



Investor Meeting  
October 17-18, 2011  
Barcelona

**GRIFOLS**

a new era begins

## Monday, October 17th, 2011: Sant Cugat del Valles



- A new era begins *(Victor Grifols)* 10:00
- Grifols Operational Framework *(Victor Grifols)* 10:15
- Integration Process Status *(Thomas Glanzmann)* 11:00
- Coffee Break 11:45
- Plasma Procurement Management *(Shinji Wada)* 12:15
- Lunch 13:15
- Capex *(Mary Kuhn)* 14:15
- Financials *(Alfredo Arroyo)* 15:00
- Q&A 16:00
- Transfer to Barcelona

## Tuesday, October 18th, 2011: Parets del Valles



- Global Commercial Area
  - Bioscience *(Ramón Riera)* 09:00
  - Sales & Marketing N.A. *(Greg Rich)* 09:45
  - Hospital and Diagnostic *(Ramón Riera)* 10:30
- Coffee break 10:45
- R & D Review *(Juan Ignacio Jorquera)* 11:15
- Coffee Break 12:00
- Site visit 12:30
- Wrap-up *(Victor Grifols)* 13:30
- Lunch 14:00
- Transfer to Airport / Barcelona

# Management Team



<b>Victor Grifols</b>	<i>President &amp; CEO Grifols, S.A.</i>
<b>Thomas Glanzmann</b>	<i>Chairman Board Grifols Inc.</i>
<b>Shinji Wada</b>	<i>President Plasma Centers Grifols Inc.</i>
<b>Mary Kuhn</b>	<i>President Manufacturing Operations Grifols Inc.</i>
<b>Alfredo Arroyo</b>	<i>CFO Grifols, S.A.</i>
<b>Ramón Riera</b>	<i>President Global Commercial Division Grifols, S.A.</i>
<b>Greg Rich</b>	<i>President &amp; CEO Grifols Inc.</i>
<b>Juan Ignacio Jorquera</b>	<i>R &amp; D Director Instituto Grifols, S.A.</i>
<b>Juan I. Towse</b>	<i>President Global Industrial Division Grifols, S.A.</i>
<b>Nuria Pascual</b>	<i>VP Director of Finance – Investor Relations Officer Grifols, S.A.</i>

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**A new era begins**

*Victor Grifols*

*- President & CEO Grifols, S.A. -*

## A new era begins



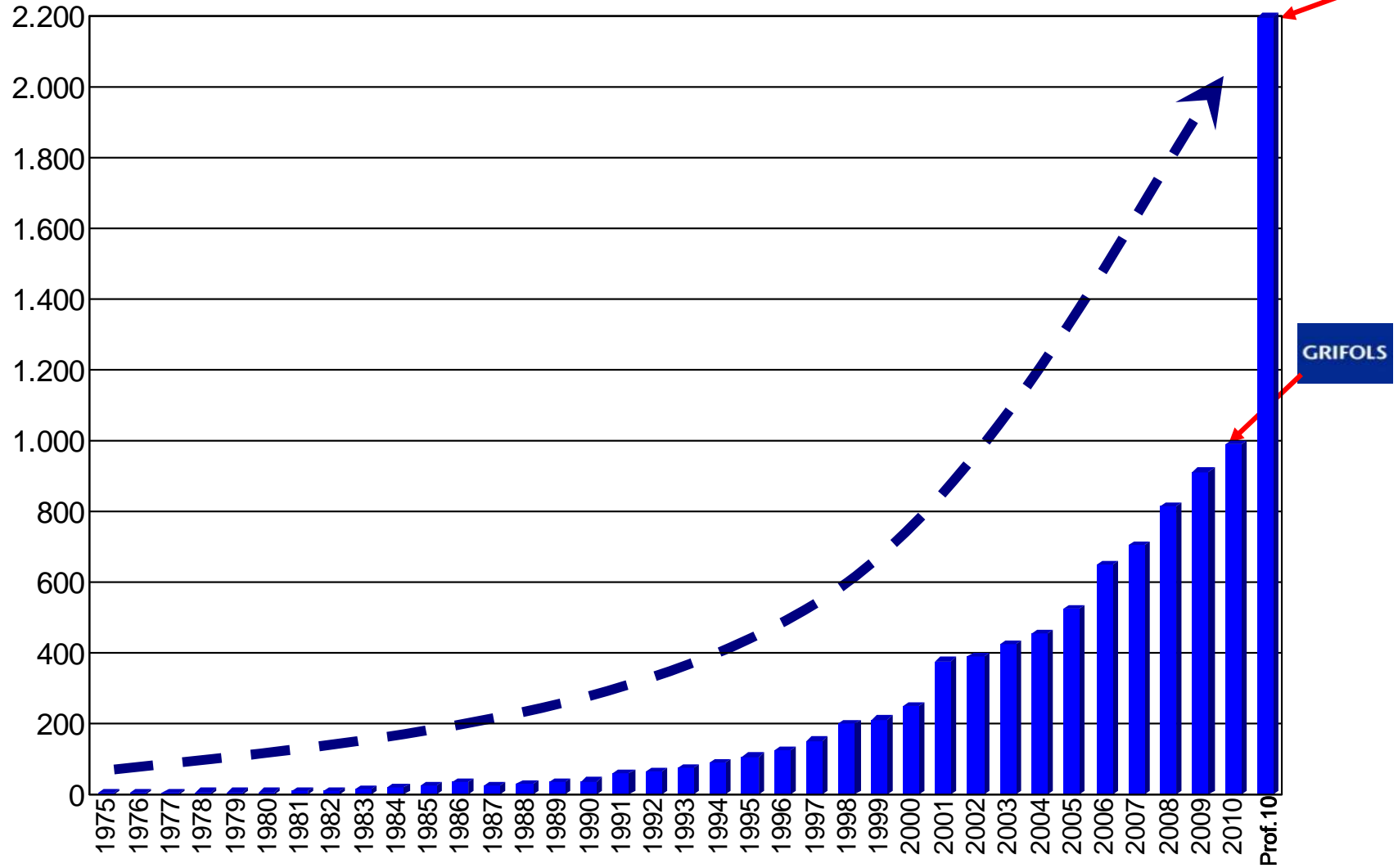
- Grifols: a new dimension for a global group
- Complementary business models
- Balanced portfolio. Plasma revenue model
- Changes in the geographical weights. Direct presence in 24 countries
- Quality importance and moreover safety as day to day operational focus
- Cost synergies contribute to the transaction rationale
- Strong underlying demand for haemoderivatives worldwide
- New opportunities: research projects, additional therapies
- Diagnostic and Hospital: growth opportunities and complementarity with Bioscience
- Increase / leverage manufacturing and collection capacities

# A history of growth



## GRIFOLS : Sales history since 1975

(000,000 EUR)





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# Grifols Operational Framework

*Victor Grifols*

*- President & CEO Grifols, S.A. -*

## Some considerations on the plasma derivatives business - I



- The raw material, plasma, is of human origin and the liquid component of the blood
- The plasma fractionation industry is generally not interested in obtaining blood or cells
- In some countries the plasma and/or blood obtention is governed by the Administration
- In some countries, the plasma is fractionated exclusively by the Administration and/or organizations such as Red Cross

## Some considerations on the plasma derivatives business - II



- In certain countries it is not permitted to pay the donations, while in others it is. There are no consistent criteria on this issue, it may obey to reasons of historical nature
- Given the complexity and the risk associated to certain products, the industrial activity is strongly regulated by the healthcare bodies
- Regulations and criteria for similar concepts may vary from one country to another
- The fractionation facilities are complex and undergo periodical inspections by the healthcare Administrations.



- Certain changes in the production process may require new clinical assays with the new product

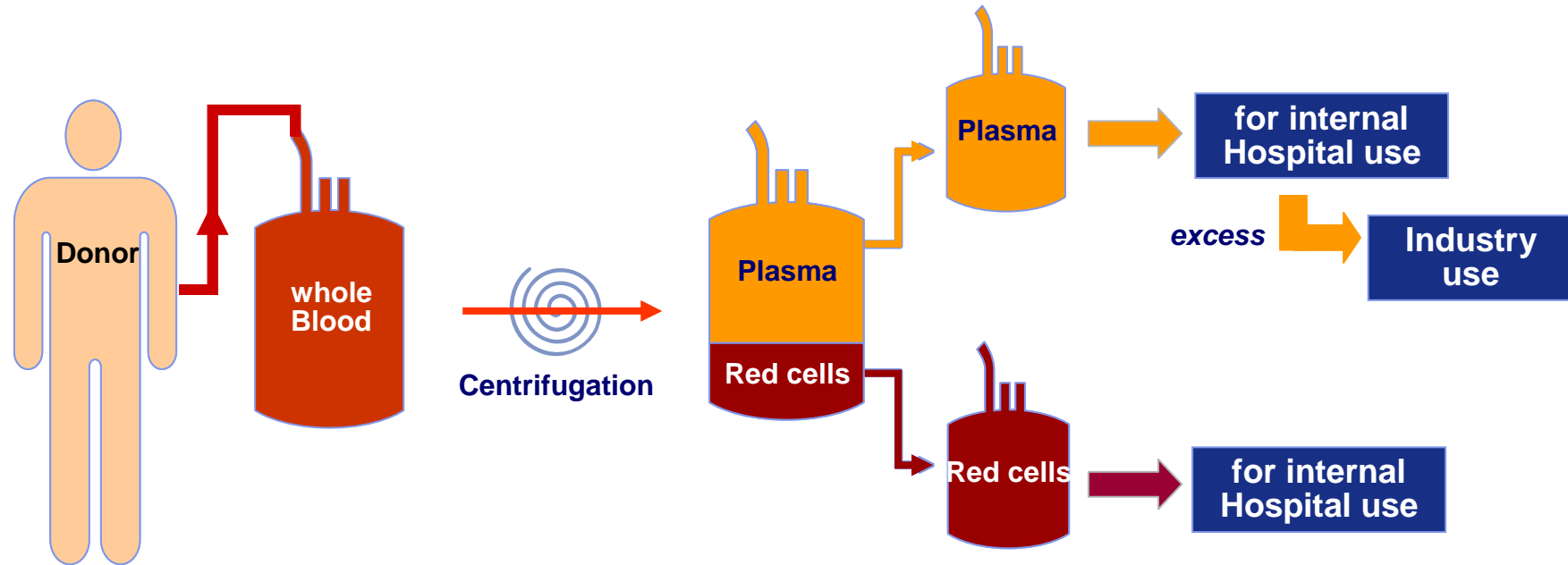
In conclusion,

The quality of the final product is no longer enough; a very high degree of safety is also demanded

# “Recovered” plasma collection



Blood donation (average 40 min. process)



Blood donors must wait three months to repeat donation

# Recovered plasma

Standard Plasma Bag  
made of P.V.C.  
and containing  
an average of  
200 ml of  
Plasma

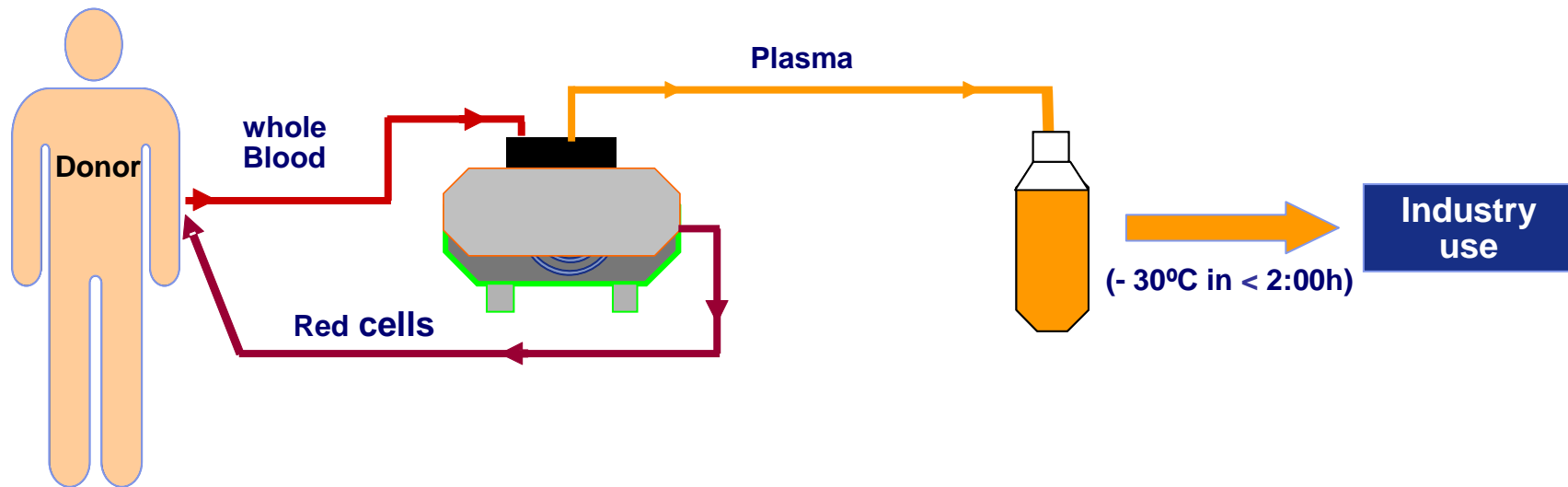




# “Source” plasma collection



Plasmapheresis (average 75 min. process)



Red cells are immediately re-injected into the donor

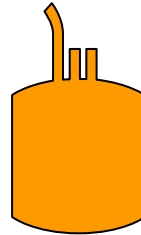
“Source” plasma donors can donate twice a week

# Source plasma



Standard Plasma Bottle  
made of polyethylene  
and containing  
an average of  
830 ml of  
Plasma





## Pros:

- Price
- Sample attached (Spaghetti)
- Higher yield (IVIG & Alb.)

