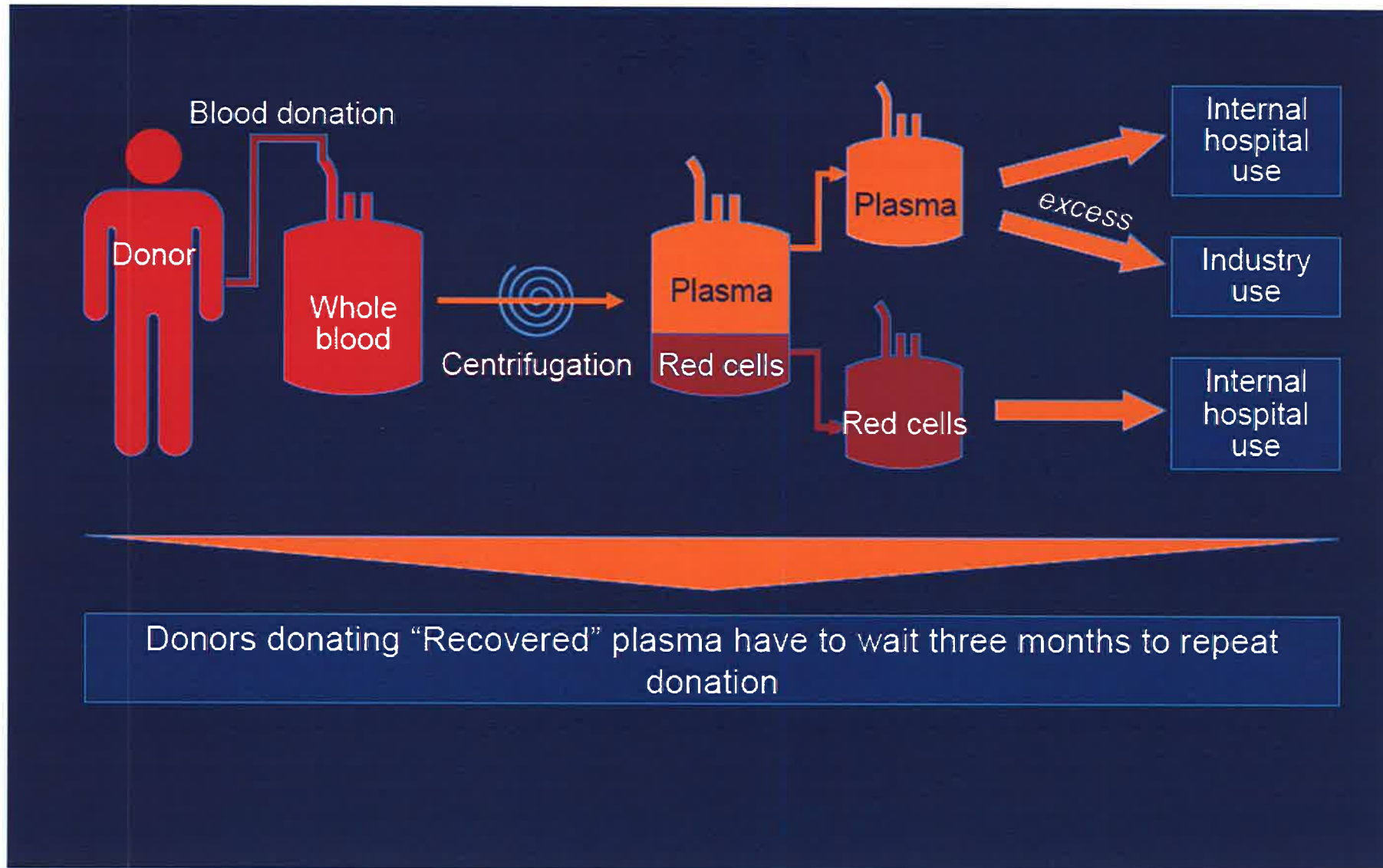
**These factors include those discussed in our public reports filed with the Madrid Stock Exchange.**

**The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.**

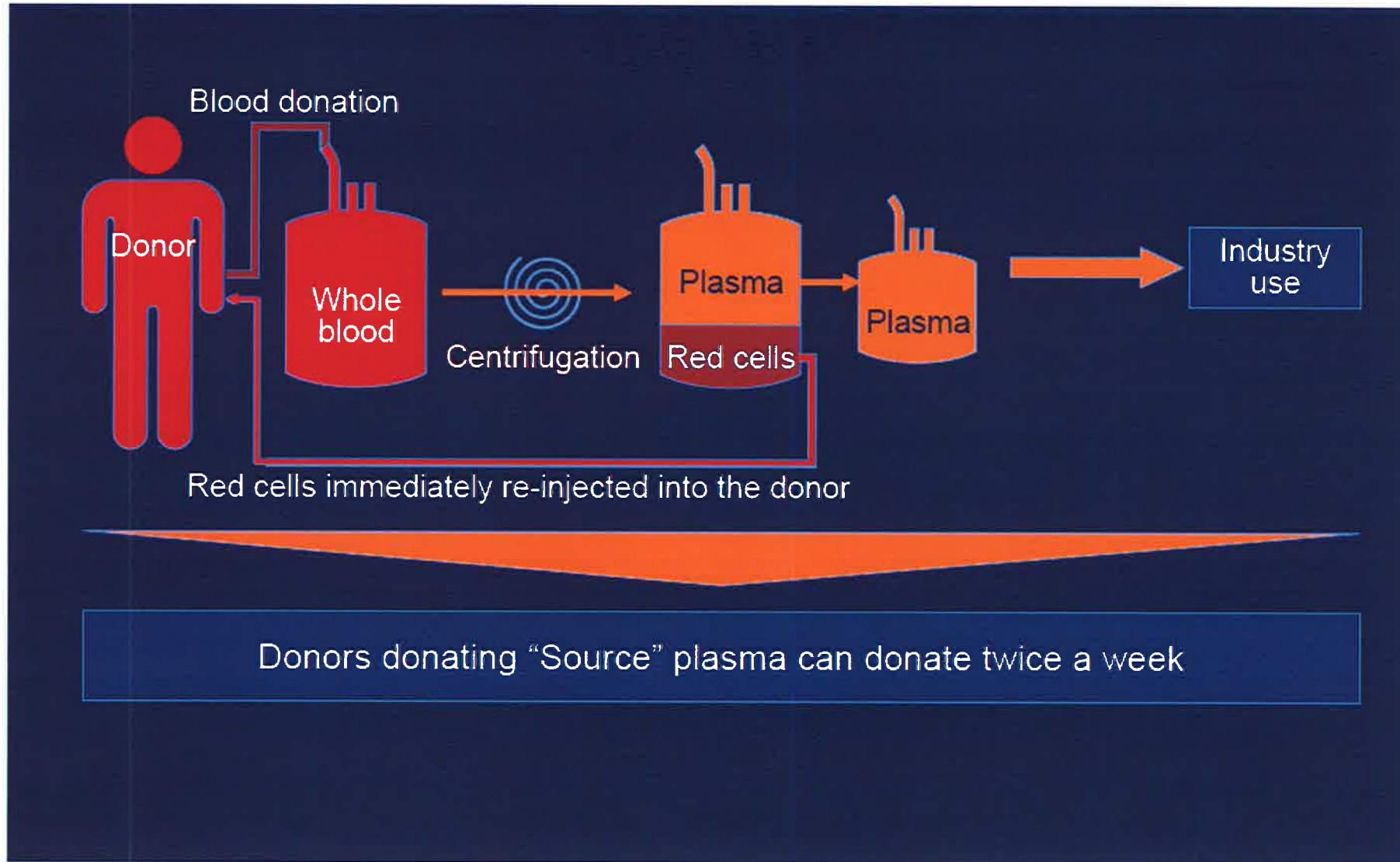
- Following the Spanish Stock Exchange (CNMV) Guidelines for investor meetings the information included in this presentation has been already filed in the CNMV.
- The Q&A session must be focused on the content of this presentation, including explanations and/or clarifications.
- Questions related to relevant information not included in this presentation can not be addressed.
- It is Grifols' investor relation policy not to provide with financial guidance in addition to the information contained in this presentation.

# Plasma Economics

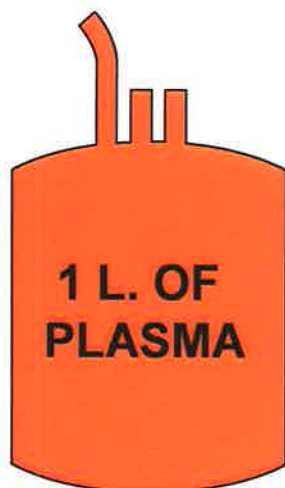
# “Recovered” plasma collection



# “Source” plasma collection



## Output per liter of Plasma



ALBUMIN	21 - 24 g.
IVIG	3 - 4.2 g.
FACTOR VIII	100 - 250 I.U.
FACTOR IX	200 - 350 I.U.
ALPHA 1	0.125 - 0.350 g.
AT-III	100 - 270 I.U.
FIBRINOGEN	0.5 - 1 g.
THROMBIN	17,000 - 22,000 I.U.
PLASMIN	20 mcg.
TOTAL PROTEINS IN PLASMA	Approx. 3,000

# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**

60												155			
95															
COST														COST & GROSS MARG.	
PLASMA	MANF.														
95,00	60,00														
<p style="color: red; text-align: center;">DATA IS NOT GRIFOLS ACTUAL BUT A "COCKTAIL" COMBINATION FROM INDUSTRY AVERAGE.</p>															

# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**

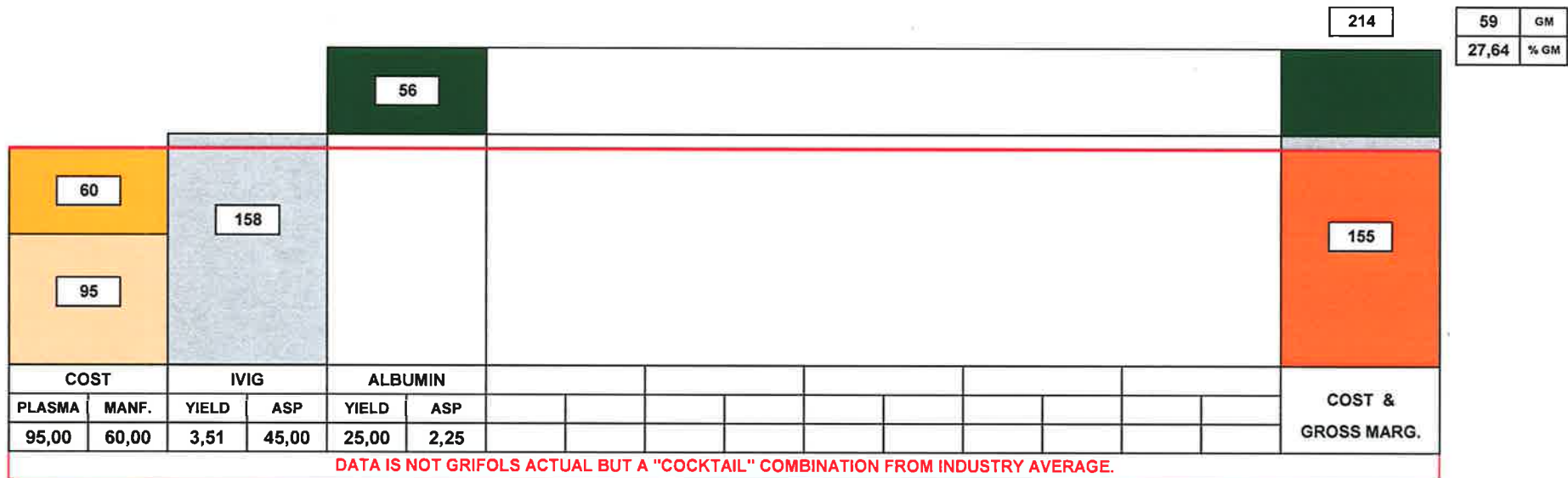
60		158				158				3 GM	
95		158				155				1,87 %GM	
COST		IVIG								COST & GROSS MARG.	
PLASMA	MANF.	YIELD	ASP								
95,00	60,00	3,51	45,00								
<p style="color: red; text-align: center;">DATA IS NOT GRIFOLS ACTUAL BUT A "COCKTAIL" COMBINATION FROM INDUSTRY AVERAGE.</p>											



# Plasma Economics (illustrative)

20XX

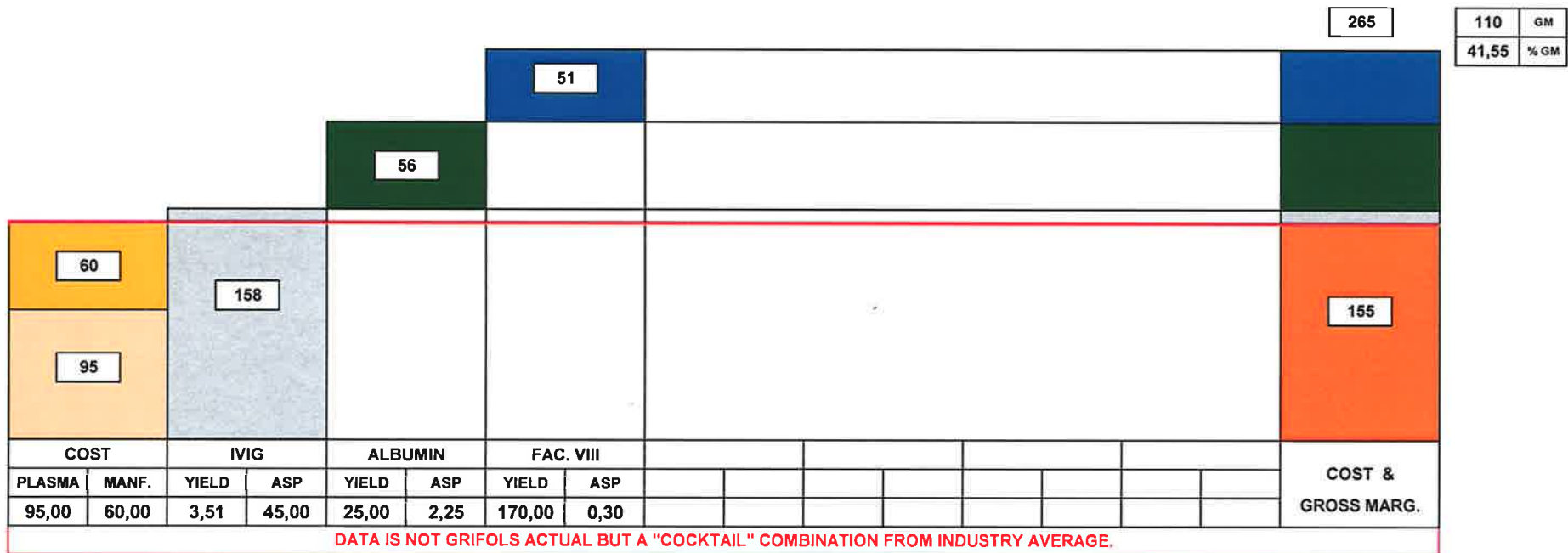
INCOME PER LITER OF PLASMA. **THE FIRST LITER.**



# Plasma Economics (illustrative)

20XX

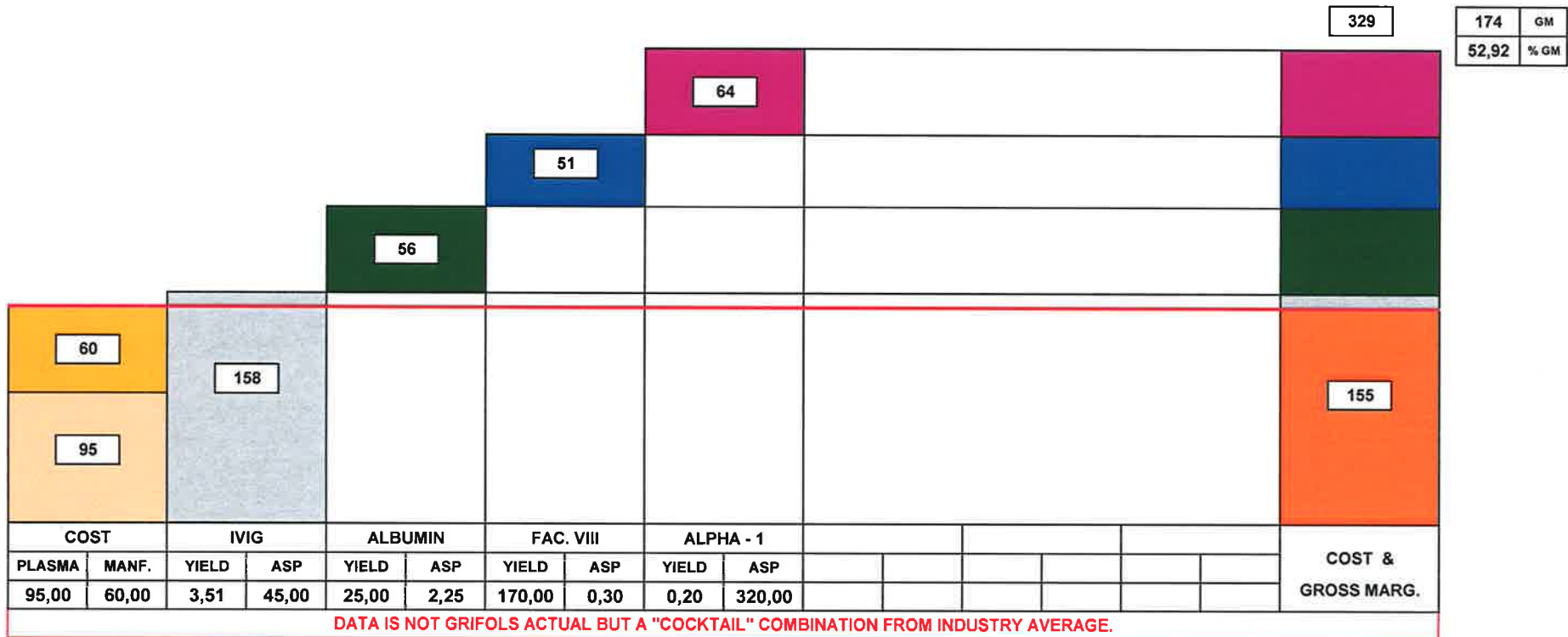
INCOME PER LITER OF PLASMA. **THE FIRST LITER.**



# Plasma Economics (illustrative)

20XX

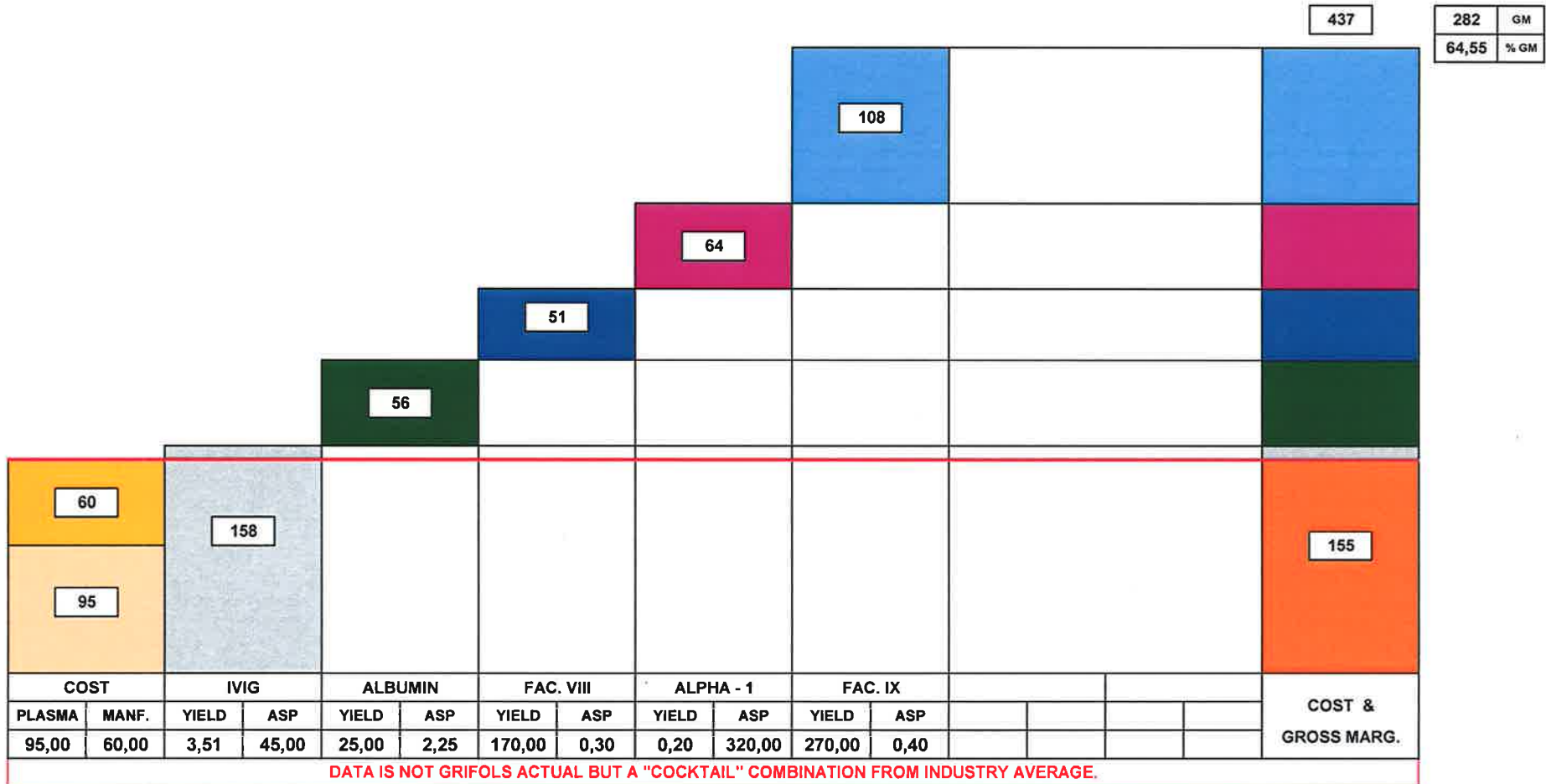
INCOME PER LITER OF PLASMA. **THE FIRST LITER.**



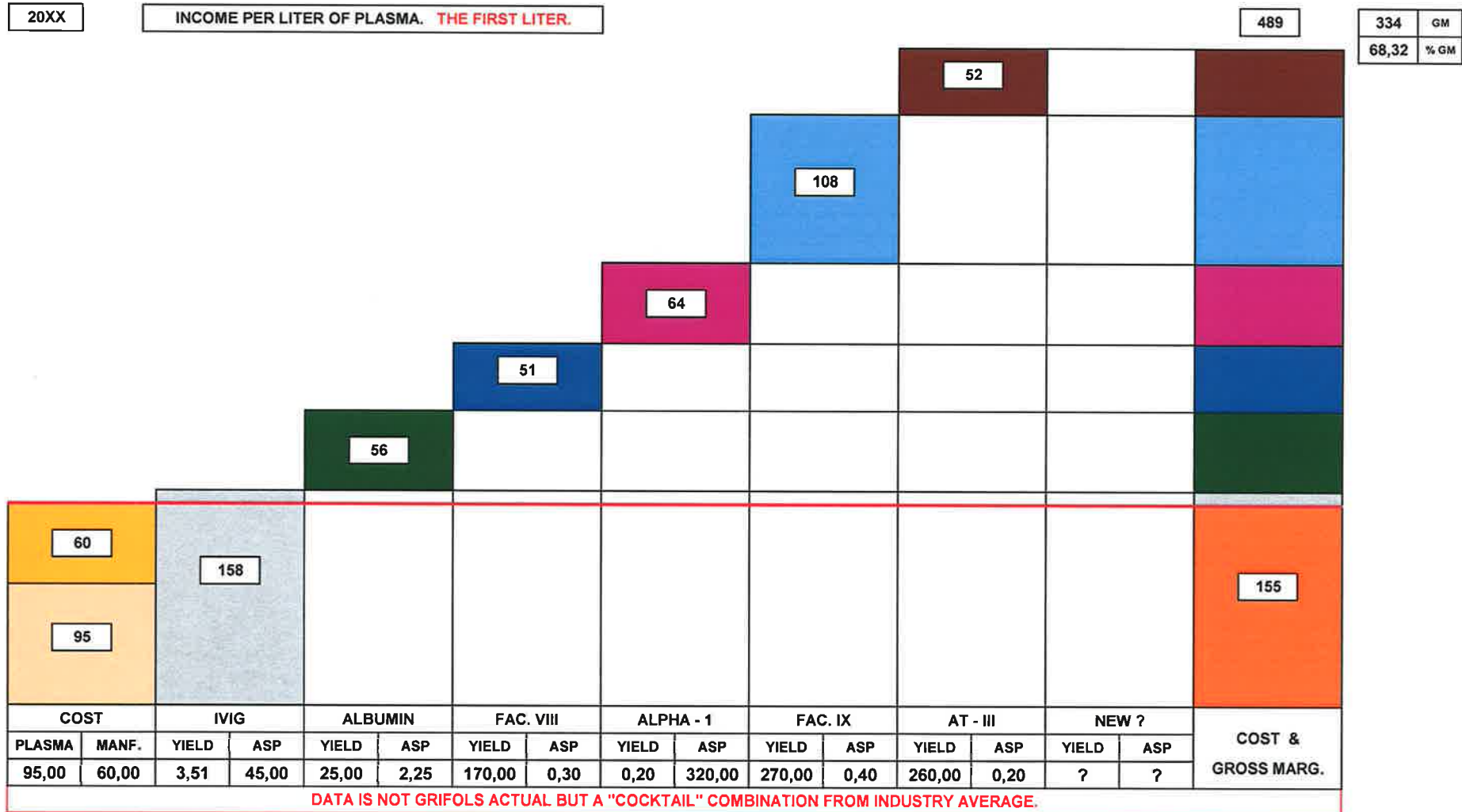
# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**



# Plasma Economics (illustrative)



# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA

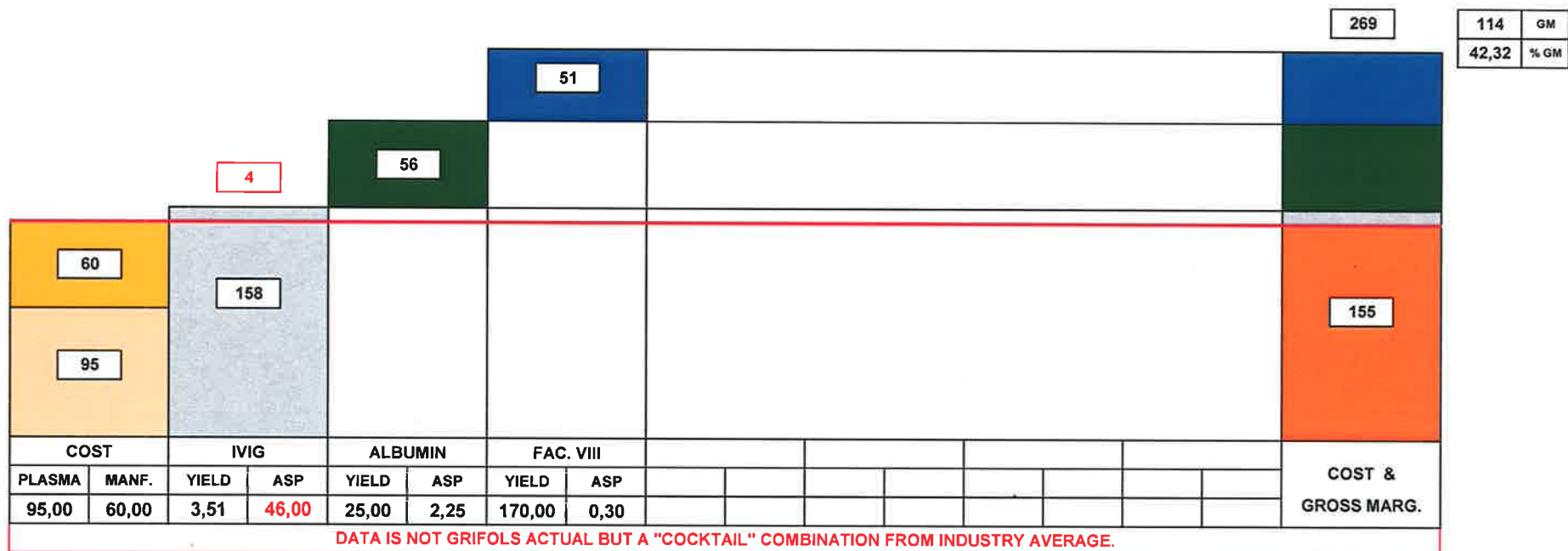
																265	110	GM	
																51	41,55	% GM	
																56			
																60			
																95	158		
																155			
COST		IVIG		ALBUMIN		FAC. VIII		ALPHA - 1		FAC. IX		AT - III		NEW ?		COST & GROSS MARG.			
PLASMA	MANF.	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP				
95,00	60,00	3,51	45,00	25,00	2,25	170,00	0,30	0,20	320,00	270,00	0,40	260,00	0,20	?	?				
DATA IS NOT GRIFOLS ACTUAL BUT A "COCKTAIL" COMBINATION FROM INDUSTRY AVERAGE.																			

# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**

3.000 M Lit. x 4 = 10.530 M €

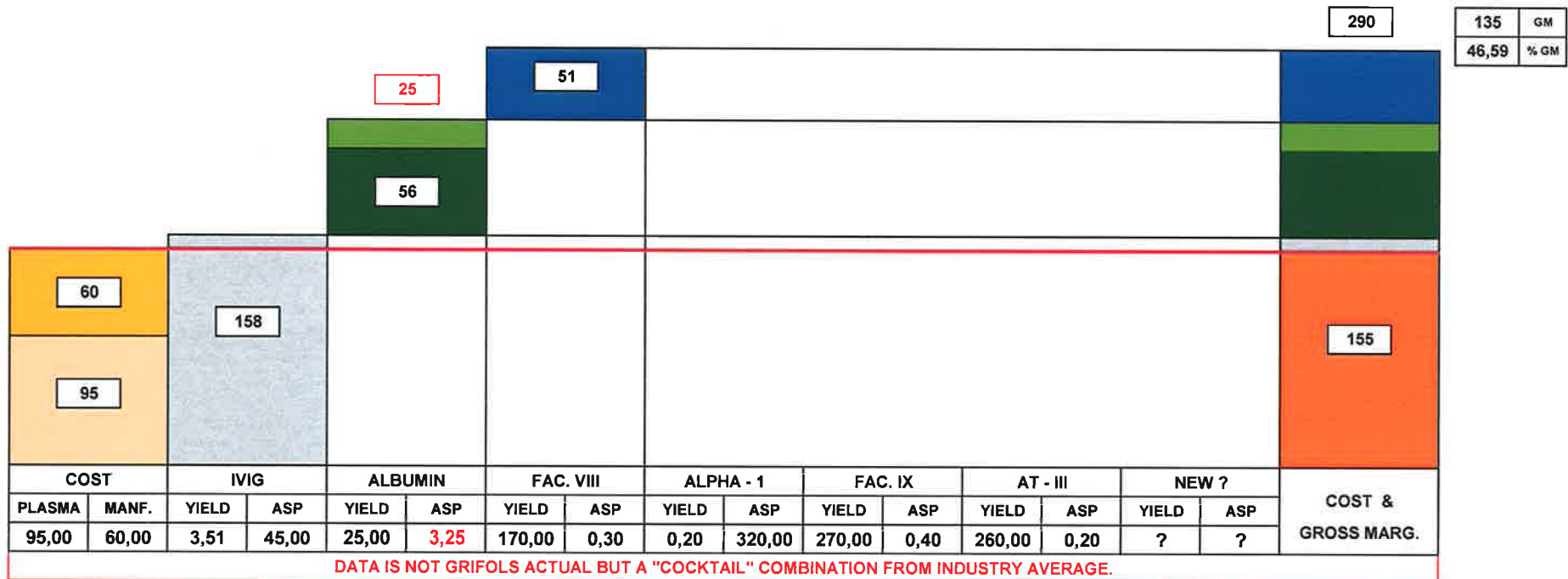


# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**

3.000 M Lit. x **25** = 75.000 M €

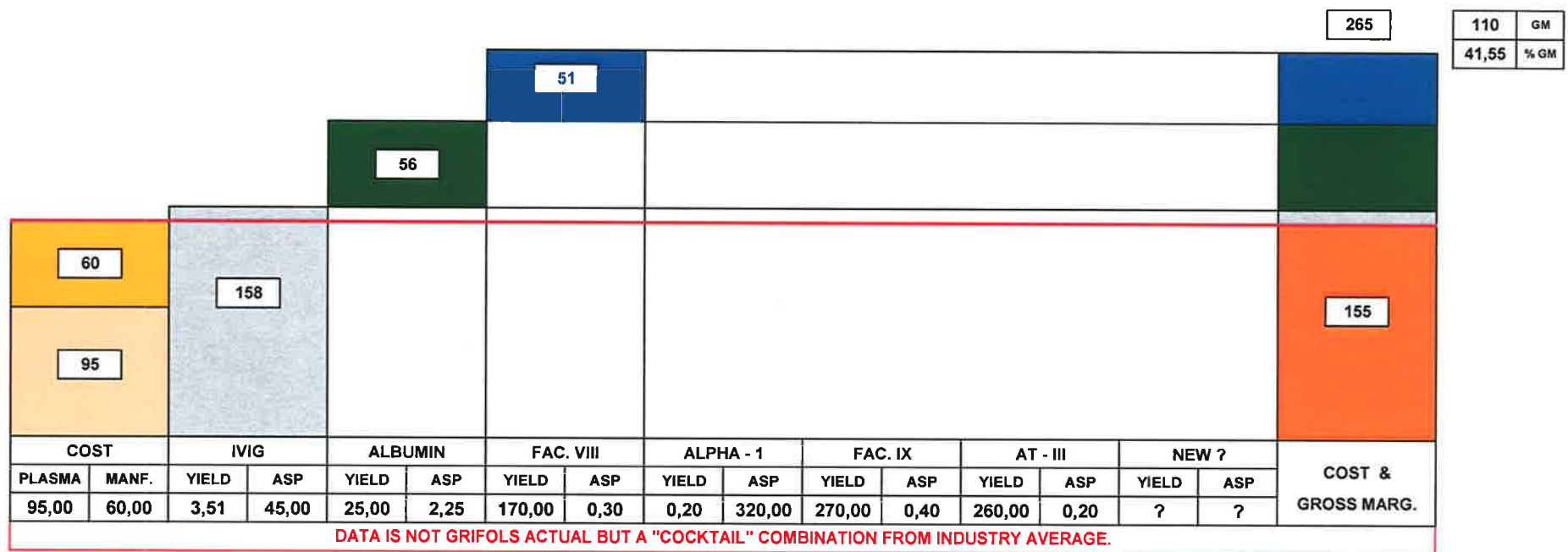




# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA

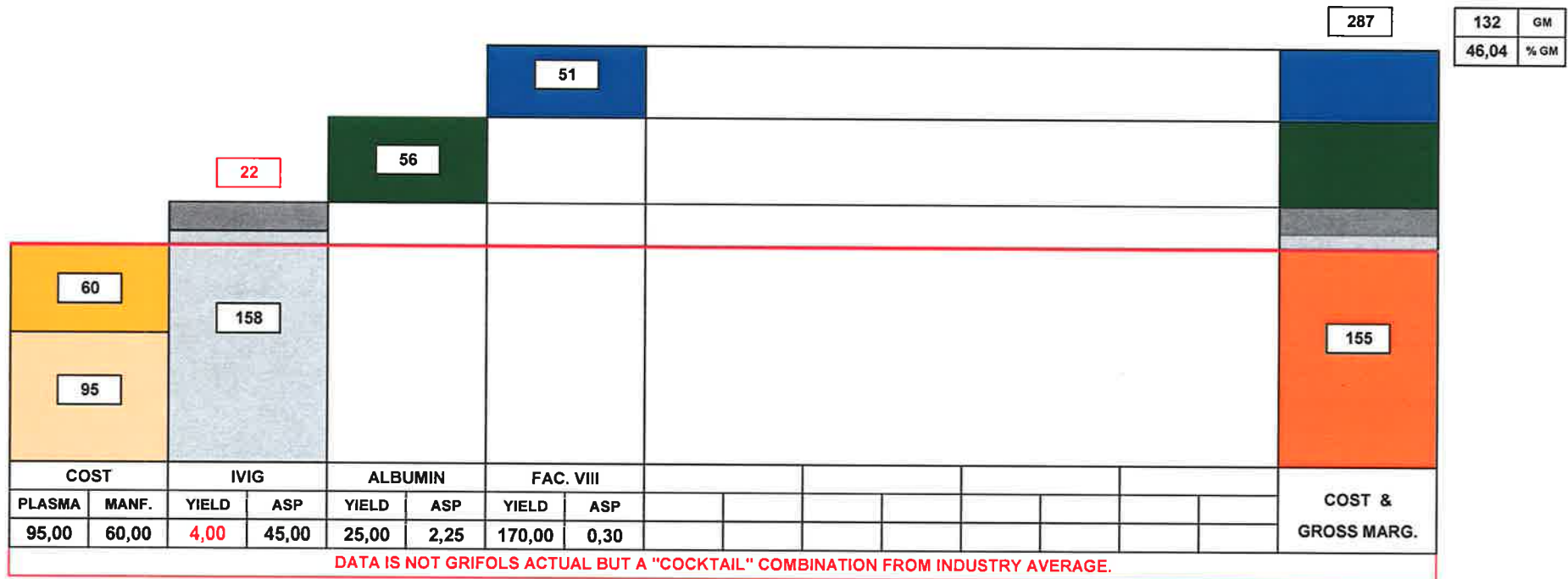


# Plasma Economics (illustrative)

20XX

INCOME PER LITER OF PLASMA. **THE FIRST LITER.**

3.000 M Lit. x 22 = 66.150 M €



# Plasma Economics (illustrative)

20XX

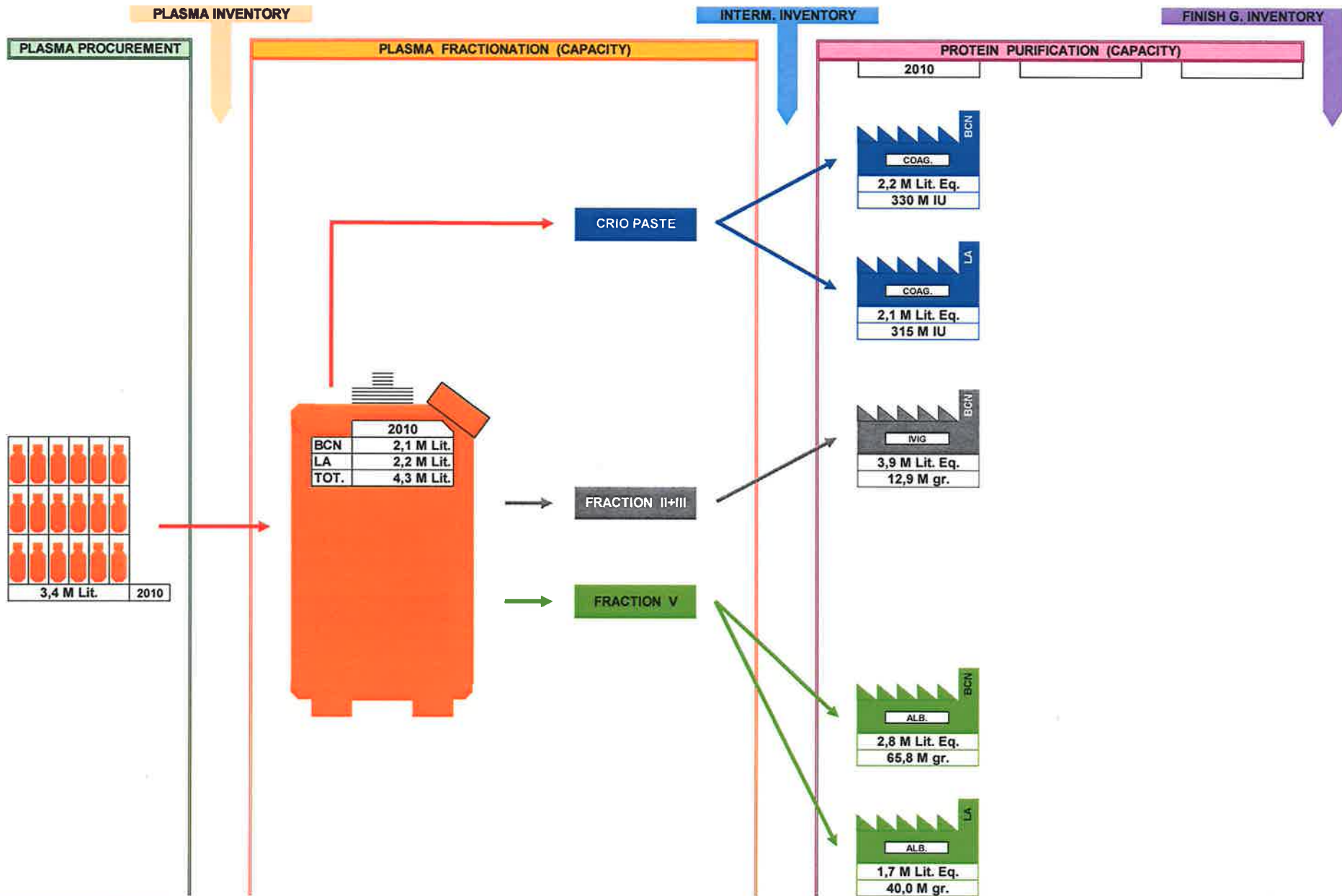
INCOME PER LITER OF PLASMA

3.000 M Lit. x 2 = 6.750 M €

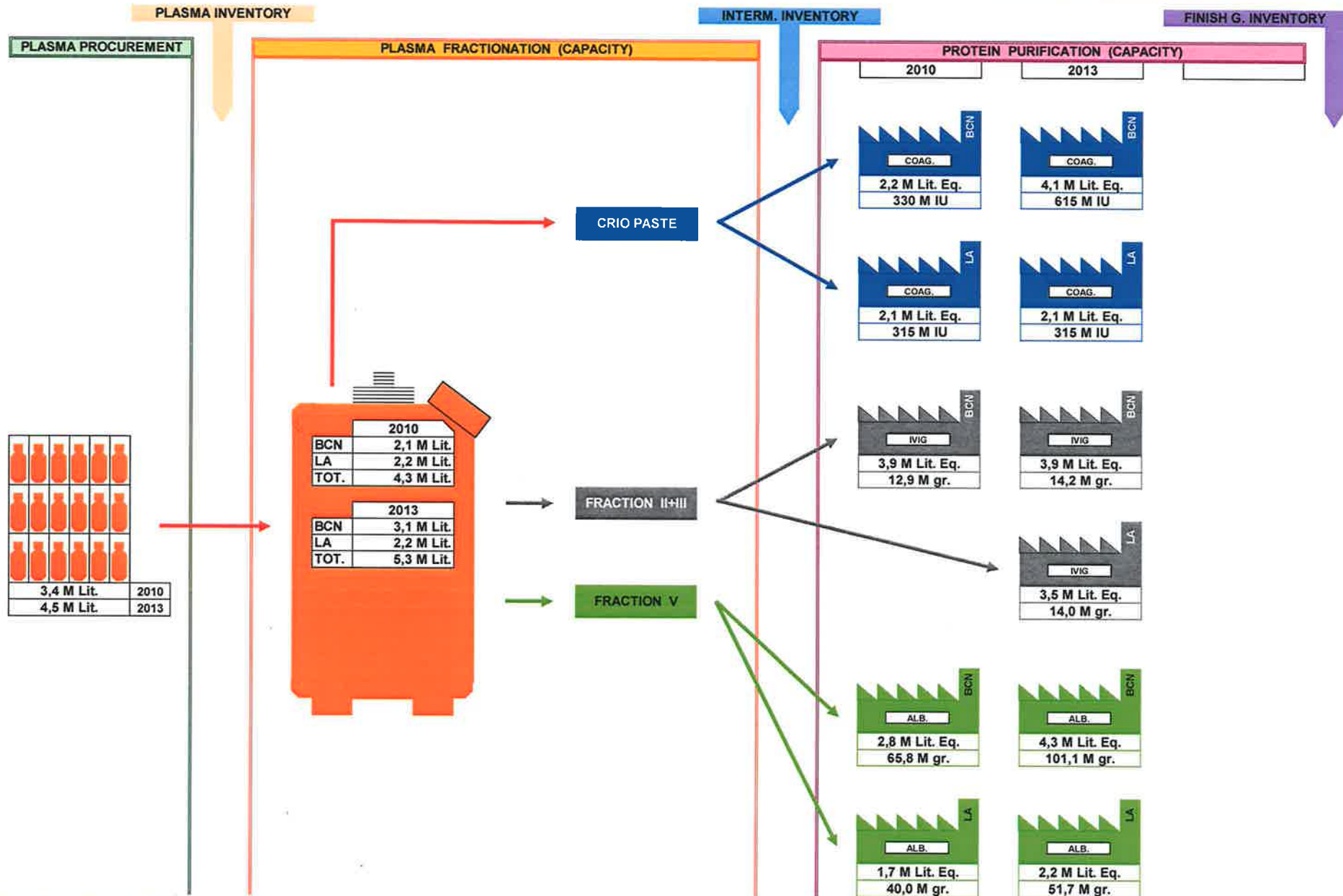
COST		IVIG		ALBUMIN		FAC. VIII		ALPHA - 1		FAC. IX		AT - III		NEW ?		COST & GROSS MARG.	
PLASMA	MANF.	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP	YIELD	ASP		
95,00	60,00	3,51	45,00	26,00	2,25	170,00	0,30	0,20	320,00	270,00	0,40	260,00	0,20	?	?	155	
60		158		56		2		51								265	
																110	GM
																41,55	% GM

DATA IS NOT GRIFOLS ACTUAL BUT A "COCKTAIL" COMBINATION FROM INDUSTRY AVERAGE.

# Global Capacity

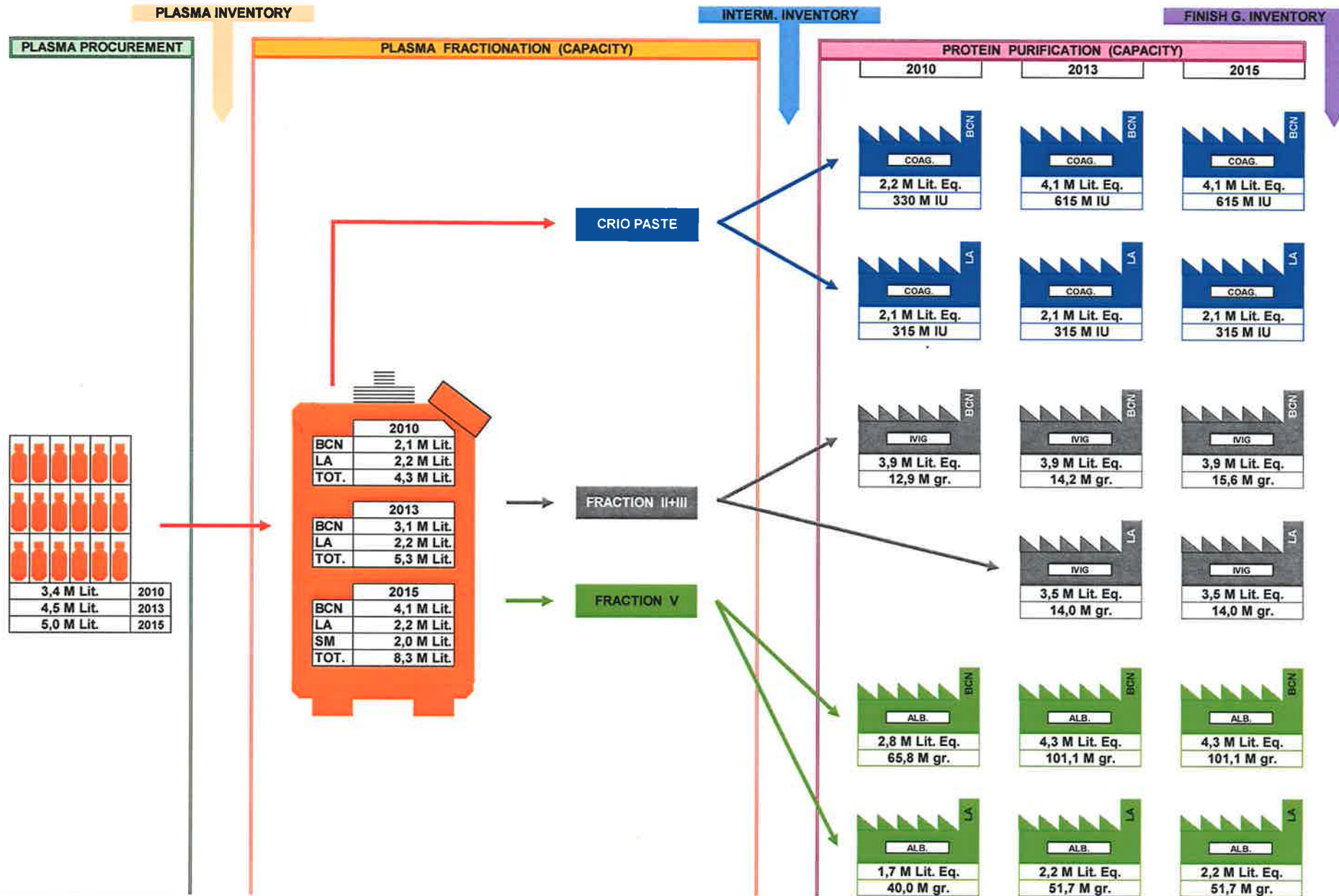


# Global Capacity





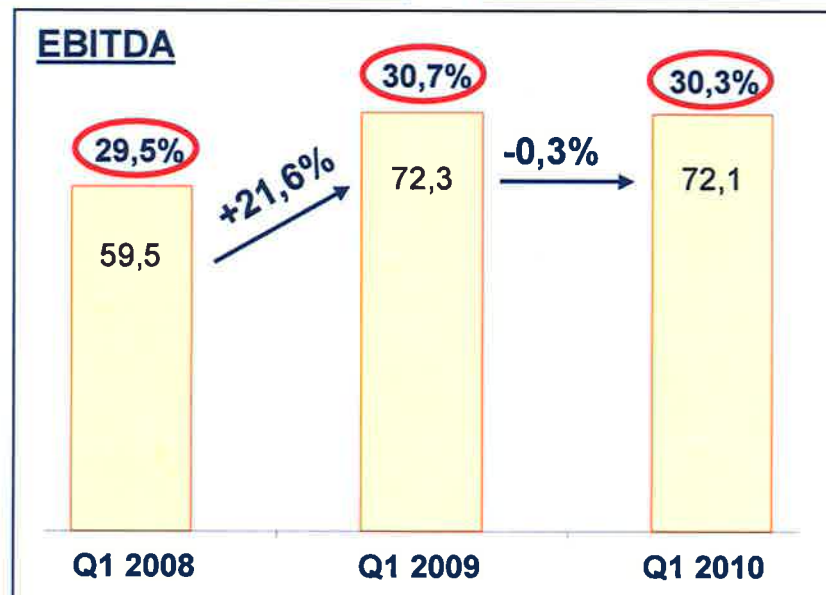
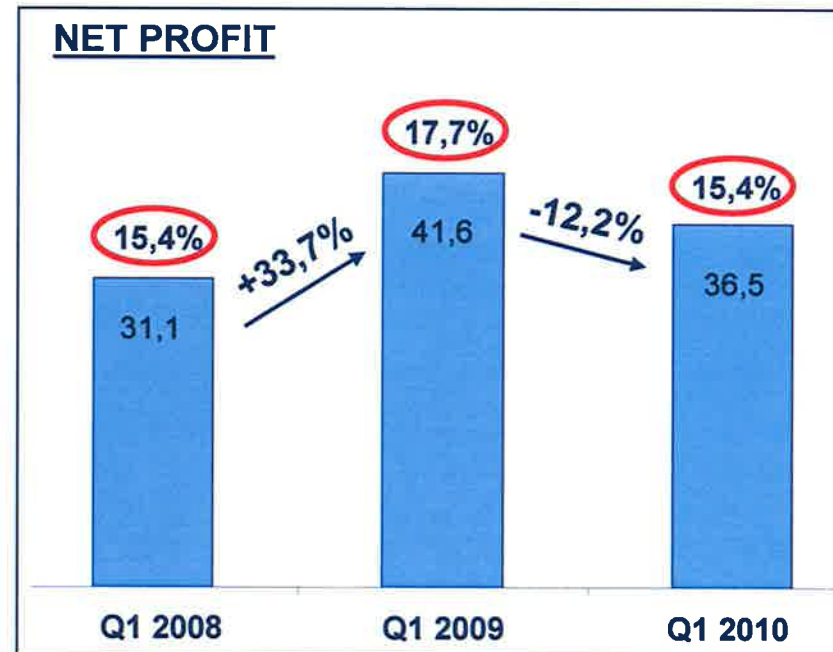
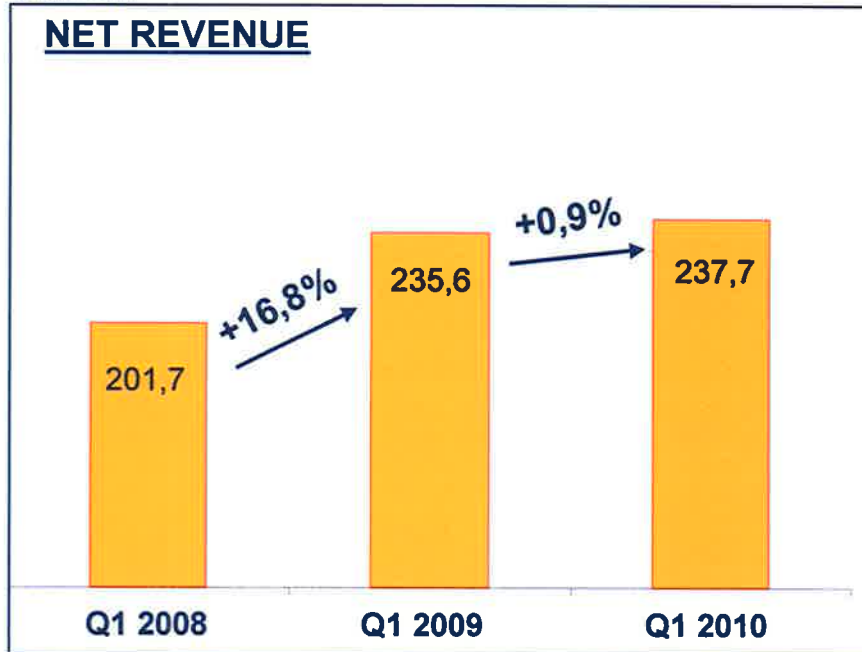
# Global Capacity



# Financial Review

# Q1 Performance

€ Million





## Sales by Divisions - Q1

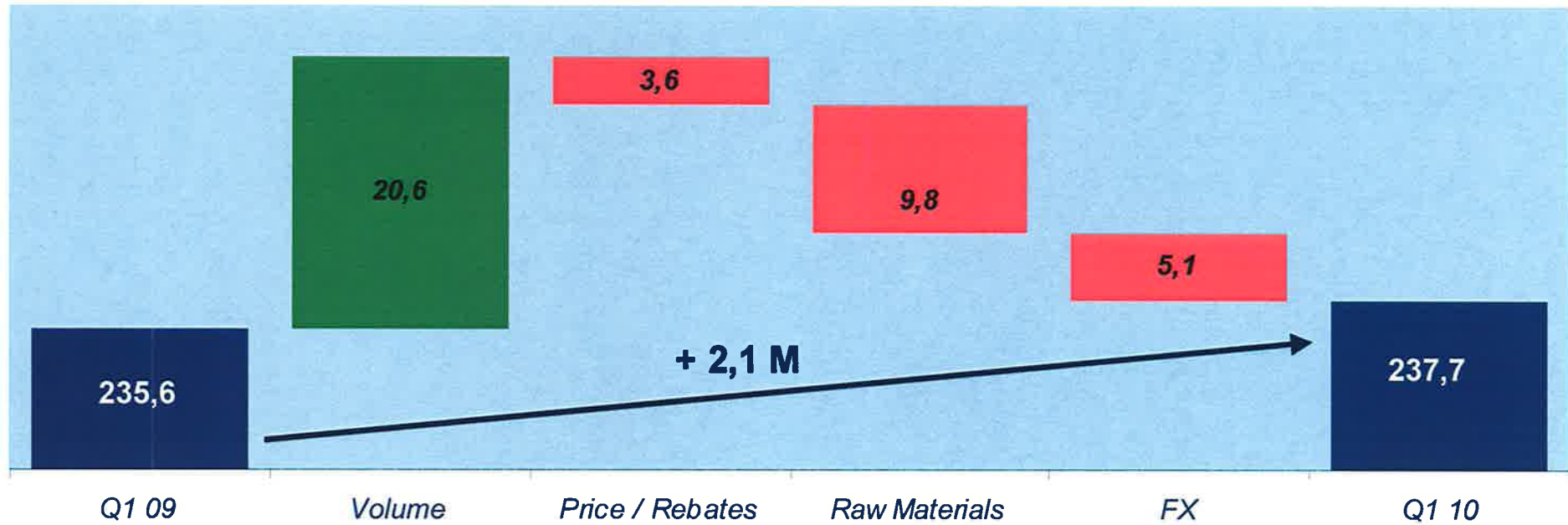
	YTD March 2009		YTD March 2010	
		%		%
<b>Bioscience</b>	<b>175,3</b>	74%	<b>184,6</b>	78%
<i>% growth</i>			5,3%	
<i>% growth at constant rate</i>			8,2%	
<b>Hospital</b>	<b>21,9</b>	9%	<b>21,9</b>	9%
<i>% growth</i>			-0,1%	
<i>% growth at constant rate</i>			-0,1%	
<b>Diagnostic</b>	<b>25,8</b>	11%	<b>27,2</b>	11%
<i>% growth</i>			5,5%	
<i>% growth at constant rate</i>			5,7%	
<b>Subtotal</b>	<b>223,0</b>	95%	<b>233,7</b>	98%
<i>% growth</i>			4,8%	
<i>% growth at constant rate</i>			7,1%	
<b>Raw Materials &amp; Others</b>	<b>12,6</b>	5%	<b>4,0</b>	2%
<i>% growth</i>			-68,4%	
<i>% growth at constant rate</i>			-67,9%	
<b>TOTAL</b>	<b>235,6</b>	100%	<b>237,7</b>	100%
<i>% growth</i>			0,9%	
<i>% growth at constant rate</i>			3,1%	

## Sales by Regions - Q1

	YTD March 2009		YTD March 2010	
		%		%
<b>EU</b>	<b>109,3</b>	<b>46%</b>	<b>105,8</b>	<b>44%</b>
<i>% growth</i>			-3,1%	
<i>% growth at constant rate</i>			-3,6%	
<b>US</b>	<b>72,9</b>	<b>31%</b>	<b>70,7</b>	<b>30%</b>
<i>% growth</i>			-3,0%	
<i>% growth at constant rate</i>			3,6%	
<b>ROW</b>	<b>40,8</b>	<b>17%</b>	<b>57,2</b>	<b>24%</b>
<i>% growth</i>			39,3%	
<i>% growth at constant rate</i>			41,0%	
<b>Subtotal</b>	<b>223,0</b>	<b>95%</b>	<b>233,7</b>	<b>98%</b>
<i>% growth</i>			4,8%	
<i>% growth at constant rate</i>			7,1%	
<b>Raw Materials &amp; Others</b>	<b>12,6</b>	<b>5%</b>	<b>4,0</b>	<b>2%</b>
<i>% growth</i>			-68,4%	
<i>% growth at constant rate</i>			-67,9%	
<b>TOTAL</b>	<b>235,6</b>	<b>100%</b>	<b>237,7</b>	<b>100%</b>
<i>% growth</i>			0,9%	
<i>% growth at constant rate</i>			3,1%	

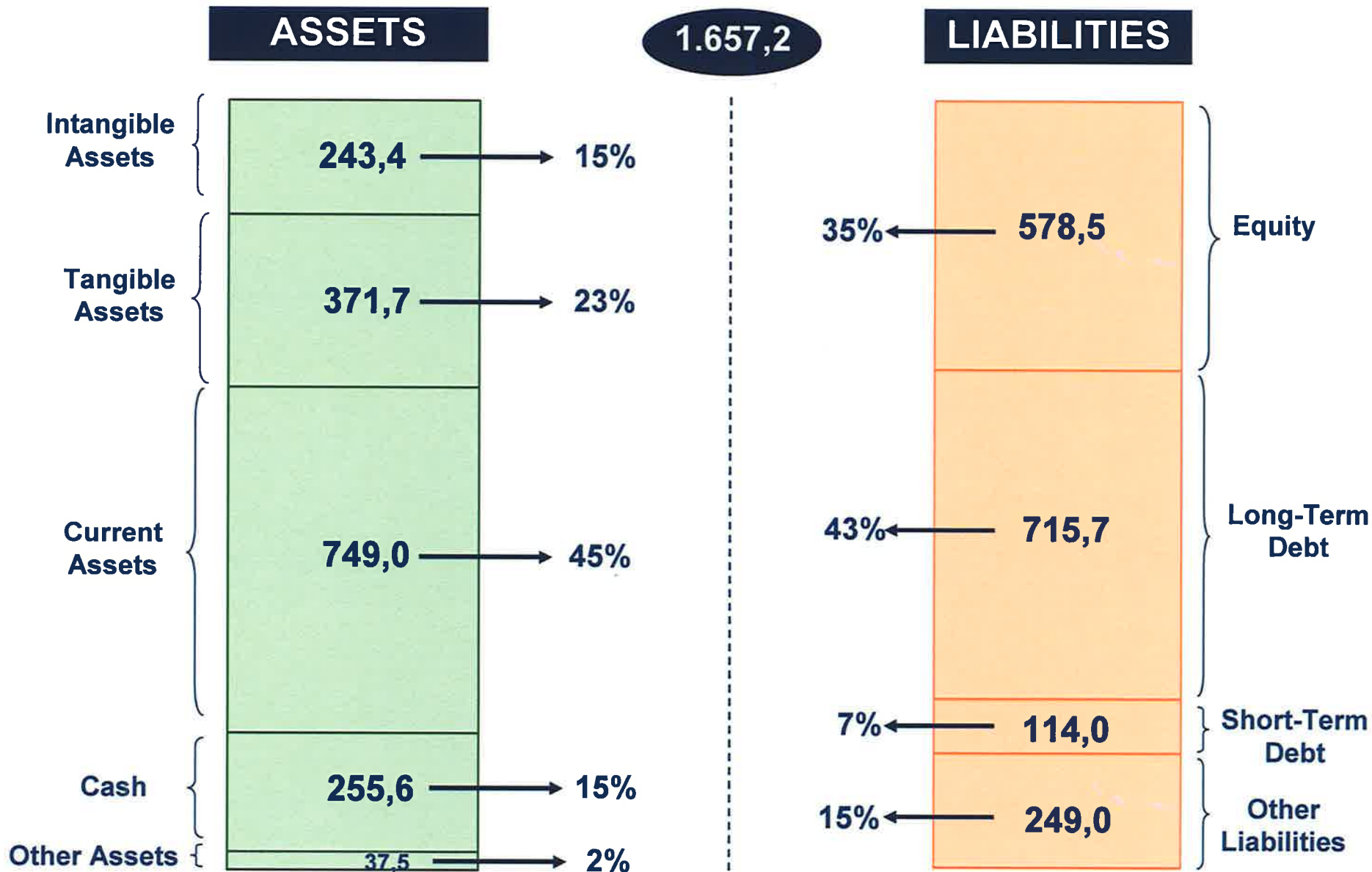
# Q1 2010 Sales Variance

€ Million



# 2009 Balance Sheet

€ Million



# 2009 Cash Flow

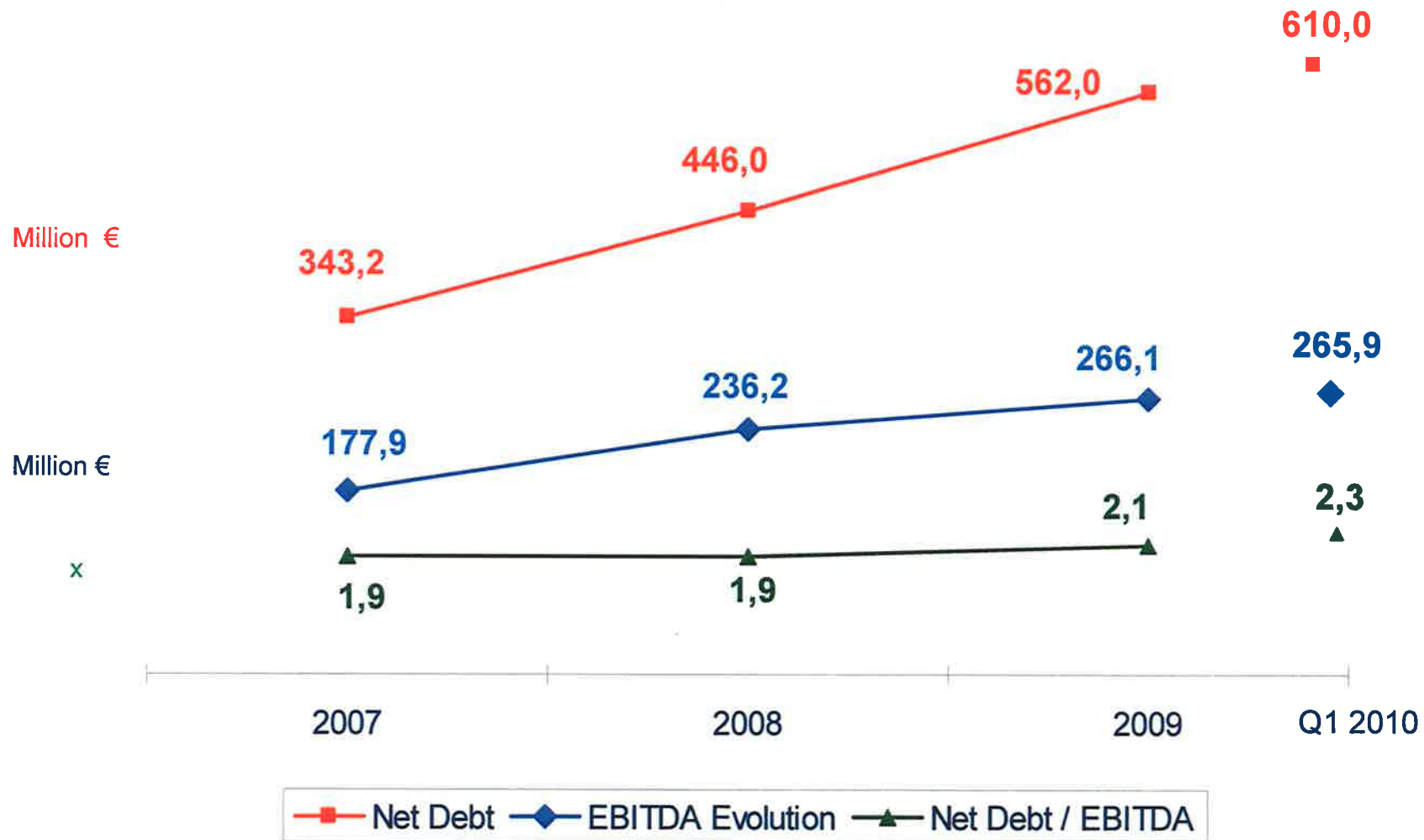
€ Million

SOURCES	
- Operating Cash Flow	204,2
- Working Capital Increase	-119,0
- Net Operating Cash Flow	85,2
- Sale of Treasury Stock	26,8
- Net Debt Increase	101,4
Total	<u>213,4</u> =====