## Cons:

- No company control during storage (temperature)
- No “Look Back”
- No control on testing
- Very low content of Fac. VIII
- Difficult to open (manually)
- Small volume (big pool)
- No “Pedi-Gri®”



## Pros:

- Two months “Look Back”
- Qualified donor
- Total control since donation (testing, storage, shipping ...)
- Easy to open (automatic)
- Volume (830 ml) (small pool)
- “Pedi-Gri®”(traceability)
- High levels of Fac. VIII & IX

## Cons:

- Price
- Lower yields (IVIG & Alb.)
- 75% of supply from USA

# Significance of the type of plasma in traceability

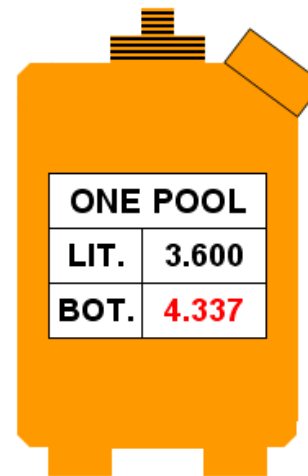


Plasma Bags of  
200cc. each



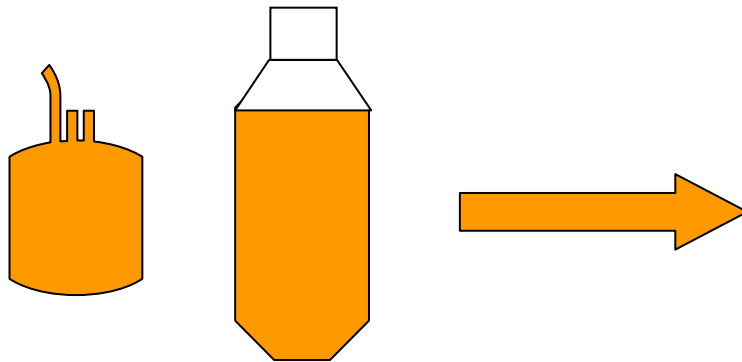
Aprox.  
**18.000 Donors**  
with no "Look Back"  
period

Plasma Botles of  
830cc. each



Aprox.  
**2.200 Donors**  
with a "Look Back"  
period of two month.

# One liter of plasma contains ...



Total proteins in plasma  
approx. 3,000

	INTERVAL INDUSTRY YIELDS		
ALBUMIN	19	27	gr.
IVIG	2.50	5	gr.
FAC.VIII	80	230	I.U.
FAC. IX	100	350	I.U.
ALPHA 1	0.125	0.38	gr.
AT - III	50	270	I.U.
FIBRINOGEN	0.5	1.0	gr.
THROMBIN	15,000	30,000	I.U.
PLASMIN	20	30	mcgr.

Source : Grifols Internal Data



# Plasma procurement: some figures to think about



LITERS OBTAINED	LITERS PER DONATION	TOTAL DONATIONS	WORKING DAYS	DONATIONS PER DAY
5.500.000	0,830	6.626.506	280	23.666

→

DONATIONS PER DAY	TESTS PER DONATION	TESTS PER DAY
23.666	8	189.329

WHAT IF WE HAVE... →

% OF ERROR	ERRORS PER DAY	ERRORS PER YEAR
1%	1.893	482.788
0,1%	189	48.279
0,01%	19	4.828

# Plasma economics

Revenue & Gross Margin generation. The first liters (case study, 2010, USD)



72											222	
150												
<b>COST</b>												<b>COST</b>
<b>PLASMA MANF.</b>												
150,0    72,0												

# Plasma economics

Revenue & Gross Margin generation. The first liters (case study, 2010, USD)



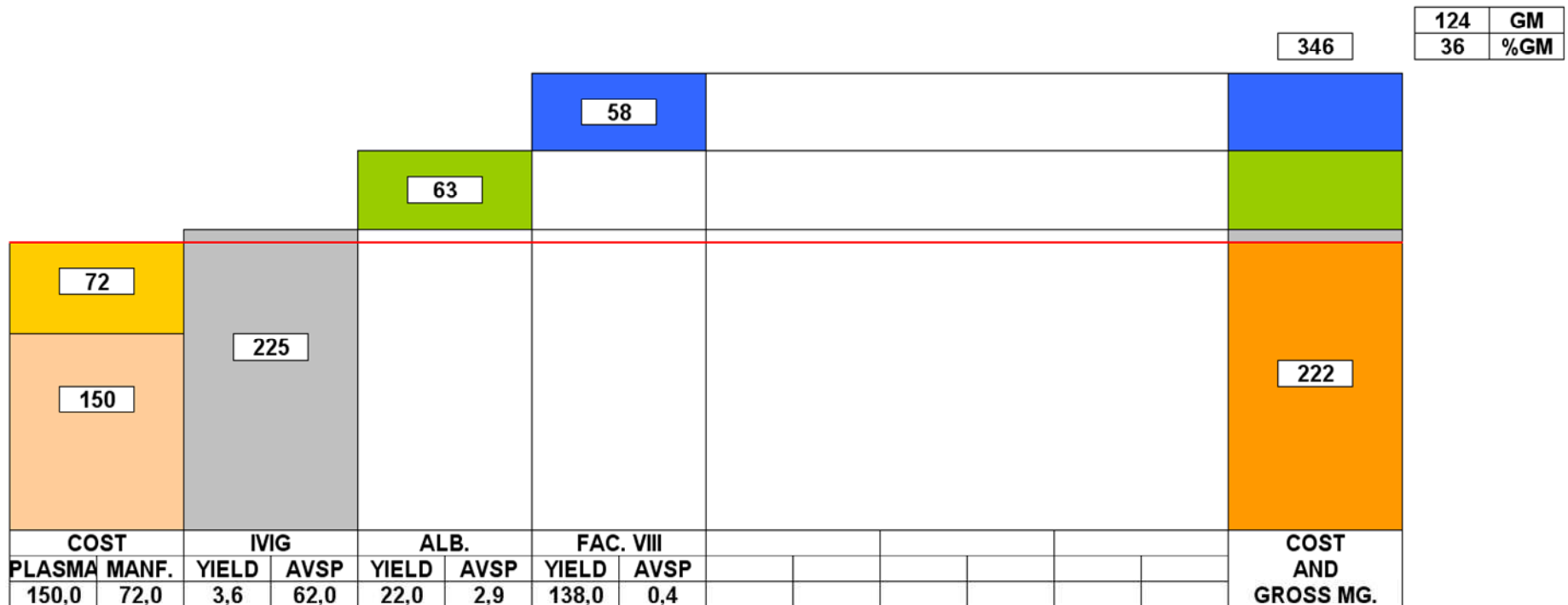
# Plasma economics

Revenue & Gross Margin generation. The first liters (case study, 2010, USD)



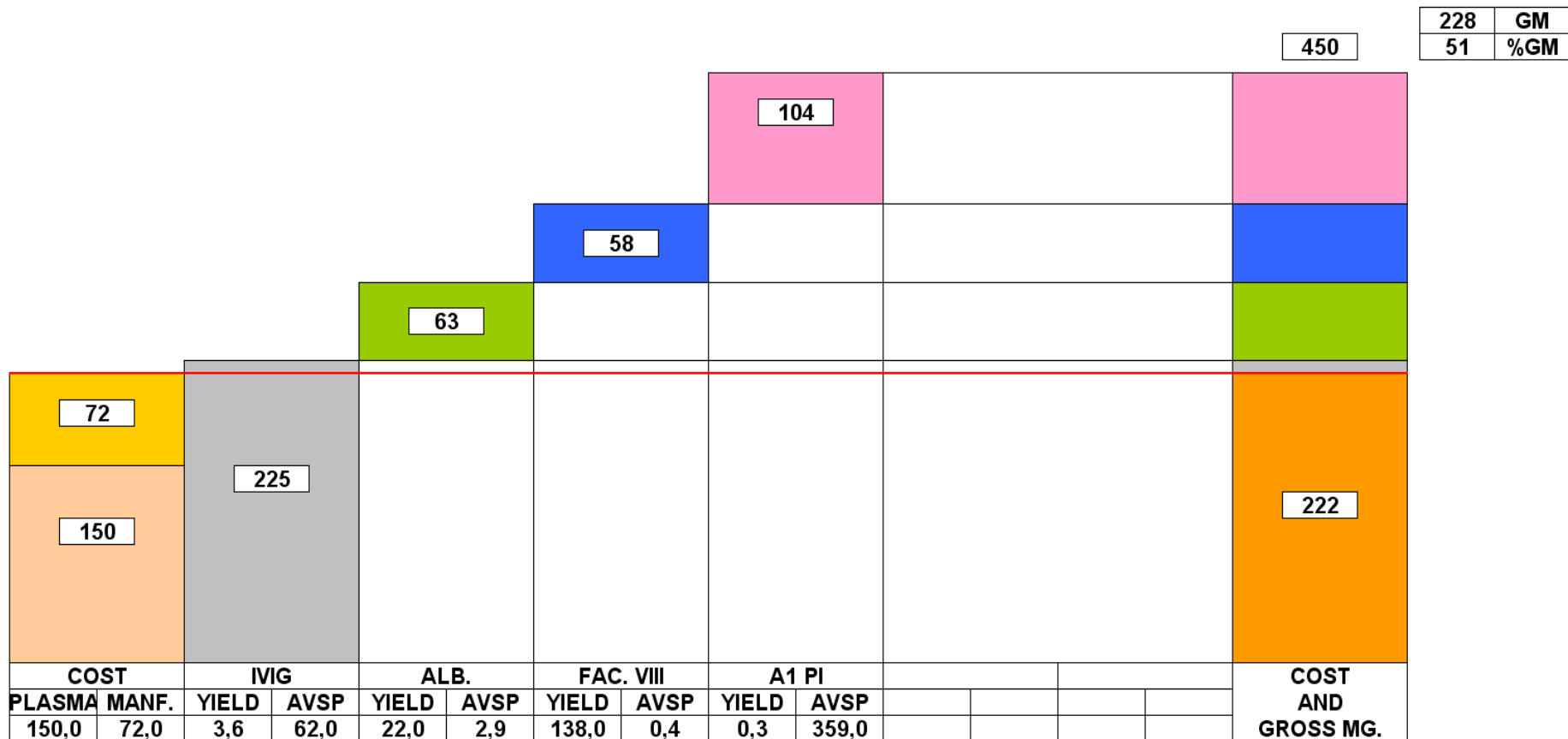
# Plasma economics

Revenue & Gross Margin generation. The first liters (case study, 2010, USD)



# Plasma economics

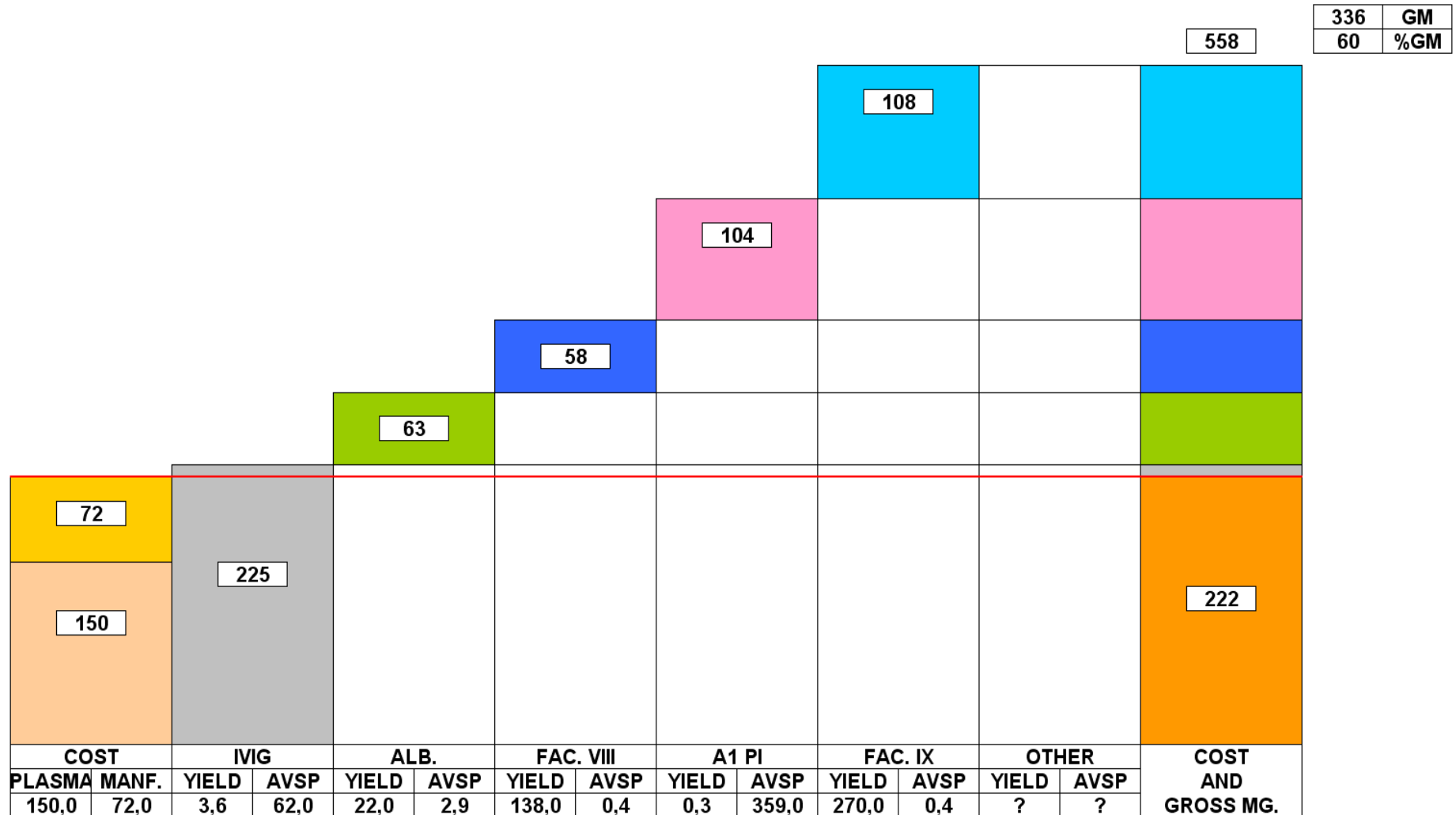
Revenue & Gross Margin generation. The first liters (case study, 2010, USD)





# Plasma economics

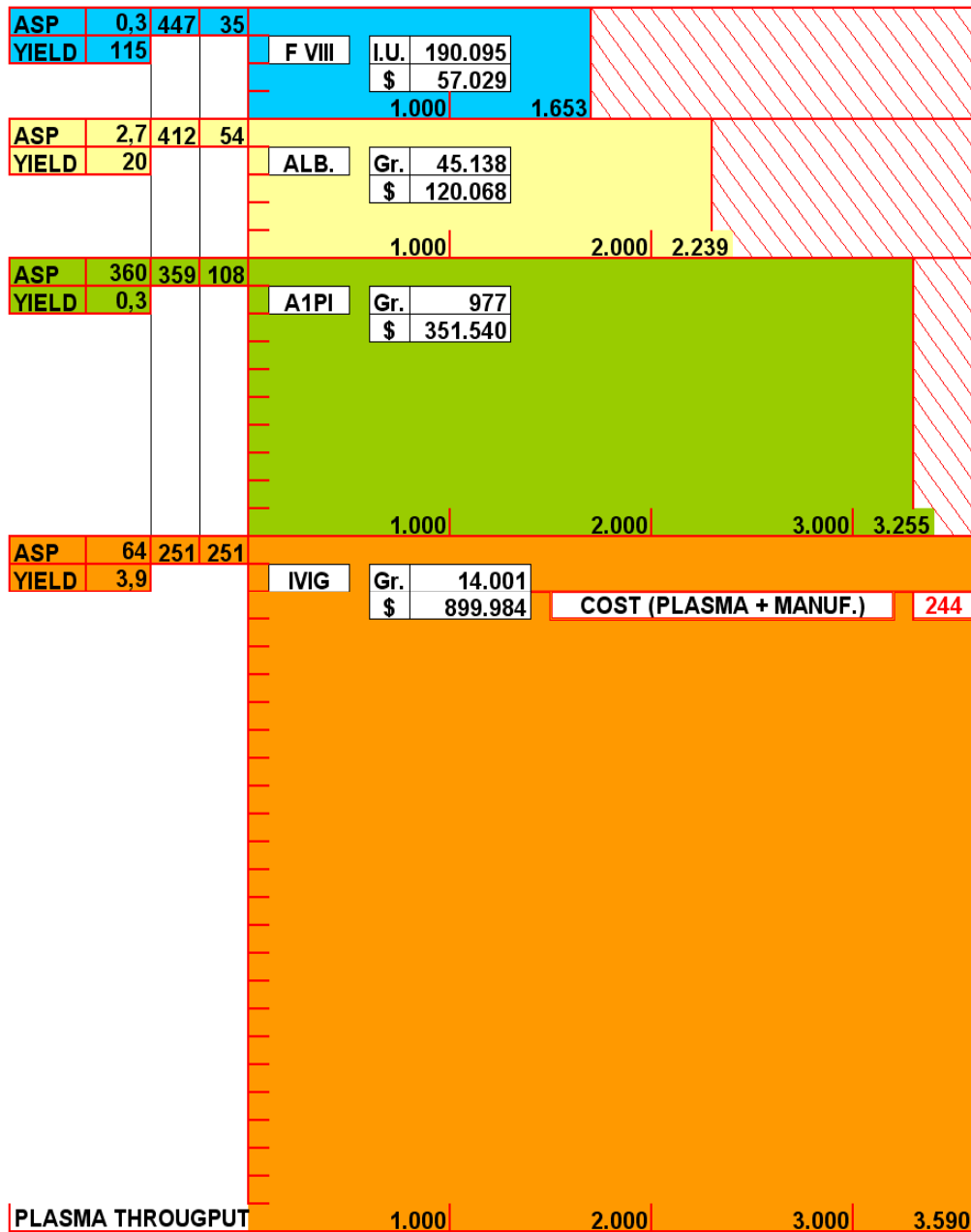
Revenue & Gross Margin generation. The first liters (case study, 2010, USD)