USES	
- CAPEX (Tangible & Intangible)	133,4
- Dividends (2008 + 50% Interim 2009)	80,8
- Others / FX	-0,8
Total	<u>213,4</u> =====

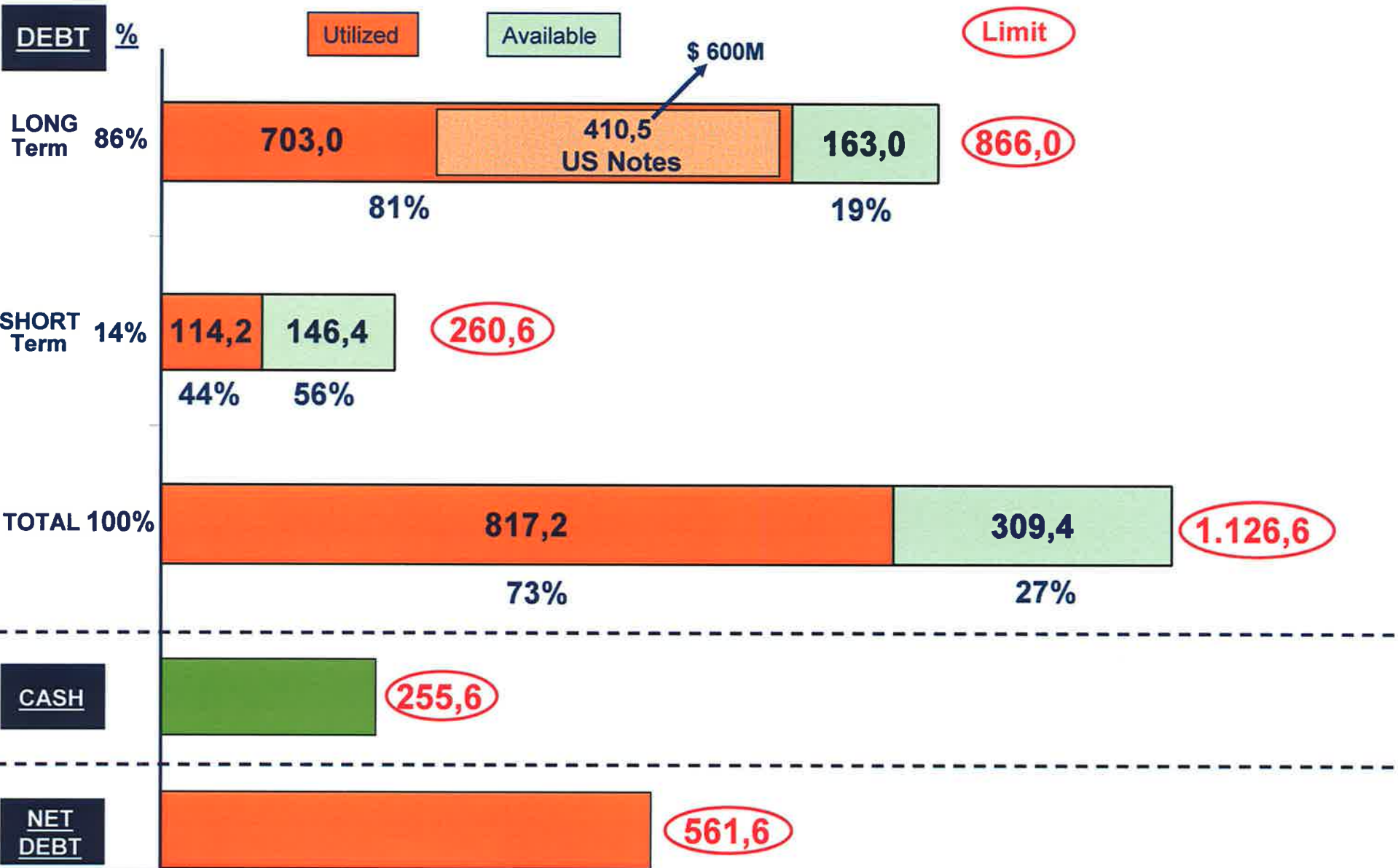
# Net Debt - Evolution





# 2009 Liquidity Position

€ Million



# Financial Ratios

	Dec 08 Actual	June 09 Actual	Dec 09 Actual
<b>Debt Covenants</b>			
Net Debt (€ 000)	446,0	532,7	561,7
Net Debt / EBITDA (< 3,5)	1,9	2,1	2,1
Minimum Net Worth	---	392,4	408,9
Actual Net Worth	---	490,5	567,5
EBITDA/Financial expenses (>5,00)	7,7	10,8	11,8

<b>Return Ratios</b>			
ROE %	25,3%	28,8%	26,1%
ROIC %	15,3%	15,0%	13,9%

<b>Working Capital Ratios</b>			
Inventory Turnover	327	353	379
DSO	83	93	83
DPO	65	69	64



- **“Minifrac” obtains FDA approval and starts fractionation, increasing capacity by 700,000 ltrs pa.**
- **Opening of Grifols Plasmapheresis Academy in Arizona, evidencing our firm commitment to employee training and standardization of in-house knowledge. Over 500 employees have participated in the 25 courses organized since its opening last January.**
- **Acquisition of the Australian-Swiss group Lateral/Medion for 25 MM €, corresponding to the 49% stake of the economic rights and 99% of the voting rights, bringing significant synergies to Grifols in the Diagnostic Area.**
- **Grifols gets a minority stake in Cardio3 BioSciences, specialized in stem-cell based biotherapeutic R&D for the treatment of cardiovascular diseases.**
- **Grifols shares start trading in the US via ADR Level 1 Sponsored.**
- **Grifols promotes European research into cirrhosis of the liver with a 2 MM € contribution to fund the development of the European Consortium for the Study of Chronic Liver Failure.**
- **Grifols closed its \$ 600 MM corporate bond issue in the US, subscribed by qualified investors, mainly in dollars. The issue was heavily over-subscribed.**
- **Launch of Niuliva<sup>®</sup>, an anti-hepatitis B intravenous immunoglobulin (IVIG), in Spain and Italy.**
- **Exclusive distribution agreement with Accumetrics (US) for its VerityNOW<sup>®</sup> System in Spain, Portugal and Chile.**

- **Partnership with Health-Robotics to distribute the robot i.v. STATION in Spain, Portugal and Latin America over the next 5 years.**
- **Grifols starts the construction of the new lab in San Marcos, TX, scheduled for completion in 2010.**
- **Release of interim results of the clinical trial on Alzheimer's disease.**
- **Grifols obtains FDA approval for the new sterile albumin filling plant at Los Angeles.**
- **Grifols starts a new IV solutions factory in Murcia.**
- **Grifols Engineering signs a turn key project for a Portuguese pharmaceutical company.**
- **Grifols introduces holographic seal for plasma product containers to increase safety levels.**
- **The number of hospital with Pyxis technology installed by Grifols reaches 100 in Spain. Since 1999 Grifols has a distribution agreement with Cardinal Health/ Carefusion to distribute this technology.**
- **Grifols incorporates a new company (Gri-Cel) for the research into the regenerative medicine field.**
- **Production of diagnostic products starts in Australia.**
- **Grifols to open direct subsidiaries in Sweden and Colombia.**
- **Grifols to open a representation office in China (Shanghai).**

# Plasma Procurement Overview

Grifols US Plasma Operation

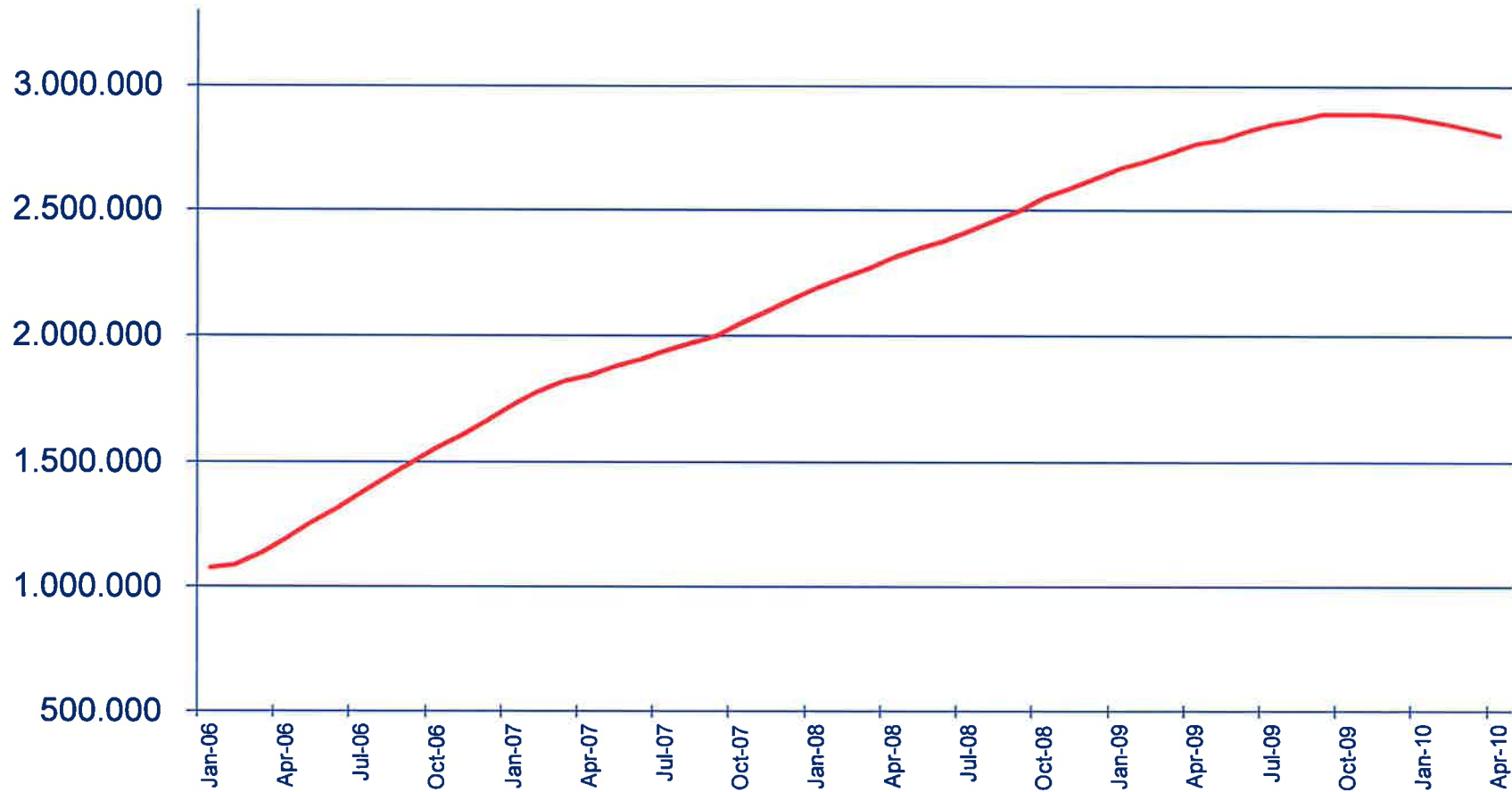
- 2 Plasma Collection Companies with approx. 2,517 FTE
  - Biomat USA (64 Centers) 2,021 FTE
  - PlasmaCare (16 Centers) 496 FTE
- Corporate Offices in Los Angeles and Cincinnati
- Divisional Office in Atlanta, Colorado Springs and Seattle
- Centralized Plasma Warehouse in City of Industry, CA
  - 20,000 Sq. Feet Freezer, 2 million liters storage capacity
- Centralized Testing Lab in Austin, TX
  - 26,000 Sq. Feet, 3.2 million donations testing capacity
  - 2<sup>nd</sup> Testing Laboratory under construction in San Marcos, Texas, (4Q 2010 completion)
- Grifols Academy of Plasmapheresis

# Center map



# 2006 – 2010 LTM Plasma Collection

In Liters



## Donor Center Acquisition and New Center Opening

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
<b>Acquisition</b>	<b>0</b>	<b>22</b>	<b>4</b>	<b>1</b>	<b>0</b>
<b>New Center</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>
<b># of Centers</b>	<b>48</b>	<b>72</b>	<b>76</b>	<b>80</b>	<b>80</b>

- ✓ As of May 2010, all 80 Grifols centers are FDA licensed, IQPP certified and fully operational.
- ✓ 66 among 80 centers have been audited and accepted by EMA.



- ✓ **Planning Phase** **3 - 6 months**
  - Site Search
  - Lease negotiation/execution
  - Engineering and construction permit submission
  
- ✓ **Construction Phase** **3 - 12 months**
  - Leasehold Improvement 3 months
  - Ground-up 9 - 12 months
  
- ✓ **Regulatory Approval Phase** **15 - 24 months**
  - Pre-Inspection Operation 3 months
  - Pre-Licensure FDA Inspection and Approval 6 - 9 months
  - European PMF Amendment and approval 6 - 12 months
  
- ✓ **The entire process:** **21 to 42 months**

- ✓ **Key Success Parameters**
  - Minimize Down Time for Integration
  - Quick Gap Analysis for Different SOP's and Conflict Resolution
  - Swift Training of Employees with the “New” SOP
  - Retention of Trained Employees with Positive Motivation
  - Establishing Quality Operation
  - Sensible HR and Administrative Policy Transition
- ✓ **Realistic Integration Strategy with Careful Attention to the Details**
  - IT Infrastructure and Donor Center Management system
  - Critical Logistics Management
- ✓ **Availability of Compassionate Regional Support Team**

## Center Relocation and Facility Expansion

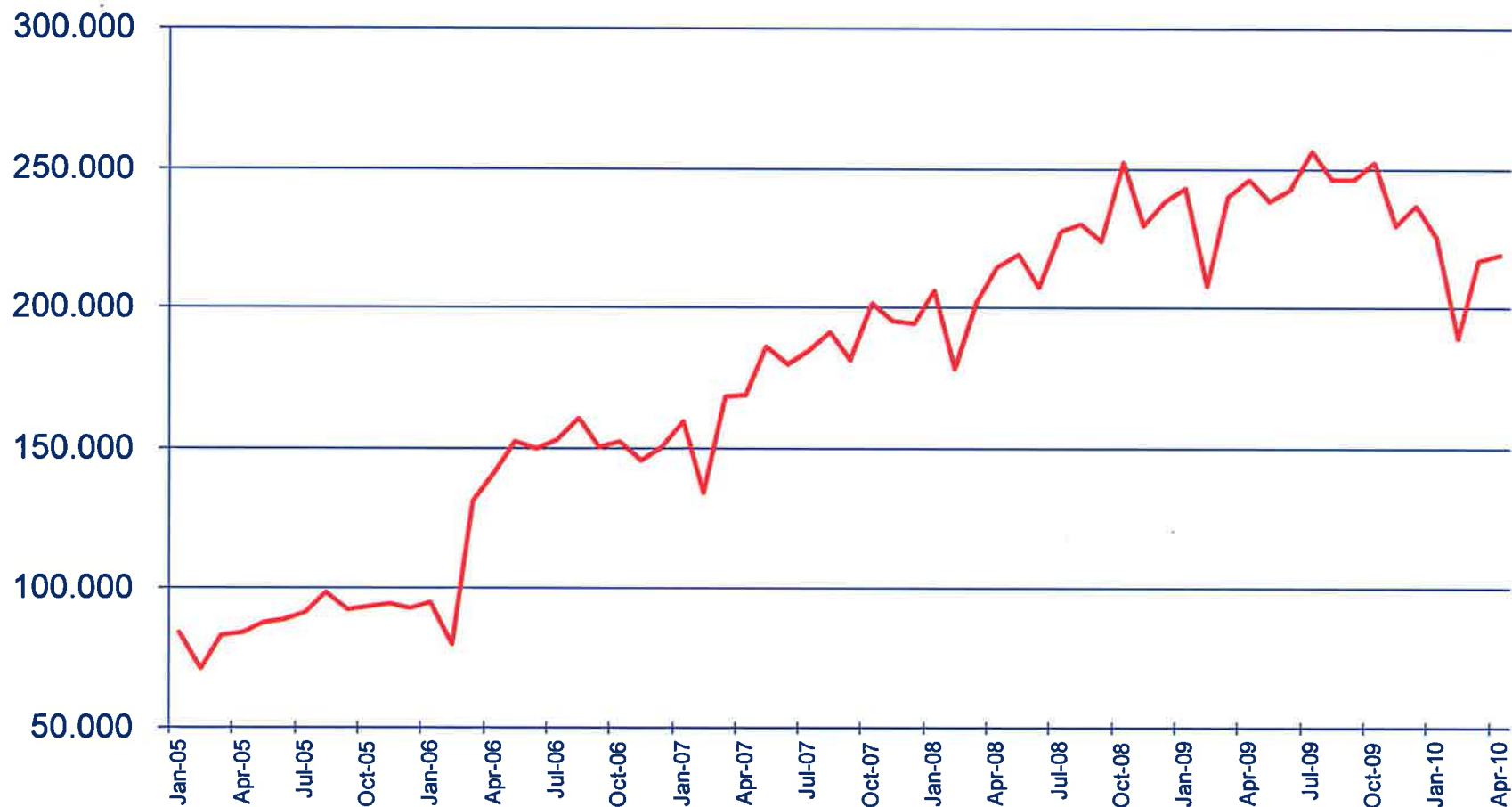
	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
<b>Center Relocation to New Facility</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>4</b>
<b>Major Expansion</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>4</b>

**Grifols new facility standards include +/- 10,000 sf foot print with 48 - 60 beds, medical grade finishing and adequate Freezer/Storage space**

- Closing small, inefficient or sub-standard donor center and relocate the FDA license to better location/facility
- No geographical limitation for the license transfer
- Avoid pre and post FDA inspection/approval cycle (9 to 12 months)
- Require fully certified and experienced management staff for opening
  - Facility Manager
    - 9 to 12 months for certification and minimum 3 months of position experience
  - Quality Supervisor
    - 6 to 9 months for certification and minimum 3 months of position experience
  - Medical Supervisor (Physician Sub.)
    - 2 to 9 months for certification and minimum 3 months of position experience
  - Line level staff
    - 2 to 3 months for certification
- No change/deviation allowed from the corporate S.O.P.

# 2005 – 2010 Monthly Plasma Collection

In Liters



➤ **Physical Plasma Collection Capacity depends on**

	<u>Grifols New Facility Standard</u>
– Number of Beds/Plasmapheresis Machines	48 - 60
– Number of Medical Office	2 - 3
– Number of Screening Booth	5 - 8
– Freezers and Storage Space	OK for by-weekly delivery/pick-up
– Parking	Minimum 40

- **The existing 80 Grifols donor centers network has a sufficient physical plasma collection capacity to accommodate more than 50% increase of the current run rate.**
- **Long range CAPEX plan is in place to enhance other supporting infrastructure, including testing laboratory and warehouse.**

- **By adjusting several operational parameters, each donor center is capable in controlling  $\pm 5$  to 15% of collection run rate.**
  - Operation Days/Hours
  - Advertisement and Donor Recruitment Programs
  - Incentive Programs
  - Controlling new donor enrollment
- **The reaction time of a center is immediate after the corporate decision and an impact could be observed and assessed in 2 to 3 months.**
- **Simple increase of donor incentive does not always warrant a sustainable collection growth or donor's satisfaction. It could often impact customer service, sometime quality operation.**



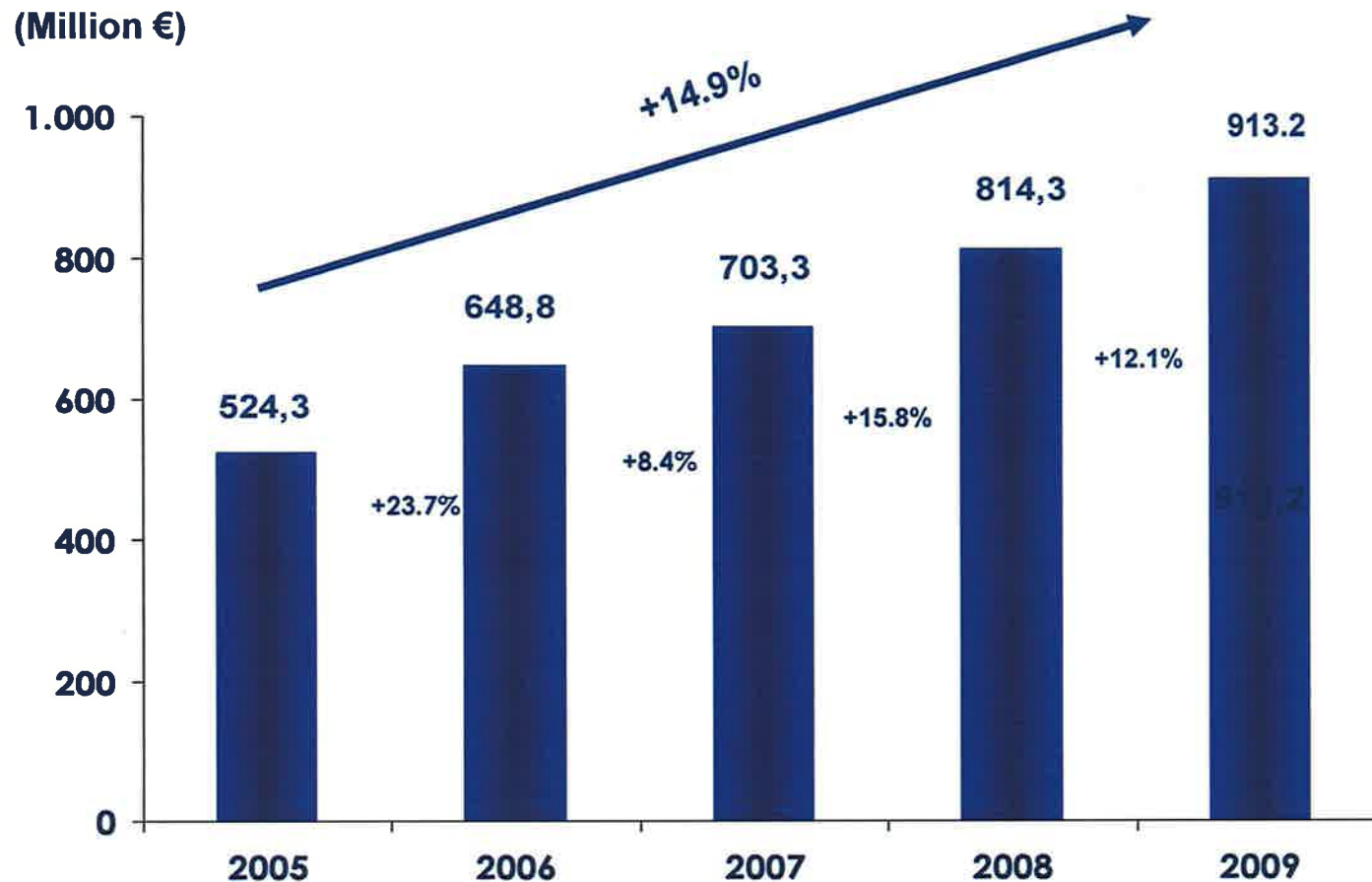
- **In 2009, Grifols Donor Centers had:**
  - 200,000 donors
  - 150,000 Qualified Donors
  - 111,000 New Donors donated
  - Qualified 95,000 New Donors
  - Overall turnover rate of Qualified Donor at 65%
  - Qualified Donors donated avg. 21 times
  
- **This means, in 2009 each Donor Center had, in average:**
  - 2,500 Donors
  - 1,875 Qualified Donors
  - 14,000 New Donors donated
  - Qualified 1,200 New Donors (100 per month, 4.2 per day)

- **Plasma collection process involves significant manual intervention of employees, continuous training and maintaining their competency level are essential for high quality operation.**
- **Donor center process is highly regulated and demands strict adherence to the company's SOP. Assuring employees compliance requires their ethical behaviors and knowledge beyond job skill.**
- **Employees understanding of the importance of plasma therapy and its impact to the health of patient, boosts their moral and motivation.**
- **Maintaining well trained, experienced and motivated employees has been the 1<sup>st</sup> priority of Grifols Donor Centers.**

- **Grifols has successfully established a solid plasma collection infrastructure, which is capable in fulfilling its source plasma demand in the coming years.**
- **Grifols has gained experiences in increasing plasma collection capacity applying several different business models, which could be selected to fit various business environments.**
- **Grifols has various means in controlling plasma collection volume, center by center basis, to achieve an adequate level of inventory and maximize the cash flow.**
- **Grifols continues to invest in developing donor center management and employees. The company believes that the pool of well-trained, experienced and loyal employees are the key for its continuous success in the plasma collection industry.**

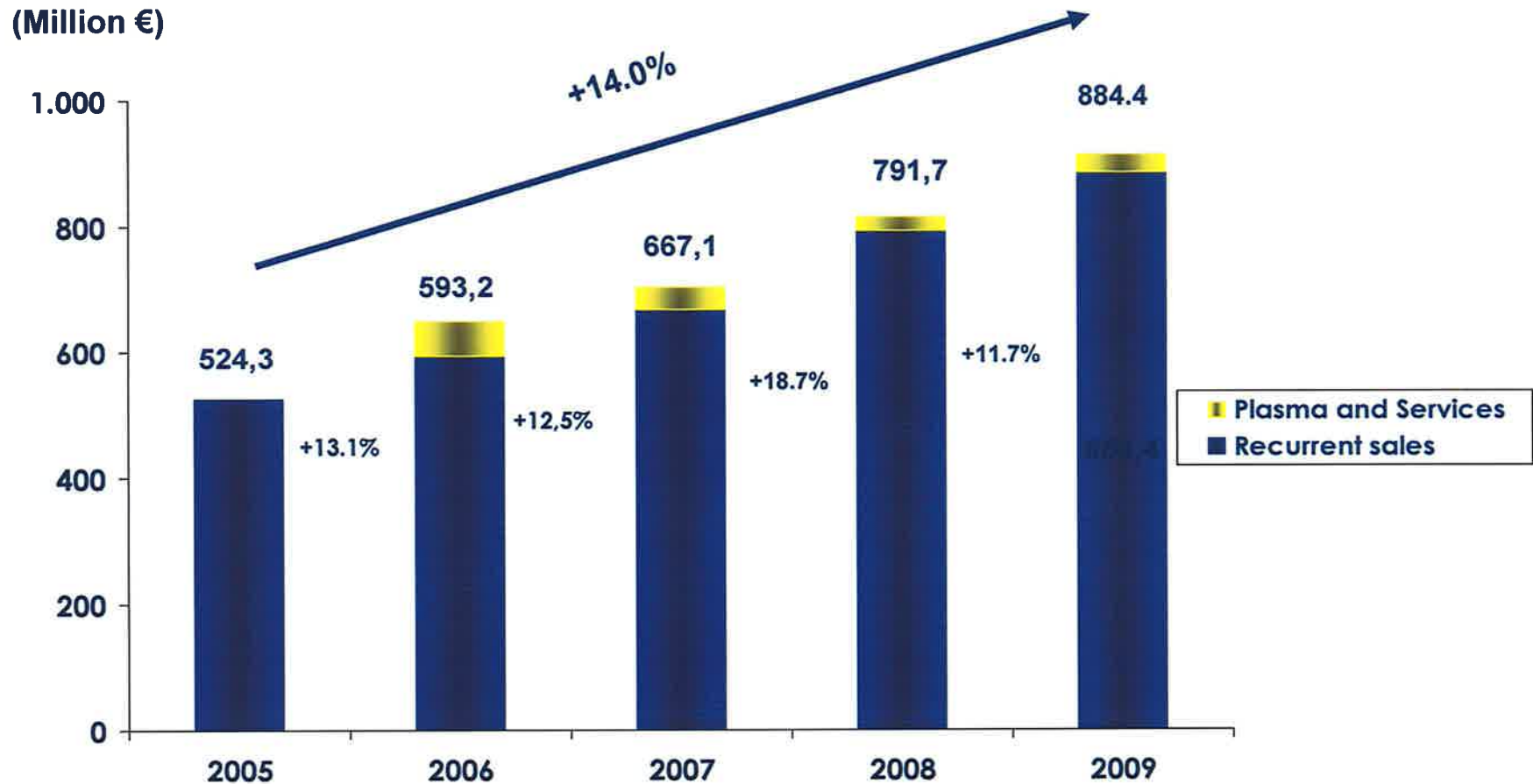
# Market Overview

## Total Grifols Sales Evolution



Total sales increased by 12.1% in 2009 and 14.9% CAGR since 2005

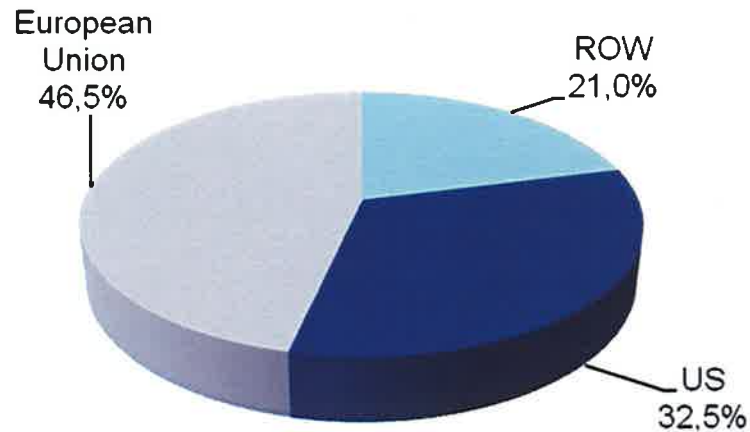
# Total Grifols Sales Evolution



Recurrent sales increased at a sustained double digit rate with a 14% CAGR since 2005

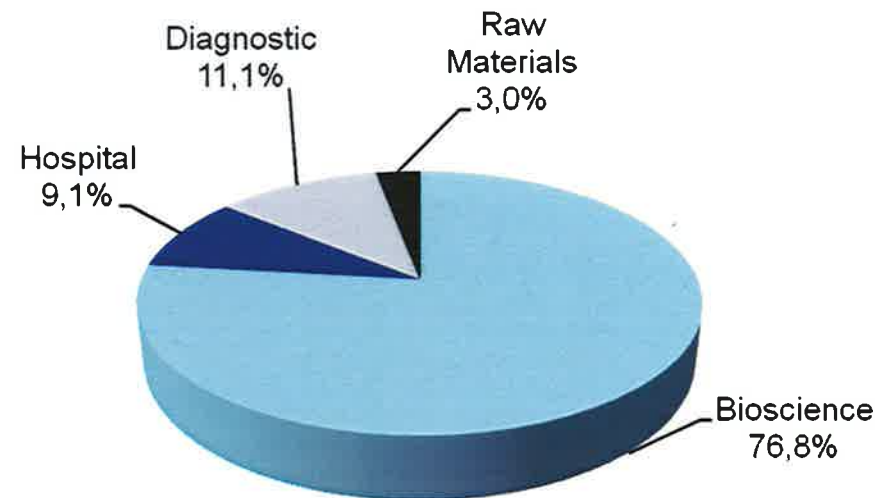
## 2009 Sales by Region – Sales by Division