# Plasma economics – Case study

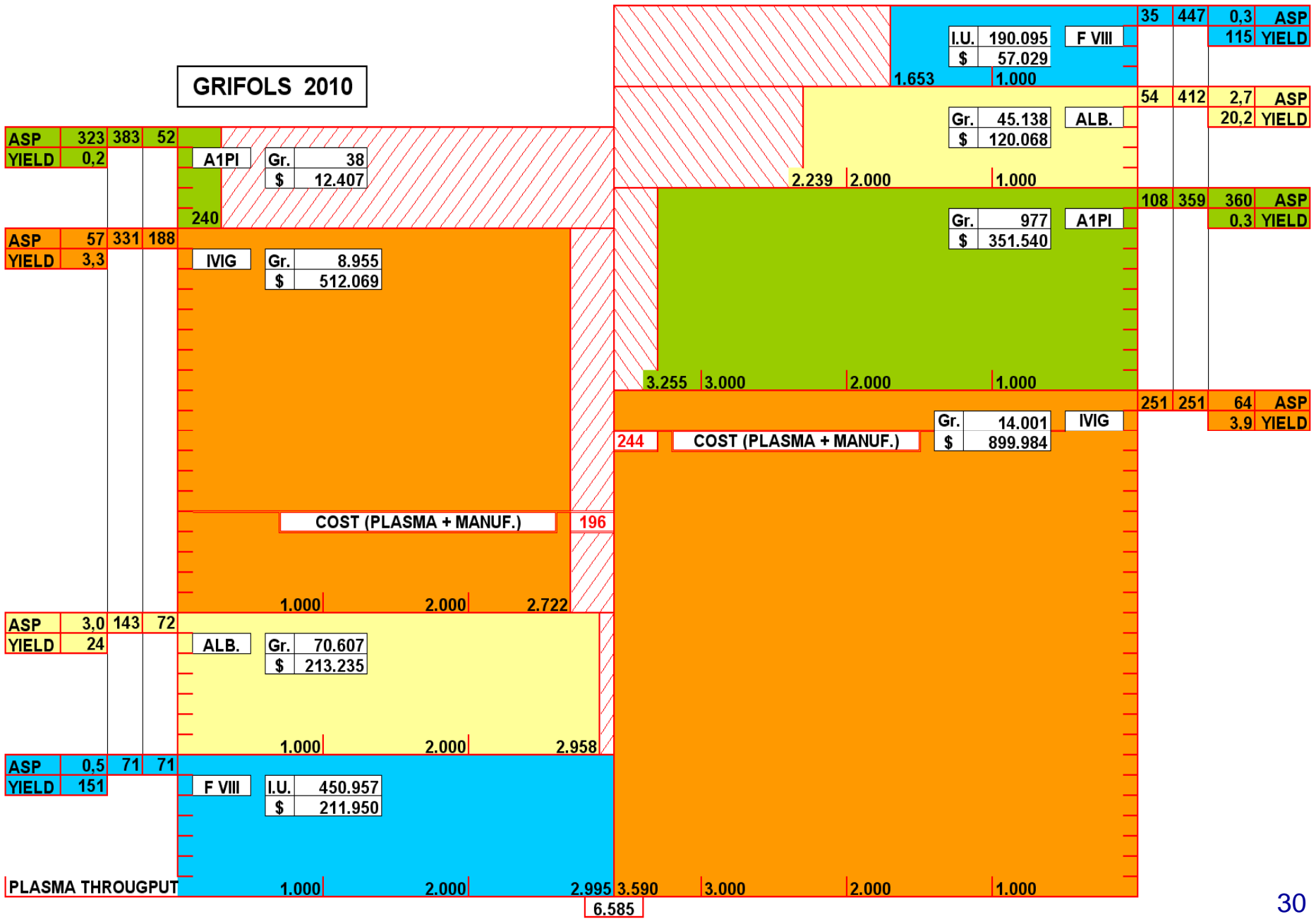
## TALECRIS 2010



# Plasma economics – Case study

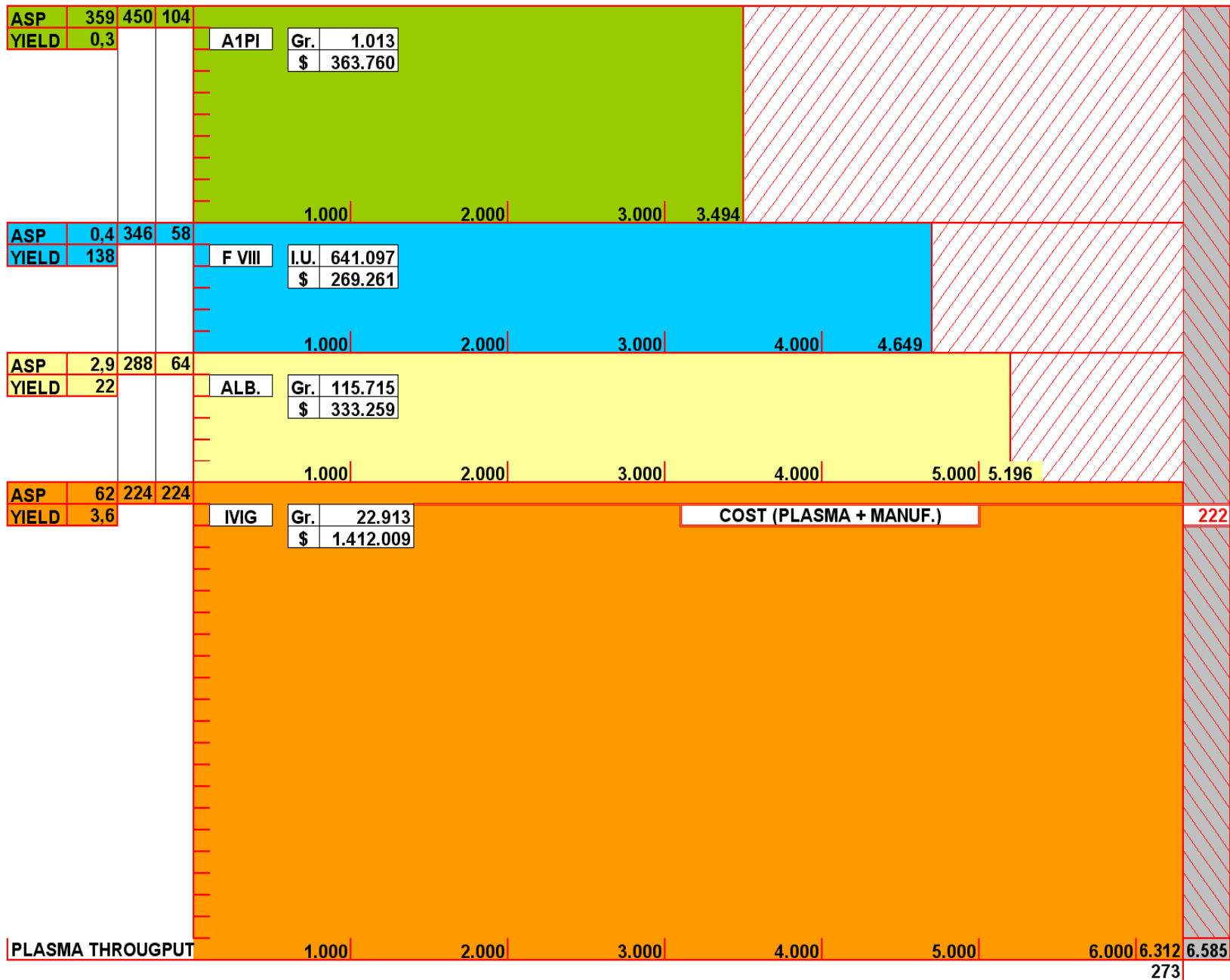
TALECRIS 2010

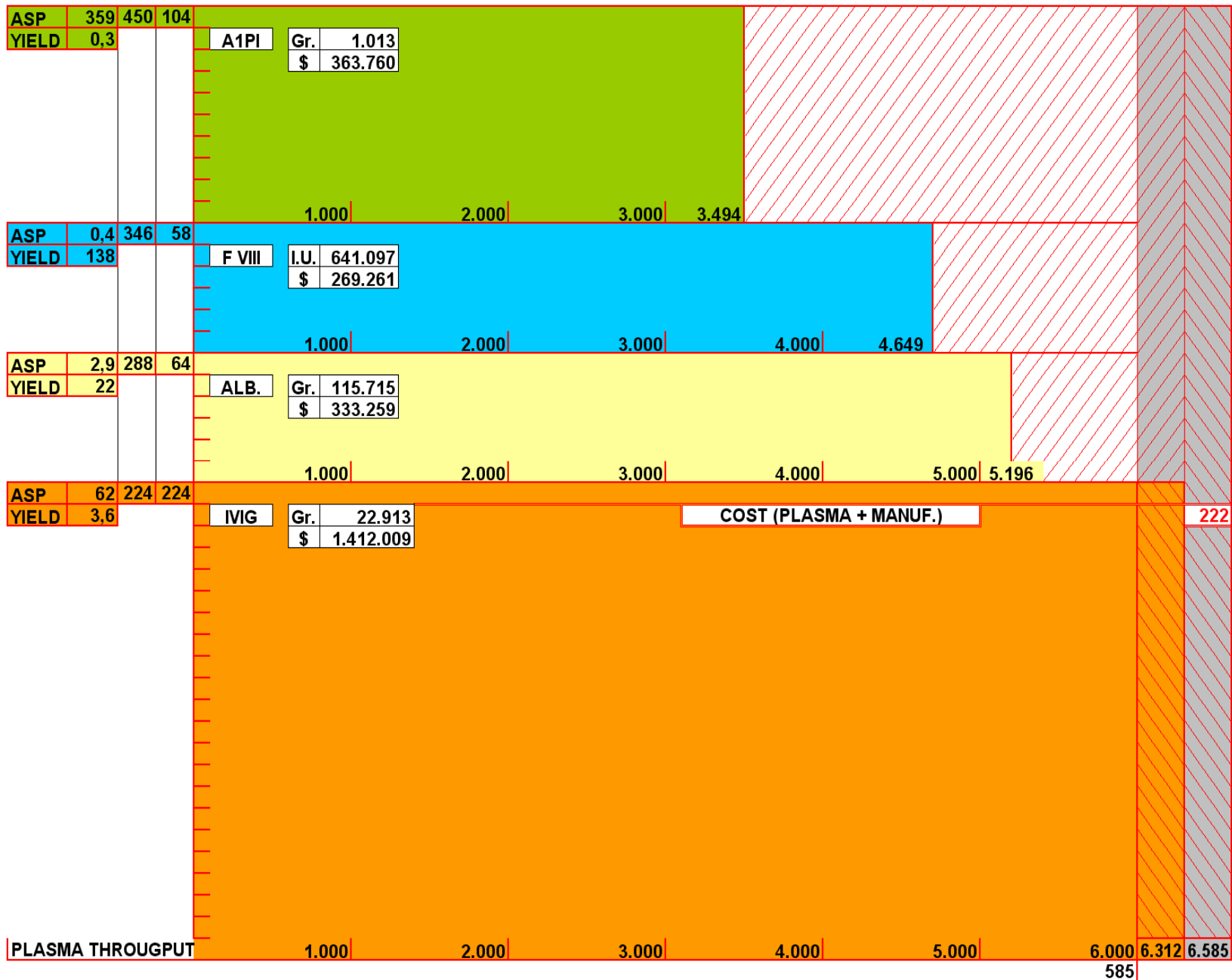
GRIFOLS 2010



GRIFOLS + TALECRIS 2010

# Plasma economics – Case study







# Situation of the two companies in 2010

## Regarding fractionation & IVIG purification capacity



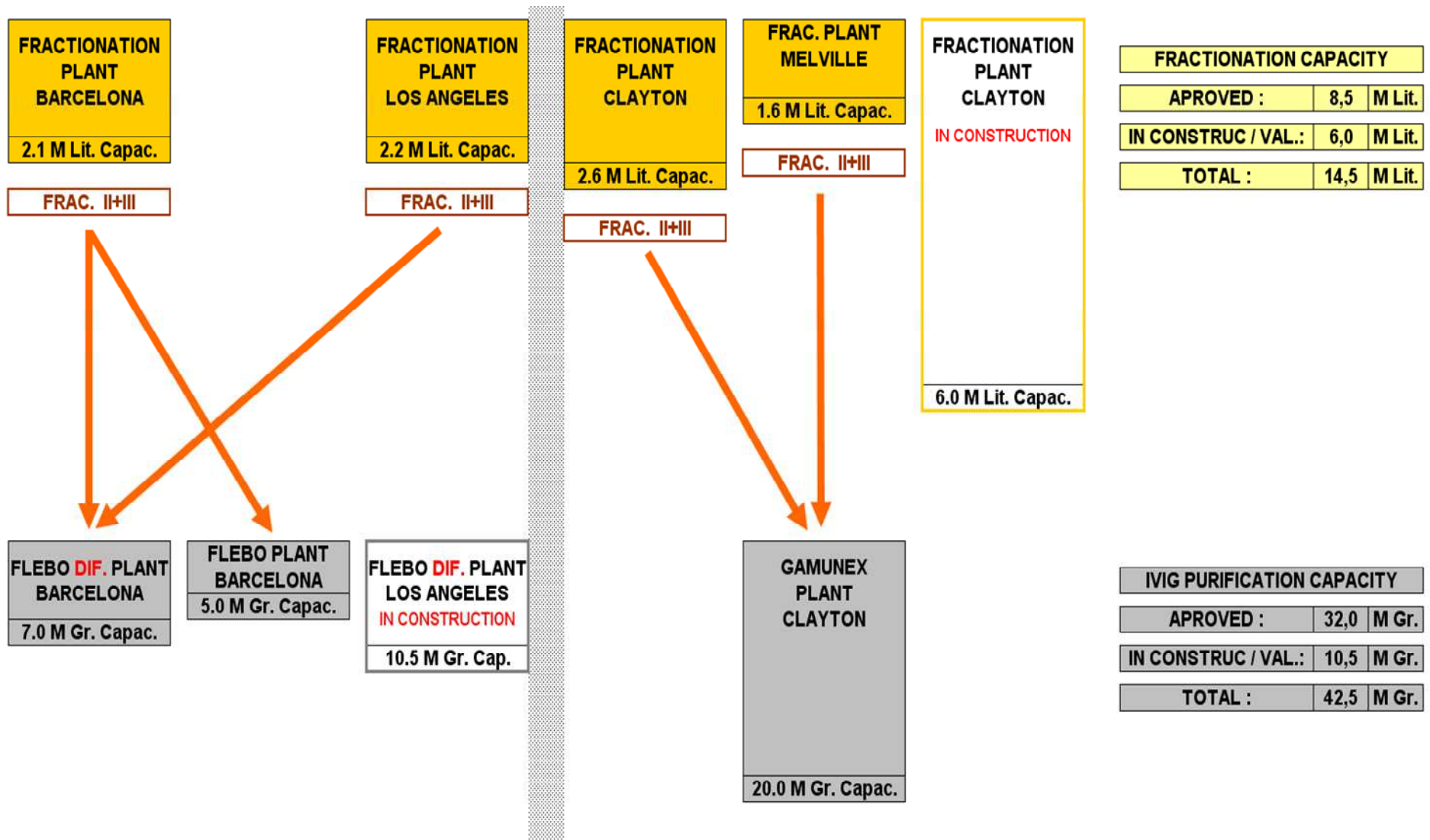
### FRACTIONATION

- FRACTIONATION PLANT BARCELONA : 2,1 M L
- FRACTIONATION PLANT LOS ANGELES : 2,2 M L
- OLD FRACTIONATION PLANT CLAYTON : 2,6 M L
- FRACTIONATION PLANT MELVILLE : 1,6 M L
- NEW FRACTIONATION PLANT CLAYTON :  
IN CONSTRUCTION

### IVIG PURIFICATION

- FLEBO DIF PLANT BARCELONA : 7,0 M Gr
- FLEBO PLANT BARCELONA : 5,0 M Gr
- FLEBO DIF PLANT LOS ANGELES :  
IN CONSTRUCTION
- GAMUNEX PLANT CLAYTON : 20,0 M Gr

# Fractionation & IVIG purification: 2010



# Major changes during 2011



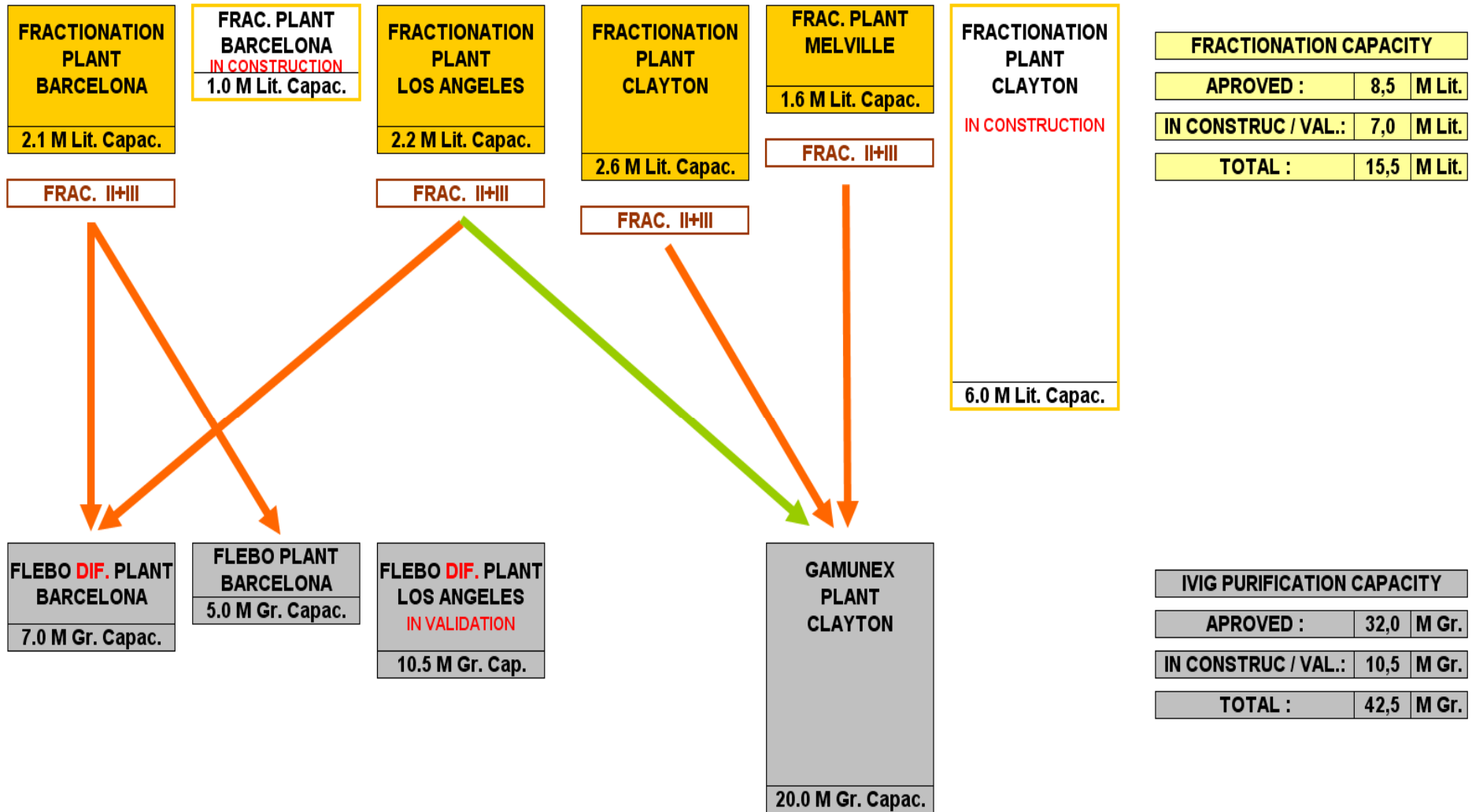
## FRACTIONATION

- CONSTRUCTION OF A NEW FRACTIONATION PLANT IN BARCELONA BEGINS

## IVIG PURIFICATION

- FLEBO DIF PLANT IN LOS ANGELES ENTERS THE VALIDATION PROCESS.
- APPROVAL FROM THE F.D.A. TO USE FRACTION II+III FROM LOS ANGELES AS A STARTING MATERIAL TO PRODUCE GAMUNEX IN CLAYTON.

# Fractionation & IVIG purification: 2011



# Changes forecasted for 2012-2013



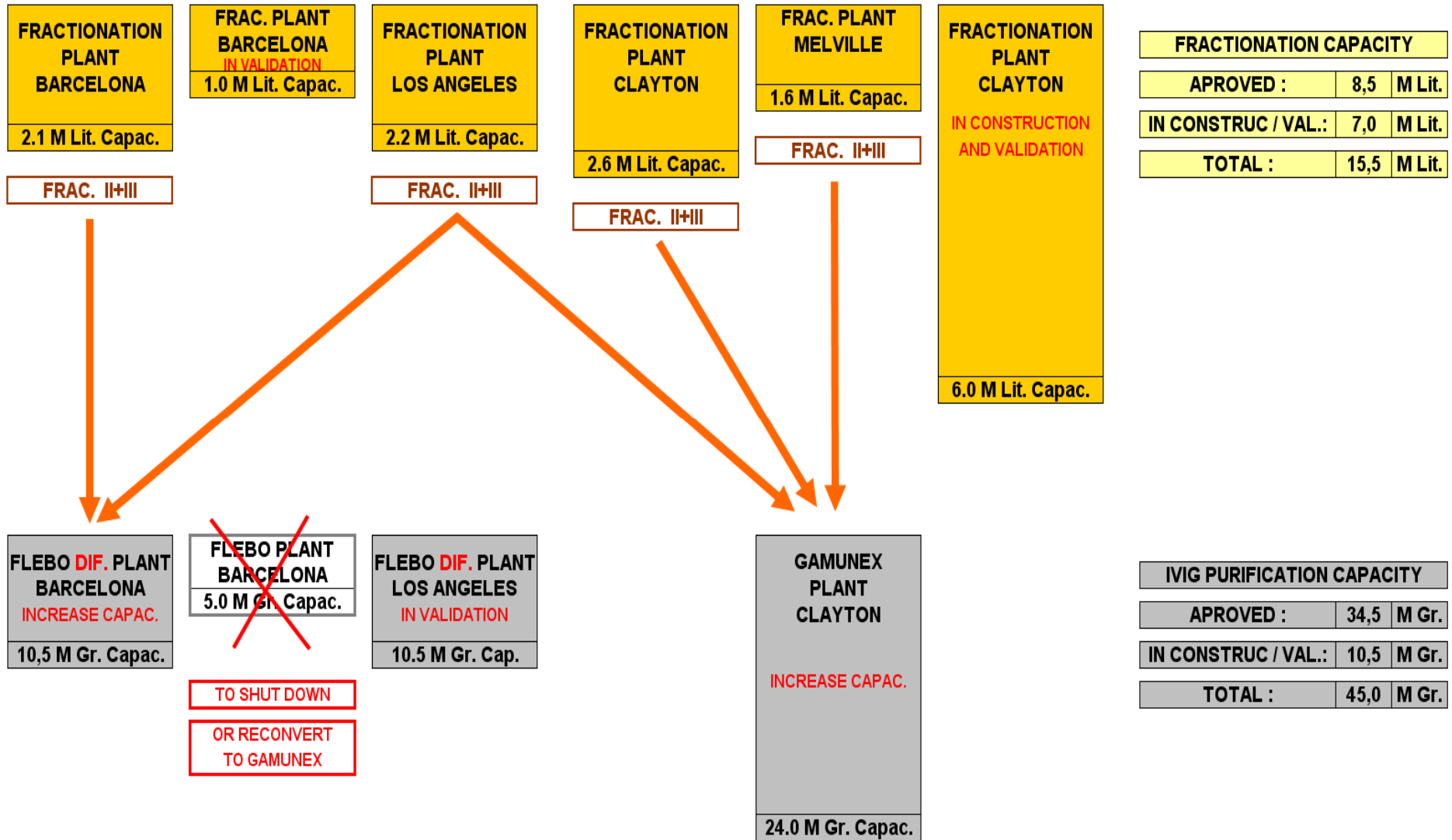
## FRACTIONATION

- NEW FRACTIONATION PLANT IN BARCELONA STARTS VALIDATION PROCESS.
- NEW FRACTIONATION PLANT IN CLAYTON STARTS VALIDATION PROCESS.