### 2009 Sales by Region (%)



Balanced Sales by Region with significant increased contribution from ROW

### 2009 Sales by Division (%)



Bioscience Division accounts for 77% of total sales  
Diagnostic Division increased its share in 2009 helped by the Lateral/Medion acquisition



## Sales growth by Division

	2009 sales (%)	2008 (m€)	2009 (m€)	2009 Δ (%)
Bioscience	77	618	695	13
Diagnostic	11	86	103	20
Hospital	9	83	86	5
Raw Materials	3	28	29	2
<b>TOTAL</b>	<b>100</b>	<b>814</b>	<b>913</b>	<b>12</b>



**Key focus on Bioscience, enjoying complementary growth from Hospital and Diagnostic divisions**

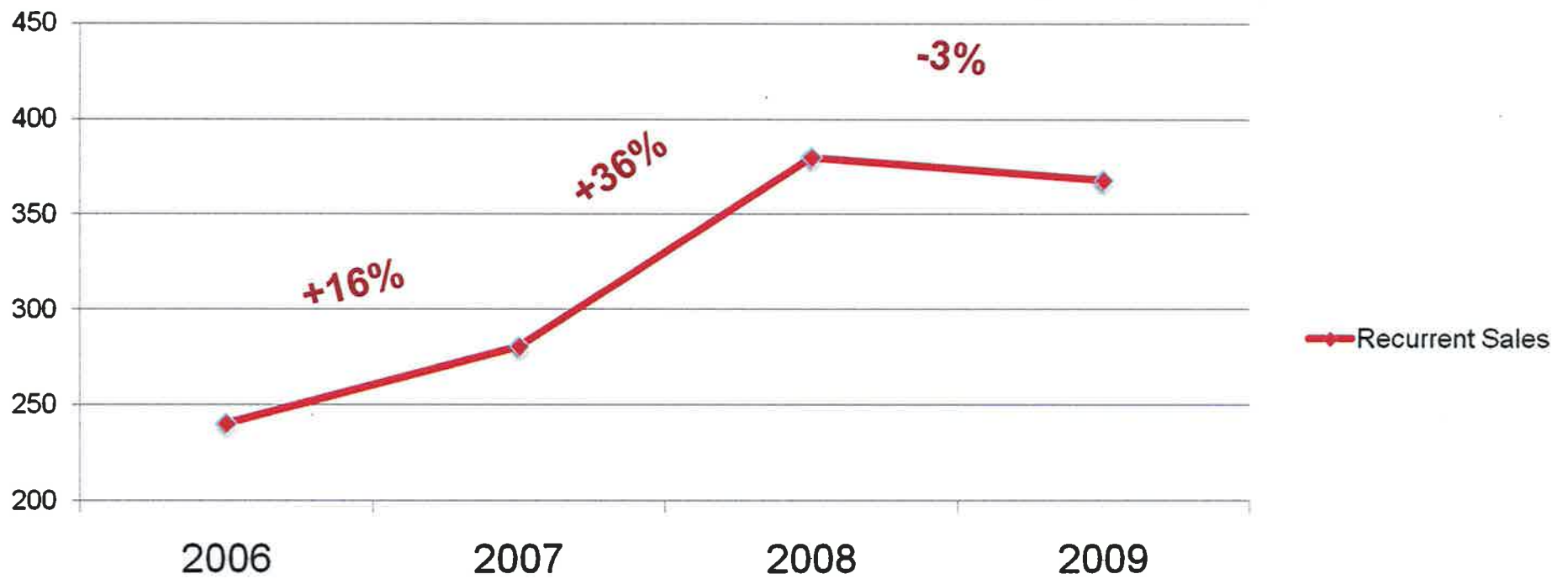
## Sales growth by Region

	2009 sales (%)	2008 (m€)	2009 (m€)	2009 Δ (%)
European Union	46,5	404	424	5
US	32,5	291	297	2
ROW	21	119	192	61
<b>TOTAL</b>	<b>100</b>	<b>814</b>	<b>913</b>	<b>12</b>

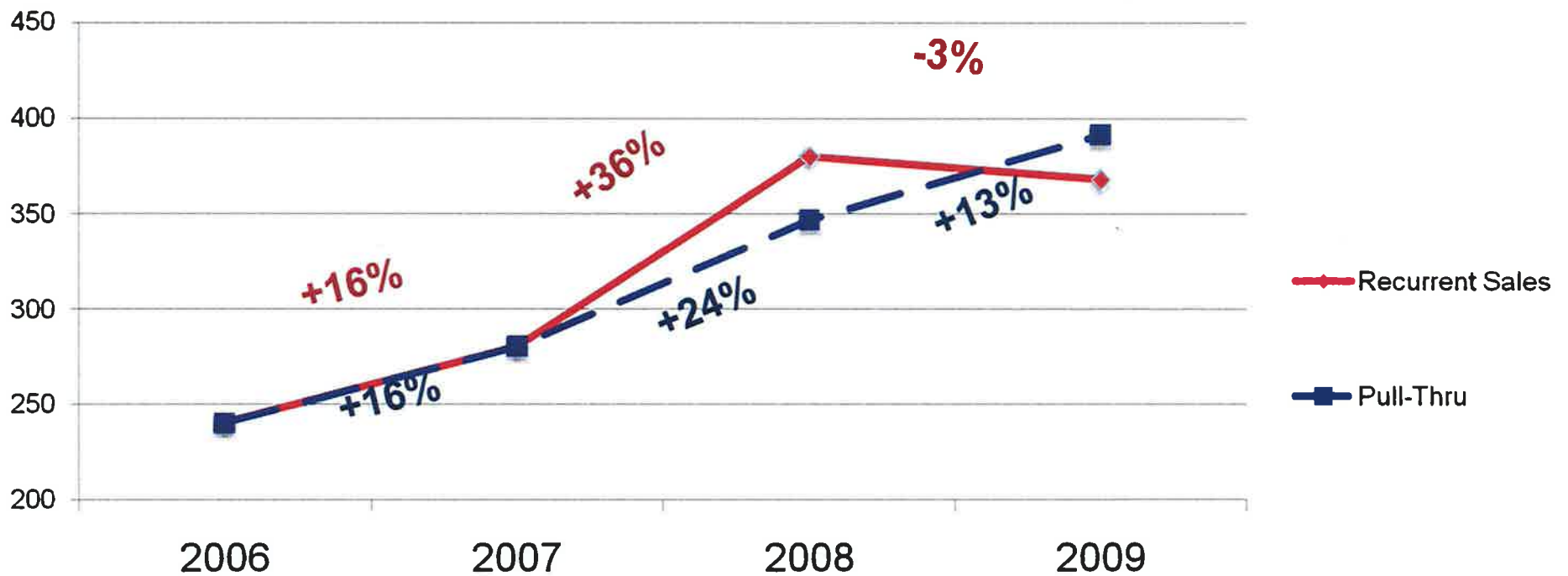


**Total double digit sales growth supported by the important contribution of ROW markets during 2009**

### US Recurrent Sales in US\$(000)



## US Recurrent Sales in US\$(000)

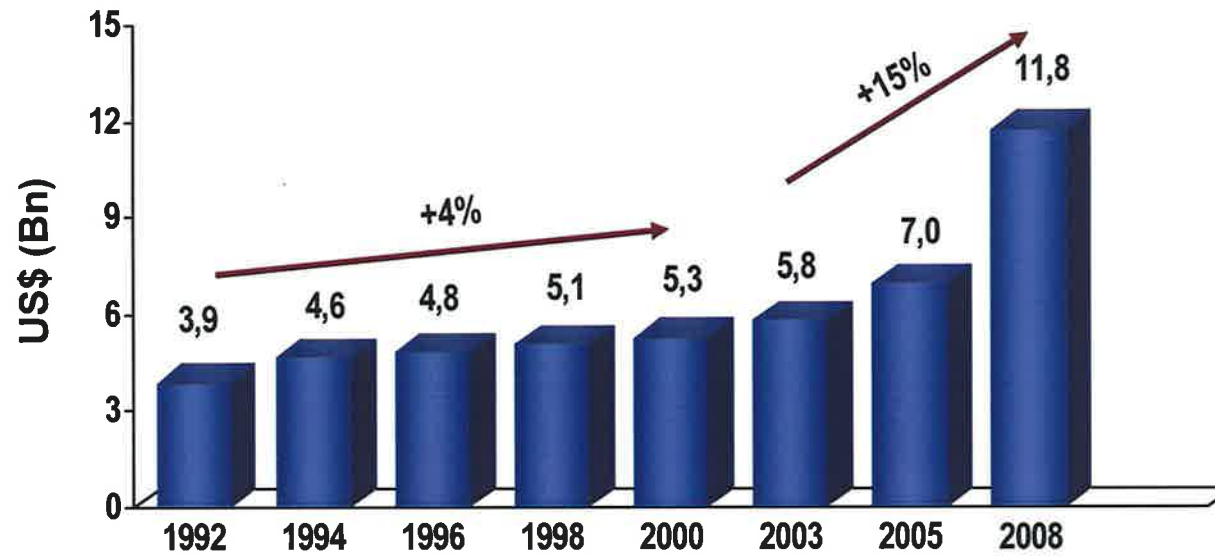


Inventory variations in the distribution channel have changed the shape of the growth line in the last couple of years.

Source of Pull-thru data : internal company data

# BIOSCIENCE DIVISION

# The Worldwide Plasma Derivatives Market

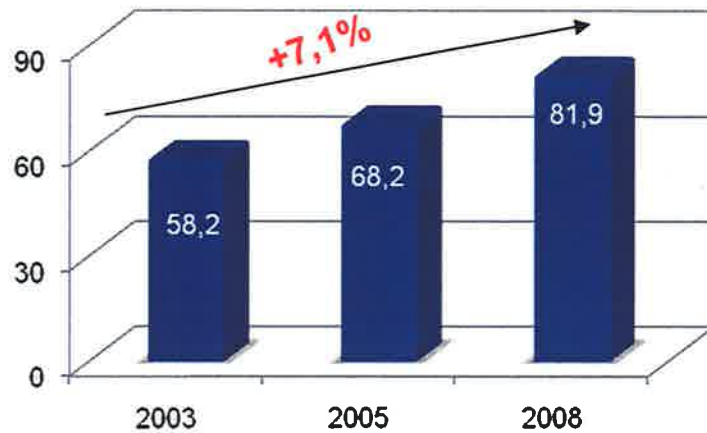


Sources: *The Worldwide Plasma Fractions Market 2008, MRB.*

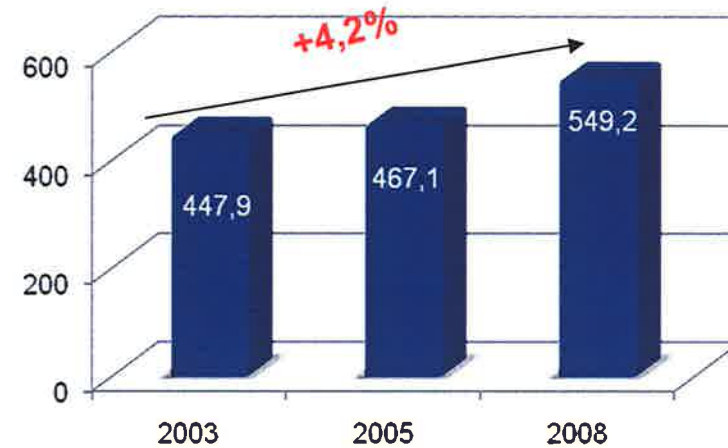
The world plasma derivatives market has grown consistently since the early 1990s.  
Since 2003, worldwide sales' growth has accelerated

Market growth continued at an accelerated rate until 2008

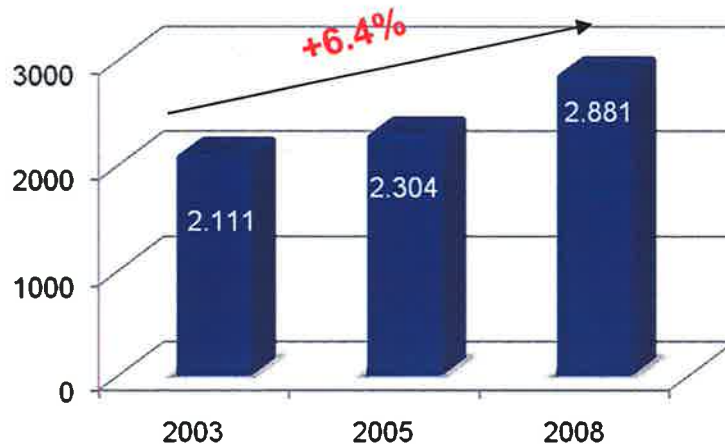
# Demand Evolution for Plasma Proteins



IVIG in 000'kg.



Albumin in 000'kg.



pdFactor VIII in MM I.U.

Source: The Worldwide Plasma Fractions Market 2008, MRB

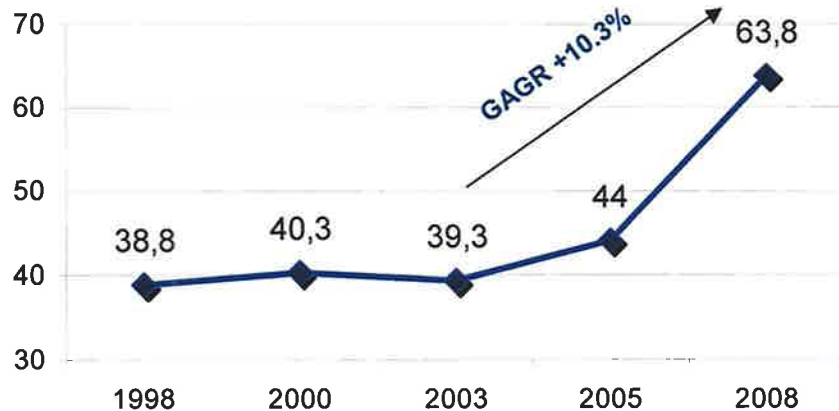
the genetically engineered at a competitive cost and price, and there are differences between the genetically engineered and the plasma-derived products. Some twenty years ago, the introduction of recombinant factor VIII was expected to compromise future sales of the plasma-derived products. The recent history of this market testifies that the plasma-derived products have recently regained a small part of their market shares, as they have shown superior efficacy in some treatment modalities over recombinant products.

Recently published MRB data confirm main proteins W/W demand growth up to 2008.

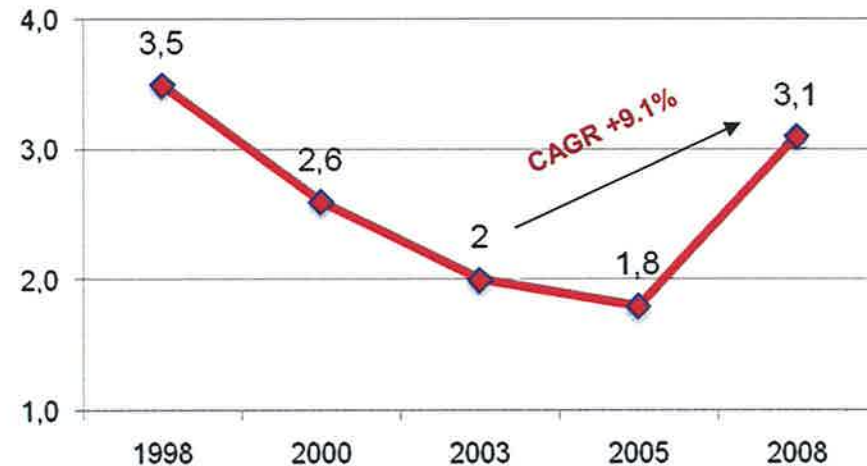


# Price evolution of main Plasma Proteins

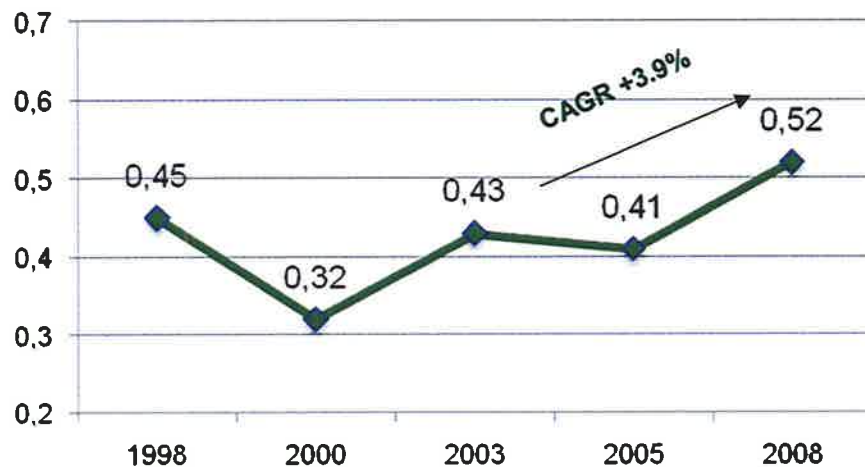
**IVIg Evolution of ASP (US\$ per gr) - Worldwide**



**Albumin Evolution of ASP (US\$ per gr) - Worldwide**



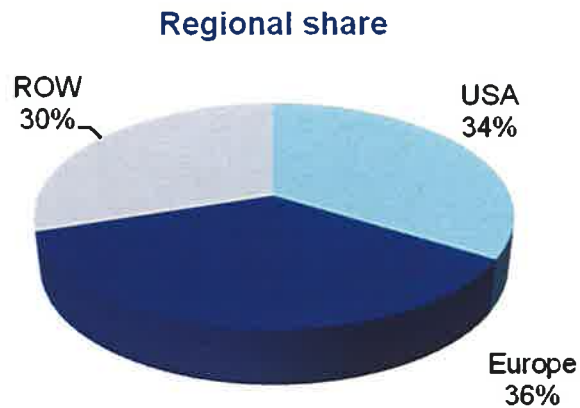
**pd Factor VIII Evolution of ASP (US\$ per IU) - Worldwide**



Albumin and pdFactor VIII prices have recovered similar levels than ten years ago. Positive demand evolution for IVIG has driven prices up and is the product paying for the industry higher costs.

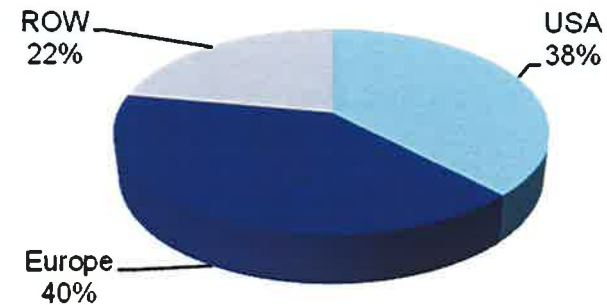
# The Worldwide Plasma Derivatives Market

## World Total Sales 2008 US\$ 11.8 (Bn)



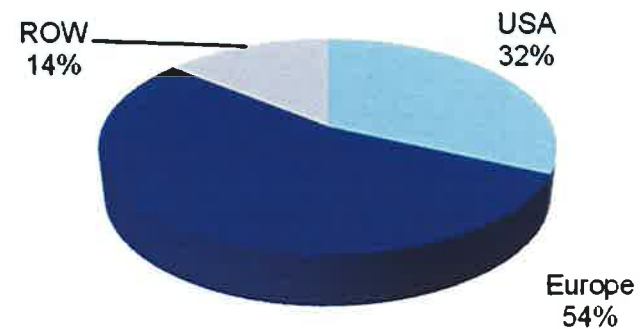
## Grifols Bioscience Sales

2009 Regional share (%)



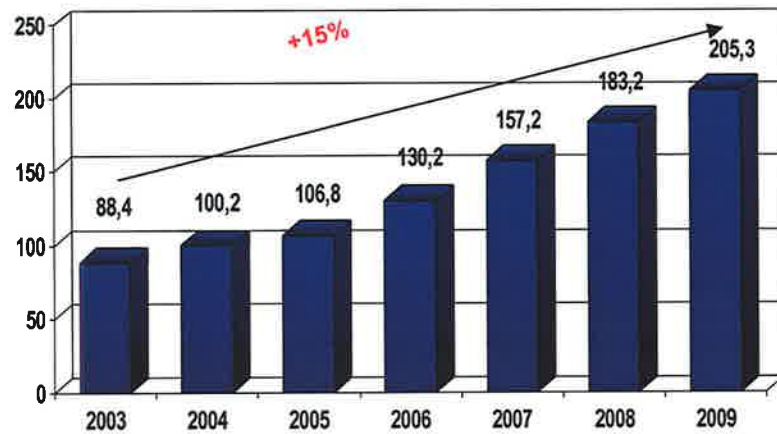
**In 2009 Grifols Plasma Protein sales in ROW reached 22% of total sales**

2005 Regional share (%)

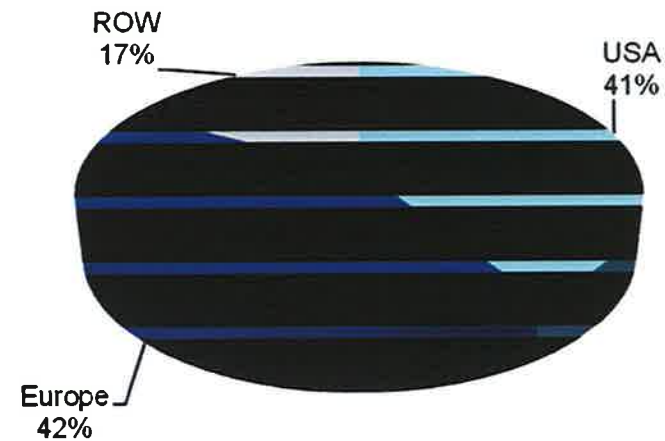


Source: *The Worldwide Plasma Fractions Market 2008 MRB.*

# Grifols pdFactor VIII Sales Evolution



Grifols Worldwide Factor VIII Sales (MM. US\$)



Geographical Distribution of Grifols Factor VIII Sales 2009 (I.U.)

**Grifols Plasma Factor VIII Sales continue showing a healthy growth with significant presence in Europe and in the US**

## ***Market***

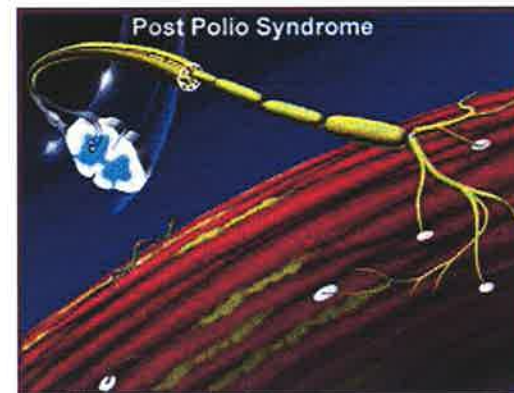
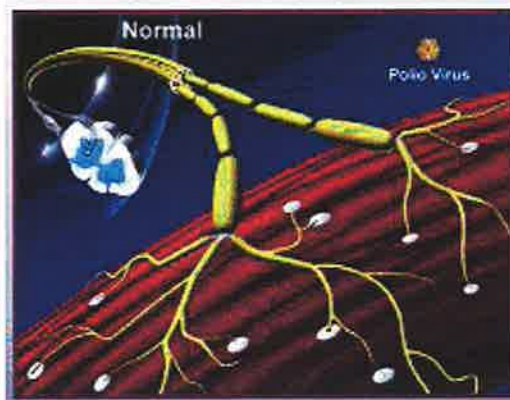
- Continued diagnosis and treatment of new PID patients in developed markets
- Increased access to treatment of developing countries
- Promotion of CIDP by Talecris worldwide
- New potential indications: Alzheimer, MMN, PPS
- Economic environment improvement

## ***Grifols***

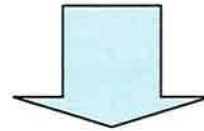
- Flebogamma10% DIF in the US market by H2 2010 and in Europe by H1 2011
- IVIG US manufacturing facilities by 2013
- Alzheimer trial Plasmapheresis + Albumin + IVIG
- PPS indication

# Post-Polio Syndrome (PPS)

- Condition that affects polio survivors years after recovery from initial acute attack of the polio virus.
- Characterized by new or increased muscle weakness, fatigue, and musculoskeletal pain.
- Ongoing denervation has been suggested to be the most important reason for increased muscle weakness.

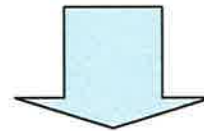


- According to US National Institute of Neurological Diseases and Stroke (NINDS) the condition affects 25 to 50% of the survivors
- WHO estimates a 40% prevalence



Assuming a prevalence of 30%, only in major Western countries there would be around 300.000 PPS patients

300.000 patients x 90 g IVIG/year  
Treating 100% of patients



27Million grams of IVIG/year

## ***Market***

- Hemophilia is an undertreated chronic disease. Only 25% of hemophiliacs in the world receive concentrates
- Increased prophylaxis treatment
- New countries starting to treat Hemophilia
- Increasing incidence of inhibitors to recombinant products
- Von Willebrand is an underdiagnosed and undertreated disease
- Increasing use in the treatment of Von Willebrand Disease

## ***Grifols***

- Best data and experience in Immunotolerance treatment of inhibitors
- Active participation in the major ongoing trials like SIPPET, RESIST, PROWILL, etc.
- Strong presence in the major Hemophilia markets (US, Germany, Italy, UK, Spain)



### ***Market***

- New indications in Liver Cirrhosis and Neurology
- Growing demand in developing markets (China,...)
- Albumin is normally the first Plasma Protein used in emerging markets.
- There is renewed interest in Albumin as a product, with new uses being researched widely.

### ***Grifols***

- Direct participation in all major trials ongoing with Albumin
- Plasma exchange with albumin in Alzheimer
- Alzheimer trial Plasmapheresis + Albumin+ IVIG
- Non therapeutic applications
- Global presence



## ***Grifols R&D***

- Clinical Trials are being conducted with other Plasma Proteins and may represent new market opportunities in the near future.
- AT III, Fibrin Sealant, Fibrinogen, Thrombin, etc

# DIAGNOSTIC DIVISION

# Diagnostic Business - Overview

## ➤ Diagnostic division accounted for 11% of Grifols' Sales in 2009

- The division manufactures and develops equipment, instrumentation and reagents for diagnosis, as well as blood bags

## ➤ Large and growing Global Diagnostic Market

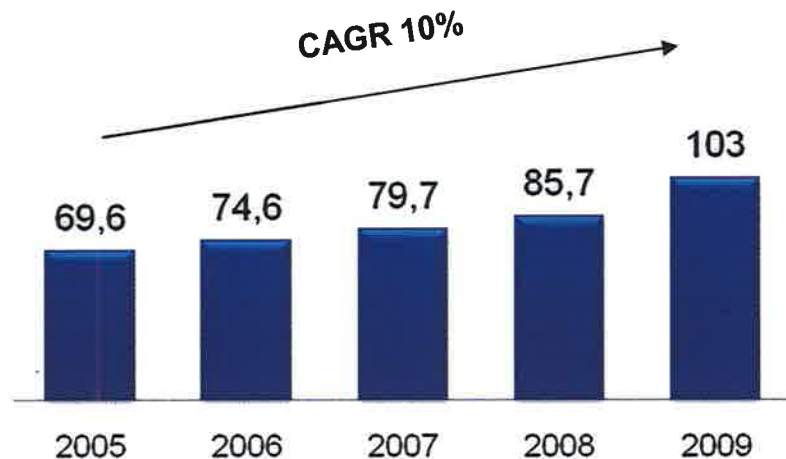
- In-vitro diagnosis growth driven by the introduction of new analyses and novel technologies
- Improvement in diagnosis translates into a better application and monitoring of therapies, leading to an improvement in disease prevention and treatment
- The world market for IVD products in 2008 was approximately \$39,07bn (source Biotechnology Associates)

## ➤ Grifols is active in certain IVD market niches that present synergies with its core Biological business and with global presence.

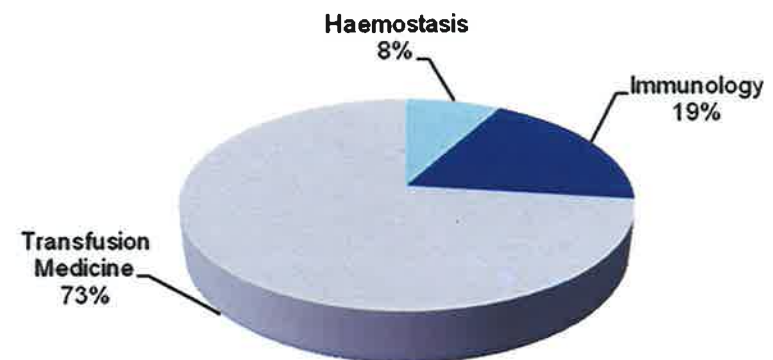
- Transfusional Medicine
- Immunology
- Haemostasis



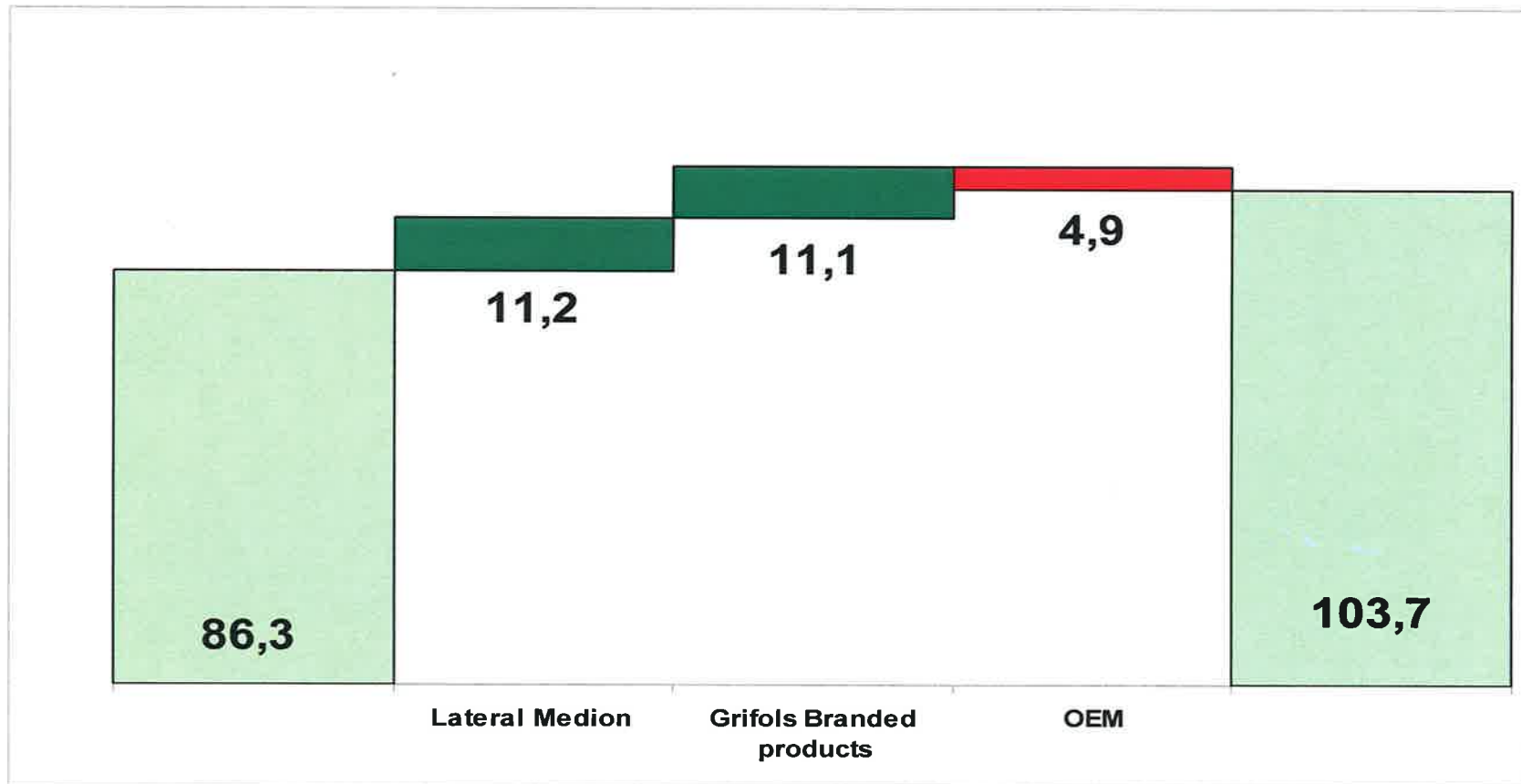
Diagnostic Sales Evolution



Diagnostic Division Sales by Business Segment - 2009



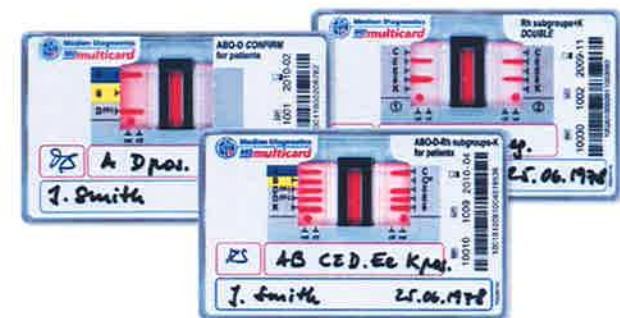
## Diagnostic Division Sales Bridge Analysis 2008/09 (M EUR)



- The OEM Sales drop is offset by the increase of sales of Grifols branded products.
- Lateral/Medion Sales contributes to the Division growth with an additional +13%

## Diagnostic Division future growth drivers short term

- **DG Gel expansion will continue** in existing markets and also in new European territories.
- **Erytra IM Analyzer Launch in ISBT congress in Berlin next June**, will provide a powerful tool to further penetrate the Immunohematology Market Worldwide.
- **STATx Multicard reader** expected EC mark will support the introduction of the new device in Europe.
- **New line of Triturus Branded Elisa reagents** in Infectious Serology



- IM product line launch in US, after gel patent expiration (2012) and FDA approvals.
- Second Generation New Elisa Analyzer.
- New higher throughput Coagulometer under development.
- New Multicard formats and Automation of the Lateral Flow technology for Blood typing.

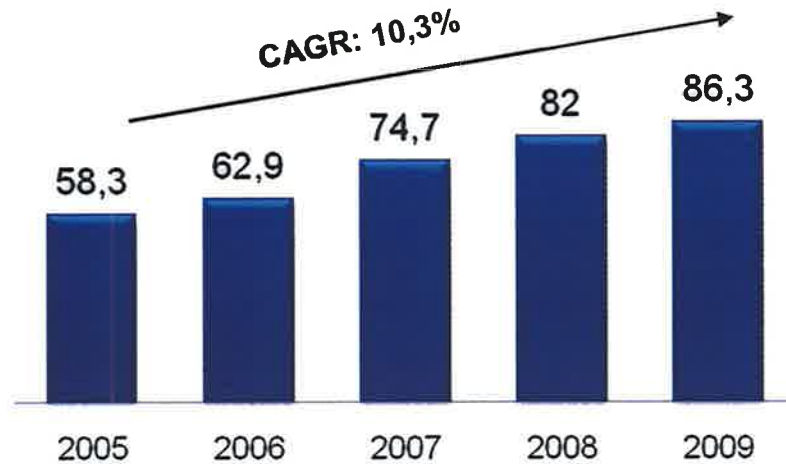
# HOSPITAL DIVISION

# Hospital Division - Overview

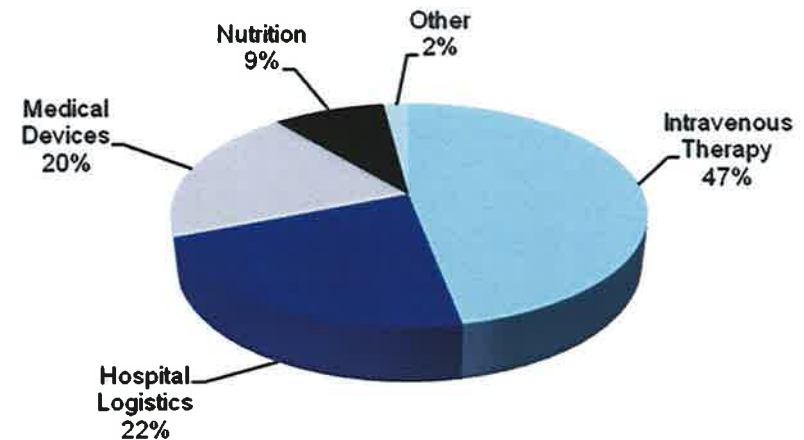
- Hospital division accounted for 9.5% of Grifols' Sales in 2009
- The hospital division grew by 4.6% in 2009 with a leading market share in Spain in IV Solutions and Hospital Logistics.
- Grifols Hospital Division: a natural partner of the Bioscience Business
  - Grifols leverages its bioscience relationships by providing a wide range of products to the hospital market
  - This division manufactures primarily intravenous solutions and enteral and parenteral nutrition products as well as distribute certain products manufactured by third parties (complementary to the hospital products portfolio)
- Sales predominantly in Spain. ROW include sales of Parenteral nutrition products in Asia



Hospital Sales Evolution



Hospital Division Sales by Business Segment – 2009



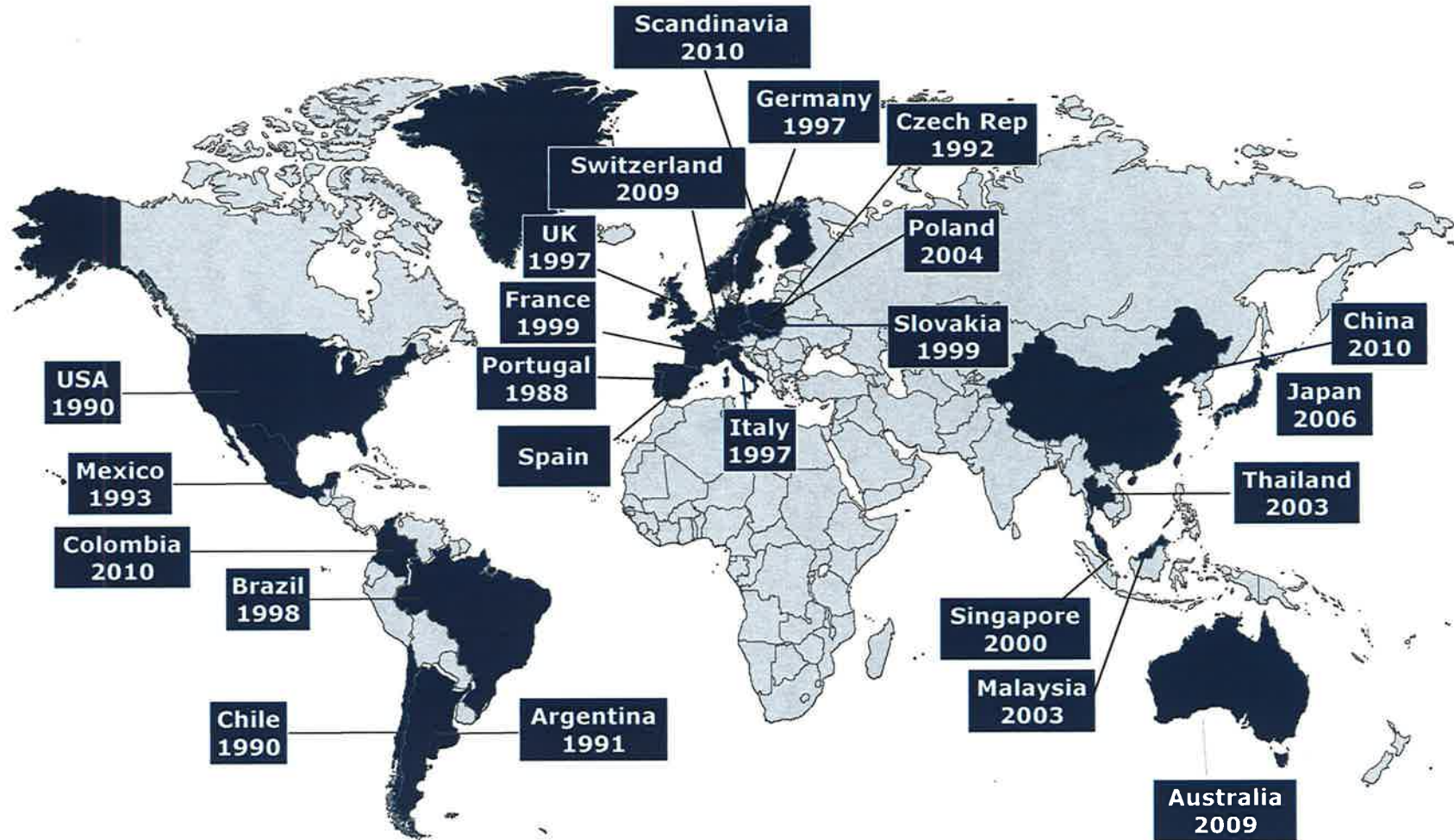


## Hospital Division future growth drivers

- **Contract Manufacturing Agreements** signed with several European big Pharmas will provide significant volume increase in our IV Solutions Manufacturing facilities for the next several years.
- Gradual **development of international presence** through Oncotools (Misterium, Grifill, Oncofarm software)
- **New products developed** internally in our Hospital Logistics segment like Blispack (unitdose packaging) will support the growth even in the actual difficult environment.
- **Enteral Nutrition new products** and extension of the business outside the Hospital (Homecare)







**Grifols international expansion will continue through the establishment of new subsidiaries in Colombia, Scandinavia and China in 2010**



- Very positive Bioscience sales increase of 8,2% versus Q1 2009 at cc.
- US recurrent sales +8,8% vs. Q4 2009 and +3,6% vs. Q1 2009 at cc.
- Another outstanding ROW quarter sales with +41% cc versus previous year.
- Sales in Europe, although +1,9% better than Q4 2009, were 3,6% lower than Q1 2009, due to a slower start of the year in Spain and Germany.
- Total recurrent products sales (excluding raw materials) were 4,8% higher than Q1 2009 or +7,1% at cc.
- Diagnostic growth is again penalized by the decrease in our OEM sales during the quarter
- Hospital Division sales were flat for the quarter with Spanish Hospitals reducing inventory and postponing capital investments
- EBIDTA margin of 30,3% on sales confirms excellent operational profitability for the quarter

# Impact of US Healthcare Reform

No significant impact on business activity or patient communities we serve

- Medicaid Drug Rebate
  - 340B Discount Program
  - Manufacturer Excise Tax
- 

- Insurance Lifetime Caps
- Comparative Effectiveness Research
- Biosimilars
- Retired Employee Prescription Drug Plans

### Effective January 1, 2010

- Manufacturer rebates on drugs administered to Medicaid patients increased from 15.1% to 23.1%
- EXCEPT for blood clotting factors for which rebates are capped at 17.1%
- Companion increase to 340B drug discount program (implementation date not yet determined)



- 340B Integrity Provisions require GAO study in 18 months to assess program effectiveness
- Program expansion potential to 1600 eligible new hospitals (excluding orphan drugs)
- “Must Sell” provisions requires 340B customers be on-par with others
- No expansion to inpatient setting under healthcare reform
- Possible limited future expansion to inpatient applicable to “truly uninsured”

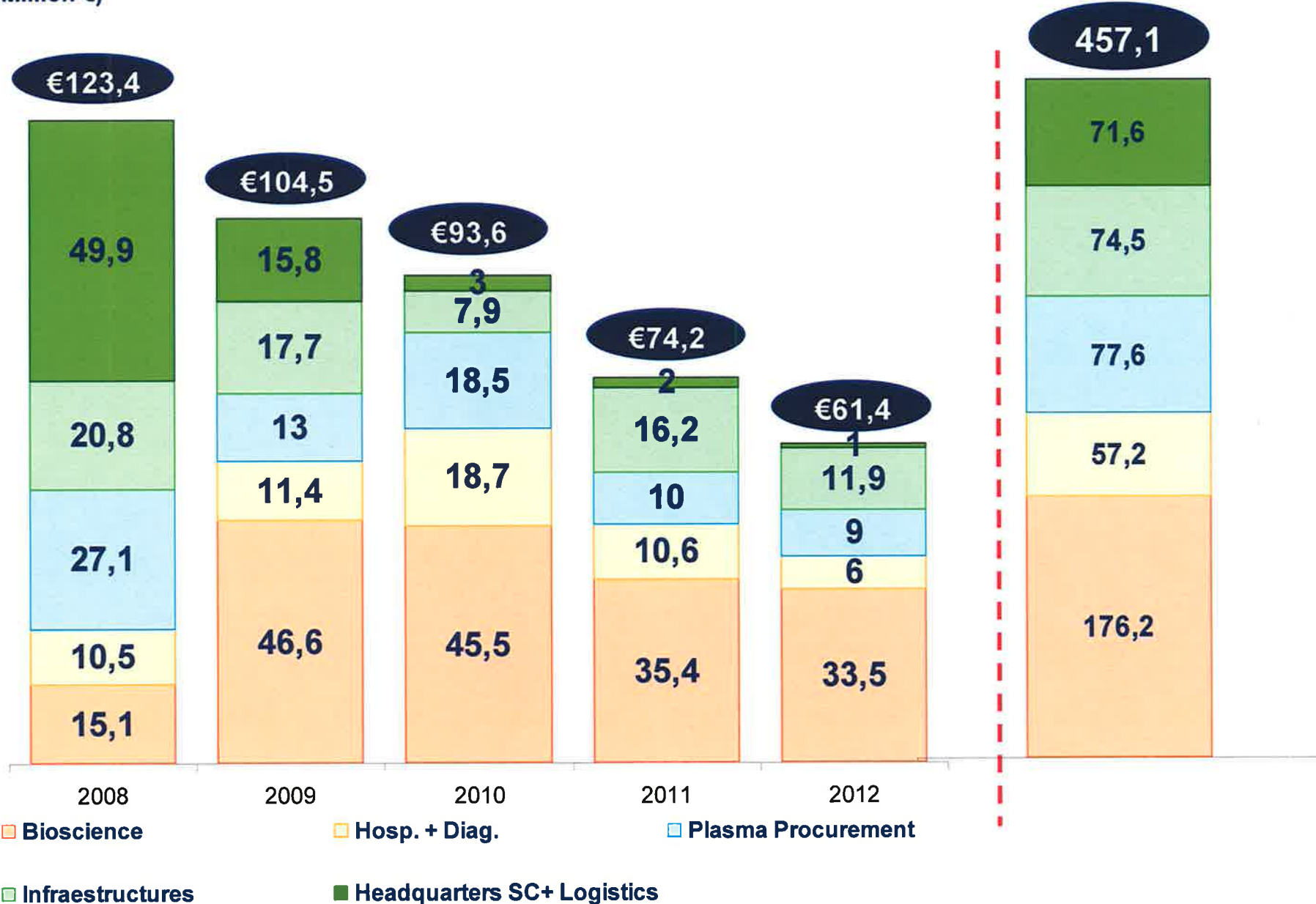
- \$28 billion tax on pharmaceutical manufacturers over the years 2011 – 2019
- Sales weighted calculation based on market share
- Sales of orphan drugs and sales to government programs excluded from calculation
- Grifols impact estimated at less than \$1 million per year based on current market conditions
- Advocating to expand exclusion to drugs approved only to treat orphan diseases

- Lifetime insurance caps eliminated
- Comparative effectiveness provisions creates rare disease panel
- Biosimilars:
  - 12 years exclusivity
  - Recombinant products eligible for biosimilars
- Tax provisions for retired employee prescription plans do not apply to Grifols

Capex

# CAPEX Plan 2008-2012

(Million €)



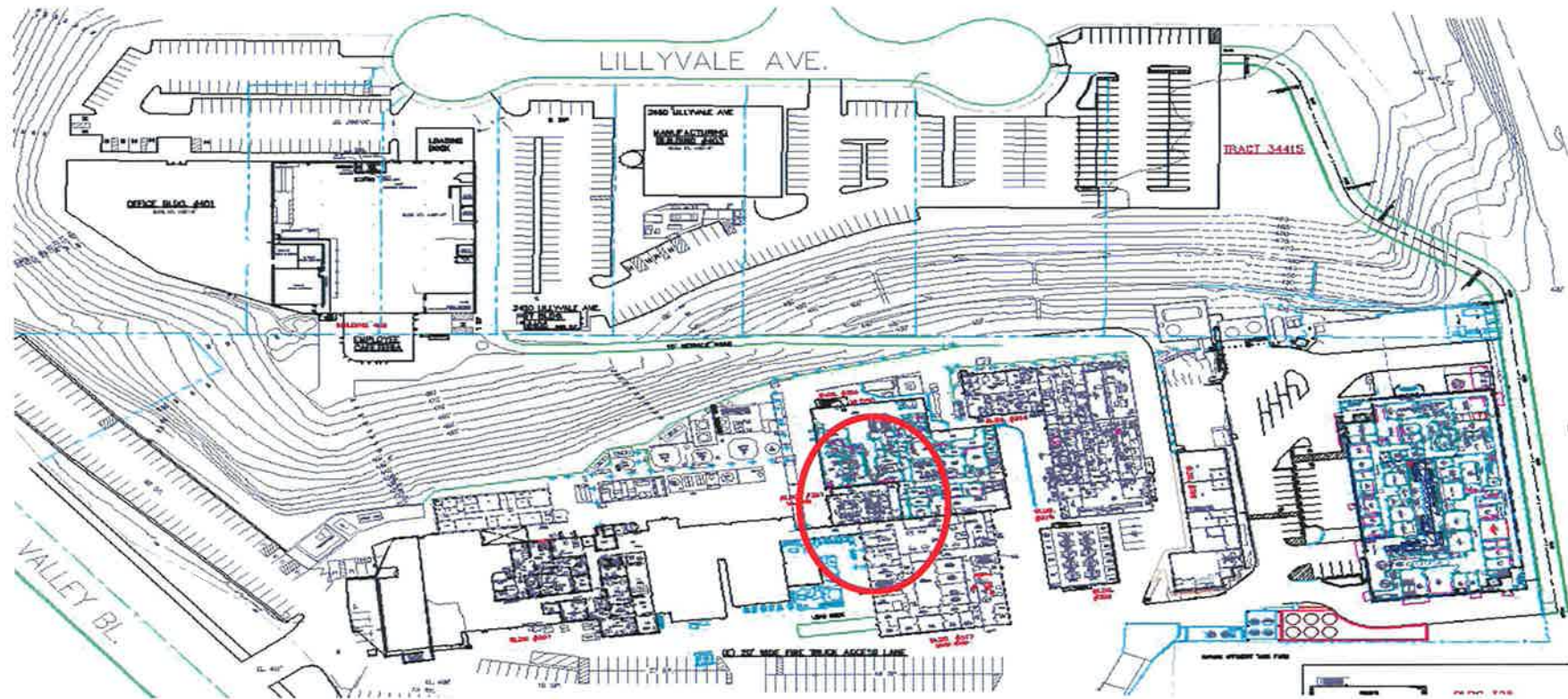


# Bioscience USA





## Building 321: Fractionation capacity increase



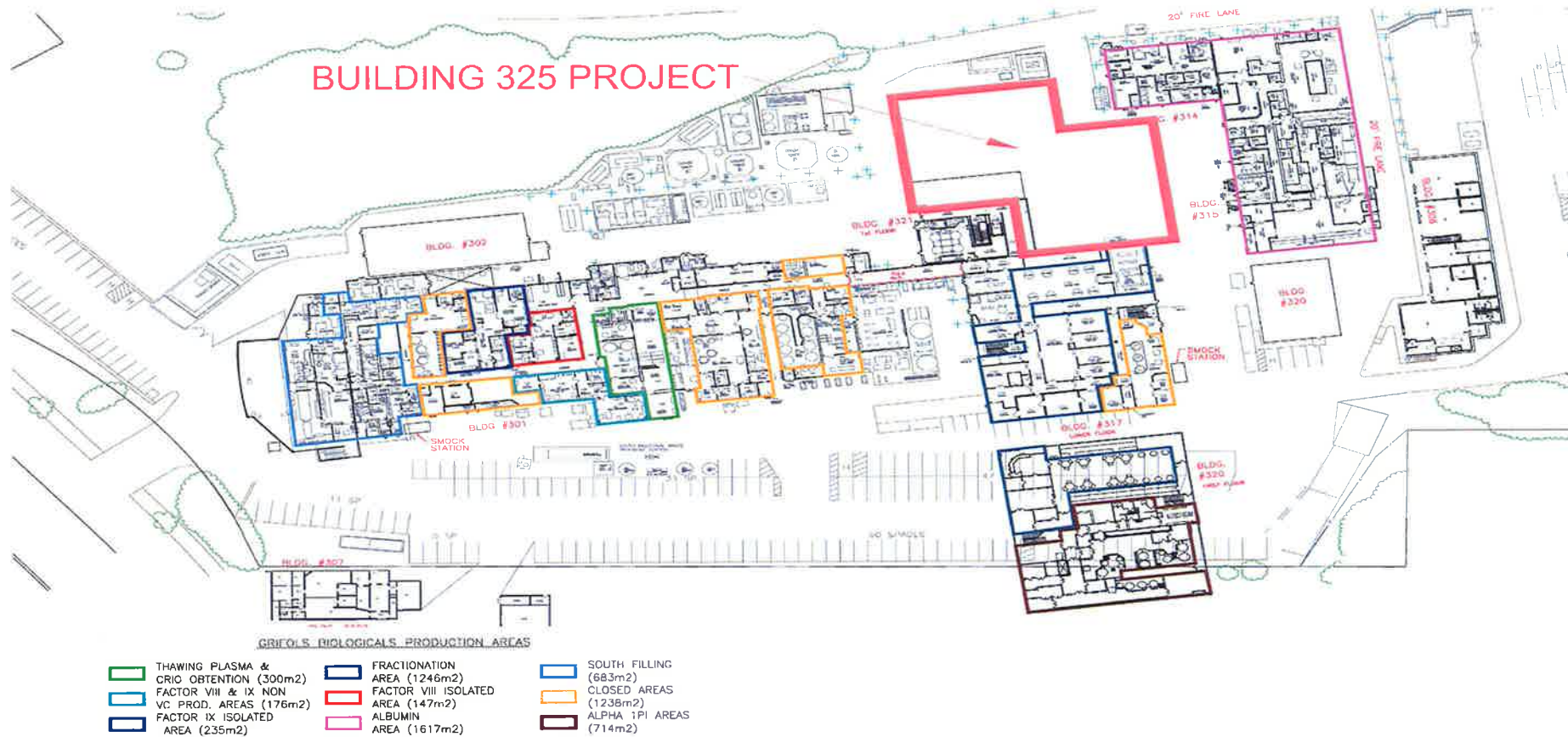
- Investment: € 2,0 MM
- Surface : 1.970 m<sup>2</sup>
- Capacity: 1.500.000 + 700.000 (Minifrac) → 2.200.000 liters (total GBI)
- FDA approval December 2009

## Building 321: Fractionation capacity increase (Minifrac)





# Building 325: Coagulation Factors facility



## Building 325: Coagulation Factors facility

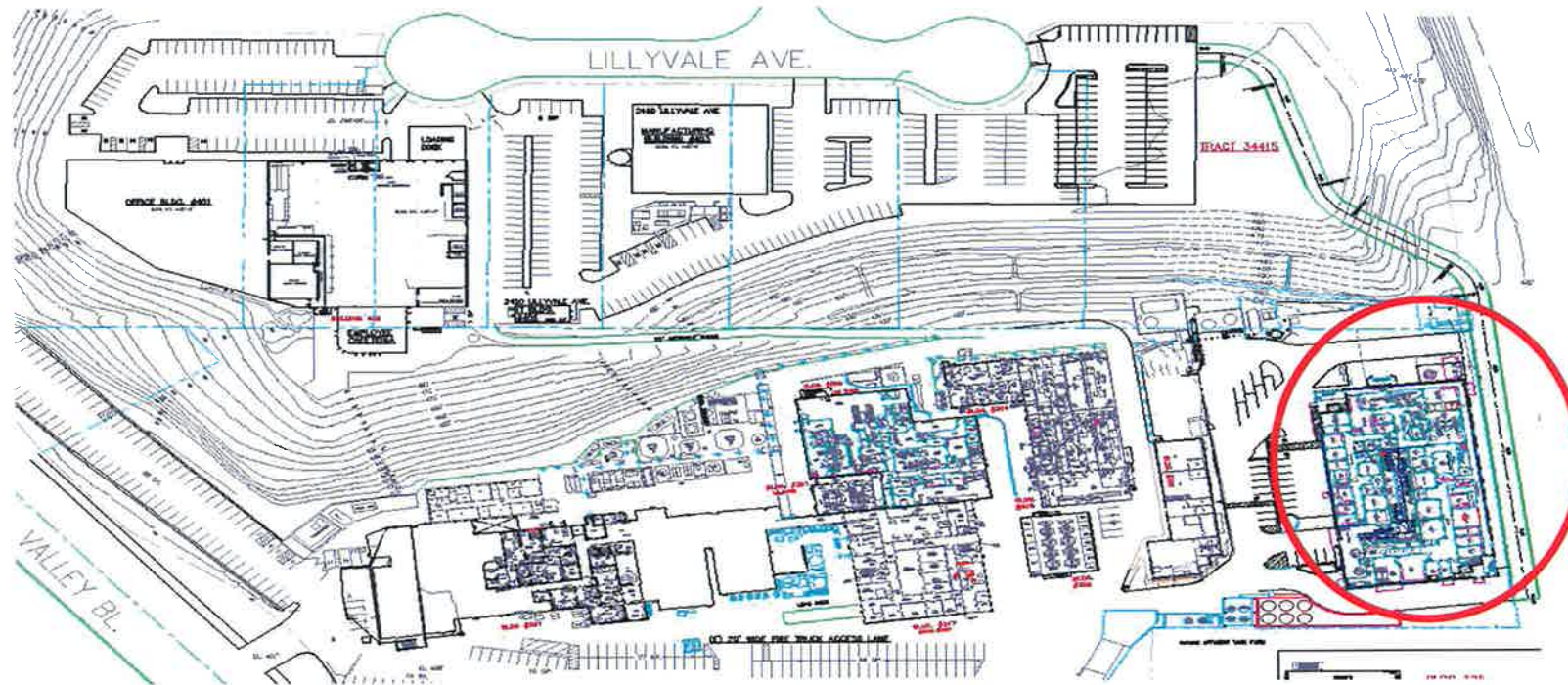


4.500 m<sup>2</sup> plant building in 3 levels for:

- Freeze dried products filling €12,3 MM FDA approved May 2008
- Liquid products filling € 3,5MM FDA approved December 2009
- Coagulation Factors purification € 9,0MM under construction
- Plasma thawing € 2,5MM under construction



# Building 330: Flebogamma DIF® Facility



- Investment: € 44,0 MM
- Surface : 9.000 m<sup>2</sup> in three levels
- Capacity: 3.500.000 l plasma equiv.
- Start : 2008
- Expected FDA approval in 2012

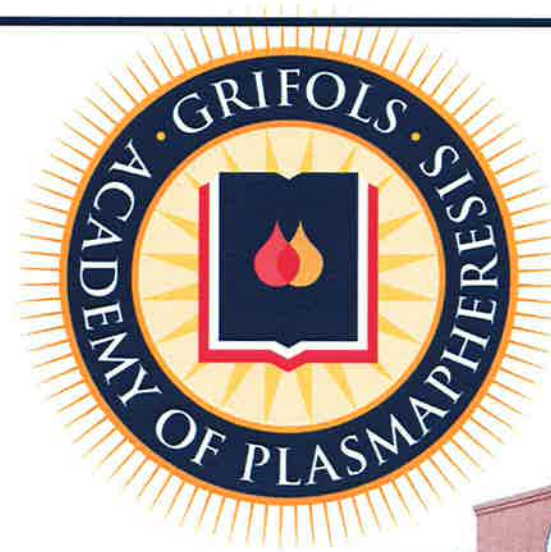
# Building 330: Flebogamma DIF<sup>®</sup> Facility





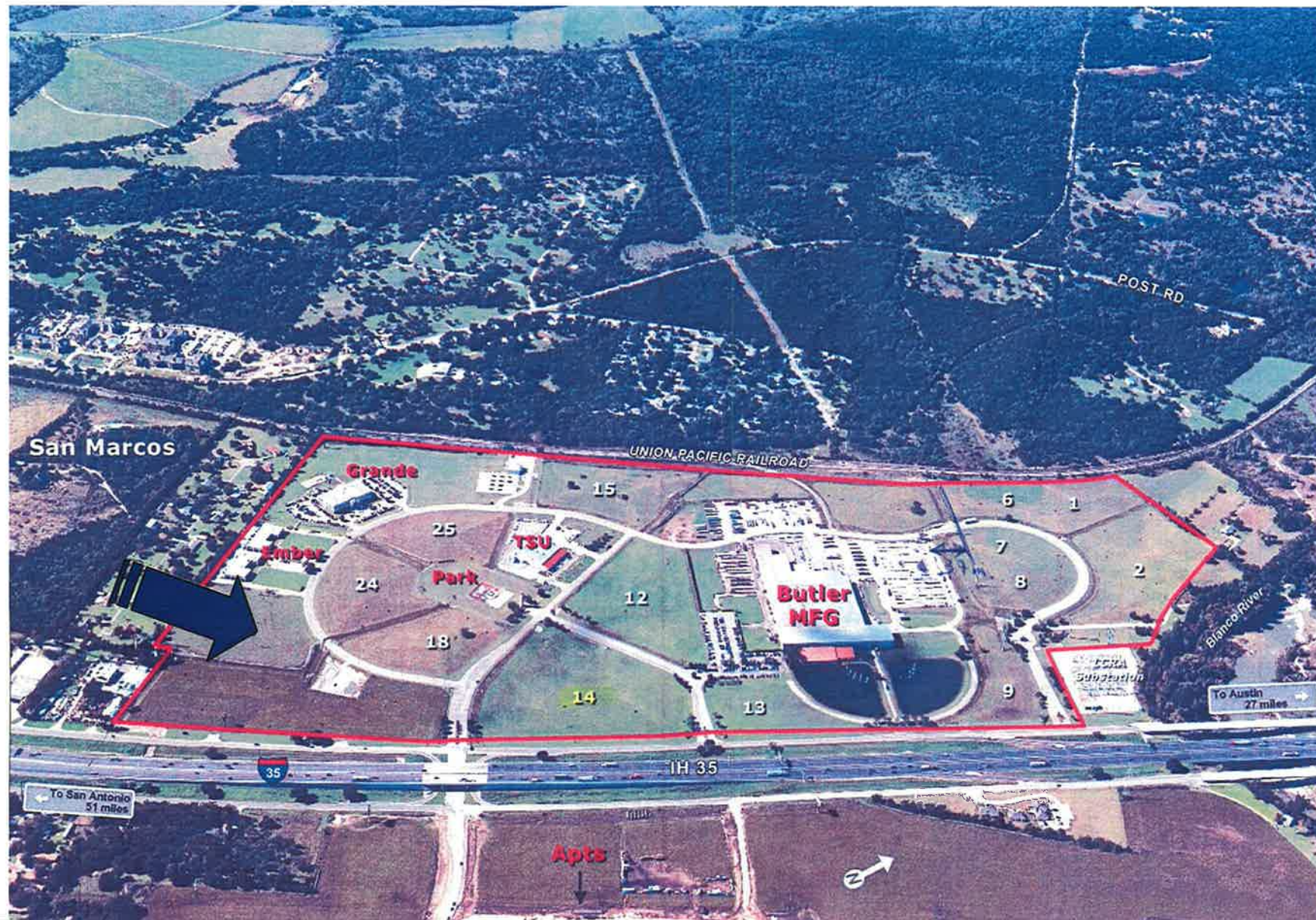
# Academy of Plasmapheresis

Start: 2nd Q 2008  
End : January 2009  
Surface: 789 m<sup>2</sup>





# San Marcos (TX) Plasma Testing Lab





# San Marcos (TX) Plasma Testing Lab



Investment: € 11,5 MM    Start : October 2009  
Surface : 7.125 m<sup>2</sup>    End : October 2010



# Bioscience Spain





# P1A Building. Fibrin Sealant Production, Sterile filling, R&D Pilot Plant (GMP)



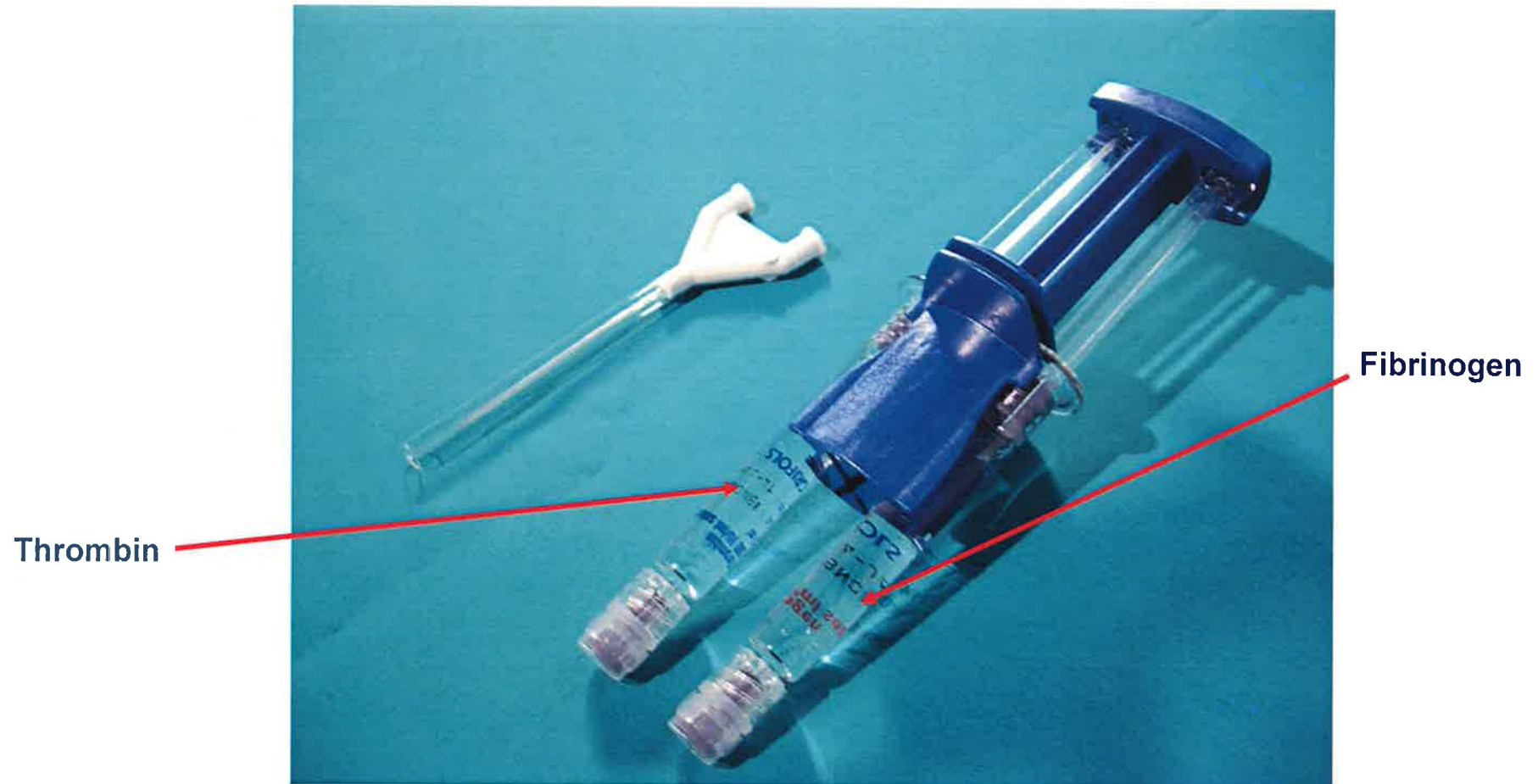
Investment: € 34,0 MM  
Surface: 2.760 m<sup>2</sup>