## IVIG PURIFICATION

- FLEBO DIF PLANT IN BARCELONA WILL SEE A CAPACITY INCREASE : FROM 7,0 M Gr TO 10,5 M Gr
- GAMUNEX PLANT IN CLAYTON WILL SEE A CAPACITY INCREASE : FROM 20,0 M Gr TO 24,0 M Gr
- FLEBO PLANT IN BARCELONA TO SHUT DOWN

# Fractionation & IVIG purification: 2012 - 13



# Changes forecasted for 2014 - 15



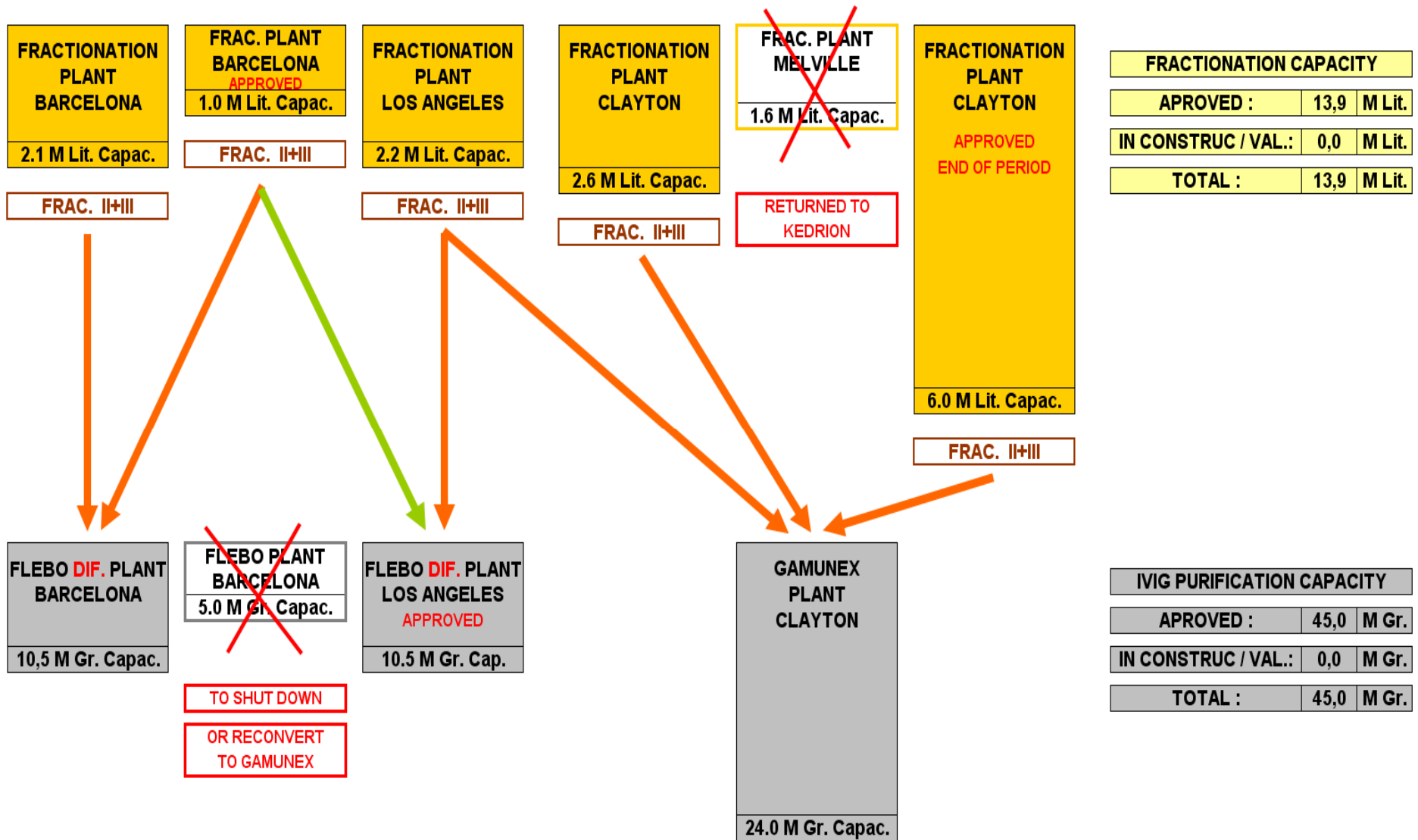
## FRACTIONATION

- NEW FRACTIONATION PLANT IN BARCELONA APPROVED. NEW CAPACITY OF : **1,0 M L**
- NEW FRACTIONATION PLANT IN CLAYTON APPROVED AT THE END OF THE PERIOD. NEW CAPACITY OF : **6,0 M L**
- MELVILLE FACILITY RETURNED TO KEDRION

## IVIG PURIFICATION

- FLEBO DIF PLANT IN LOS ANGELES APPROVED. NEW CAPACITY OF : **10,5 M Gr**

# Fractionation & IVIG purification: 2014 - 15





# Changes forecasted for 2016



## FRACTIONATION

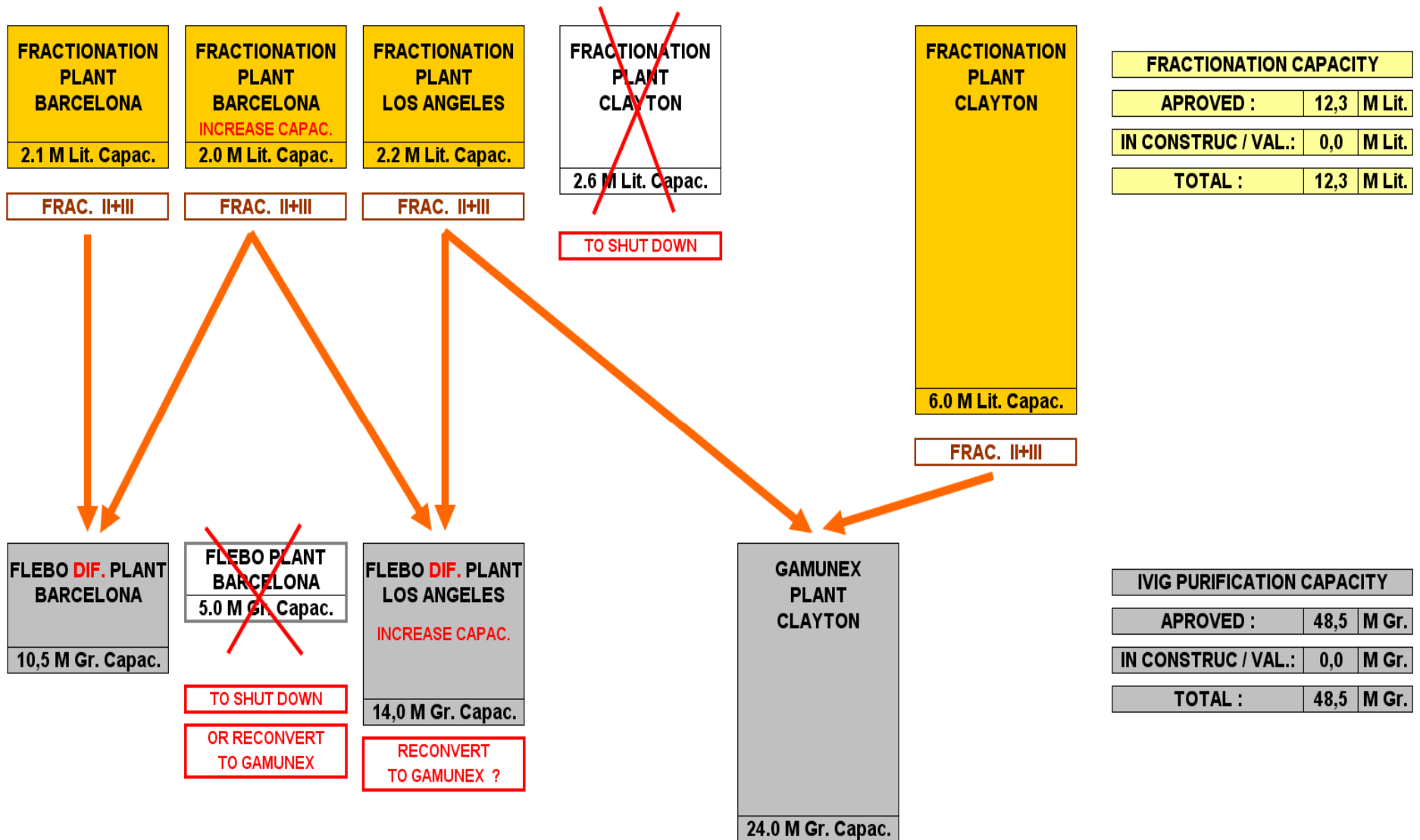
- NEW FRACTIONATION PLANT IN BARCELONA WILL SEE A CAPACITY INCREASE FROM 1,0 M L TO 2,0 M L
- OLD FRACTIONATION PLANT IN CLAYTON WILL BE SHUT DOWN.

## IVIG PURIFICATION

- FLEBO DIF PLANT IN LOS ANGELES WILL SEE A CAPACITY INCREASE FROM 10,5 M Gr. TO 14,0 M Gr.

POSSIBLE CONVERSION TO GAMUNEX

# Fractionation & IVIG purification: 2016




# 2016 goal: ideal match between fractionation and purification



## PLASMA FRACTIONATION PLANTS AND CAPACITIES

BARCELONA	BARCELONA	LOS ANGELES	CLAYTON	TOTAL
2,1 M Lit.	2,0 M Lit.	2,2 M Lit.	6,0 M Lit.	12,3 M Lit.

Yield  x 4 Gr/Lit.

## IVIG PRODUCTION PLANTS AND CAPACITIES

BARCELONA DIF	LOS ANGELES DIF or GAMUNEX	CLAYTON GAMUNEX	TOTAL
10,5 M Gr.	14,0 M Gr.	24,0 M Gr.	48,5 M Gr.

## Summary



- Raw material being of human origin demands an exquisite treatment
- Errors are not acceptable. Efforts in that direction must be constant and all new technologies available must be tested and/or implemented
- R & D opportunities are nearly limitless (new proteins and/or new indications)
- Economically wise, it is a must to market at least three proteins from each liter of plasma
- Trade marks and brands are very important. Most patients rely on them
- Any project is long term (new facilities, new products, new indications, clinical assays...)
- Certain errors by competitors may not affect positively the rest of the players
- As mentioned in the first slides : **Quality is not enough ... safety above all !**

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# Integration Process Status

*Thomas Glanzmann*

*- Chairman Board Grifols Inc. -*

# Grifols: A new era begins



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**Talecris**  
BIOTHERAPEUTICS

- US market leader in IVIG 5% solution
- Existing and available FDA licensed manufacturing capacity
- Extensive international sales, marketing and logistics network
- Well established, premiere source plasma collection operation
- Serological testing laboratory with additional capacity coming on-line
- Dedicated engineering company for biologic facility design and construction

- Well established IVIG 10% and A1PI brand recognition in the United States
- Manufacturing capacity constraints for near to mid term
- Strong native clinical research program including subcutaneous IG and recombinant plasmin
- Developing source plasma collection operation not-yet self sufficient
- Broad portfolio of hyperimmune and specialty immune globulin therapies

- Number 3 ranked vertically integrated plasma derivatives producer
- Expanded plasma collection and fractionation capabilities
- Only company to offer 5% and 10% IVIG solution
- Enhanced US presence and global footprint
- Complementary R&D pipeline
- Significant synergies expected

## Integration executive summary



- Integration is on-track and proceeding well
- Comprehensive integration process in place
- New operating structures implemented
- Executive management appointments made and are operational
- Integration priorities are on track
- Fr II+III paste transfer from LA approved, shipped and in process

## Integration goals



- Create a sustainable industry leader
- Establish an integrated company operating as one
- Deliver financial commitments and targets