## P1A Building. Detail of Fibrin Sealant production area

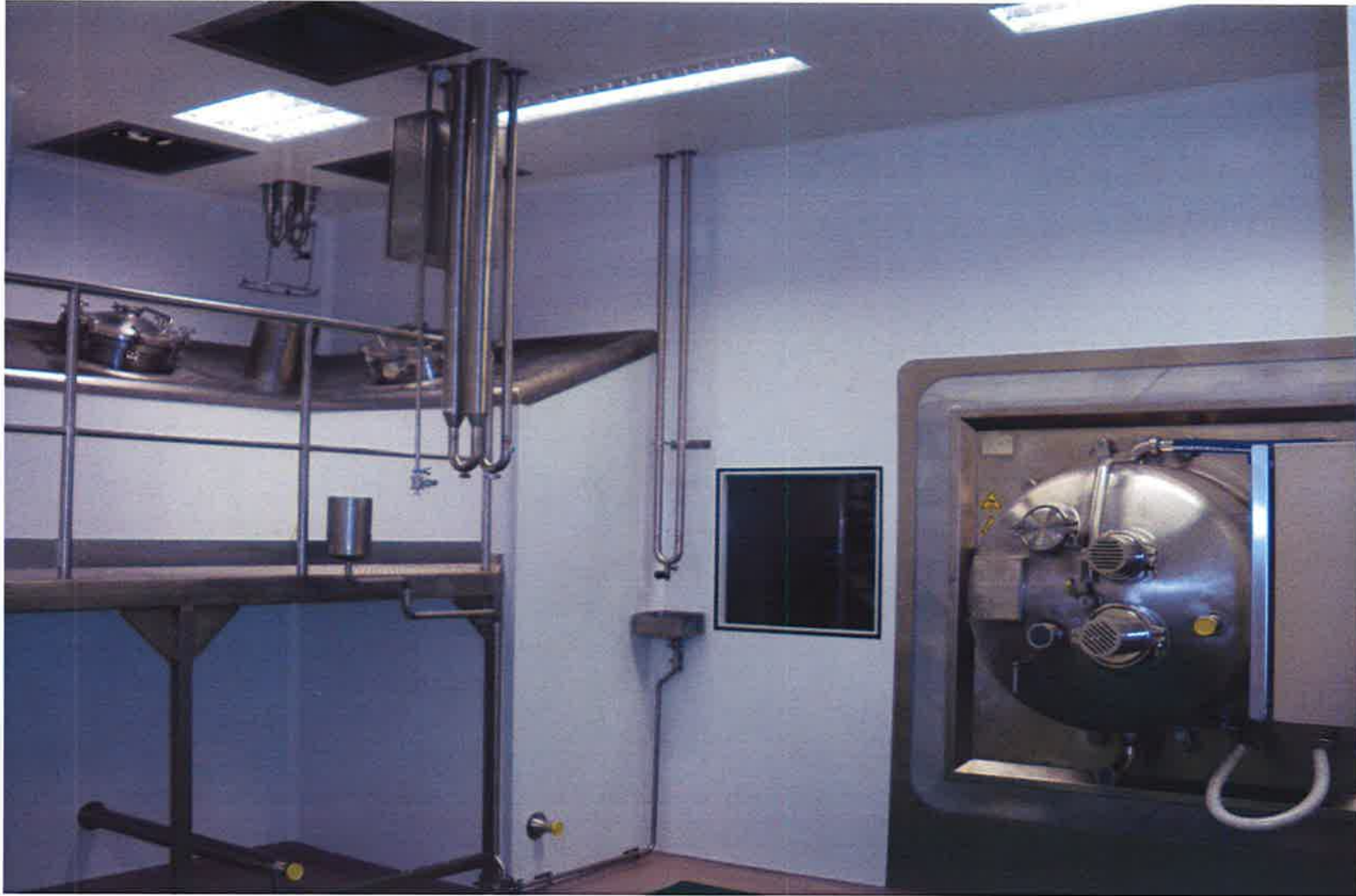




# Fibrin Sealant Final Container



## P1A Building. Detail of R&D Pilot Plant (GMP)



## P2 Building. New Microbiology Labs



Start:	July 2009
Investment:	€ 1,3 MM
End :	January 2010
Surface:	426 m <sup>2</sup>



## P1 Building. New R&D Labs addition



Start:	July 2009
Investment:	€1,8 MM
End :	July 2010
Surface:	854 m <sup>2</sup>



## Fractionation expansion 2010 – 2012 Barcelona



Investment: : € 15,0 MM  
Surface : 4.284 m<sup>2</sup>  
Capacity: 1.000.000 liters (expandable to 2.000.000)  
Start: Q4 2010  
Expected EMEA approval Q4 2012

# Diagnostic Division



**GRIFOLS**

*Investors Meeting, May 2010*

112

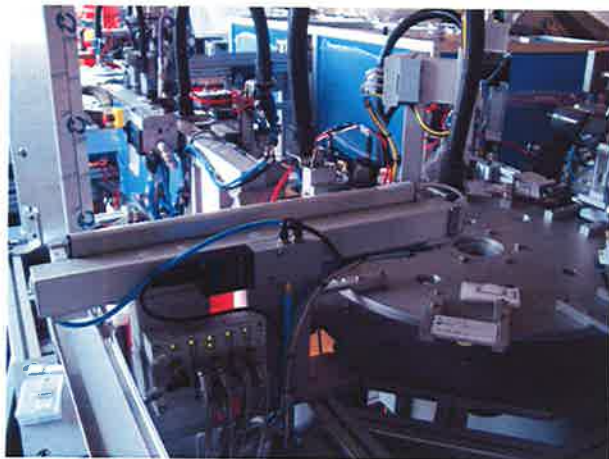
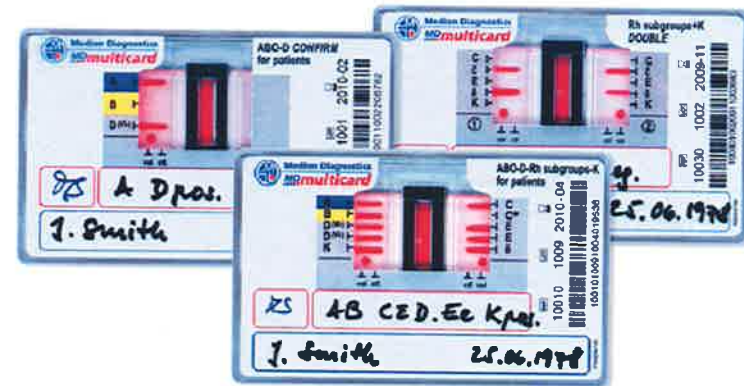
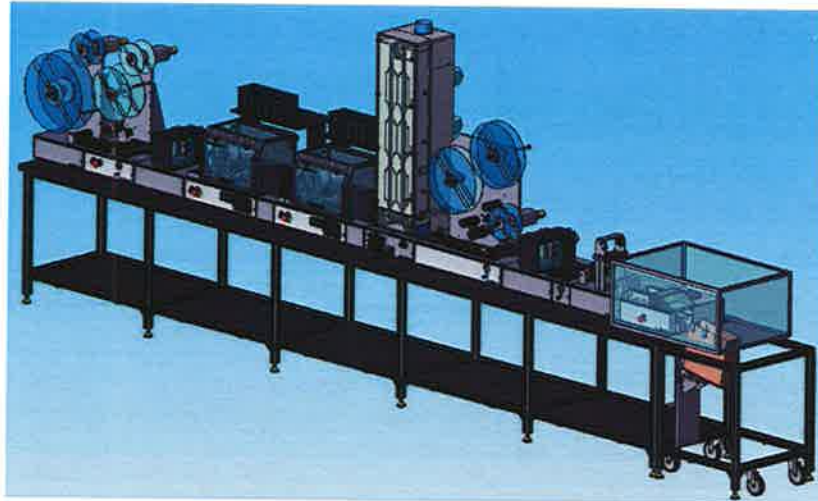


## D+G: Gel Cards Production Increase



Start: January 2008  
Investment: € 2,5 MM  
End : December 2010  
Surface: 347 m<sup>2</sup>  
Yield : 5.000 cards/ hour





Invest: € 1,8MM

MDmulticard® is a novel card device which uses lateral flow technology for the rapid determination of blood groups to assure RBC compatible transfusion.

It allows for simultaneous multi-parameter testing in a single assay and provides stable end-point results without centrifugation.

## New Gel Card Production Plan in Australia



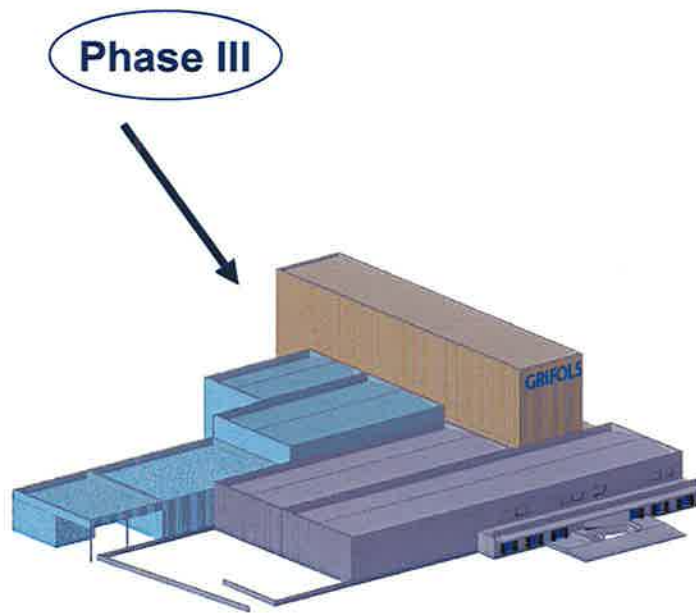
Project start : April 2009  
Project End : March 2010  
Investment : € 6,0 MM  
Surface : 1.115m<sup>2</sup>



# Hospital Division



## Murcia Phase III: Parenteral solutions plant



Project start:

Expected EMEA approval:

Investment :

Max.Capacity:

Surface:

March 2009

Q4 2011

€ 16,0 MM

30MM units

4.060 m<sup>2</sup>



# Infrastructures



## Corporate HeadQuarteres Sant Cugat



Surface: 33.100 m<sup>2</sup>  
Invest: € 50,0 MM

Start : 2008  
Offices occupied in Sept 2009



# Logistics Warehouse in Barcelona



EMEA approval:	May 2010
Investment:	€ 4,5 MM
Total Area:	9.100 m <sup>2</sup>
Automated Silo:	7.860 locations

## Logistics Warehouse in Barcelona



# R&D Review

- **Canada, Spain, UK & USA (20 centers)**
- **Preliminary phase:**
  - Safety and training, 100 subjects
- **Primary phase:**
  - Randomized, single-blinded, efficacy and safety
  - Superiority trial (FS vs. manual pressure)
  - 250 subjects
- **Current status:**
  - Initiated in Canada, Spain and UK (FDA IND meeting pending)
  - 70 patients treated
- **FPI – LPO: Q4 08 – Q1 12**
- **Facility ready for production**

- **Hepatic (main interest) and soft-tissue surgery**
- **Randomized, single-blinded, efficacy and safety**
- **FS vs. haemostatic agent**
- **260 subjects, USA**
- **Current status :**
  - Protocol (draft version available)
  - FDA IND meeting outstanding
- **FPI – LPO: Q3 10 – Q1 12**



- **Natural derivation of the FS project**
- **Target indication: adjunct to hemostasis agent in surgery.**
- **Study design: Phase III study in 25 centers (USA). Double-blind compared with bovine topical thrombin**
- **At least 300 patients.**
- **3 types of surgery: vascular, hepatic and soft-tissue.**
- **FDA IND meeting outstanding**

- **Natural derivation of the FS project**
- **Grifols commercialized Fibrinogen until 1982**
- **First indication: Congenital deficiency (at least 2 studies):**
  - Pharmacokinetics, safety and “in vitro” efficacy in 15 patients
  - Safety and efficacy. Treatment of bleeding episodes and prophylaxis before surgery or during pregnancy/delivery
  - Possible additional study: long-term prophylaxis
- **Second indication: Secondary deficiency**
  - Treatment/prophylaxis of bleeding in patients with acquired deficiency of fibrinogen (< 1g/dL)
  - Study population: obstetrics/postpartum bleeding

- **Deficiency of IG: short life expectancy without treatment (absolute medical need)**
- **Pediatric trial (USA):**
  - Post-marketing commitment with FDA
  - 25 patients <16 years; 9 centres
  - 1 year follow-up/patient
  - Infections, IgG levels, Adverse Events
  - FPI – LPO: Q3 08 – Q2 11
  - Current status: 23 patients treated

- **Multi-centre, prospective, open-label clinical trial**
- **Efficacy & safety in Chronic ITP in acute phase**
- **USA & Canada (>35 centers, 75 subjects)**
- **37 sites selected 29 with IRB approval**
  - Ready to extend the study to India (11 new sites)
- **27 sites opened, 22 patients treated**
- **FPI – LPO: Q2 08 – Q2 11**

- **Multi-centre, prospective, open-label clinical trial (extension of the 5% trial)**
- **Efficacy & safety in Chronic ITP in acute phase (adults).**
- **Spain, Russia & UK (12 centers, 20 subjects)**
- **Follow-up: 3 months**
- **FPI – LPO: Q3 08 – Q2 11**
- **Current status:**
  - **14 patient treated (9 in Russia, 3 in Spain, 2 in UK)**
  - **Interim report written and submitted to EMEA**



- **Interest: having the same as competitors**
- **Not a clear medical need**
- **50 patients (25 <16 years); 9 centres**
- **1 year follow-up/patient**
- **Infections, IgG levels, Adverse Events**
  - PK (25 patients)
- **FPI – LPO: Q1 11 – Q4 12**

- **Niuliva® approved in Spain and Italy since 2008 for maintenance after liver HBV transplantation.**
- **Anhepatic phase (immediately after transplantation) not included.**
- **New study of Niuliva® to gain the anhepatic phase indication.**
- **Single arm, clinical study.**
- **4 centers in Italy**
- **Sample size: 20 patients**
- **6 months of follow-up**
- **FPI - LPO: Q4 10 – Q4 12**

- **Post-polio syndrome (PPS): new muscle weakness and pain affecting survivors of poliomyelitis many years after the first attack.**
- **Previous study suggests efficacy of Flebogamma DIF<sup>®</sup> in PPS. This study was performed in Sweden by Pharmalink AB using Grifols Flebogamma<sup>®</sup>**
- **FDA orphan drug designation since 2006**
- **Clinical development planned to support the indication of Flebogamma DIF<sup>®</sup> in PPS**
- **Interestingly, the same model can be applied to other diseases with neuropathic chronic pain.**

- **Alfa-1-antitrypsin: congenital deficit produces a severe form of emphysema**
- **Randomized, placebo-controlled, double-blind, clinical trial**
  - **Change on lung density measured by CT scan**
  - **Europe (14-15 countries, >30 sites)**
  - **150 subjects**
    - **Pre-screening of 12,000 COPD subjects in Eastern Europe is expected**
  - **Enrolment: 1 year/site (+ pre-screening)**
  - **Follow-up: 2 years/pt**
  - **FPI – LPO: Q4 10 – Q4 13**

- **Grifols launched ATIII in Europe in the late 80's.**
- **Efficacy, safety and PK for prophylaxis of thrombosis in surgery and pregnancy/ delivery in at least 15 patients.**
- **500 centres contacted (around 14,000 hematologists more by mailing).**
- **Current centres: 8 USA (4 open)**
- **4 patients treated (2 for PK, 2 for surgery)**
- **Study kept at minimum clinical operation after GTC launch of transgenic ATIII**



- New indications very valuable as GRIFOLS obtains only 10% of the available ATIII.
- Secondary deficiency even more valuable: many patients
- Study to evaluate efficacy and safety of preoperative administration of Anbinex in cardiac surgery with CPB.
  - Phase II trial
  - 200 patients, controlled with placebo
  - Single-center (Milan, Italy)
  - Dr. M. Ranucci, President of the European Association of Cardiothoracic Anesthesiologists ([www.eacta.org](http://www.eacta.org)).
  - Status: 90 patients included
  - FPI – LPO: Q2 09 – Q1 11

- **Again, new indications are very valuable**
- **Previous studies suggest that ATIII in severe burns improves time to wound healing and morbi- mortality**
- **Recent study shows 25% reduction in mortality in the group treated with ATIII**
- **A study has been designed on the use of ATIII in severe burns**
- **Main site in Chicago (RUSH University, Dr. Kowal-Vern)**
- **Sample size and total number of sites to be decided**

- **Comparative pharmacokinetics against BeneFIX®**
- **Efficacy (bleedings, surgery) and safety (inhibitors, viral, thrombogenicity) in severe haemophilia B**
- **Bulgaria, Poland, Spain**
- **Study finished but some analyses outstanding.**
- **Preliminary results:**
  - **Recovery 1-1.2 IU/dl per IU/kg (Alphanine®) VS 0.8 (BeneFIX®)**
  - **Dose required: Alphanine®: 2000 IU BeneFIX®: 2400 IU**
  - **Price: \$ 1300 \$ 2000**

- **Study to assess immunologic safety (inhibitors) of Alphanate in severe Hemophilia A**
  - **Post-marketing commitment with FDA**
  - **Countries: USA, Italy, Malaysia and Poland (13 centres)**
  - **Sample size required: 63 patients**
  - **Sample currently recruited: 30 patients (21 completed, Results: no inhibitors)**

- **Approved in the US in 2007 for vWD.**
- **Post-marketing observational study in type III patients submitted to surgery (commitment with FDA):**
  - **Sample size: 15 patients (10 major surgeries)**
  - **Approved in 4 centers; other pending**
  - **2 patients recruited and 2 more pending of surgery**
  - **30 candidate subjects available in several centres**



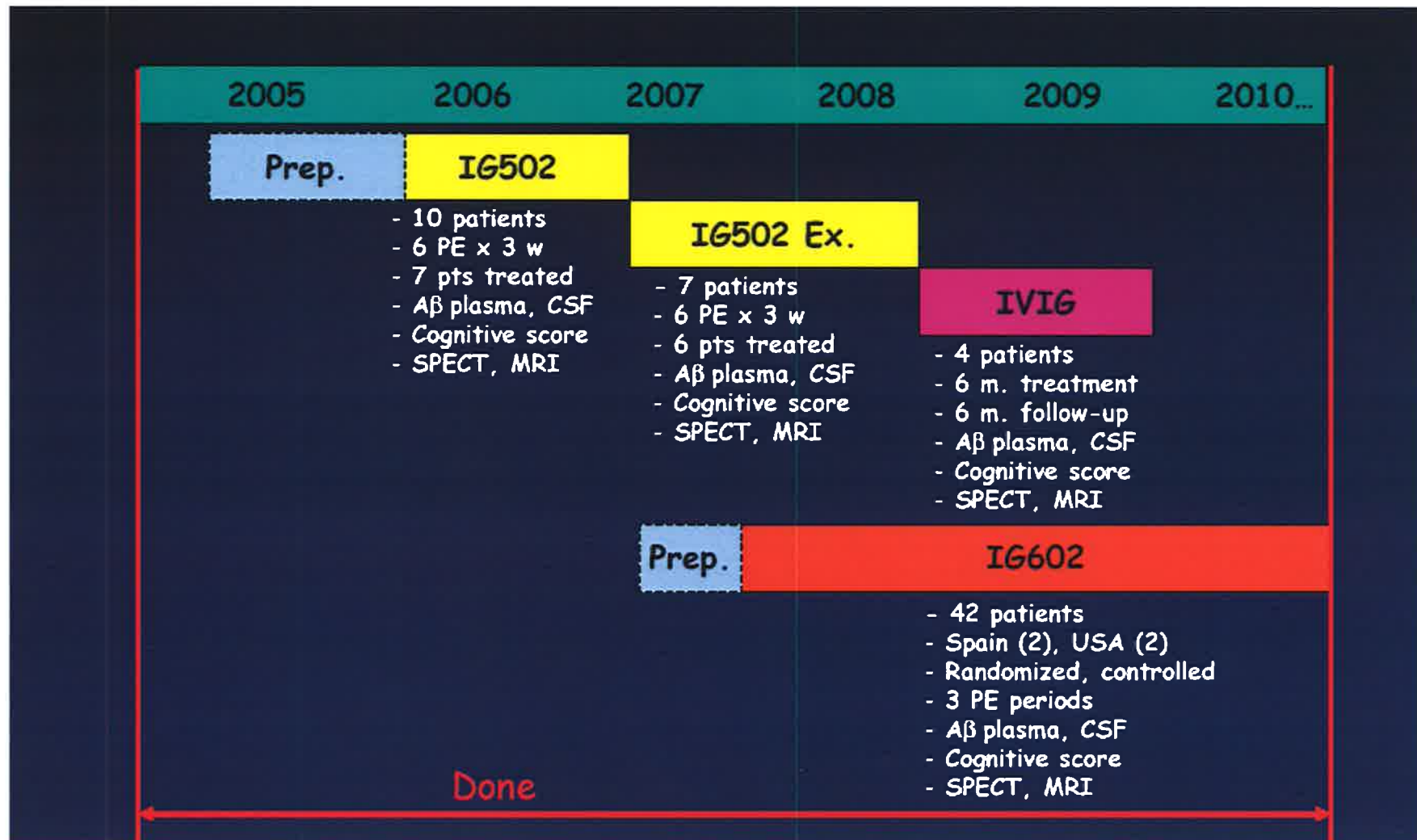
- **Three clinical trials running: PK, bleedings and surgeries**
- **Approved in Italy since 1999**
- **Current centres: 4 in Spain, 1 in the UK**
- **Retrospective study presented to Spanish Agency in Q3 2009**
- **Positive assessment from Spanish Agency**
- **Dossier presented in Q1 2010**
- **Approval outstanding for Q4 2010**

- **Comparison between plasma-derived and recombinant FVIII in terms of inhibitor incidence.**
- **Expected outcome: pdFVIII less inhib than rFVIII**
- **Sponsor: *Fundazione Bianchi Bonomi* (Milan, Italy).**
- **Three participating companies: Kedrion, LFB and GRIFOLS.**
- **300 patients, 76 sites, 18 countries.**
- **FPI: Jan 2010**
- **Current status: 25 patients recruited.**

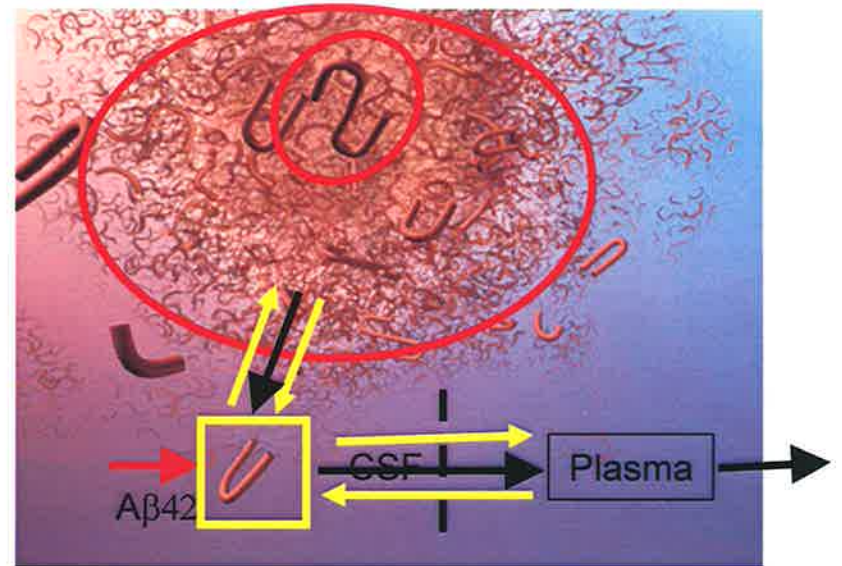
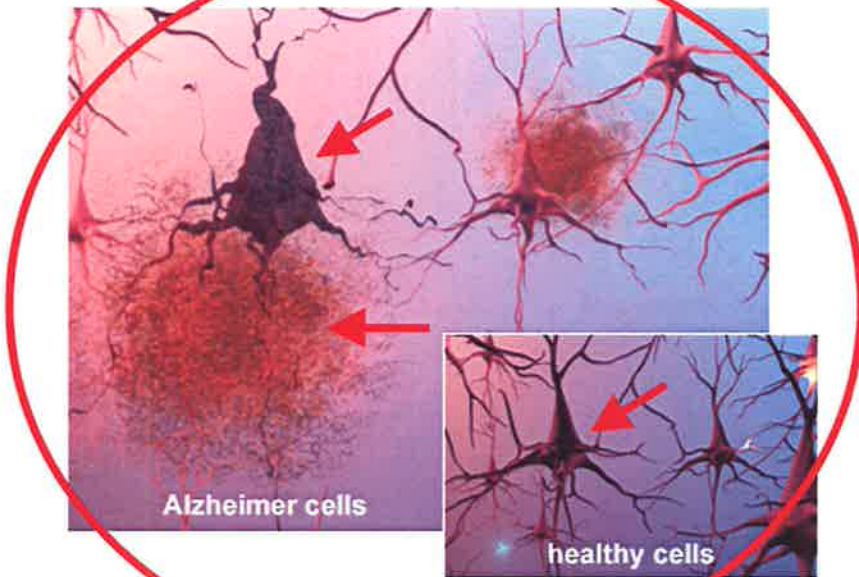
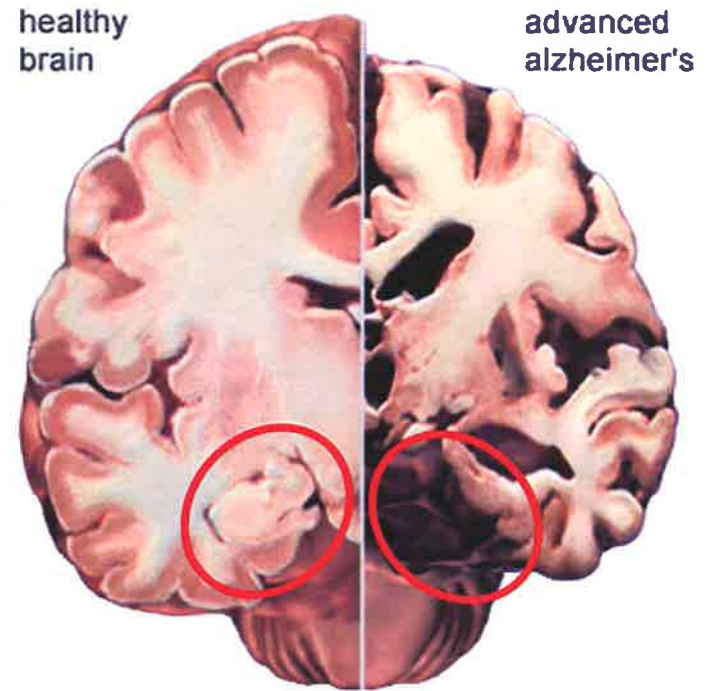
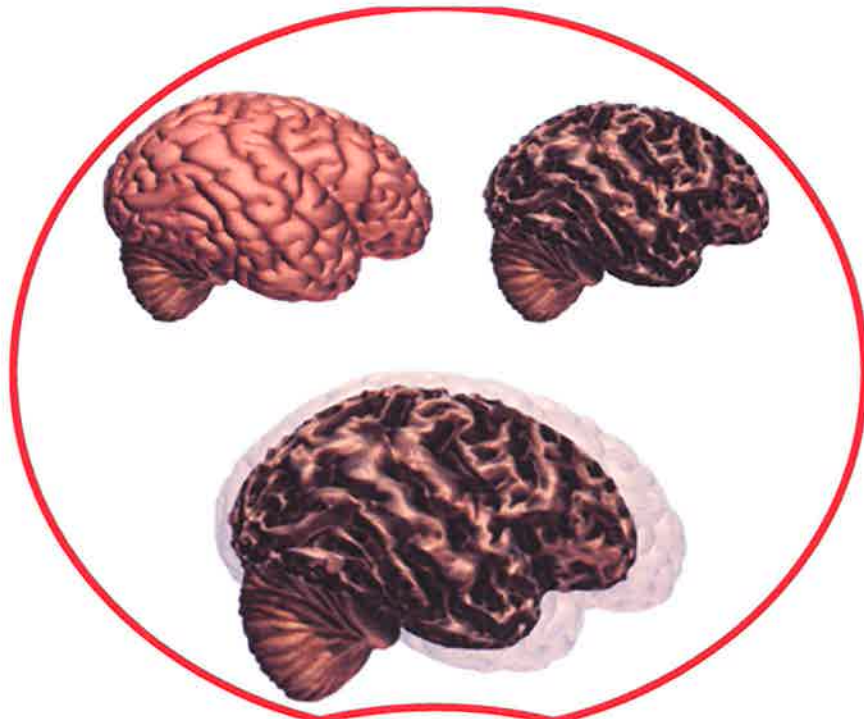
- Albumin 20% in liver cirrhosis patients: cardiovascular, renal and liver function.
- Single arm, open-label, clinical trial
- Six centers in Spain led by H. Clinic BCN (Dr. V. Arroyo, President of the **European Consortium for the Study of Chronic Liver Failure** with 70 hospitals across Europe).
- Sample size: 30 patients
- Dose: 1g/kg/2w x 3 m
- Status: 6 patients treated
- FPI - LPO: Q3 09 – Q3 11

- **Plasma Exchange with Albumin 5% in acute-on-chronic liver failure.**
- **Next step with regards to the Albumin 20% study**
- **Based on functional deterioration of albumin in cirrhotic patients found by Jalan et al. (UCL, London).**
- **Excellent relationship with Dr. Jalan**
- **Single arm, pilot study**
- **One center in Spain: H. Clinic BCN. Dr. V. Arroyo.**
- **Sample size: 10 patients**
- **6 plasma exchanges in 10 days**
- **FPI - LPO: Q3 10 – Q3 11**

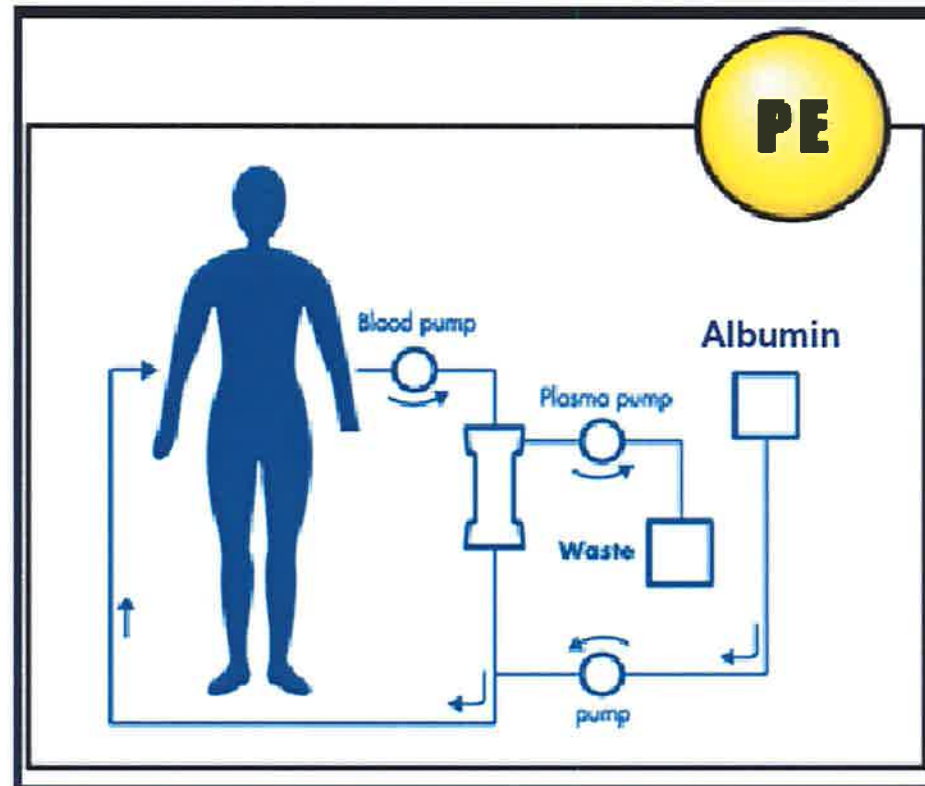
# Plasma Exchange with Albutein® and Flebogamma DIF® in Alzheimer's Disease