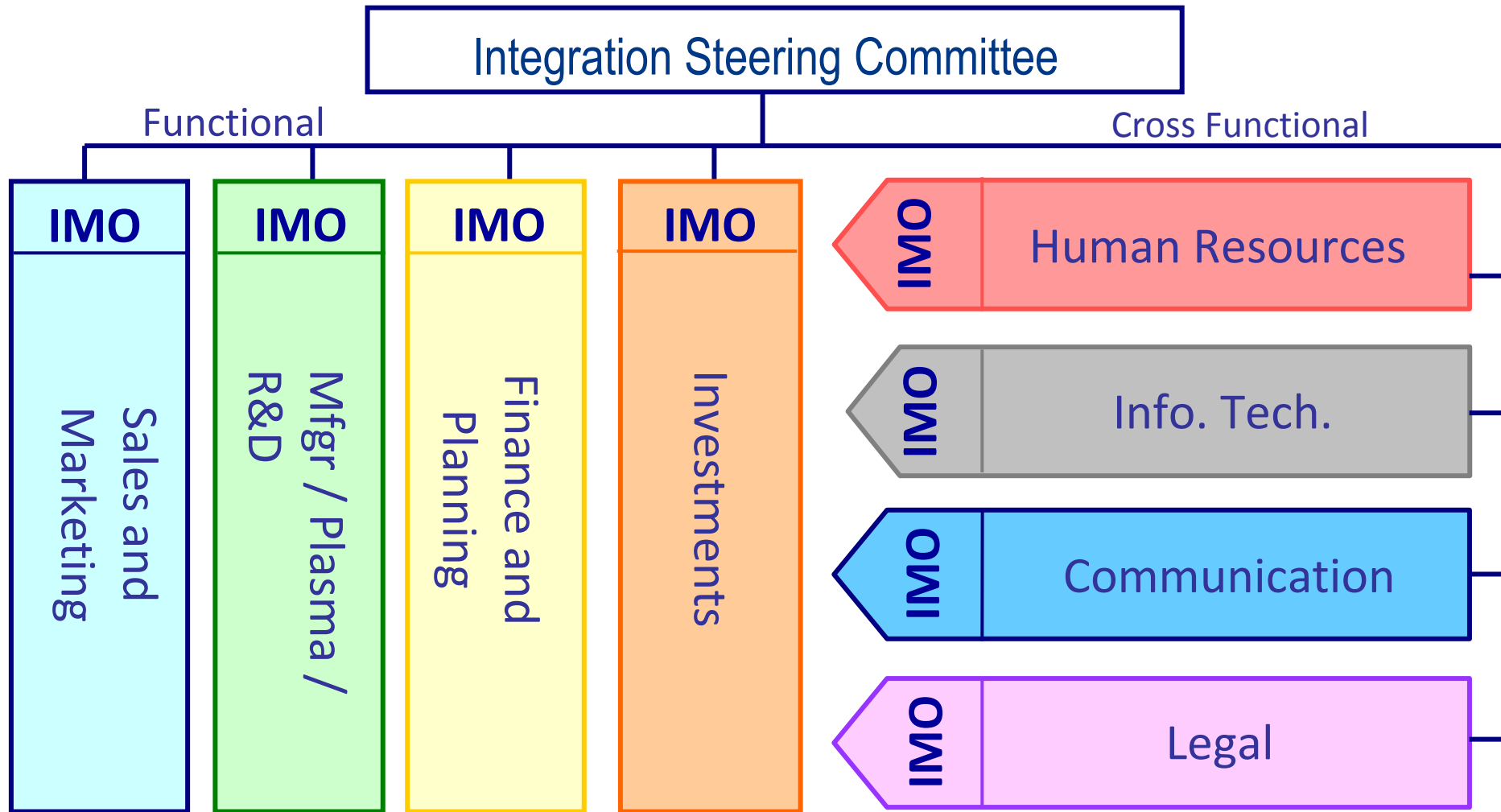


## Integration guiding principles

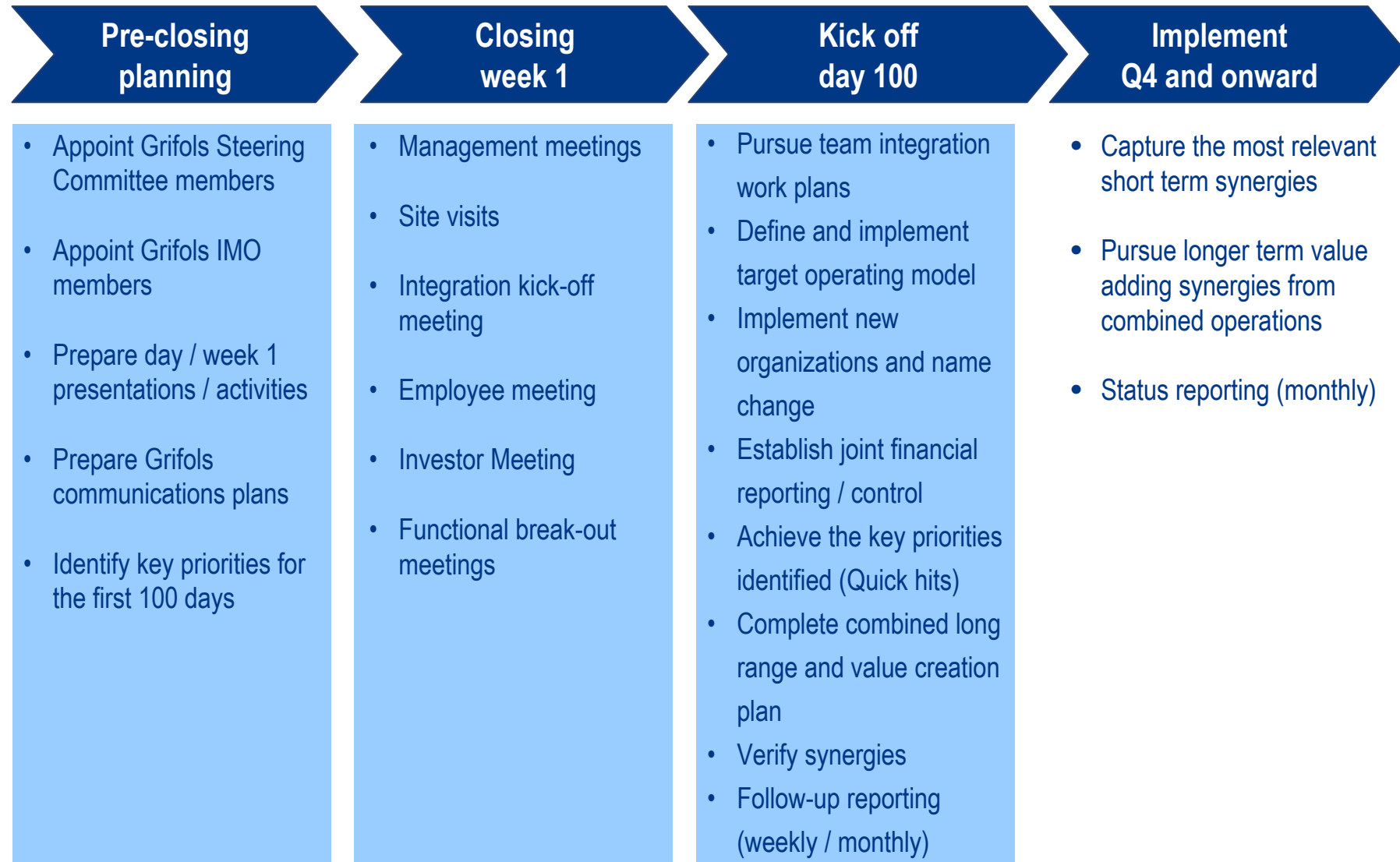


- Invisible to customers
- Capture best of both worlds
- Deliver mechanical integration in 100 days
- Do homework thoughtfully and make decisions for long term value creation

# Integration approach



# Timetable and overview



## Top priorities



- Create one customer interface
- Establish one global operating company
- Leverage products (IVIG) and manufacturing opportunities
- Establish one plasma sourcing organization and structure
- Align financials and reporting
- Verify and pursue synergies

## Create ONE customer interface



- Customer facing organizations merged in US and Canada under one leadership
- Talecris international business integrated in Grifols global operational framework
- In US established sales and marketing business units (IVIG, Alpha 1, coagulation)
- US key account management aligned
- Common policies and incentives being implemented

..... All customers retained .....

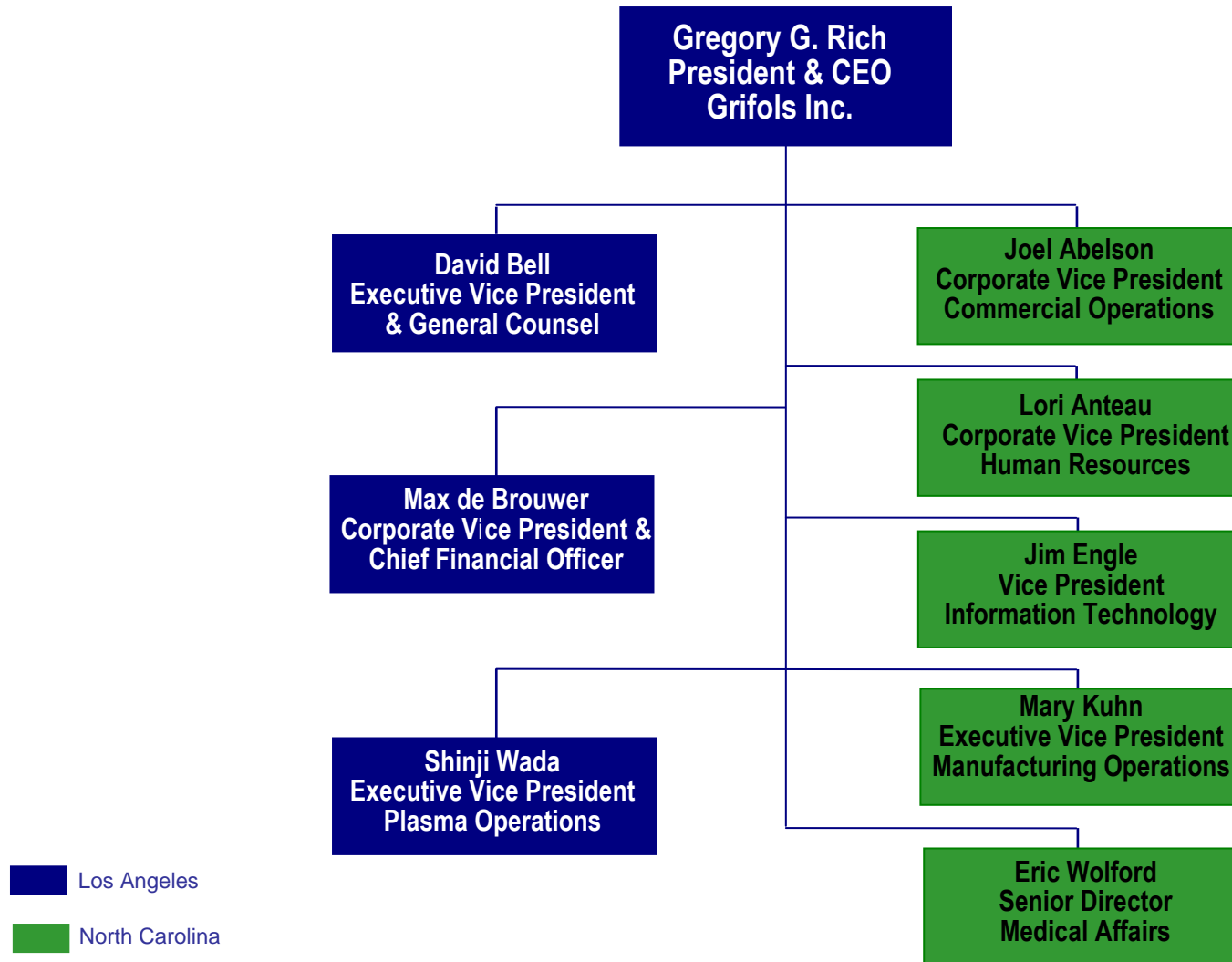
## Establish ONE global operating company



- Grifols SA executive management team appointed
- Grifols Inc Board and management established
- Common global functional organizations under one leadership in place
- Global name change to Grifols in execution
- Legal entities consolidated and aligned
- HR philosophy and policies aligned
- US headquarter – Los Angeles designated

.....Organizational merger completed .....

# Grifols Inc - US Management Team



## Leverage products (IVIg) and manufacturing opportunities



- FDA approval received in July
- Transferred Fraction II+III for manufacturing of additional Gamunex
- First lots being produced for sale in 2012
- Global product portfolios being aligned
- Teams in place to explore and pursue manufacturing opportunities

..... First significant operational synergies being realized .....



## Establish ONE plasma sourcing organization and structure



- Plasma organizations merged under one leadership
- Support functions consolidated and aligned
- 147 centers aligned in regions
- Common philosophy and guidelines implemented
- Testing leverage opportunities being pursued

..... One plasma sourcing organization operational .....

# Strategic rationale of the transaction



## Business strategic overview

- Fully complementary Business models
- Optimization of commercial, industrial and R&D projects
- Geographical fit
- Enhancement of Grifols presence in the US
- Creation of the 3rd worldwide haemoderivatives vertically integrated manufacturer
- Increase of plasma collection and fractionation capacity to meet the sustained global demand growth



## Financial overview for shareholders

- The integration of both companies will allow to obtain significant synergies with a run rate of approximately \$ 230 million from 2015 onwards
- The synergies to be obtained will overpass the premium paid, creating value for the shareholder
- Quick deleverage due to the strong cash flow generation derived from the business and synergies



## Financial synergies on track



	Initial target	Current assessment
Revenue	0	(*)
Plasma collections	~ 15%	=
Manufacturing leverage and optimization	~ 45%	+
OPEX	~ 40%	+
<b>TOTAL</b>	<b>~ \$230</b>	

(\*) Expected synergies, not yet quantified

## Achievement summary



- Business progressing - now with one customer interface
- Organizational merger complete
- First industrial synergies being materialized
- One plasma organization operational
- Financial reporting and common approach established
- Financial synergies confirmed and exceed preliminary estimates
- Complying with FTC requirements (Kedrion)

## Next steps



- Cultural company consolidation focus
- Finalize the R&D portfolio for sustainable growth contributions
- Pursue capacity and technology alignments
- Refine CAPEX requirements
- Pursue longer term market opportunities for combined product portfolio

.....CAPTURE ALL IDENTIFIED SYNERGIES.....

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# Plasma Procurement Management

*Shinji Wada*

*- President Plasma Centers Grifols Inc. -*

## Discussion points



- Grifols philosophy for Plasma Sourcing
- Historical overview
- Integration of Grifols plasma companies
- Plasma collection capacity and flexibility
- Testing and logistics
- Summary

## Grifols philosophy for plasma sourcing



- Plasma as a Raw Material vs. plasma as the integral part of product
- Grifols offers complete transparency of the origin of each source plasma unit
  - PediGri® program
- Recovered plasma vs. Source plasma?
  - Grifols only offers custom manufacturing service with Recovered plasma
    - » Spain, Canada, Czech, Slovakia
  - Challenging GMP compliance for Recovered plasma processing at blood banks
  - Robust medical history & viral test results of Source plasma donors
  - Lookback and 60 days inventory hold for Source plasma minimize risk of unsuitable units go into fractionation pool
  - Limited availability of Recovered plasma to support long term growth of global demands

**All commercial sales of Grifols plasma products (except custom fractionation) have been and will be 100% supported by Source plasma**



# Grifols Plasma: continued expansion of donor center network

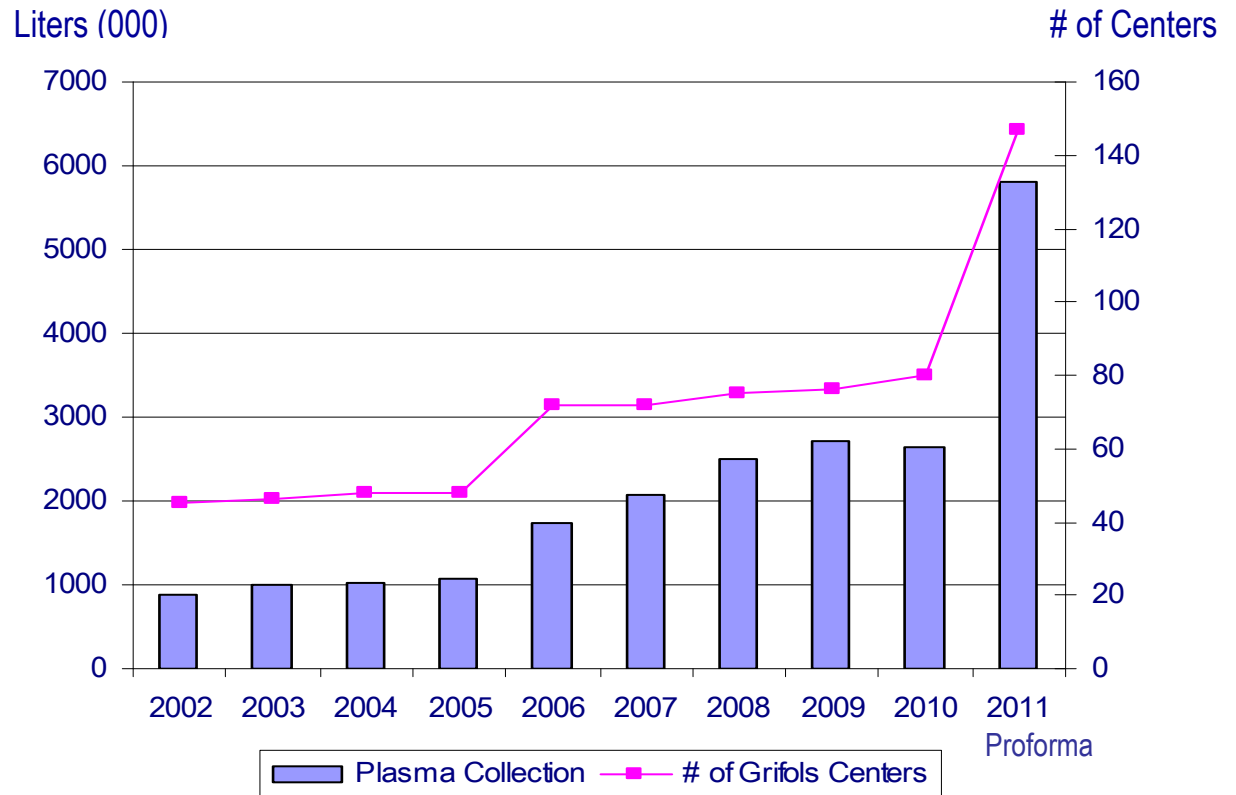


## Series of center acquisitions

2002: SeraCare (43 centers)  
 2006: Bio-Life (8 centers)  
 2006: PlasmaCare (14 centers)  
 2007: BioMedics (4 centers)  
 2008: AmeriHealth (1 center)