# Plasma Exchange (PE) with Albumin





# Plasmapheresis Center



**GRIFOLS**

*Investors Meeting, May 2010*

147

# Plasmapheresis Center



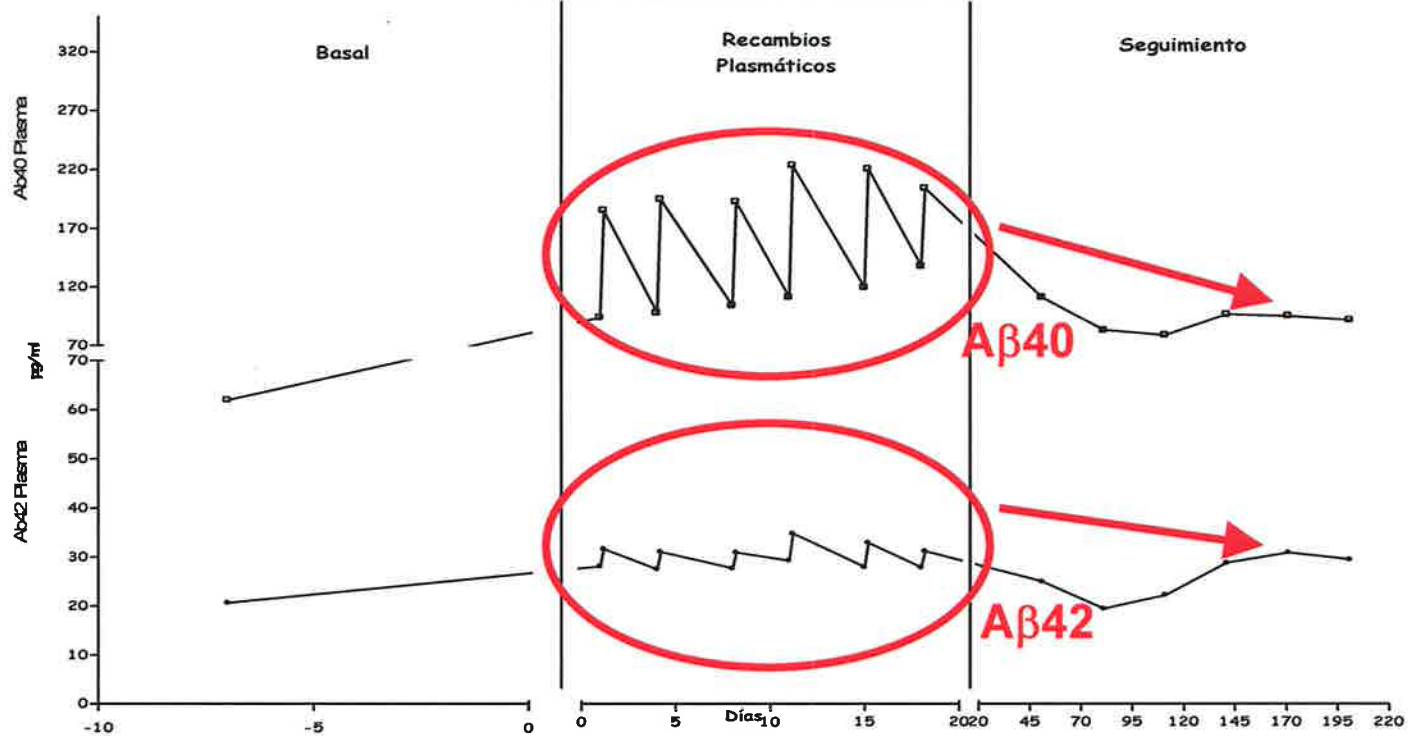
Disease	Year							
	2006		2007		2008		Total	
	Nº	%Col	Nº	%Col	Nº	%Col	Nº	%Col
<b>Cryoglobulinemia</b>	0	,0%	18	3,7%	21	2,6%	39	2,5%
<b>Multiple Myeloma</b>	0	,0%	6	1,2%	32	4,0%	38	2,5%
<b>TTP</b>	4	1,5%	33	6,8%	87	10,9%	124	8,0%
<b>HLA Hypersensitivity</b>	20	7,4%	0	,0%	0	,0%	20	1,3%
<b>Renal transplant rejection</b>	12	4,5%	11	2,3%	59	7,4%	82	5,3%
<b>GN recurrence</b>	72	26,8%	175	36,3%	148	18,6%	395	25,5%
<b>Guillain-Barré</b>	0	,0%	0	,0%	6	,8%	6	,4%
<b>Myasthenia Gravis</b>	11	4,1%	42	8,7%	31	3,9%	84	5,4%
<b>Múltiple Esclerosis</b>	5	1,9%	24	5,0%	12	1,5%	41	2,7%
<b>Hypercolesterolemia</b>	85	31,6%	91	18,9%	121	15,2%	297	19,2%
<b>Cholestasis pruritus</b>	0	,0%	0	,0%	1	,1%	1	,1%
<b>SLE</b>	0	,0%	0	,0%	2	,3%	2	,1%
<b>Waldestrong's Macrogulinemia</b>	9	3,3%	0	,0%	0	,0%	9	,6%
<b>Wegener</b>	6	2,2%	0	,0%	6	,8%	12	,8%
<b>Vasculitis</b>	19	7,1%	22	4,6%	59	7,4%	100	6,5%
<b>Ulcerative colitis</b>	26	9,7%	23	4,8%	27	3,4%	76	4,9%
<b>Crohn's disease</b>	0	,0%	37	7,7%	6	,8%	43	2,8%
<b>Stiff-man syndrome</b>	0	,0%	0	,0%	29	3,6%	29	1,9%
<b>Septic shock</b>	0	,0%	0	,0%	2	,3%	2	,1%
<b>HIS-HLA-Trasplante de Medula</b>	0	,0%	0	,0%	14	1,8%	14	,9%
<b>Encefalitis de Rasbussen</b>	0	,0%	0	,0%	12	1,5%	12	,8%
<b>Good-Pasture</b>	0	,0%	0	,0%	12	1,5%	12	,8%
<b>Total</b>	269	100,0%	482	100,0%	795	100,0%	1392	100,0%



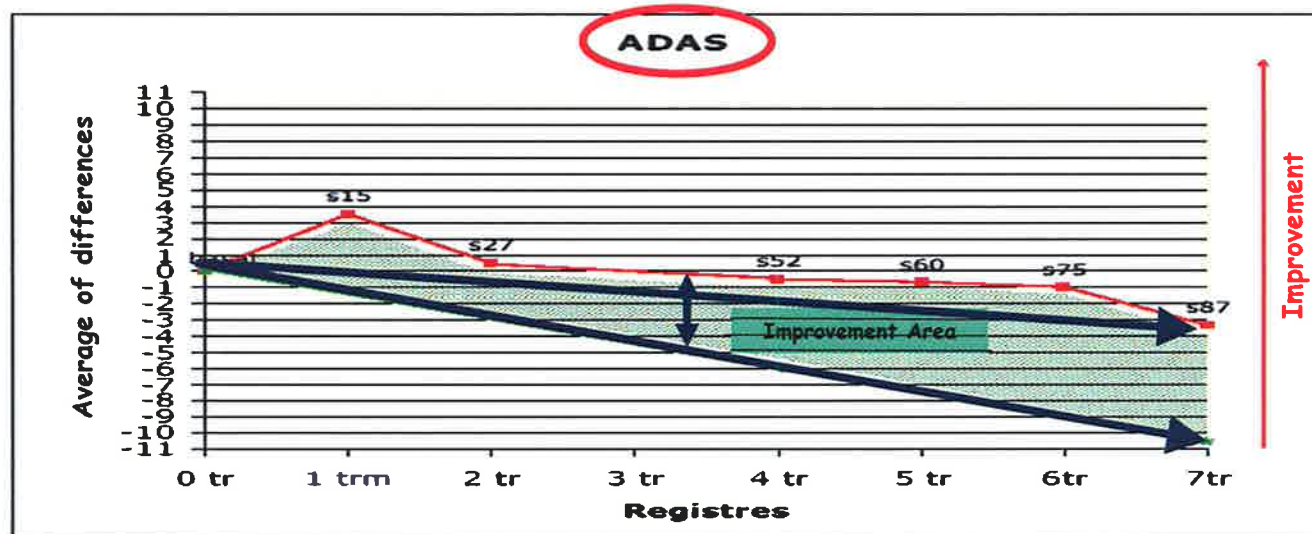
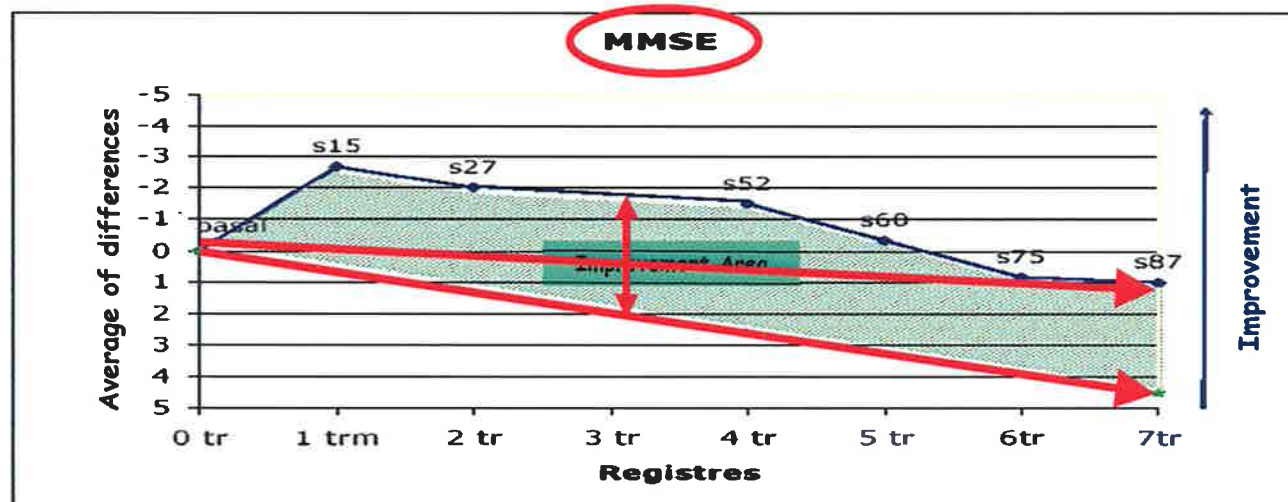
- **Pilot study in mild-moderate AD**
- **First stage (Sep 05 – Nov 06):**
  - 7 patients treated, 2 control
  - 3-5 Exchanges, 12 months follow-up
- **2nd stage (Jan 07 – Jan 08):**
  - 7 patients treated, 2 control
  - 5-6 Exchanges, 12 months follow-up
- **3rd stage (Feb 09 – Jan 10): Treatment with Flebogamma DIF® 5% & follow-up period**
- **Final Report: Q3 10**
- **Results presented in several meetings**

# Pilot Study: Plasma Ab Results

Concentraciones medias plasmáticas de Ab40 y Ab42 en plasma de 7 pacientes sometidos a recambio plasmático (Ampliación)



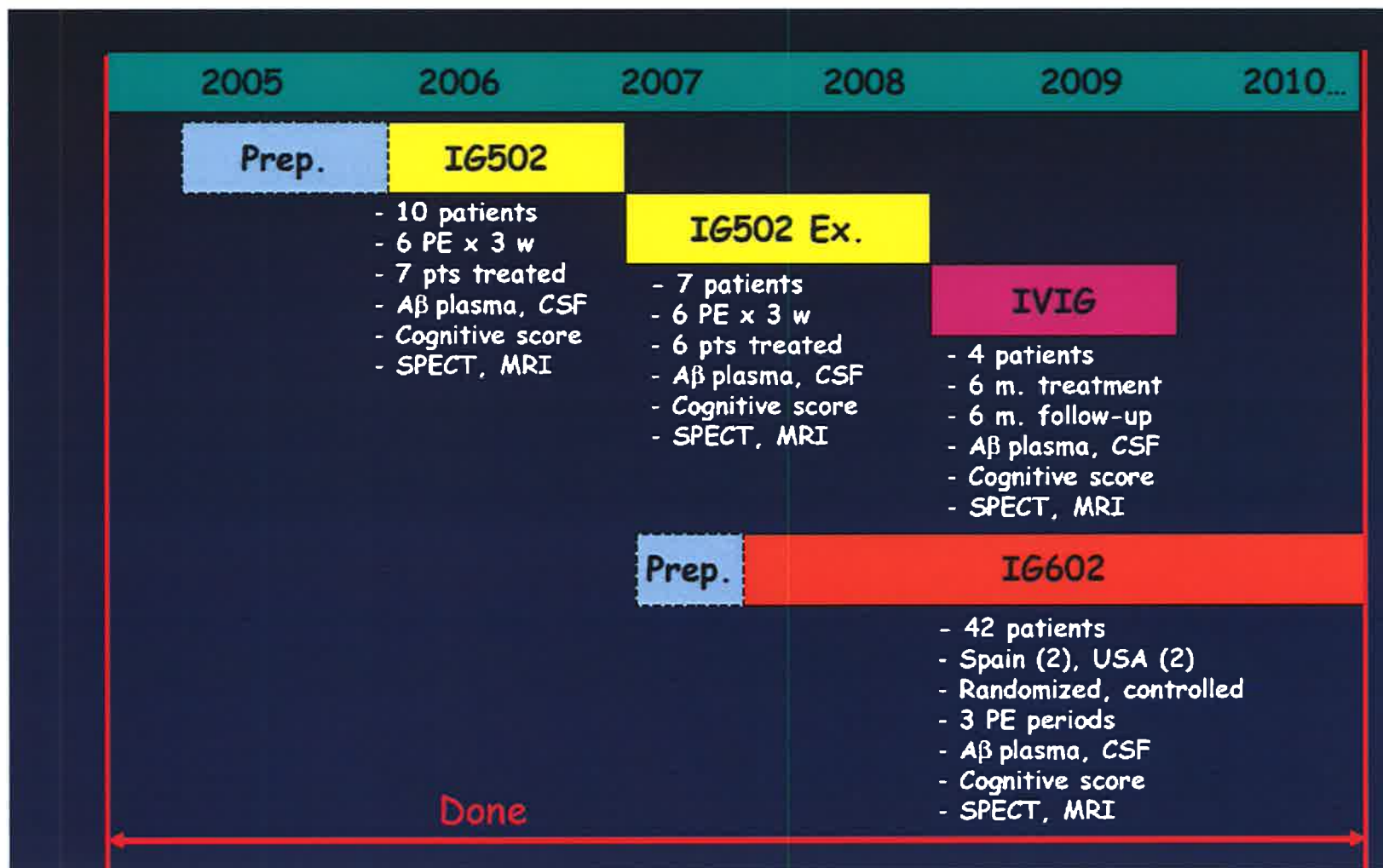
# Pilot Study: Cognitive Results



- PE is feasible in AD patients
- Plasma A $\beta$ 40 and 42 consistently oscillates during PE
- MMSE and Adas-Cog better than expected after 2 years of follow-up

**Main objectives considered to be achieved and a Phase II randomized, controlled study was planned.**

# Plasma Exchange with Albutein® and Flebogamma DIF® in Alzheimer's Disease

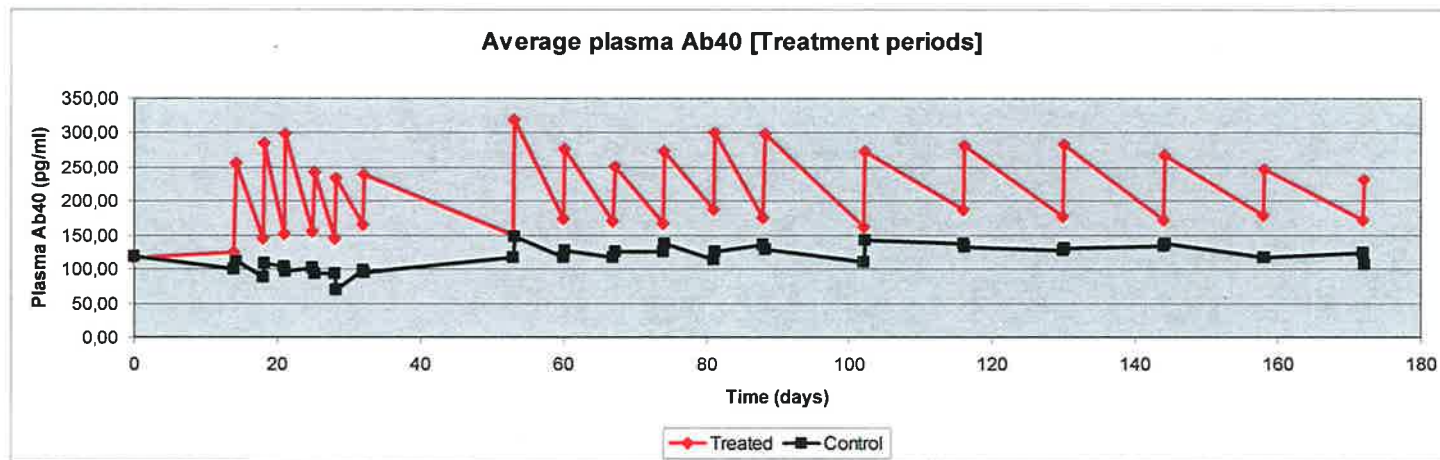
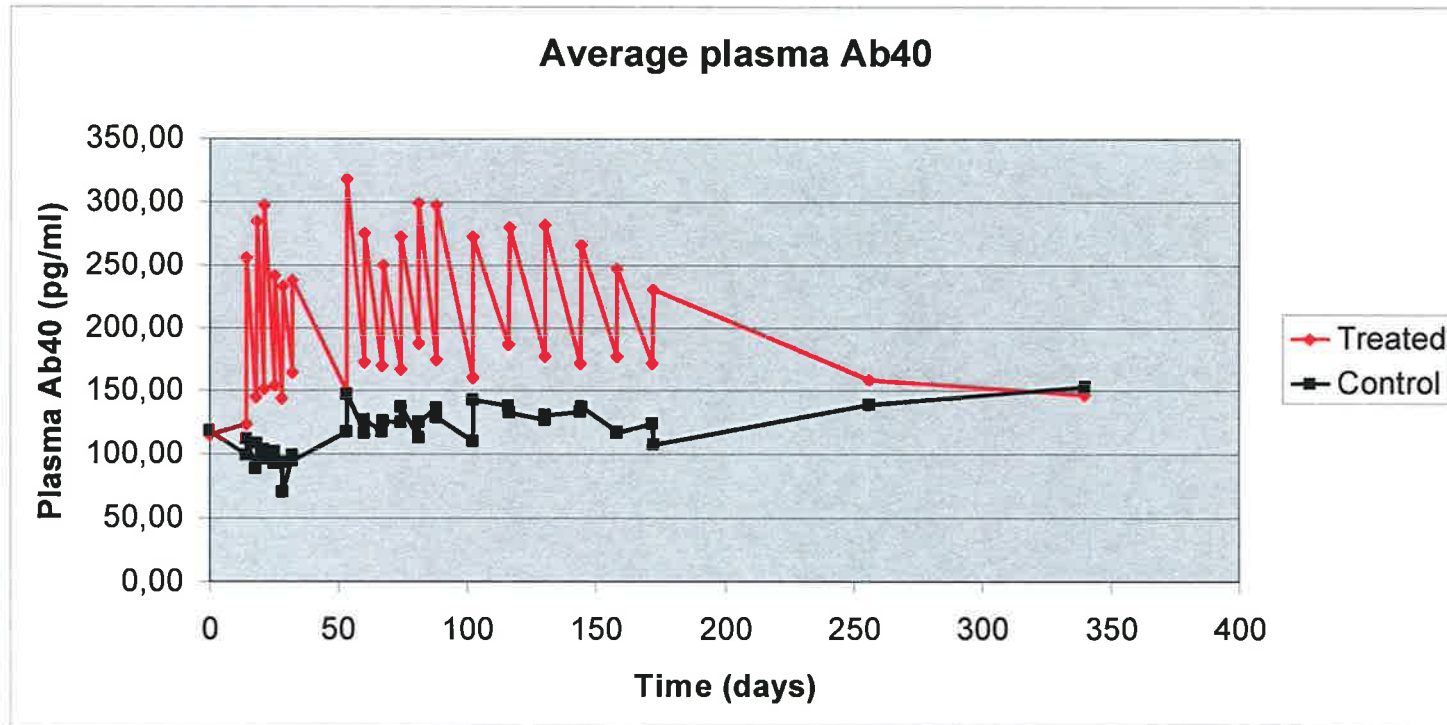




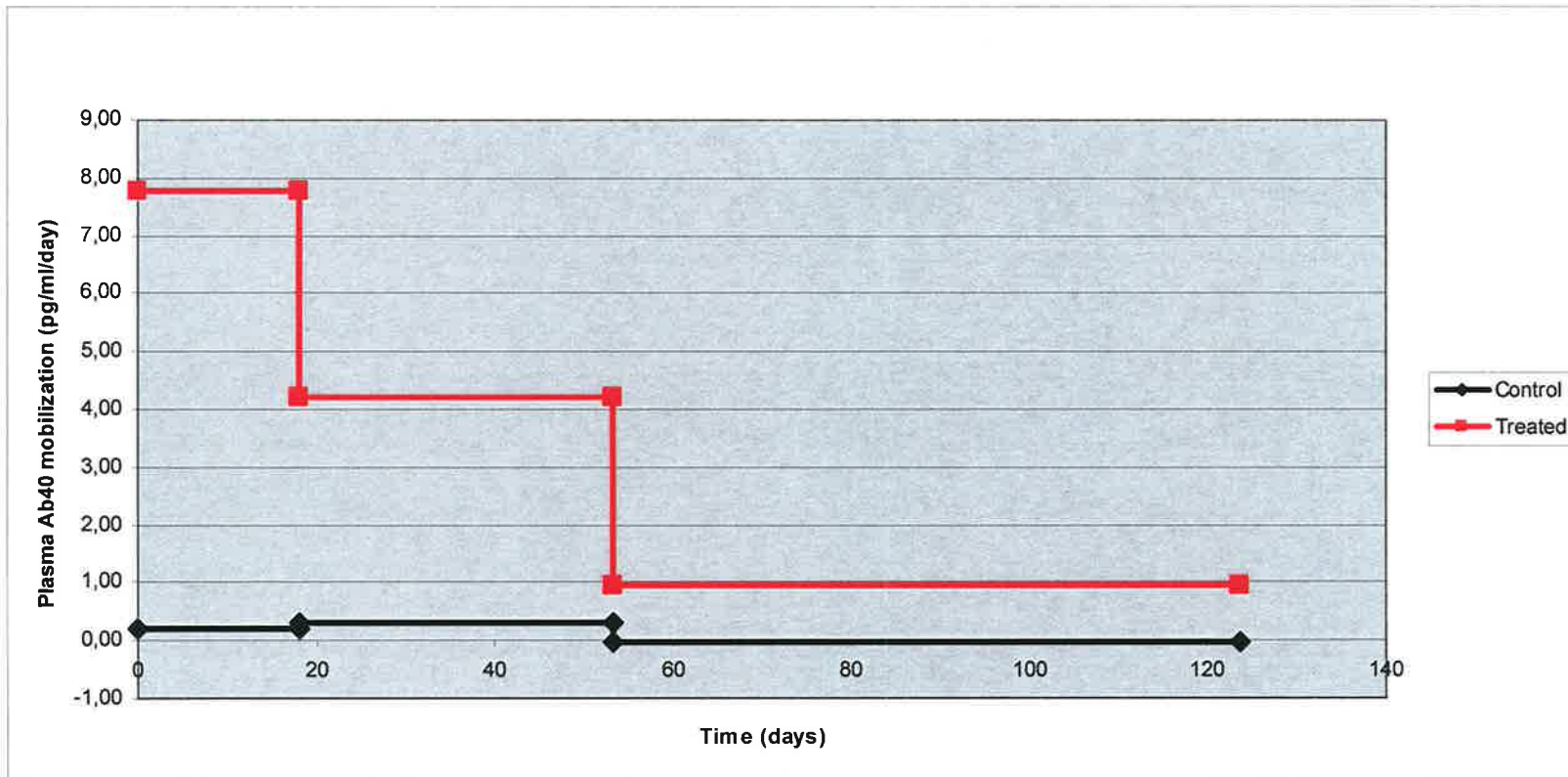
- **Phase II, randomized, controlled clinical trial:**
  - 4 centres (2 Spain, 2 USA), 42 patients
  - Continued treatment for 5 months (active group)
  - 3 PE periods: a) 2 PE/w x 3w; b) 1 PE/w x 6w; c) 1 PE/2w x 12w.
  - Follow-up: 6 additional months
  - Main measurements: plasma Aβ, cognitive scores
  - Recruitment: All patients (42) recruited
  - Last-patient-out: Dec 2010
  - Interim analysis with 29 patients

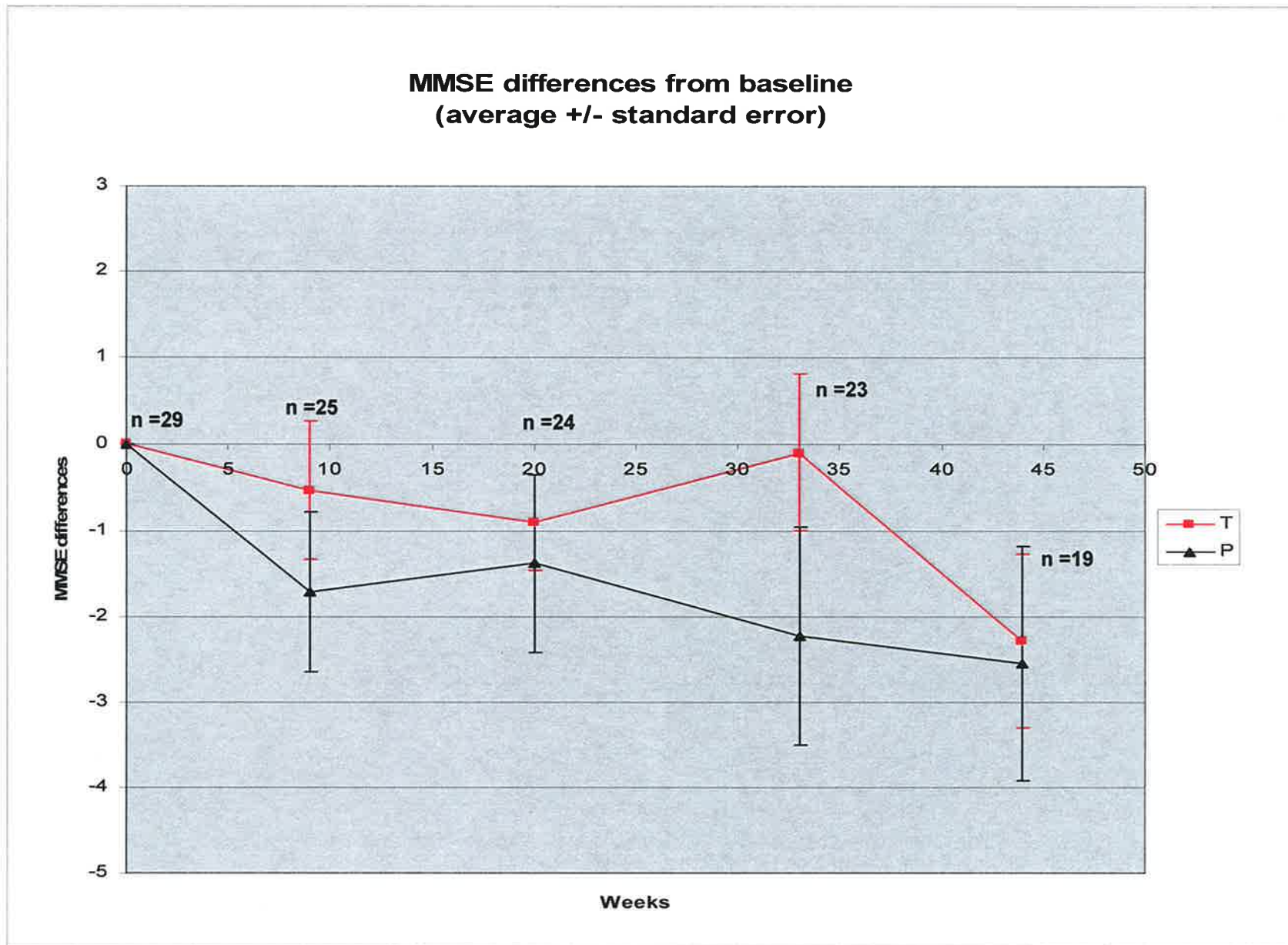
- **Phase II, Spanish sites:**
  - **Fundació ACE (Barcelona).**  
One of the best recruiters in the world and the site organizing the biannual **Conference BCN-Pittsburgh** during the last 14 years.
  - **Hospital Gregorio Marañón (Madrid)**
- **Phase II, U.S. sites**
  - **Howard University Hospital (Washington DC)**
  - **Mid-Atlantic Geriatric Association (Manchester, NJ)**