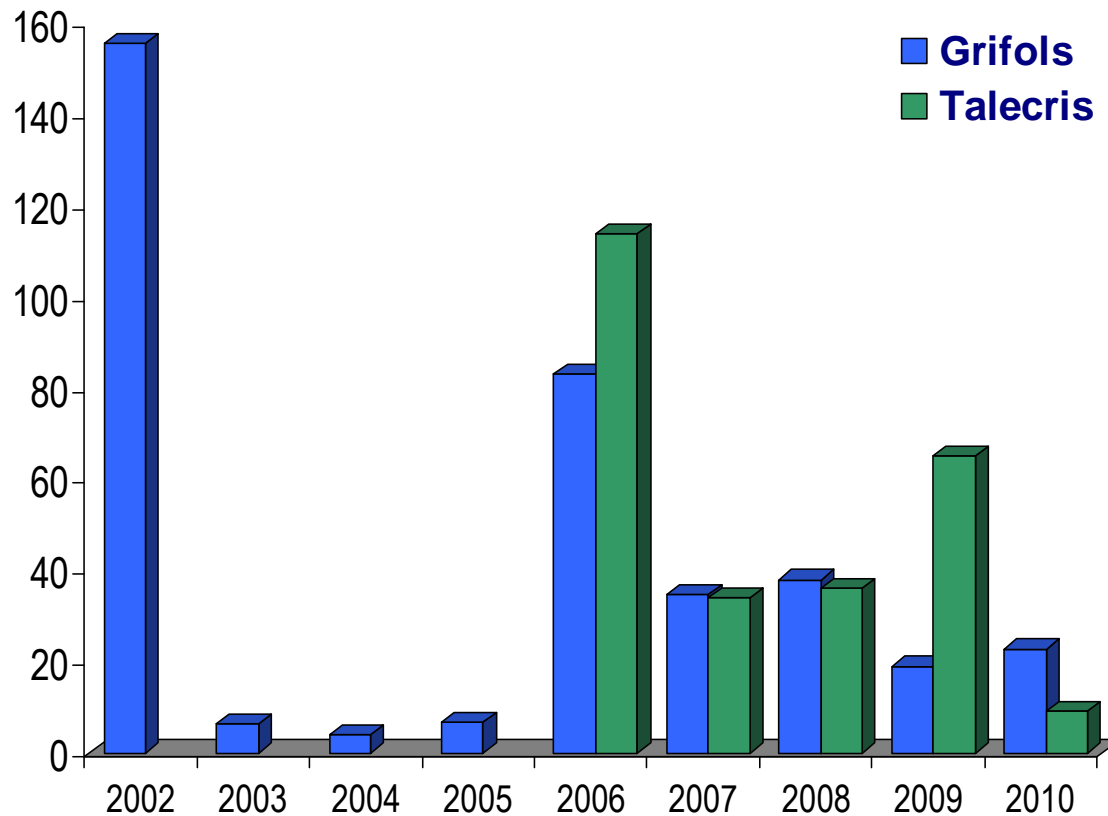
2011: TPR (67 centers)



# Continued capital investment for plasma operation



(US\$ Million)



## Grifols Investments

- 2002 SeraCare acquisition
- 2006 PlasmaCare acquisition
- Bio-Life acquisition
- 2007 BioMedics acquisition
- 2008 AmeriHealth acquisition
- 2010 San Marcos Lab

Grifols 2002 – 2010 Total: \$370

## Talecris Investments

- 2006 Initial IBR acquisition
- 2007 IBR acquisition II
- 2008 IBR acquisition IIIa
- 2009 IBR acquisition IIIb

Talecris 2002 - 2010 Total \$258

Grifols & Talecris Total \$628

# Integration of Grifols Plasma companies



**Strategic decision was made to operate three plasma companies, Biomat USA, PlasmaCare and TPR to be managed by one leadership team and one supporting structure**

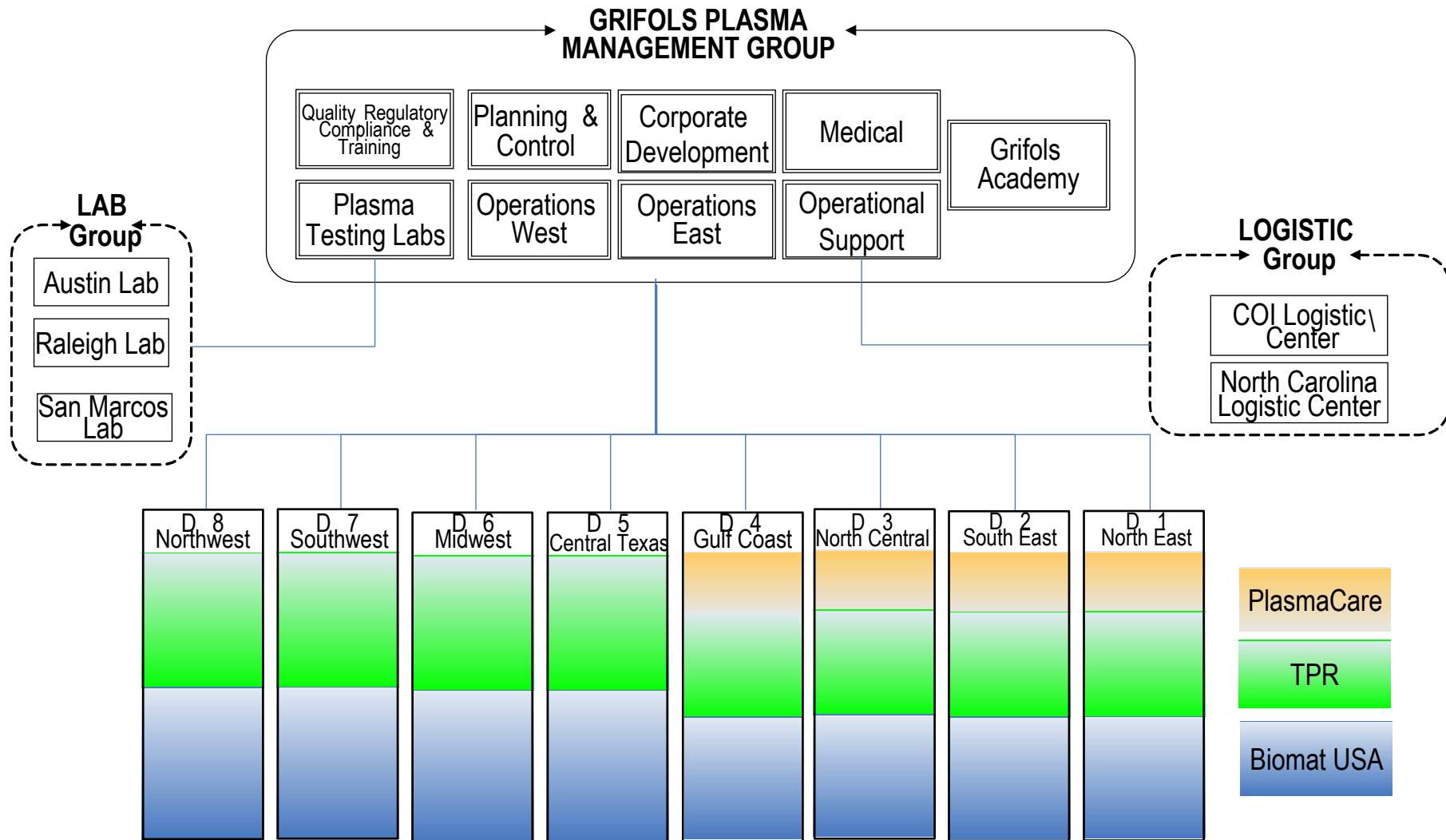
- Although legal entities (Biomat USA, PlasmaCare & TPR) and corresponding licenses will be maintained due to regulatory reasons, one management strategy should be applied to all donor centers
- Field driven operational structure (each division to be fully functional and accountable for day-to-day operation)
- Robust medical and quality structure
- Streamlined testing and other logistic functions/processes
- Only value added changes to be applied to each operating procedures

## New Grifols Plasma operational structure

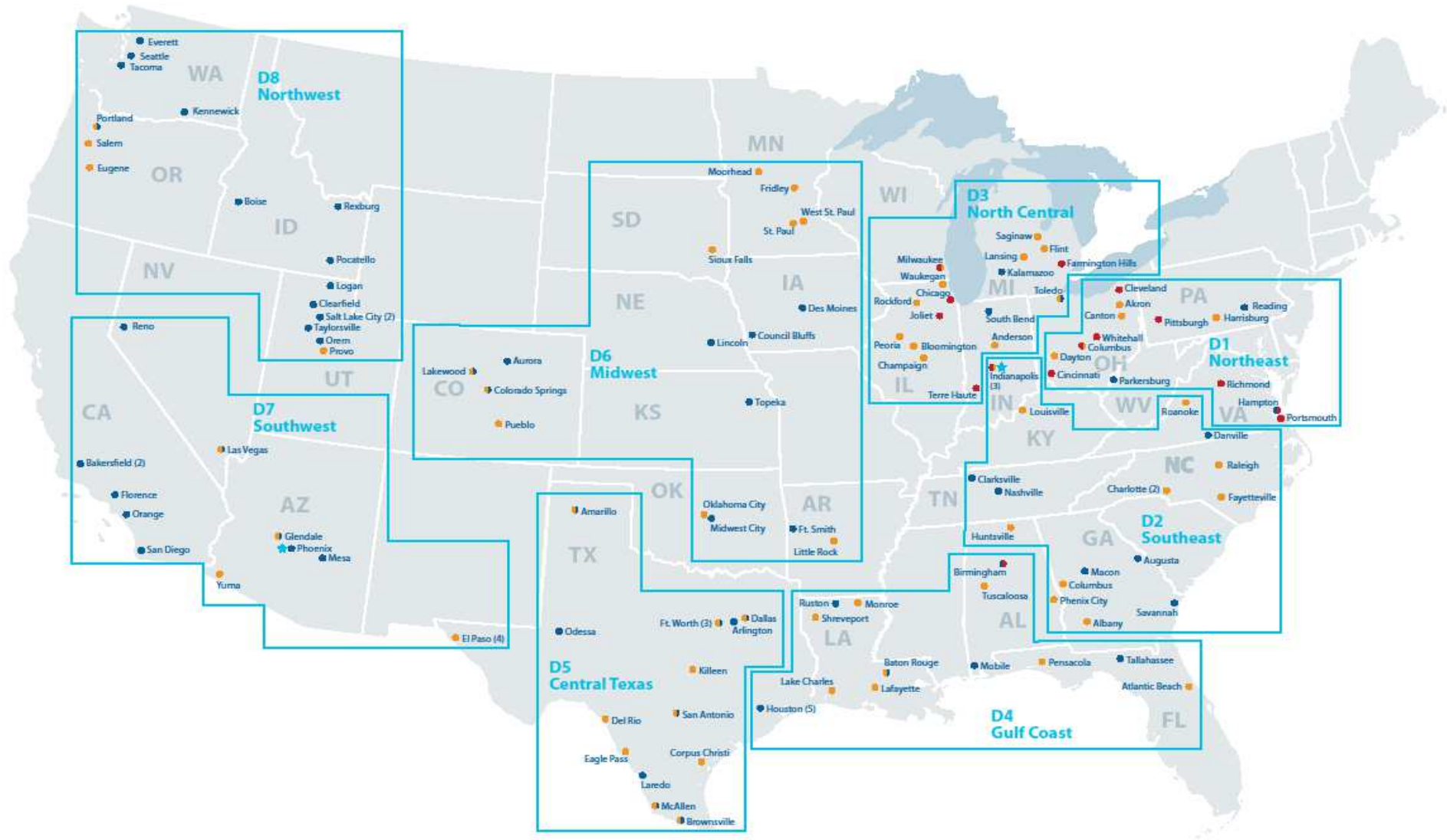


- Center operation is divided into East and West
- 147 centers to be geographically divided into 8 divisions
- Average 18 centers per division
- Each division has Operational, Quality, Medical and Training Leadership
  - General Manager and Head of Quality
  - Operation Managers
  - Quality Managers
  - Division Medical Doctor and Training Manager
- Corporate oversight through:
  - Robust Corporate Compliance Audit team
  - Electronic Documentation Systems for Quality and Training
  - Live Monitoring of Donor Management System
  - Home grown 510K certified Inventory and Quality IT system
  - Systematic review of Operational and Quality KPI

# New Grifols Plasma management structure



# Grifols Plasma 147 donor centers network



# Re-structuring of Grifols Plasma



## New Grifols Plasma re-structuring highlights

- No closure of donor center
- No change for donor center organization and staffing
- Re-distribution of talents from corporate to field oversight functions
- Re-sizing and streamlining of Corporate Administration and supporting functions

## Re-structuring synergy identified

- Corporate overhead reduction
- Field oversight efficiency improvement
- Logistic efficiency improvement
- Reduction of outsourced services
- Alignment of vendors and improved terms of purchase contracts
- Alignment of donor recruitment programs

## Continued plasma volume improvement



<b>Grifols Centers</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Center Acquisition	<b>0</b>	<b>22</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
New Center Opening	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>
Relocation to New Facility	<b>5</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>5</b>
Major Expansion	<b>1</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>