# Average Plasma Ab40



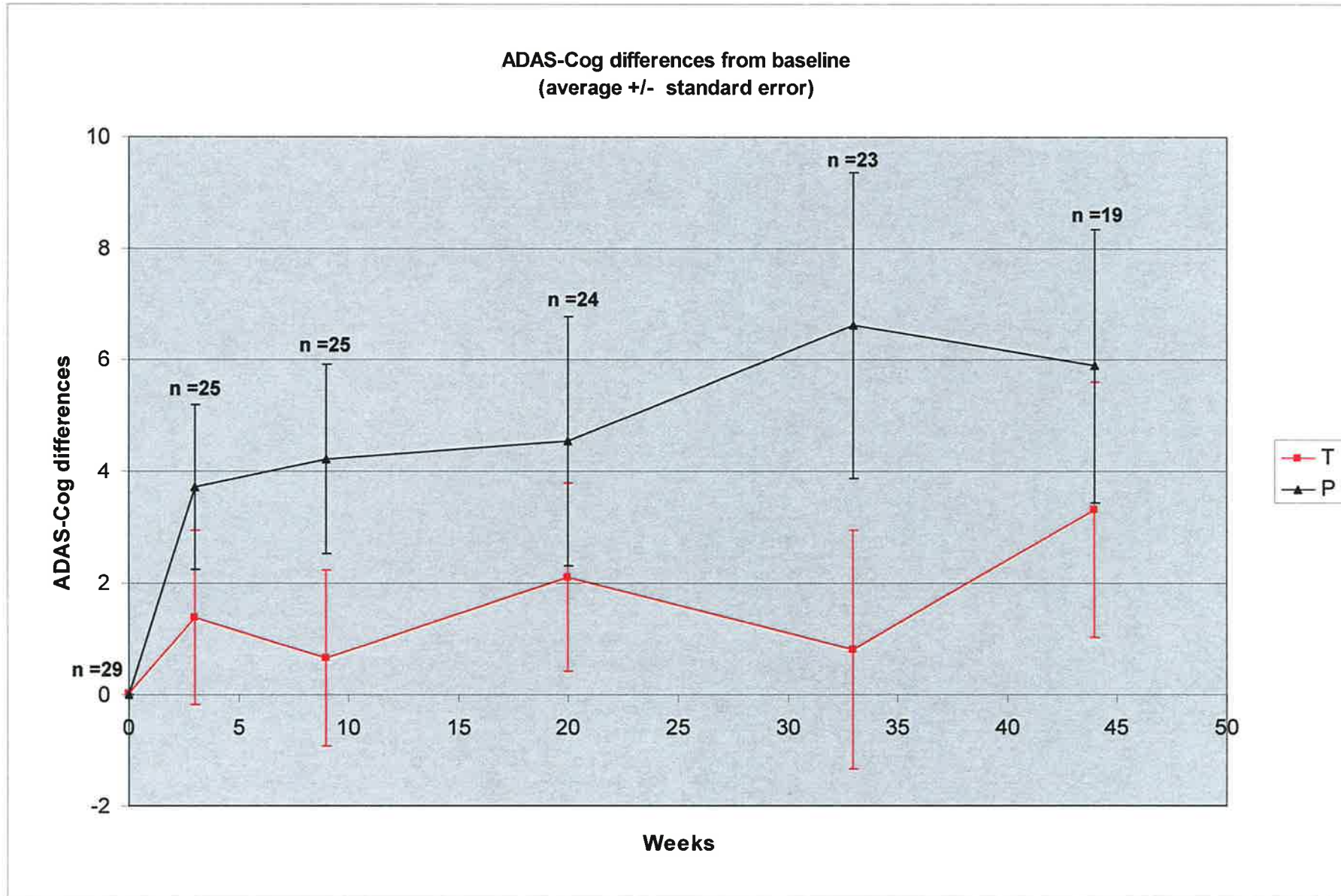
# Plasma Ab40 mobilization







# ADAS-Cog Differences



Drug News Perspect 22(6), July/August 2009

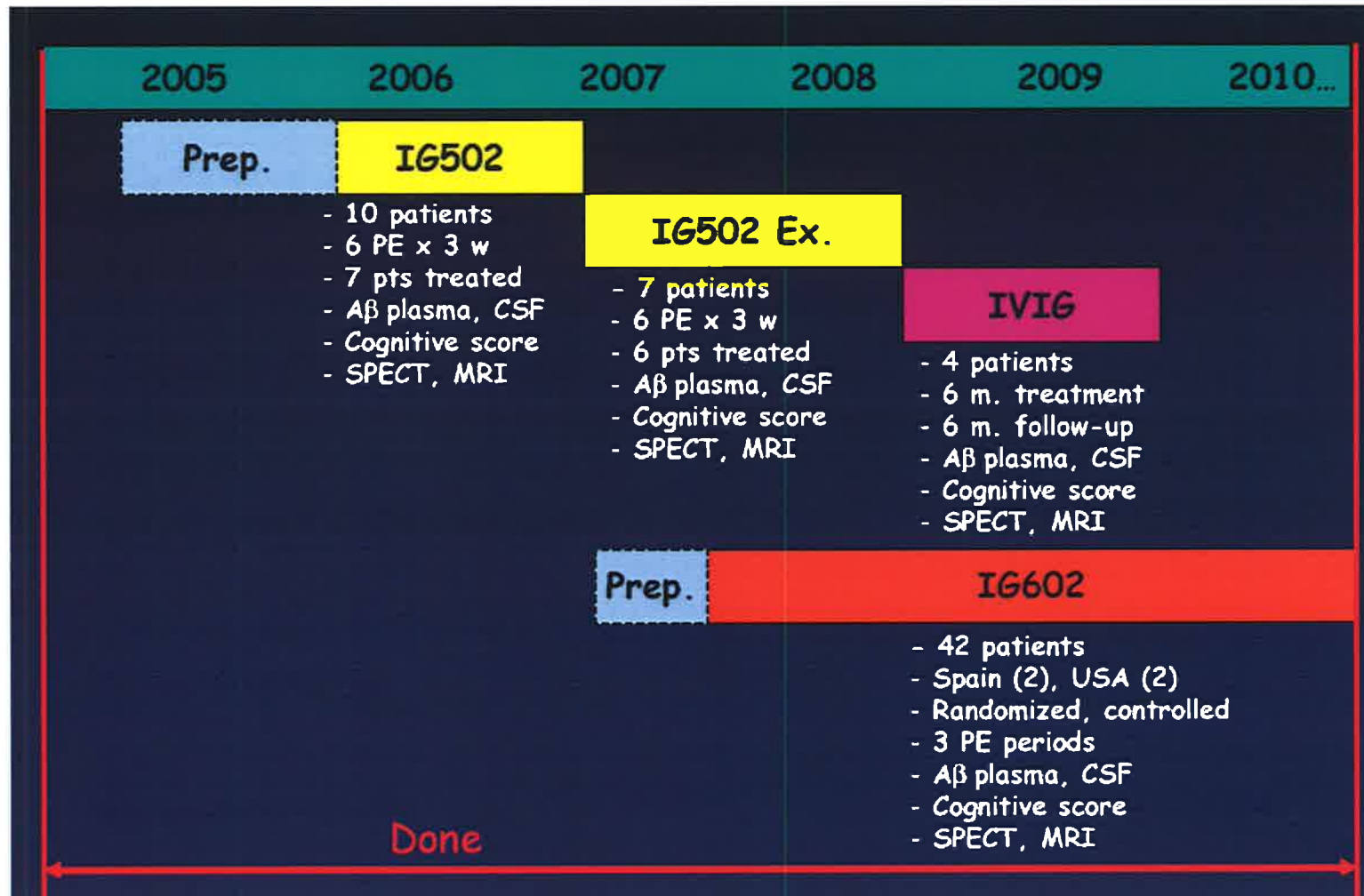
## LOOKING AHEAD

### AMYLOID-TARGETED THERAPEUTICS IN ALZHEIMER'S DISEASE: USE OF HUMAN ALBUMIN IN PLASMA EXCHANGE AS A NOVEL APPROACH FOR A $\beta$ MOBILIZATION

*by Mercè Boada, Pilar Ortiz, Fernando Anaya, Isabel Hernández, Joan Muñoz, Laura Núñez, Javier Olazarán, Isabel Roca, Gemma Cuberas, Lluís Tárraga, Mar Buendía, Ramón P. Pla, Isidre Ferrer and Antonio Páez*

The fact that 90% of circulating A $\beta$  is bound to albumin led to the hypothesis that if endogenous albumin were replaced through a plasma exchange schedule, the existing dynamic equilibrium set between the CSF and plasma A $\beta$  may be altered.

# Plasma Exchange with Albutein® and Flebogamma DIF® in Alzheimer's Disease



- **Pilot study, efficacy and safety in mild-moderate Alzheimer Disease (AD) patients**
- **Extension of the pilot plasmapheresis study**  
**Single treatment period: 0.5 g/kg/2w during 6 months + 6 months follow-up = Total of 12 months**
- **Same measurements and objectives**
- **4 patients treated**
- **FPI - LPO: Q1 09 – Q1 10**

# Analysis of Baxter Treatment

TREATMENT 1 (0,2gr. / Kg.)		
STUDY DEFINITIONS	PATIENTS	1
	WEIGHT IN Kg.	65
	DOSE OF IVIG IN gr./Kg.	0,2
	gr. OF IVIG EACH TREATMENT	13
	TREATMENTS PER YEAR	26
	TOTAL gr. OF IVIG PER YEAR	338

100.000	500.000	1.000.000
65	65	65
0,2	0,2	0,2
1300000	6500000	13000000
26	26	26
33.800.000	169.000.000	338.000.000

PLASMA IMPLICA.	IVIG YIELD (gr. / Lit.)	4
	PLASMA NEEDED PER PATIENT (Lit.)	84,5
	PLASMA NEEDED PER POPULATION (Lit.)	84,5

4	4	4
84,5	84,5	84,5
8.450.000	42.250.000	84.500.000

ECONOMIC IMPLICA.	IVIG PRICE (\$ / gr.)	65
	TREATMENT COST PER PATIENT (\$)	21970
	TREATMENT COST PER POPULATION (\$)	21.970

65	65	65
21970	21970	21970
2.197.000.000	10.985.000.000	21.970.000.000



# Analysis of Baxter Treatment

TREATMENT 2 (0,4gr. / Kg.)		
STUDY DEFINITIONS	PATIENTS	1
	WEIGHT IN Kg.	65
	DOSE OF IVIG IN gr./Kg.	0,4
	gr. OF IVIG EACH TREATMENT	26
	TREATMENTS PER YEAR	26
	TOTAL gr. OF IVIG PER YEAR	676

100.000	500.000	1.000.000
65	65	65
0,4	0,4	0,4
2600000	13000000	26000000
26	26	26
<b>67.600.000</b>	<b>338.000.000</b>	<b>676.000.000</b>

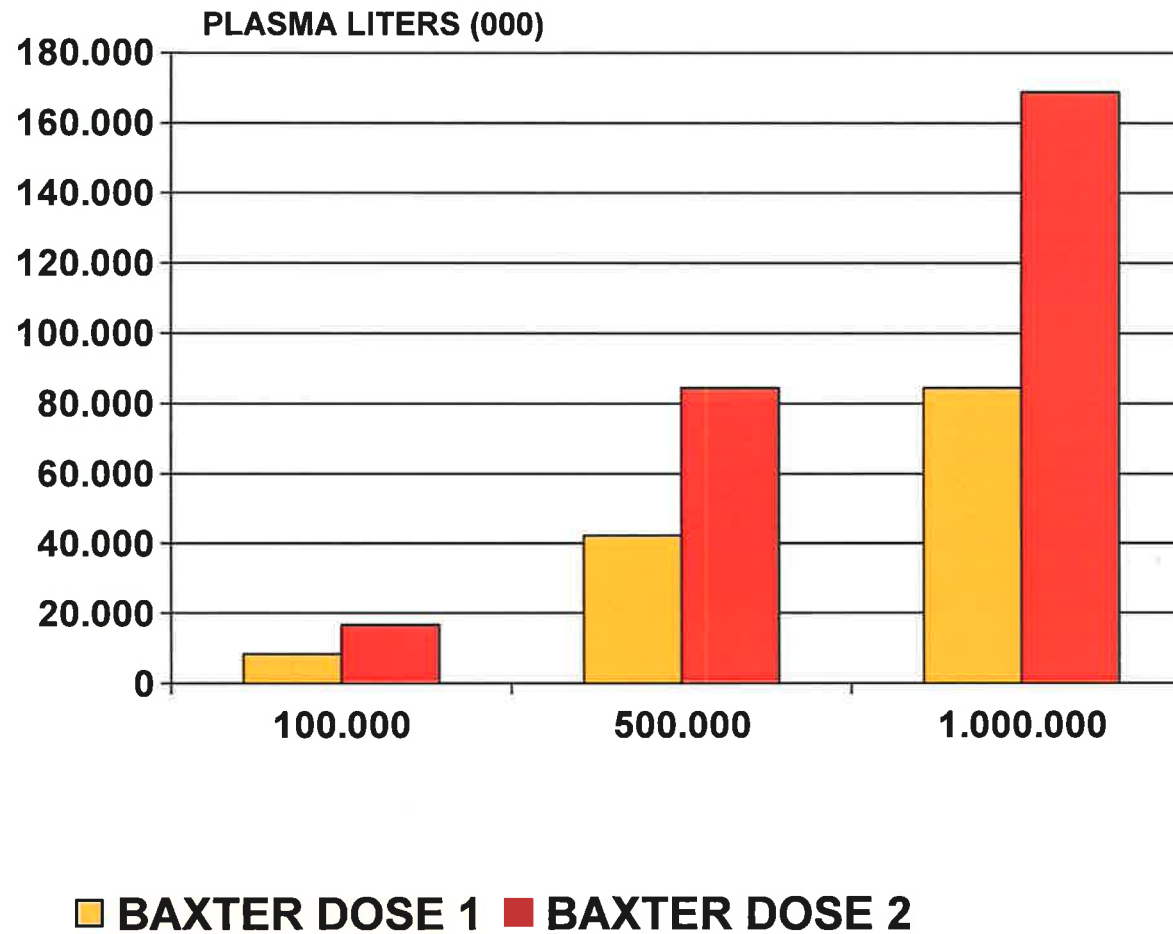
PLASMA IMPLICA.	IVIG YIELD (gr. / Lit.)	4
	PLASMA NEEDED PER PATIENT (Lit.)	169
	<b>PLASMA NEEDED PER POPULATION (Lit.)</b>	<b>169</b>

4	4	4
169	169	169
<b>16.900.000</b>	<b>84.500.000</b>	<b>169.000.000</b>

ECONOMIC IMPLICA.	IVIG PRICE (\$ / gr.)	65
	TREATMENT COST PER PATIENT (\$)	43940
	<b>TREATMENT COST PER POPULATION (\$)</b>	<b>43.940</b>

65	65	65
43940	43940	43940
<b>4.394.000.000</b>	<b>21.970.000.000</b>	<b>43.940.000.000</b>

# Plasma needs (Baxter)



- Plasmapheresis:
  - Removes albumin saturated with Abeta.
  - Removes other proteins that may affect Abeta.
- Albutein® infusion:
  - Restores albumin with “fresh” binding capacity of Abeta
- Flebogamma DIF®:
  - Contains antibodies against Abeta.
  - Binds Abeta and avoids accumulation.

**PERIPHERAL SEQUESTRATION OF AMILOYD BETA**

# Grifols Treatment

## 25.000 NEW PATIENTS PER YEAR (GRIFOLS TREATMENT)

	1st YEAR	2nd YEAR		
	NEW PATIENTS	NEW PATIENTS	MAINTENANCE	TOTAL
NUMBER OF PATIENTS	25.000	25.000	25.000	50.000
ALBUMIN CONSUMPTION (PER PATIENT PER YEAR IN gr.) (AVG)	1.030	1.030	360	695
IVIG CONSUMPTION (PER PATIENT PER YEAR IN gr.) (AVG)	60	60	60	60
TOTAL CONSUMPTION OF ALBUMIN	25.750.000	25.750.000	9.000.000	34.750.000
TOTAL CONSUMPTION OF IVIG	1.500.000	1.500.000	1.500.000	3.000.000
ASP ALBUMIN (PER GRAM) (€)	2,50	2,50	2,50	2,50
ALBUMIN REVENUE (€)	64.375.000	64.375.000	22.500.000	86.875.000
ASP IVIG (PER GRAM) (€)	40,00	40,00	40,00	40,00
IVIG REVENUE (€)	60.000.000	60.000.000	60.000.000	120.000.000
TREATMENT COST PER PATIENT (W/O MEDICAL SERVICE) (AVG) (€)	4.975	4.975	3.300	4.138
TOTAL REVENUE A.D. TREATMENT RELATED (€)	124.375.000	124.375.000	82.500.000	206.875.000
PLASMA NEEDS (FOR ALBUMIN) IN Lit.	1.072.917	1.072.917	375.000	1.447.917
PLASMA NEEDS (FOR IVIG) IN Lit.	375.000	375.000	375.000	750.000

# Grifols Treatment

## 25.000 NEW PATIENTS PER YEAR (GRIFOLS TREATMENT)

NUMBER OF PATIENTS
ALBUMIN CONSUMPTION (PER PATIENT PER YEAR IN gr.) (AVG)
IVIG CONSUMPTION (PER PATIENT PER YEAR IN gr.) (AVG)
TOTAL CONSUMPTION OF ALBUMIN
TOTAL CONSUMPTION OF IVIG
ASP ALBUMIN (PER GRAM) (€)
ALBUMIN REVENUE (€)
ASP IVIG (PER GRAM) (€)
IVIG REVENUE (€)
TREATMENT COST PER PATIENT (W/O MEDICAL SERVICE) (AVG) (€)
TOTAL REVENUE A.D. TREATMENT RELATED (€)
PLASMA NEEDS (FOR ALBUMIN) IN Lit.
PLASMA NEEDS (FOR IVIG) IN Lit.

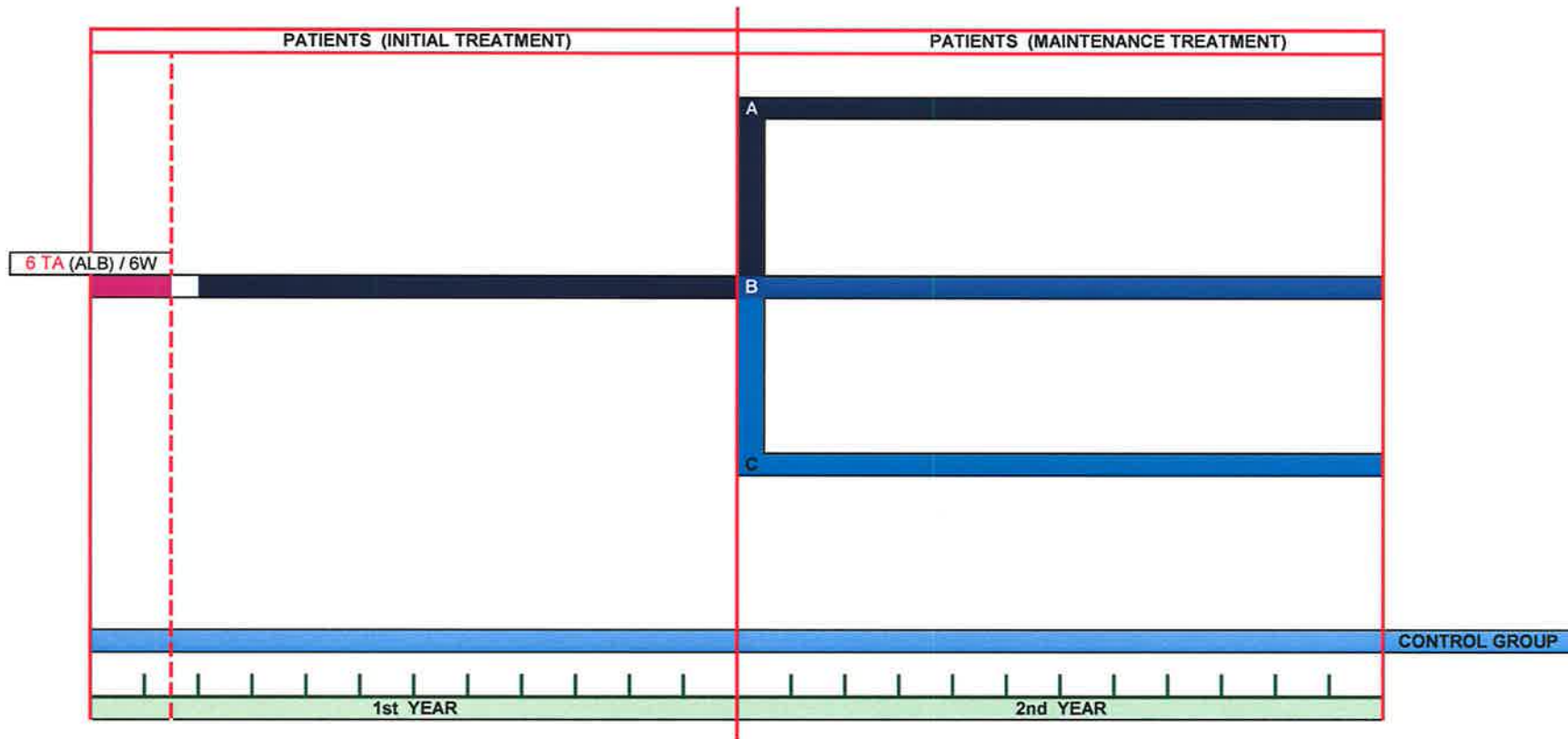
	4th YEAR	
NEW PATIENTS	MAINTENANCE	TOTAL
25.000	75.000	100.000
1.030	360	528
60	60	60
25.750.000	27.000.000	52.750.000
1.500.000	4.500.000	6.000.000
2,50	2,50	2,50
64.375.000	67.500.000	131.875.000
40,00	40,00	40,00
60.000.000	180.000.000	240.000.000
4.975	3.300	3.719
124.375.000	247.500.000	371.875.000
1.072.917	1.125.000	2.197.917
375.000	1.125.000	1.500.000



# Grifols AD Medical Study

GRIFOLS AD MEDICAL STUDY

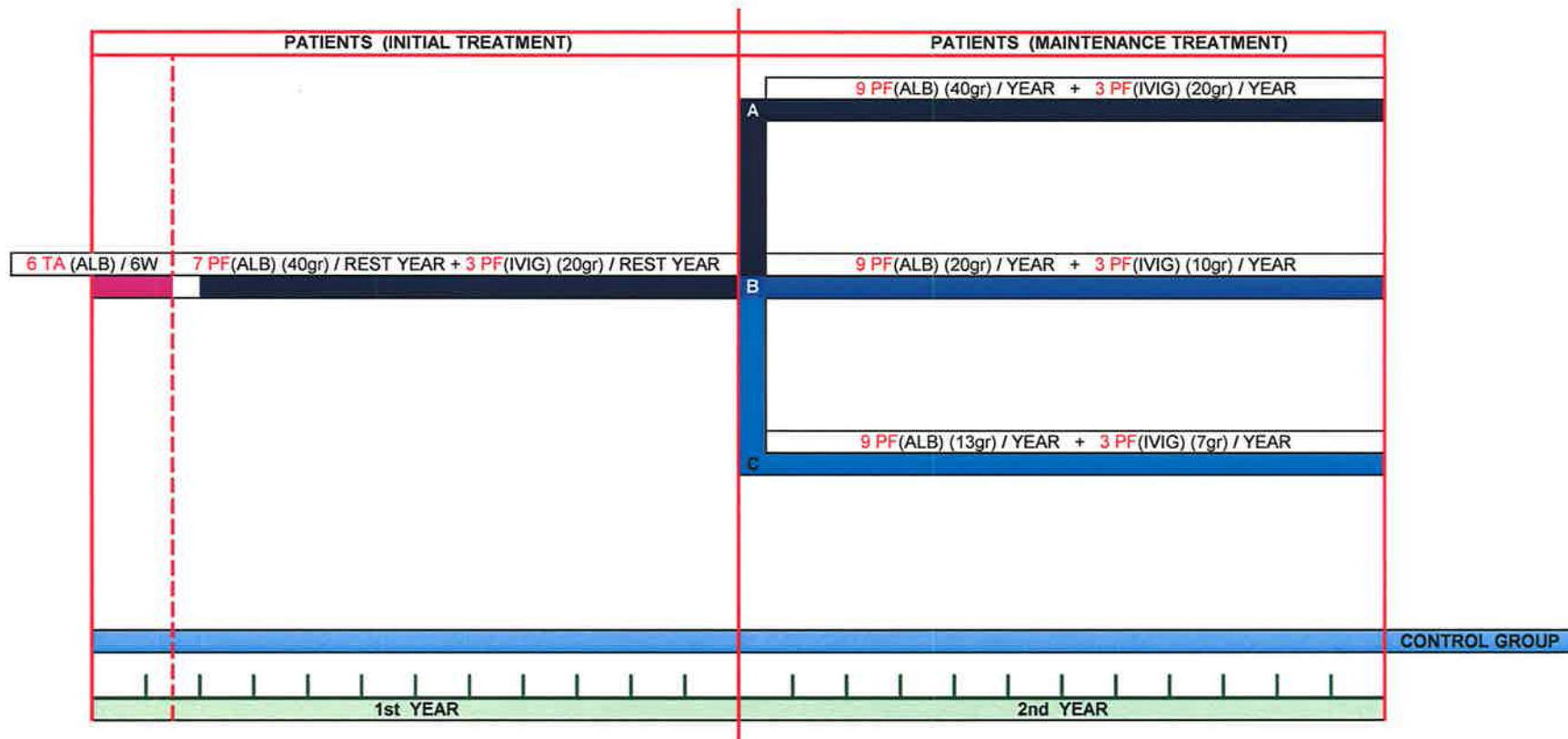
300 PATIENTS



# Grifols AD Medical Study

GRIFOLS AD MEDICAL STUDY

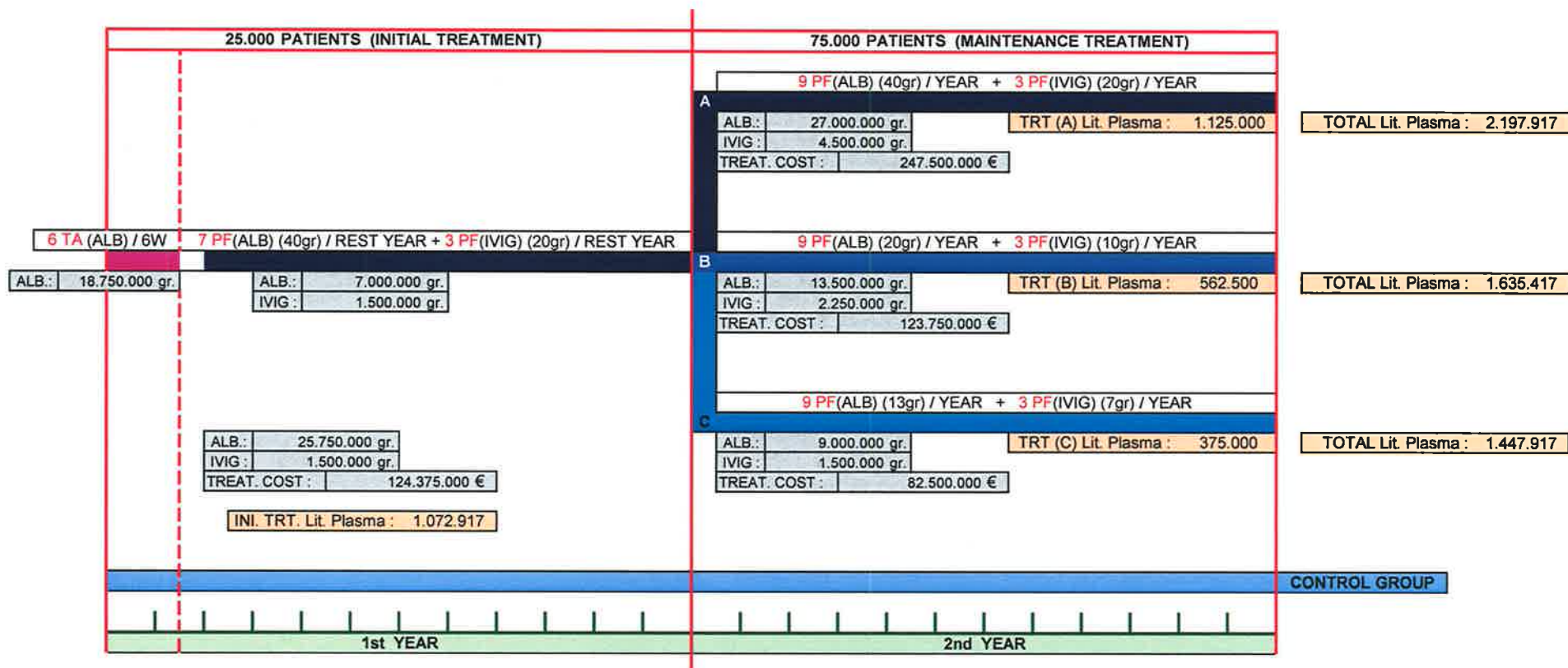
300 PATIENTS



# Grifols AD Medical Study

GRIFOLS AD MEDICAL STUDY

300 PATIENTS



PATIENTS			TREAT.	PLASMA NEED (Lit)	ALBUMIN NEED (gr.)	IVIG NEED (gr.)	COST €
INITIAL	MAINTEN.	TOTAL					
25.000	75.000	100.000	A	22	528	60	3.719
25.000	75.000	100.000	B	16	393	38	2.481
25.000	75.000	100.000	C	14	348	30	2.069

**AVG PER PATIENT**

PATIENTS			TREAT.	PLASMA NEED (Lit)	ALBUMIN NEED (gr.)	IVIG NEED (gr.)	COST €
INITIAL	MAINTEN.	TOTAL					
25.000	75.000	100.000	A	2.197.917	52.750.000	6.000.000	371.875.000
25.000	75.000	100.000	B	1.635.417	39.250.000	3.750.000	248.125.000
25.000	75.000	100.000	C	1.447.917	34.750.000	3.000.000	206.875.000

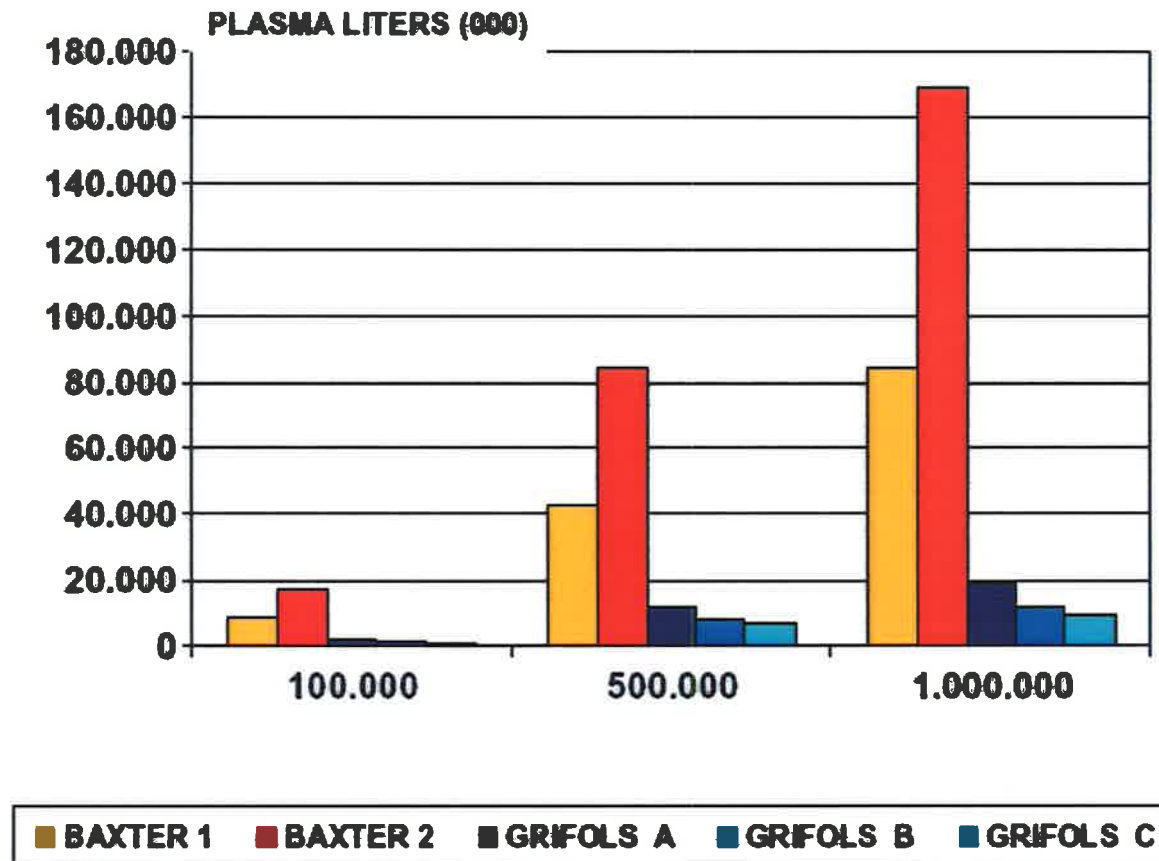
**PER POPULATION**

ASP YIELD		
ALB.	2,5	24,0
IVIG	40,0	4,0

## Plasma Exchange with Albutein® combined with Flebogamma DIF® in Alzheimer

- Effects of PE with albumin combined with IVIG on the cognitive function, Aβ levels and neuroimaging in mild-moderate Alzheimer's disease
- Randomized, controlled study (**Medical/Therapeutic Trial**)
- Spain and USA (at least); maximum of 400 patients
- 2 years duration: - **1<sup>st</sup> year:** single arm with 1 full PE/w x 6w followed by 1 PF /m (Alb:40g) + IVIG/3m (20g)  
- **2<sup>nd</sup> year:** 3 arms with a) 1 PF/m (Alb:40g) + IVIG/4m (20g), b) 1 PF /m (Alb:20g) + IVIG/4m (10g) and c) 1 PF/m (Alb:13g) + IVIG/4m (7g)
- Contract signed with Fenwal to produce specific machines
- FPI - LPO: Q4 10 – Q3 13

## Differences between Plasma needs (Grifols vs Baxter)





- **Hematology**
  - Haemophilias (9; Fanhdi<sup>®</sup>, Alphanate<sup>®</sup>, Alphanine<sup>®</sup>)
  - ATIII congenital deficit (1; Anbinex<sup>®</sup>)
  - ITP (2; Flebogamma<sup>®</sup> DIF)
- **Hepatology**
  - Liver transplant (2; Niuliva<sup>®</sup>)
  - Cirrhosis (3; Albutein<sup>®</sup>)
- **Immunology**
  - PID (2; Flebogamma DIF<sup>®</sup>, SCIG)

- **Intensive care**
  - Burns (1; Anbinex<sup>®</sup>)
- **Neurology**
  - Alzheimer (4; Albutein<sup>®</sup>, Flebogamma<sup>®</sup> DIF)
- **Pneumology**
  - AAT congenital deficit with enphysema (2; Trypsone<sup>®</sup>)
- **Surgery**
  - Cardiac surgery (1; Anbinex<sup>®</sup>)
  - Vascular, parenchyma (hepatic) and soft-tissue surgery (3; fibrin glue, thrombin)

- **Clinical research projects** 30
- **Countries** 38
  - USA 13
  - Spain 12
  - Bulgaria, Canada, Italy, Poland, Russia, UK 3-5
  - Other (IND, MYS, UKR, TUR, GRC, SVK, HUN, ROU, GRC, LVA, LTU, SRB, HRV, BIH) 1
- **Sites** 270-300
- **Subjects included**  $\approx$  400
  - Subjects pending to be included  $\approx$  1800
- **Subjects/physicians pre-screened**  $\approx$  30000

**Information related to comparisons with Baxter is sourced  
and compiled from different public available sources**

# Investors Meeting

**May 2010**

**GRIFOLS**