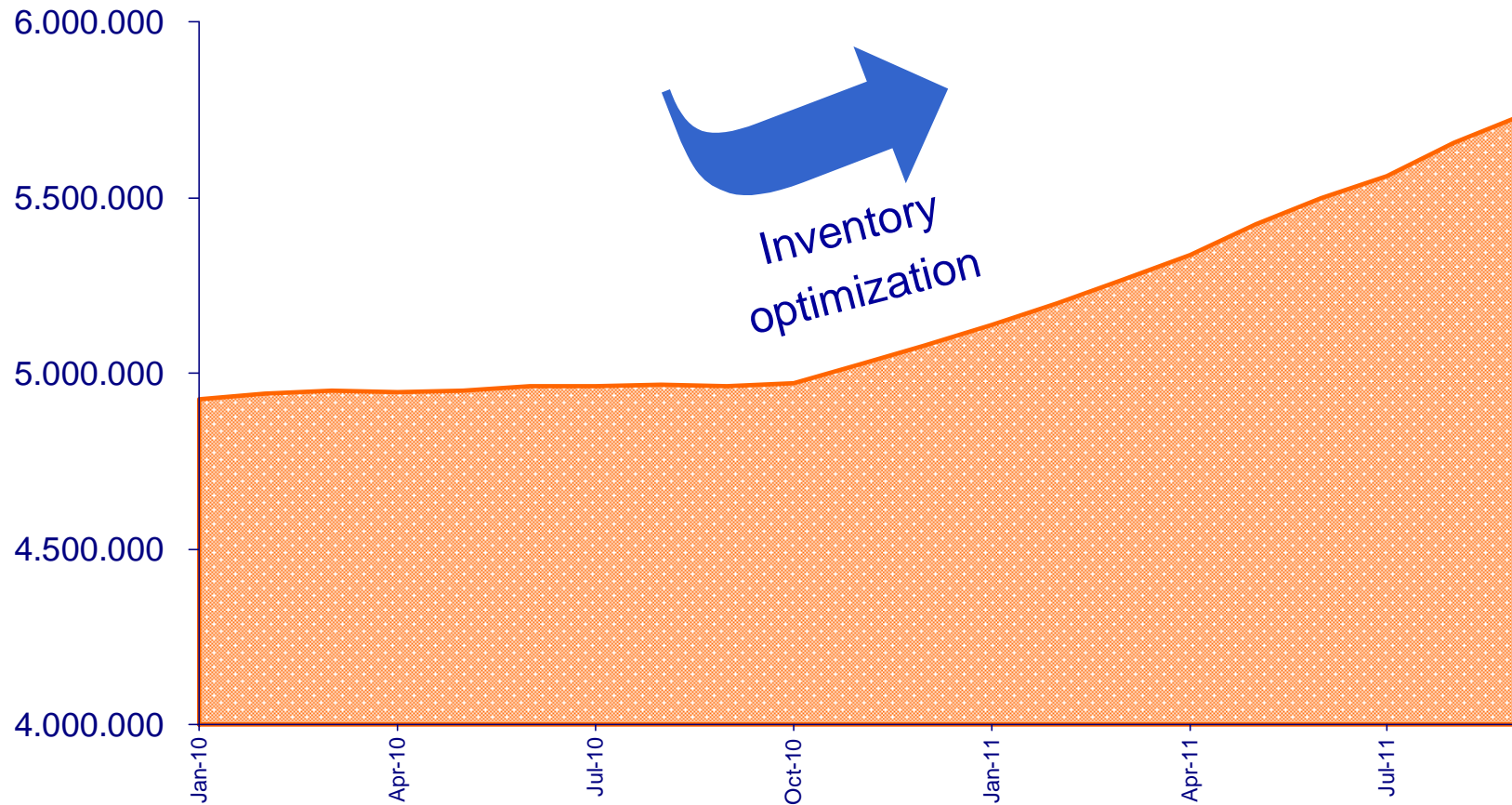
<b>Talecris Centers</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Center Acquisition		<b>33</b>	<b>3</b>	<b>3</b>	<b>12</b>	<b>0</b>	<b>0</b>
New Center Opening		<b>0</b>	<b>13</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>2</b>
Relocation to New Facility		<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>
Major Expansion		<b>0</b>	<b>2</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>3</b>



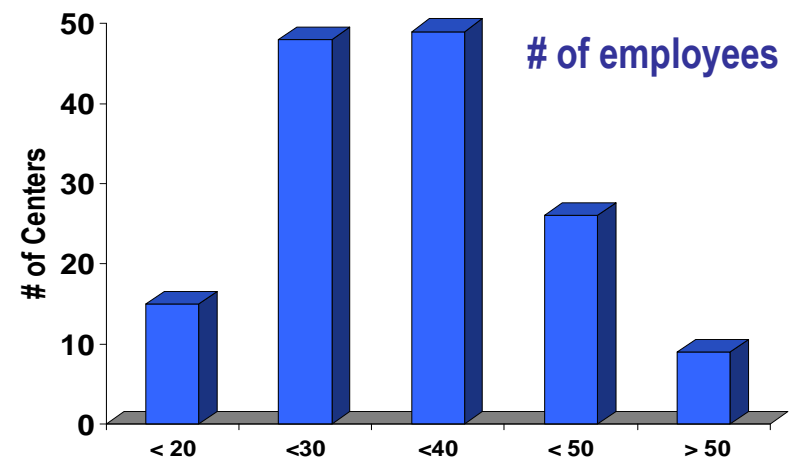
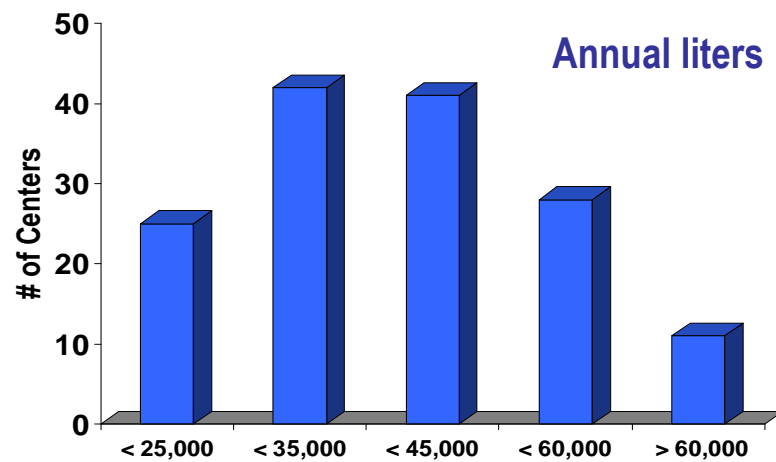
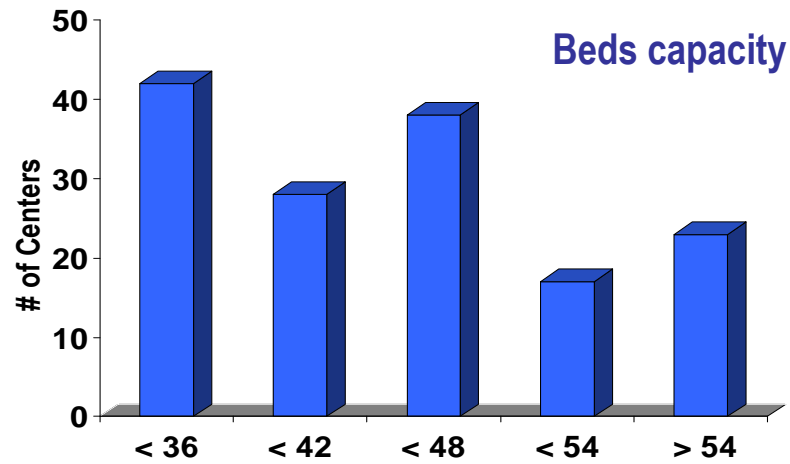
# New Grifols 147 centers last 12-month collection



(liters)



# Grifols Plasma centers: various stats of center operation



## Flexibility in adjusting plasma collection to final product demands



- By adjusting some 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
- Collection capacity expansion opportunities
  - Increase # of beds/machines. Current number of beds/machines at 147 centers can be increased by 20% without expanding facilities
  - License relocation of smaller facility (< 36 beds) to larger facility (> 60 beds). One center relocation to yield 30,000 to 40,000 liters collection increase
  - New center opening

# New Donor Center opening timeline

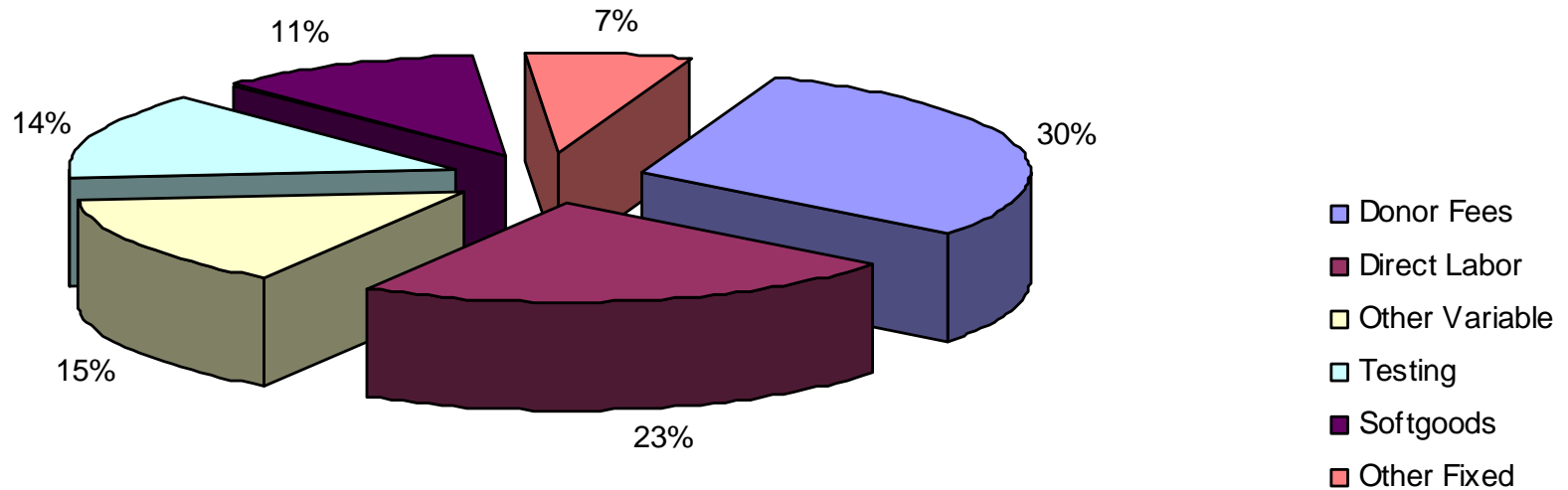


- Planning phase 3 - 6 months
  - Site search
  - Lease negotiation/execution
  - Engineering and construction permit submission
  
- Construction phase 3 - 12 months
  - Leasehold improvement 3 - 6 months
  - Ground-up 9 - 12 months
  
- Regulatory approval phase 15 - 24 months
  - Pre-inspection operation 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

# Heavy weight of variable costs in plasma



Plasma cost structure



Impact of fixed labor is limited in total labor cost

## Added value to donor center network: Speciality Plasma programs



- Grifols Donor Center network is capable of supporting various “Speciality Plasma programs”
  - Anti-HBs plasma
  - Anti-Tetanus plasma
  - Anti-D plasma
  - Disease state plasma (for diagnostic use)
  - Special Red-Cells program
  
- Unique capabilities in supporting various Clinical or Epidemiological Studies
  - Clinical study capability in some donor centers
  - Unlimited access to healthy volunteers with any demography
  - Established sample logistics and centralized testing laboratories

# Grifols Plasma testing and logistics



Donation

Testing

Inventory

Production

1. Donations are held at the donor center while plasma samples are sent for testing
2. Test results are reported to the center through the computerized Donor Management System (DMS)
3. Donations meeting Grifols' donor screening and testing criteria are shipped to warehouse for inventory hold
4. Acceptable donations are released for production after the hold period

# Grifols Plasma Testing Laboratories



Austin Testing Laboratory, TX

- 25,000 SQF building
- 80 employees
- 3.5 million donations testing
- Serological, NAT and other routine/ancillary tests



San Marcos Testing Laboratory, TX

- 75,000 SQF building
- 16 employees
- Will be expanded to 8 million donations testing capacity
- Serological, NAT and other ancillary tests
- Pre-licensed status



Raleigh Testing Laboratory, NC

- 76,000 SQF multi-use building
- 108 employees
- 4 million donations testing
- NAT 5 markers



# Logistics is the key element of plasma operation



## COI Logistic Center, CA



- 164,000 SQF building
- 20,000 SQF plasma freezer with 2,000 pallet positions
- Inventory hold and plasma clearing functions
- Support LA fractionation & shipments to Barcelona (120 x 40 ft. containers/year)

## Benson/Clayton Logistic Center, NC



- 38,000 + 18,000 SQF buildings
- 31,000 + 6,400 SQF plasma freezer with total 3,500 pallets positions
- Inventory hold and plasma clearing functions
- Support Clayton fractionation

## Summary



- Grifols now owns and operates the world largest plasma collection network with 147 donor centers
- New Grifols Plasma Management Group will provide all donor centers with robust supporting functions, resources and appropriate guidance/oversights
- Grifols Plasma has a sufficient plasma collection capacity to support the company's Plasma demands for coming years without increasing number of centers
- Grifols Plasma has a significant flexibility in adjusting and matching its plasma collection to the demand of plasma therapies.
- Grifols Plasma will further invest into its plasma logistic infrastructure to improve its quality as well as operational efficiency
- Grifols will further enhance its medical coverage and activities to support the health and well-being of plasma donors
- Grifols Plasma will continue investing into its employees through Grifols Academy educational program



Collection of High Quality Source Plasma has been and will be the highest priority of Grifols for its sustainable growth and contribution to the global patient communities



**GRIFOLS**

**Capex**

*Mary Kuhn*

*- President Manufacturing Operations Grifols Inc. -*

# Capital expenditure plan 2011 - 2015



Values in Million €

	2011	2012	2013	2014	2015	2011-2015
North Fractionation Facility (NFF)	188	71	36	11		306
NFF/Albumin Expansion	2	10	20	4	0	36
Plasmin Purification facility	0	0	20	30	10	60
Other Purification Expansion	24	20	7	15	20	86
Maintenance	9	11	11	9	9	49
<b>Clayton - North Carolina</b>	<b>223</b>	<b>112</b>	<b>94</b>	<b>69</b>	<b>39</b>	<b>537</b>
Other Purification Expansion	5	4	7	3	0	19
IVIG completion in Facility B330		4			0	4
Maintenance	1	3	8	7	6	25
<b>Los Angeles - California</b>	<b>6</b>	<b>11</b>	<b>15</b>	<b>10</b>	<b>6</b>	<b>48</b>
<b>New Fractionation San Marcos - Texas</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>15</b>
New Fractionation Facility 1M.Litres	2	17	3			21
Other Purification Expansion	3	3	0	0	0	7
Maintenance	4	12	7	17	19	58
<b>Barcelona - Spain</b>	<b>9</b>	<b>31</b>	<b>10</b>	<b>17</b>	<b>19</b>	<b>85</b>
<b>Total Grifols Bioscience Facilities</b>	<b>238</b>	<b>154</b>	<b>118</b>	<b>96</b>	<b>79</b>	<b>686</b>

(1)

(2)

(3)

(1) Planned approval 2015

(2) Planned approval 2019

(3) Planned approval 2014

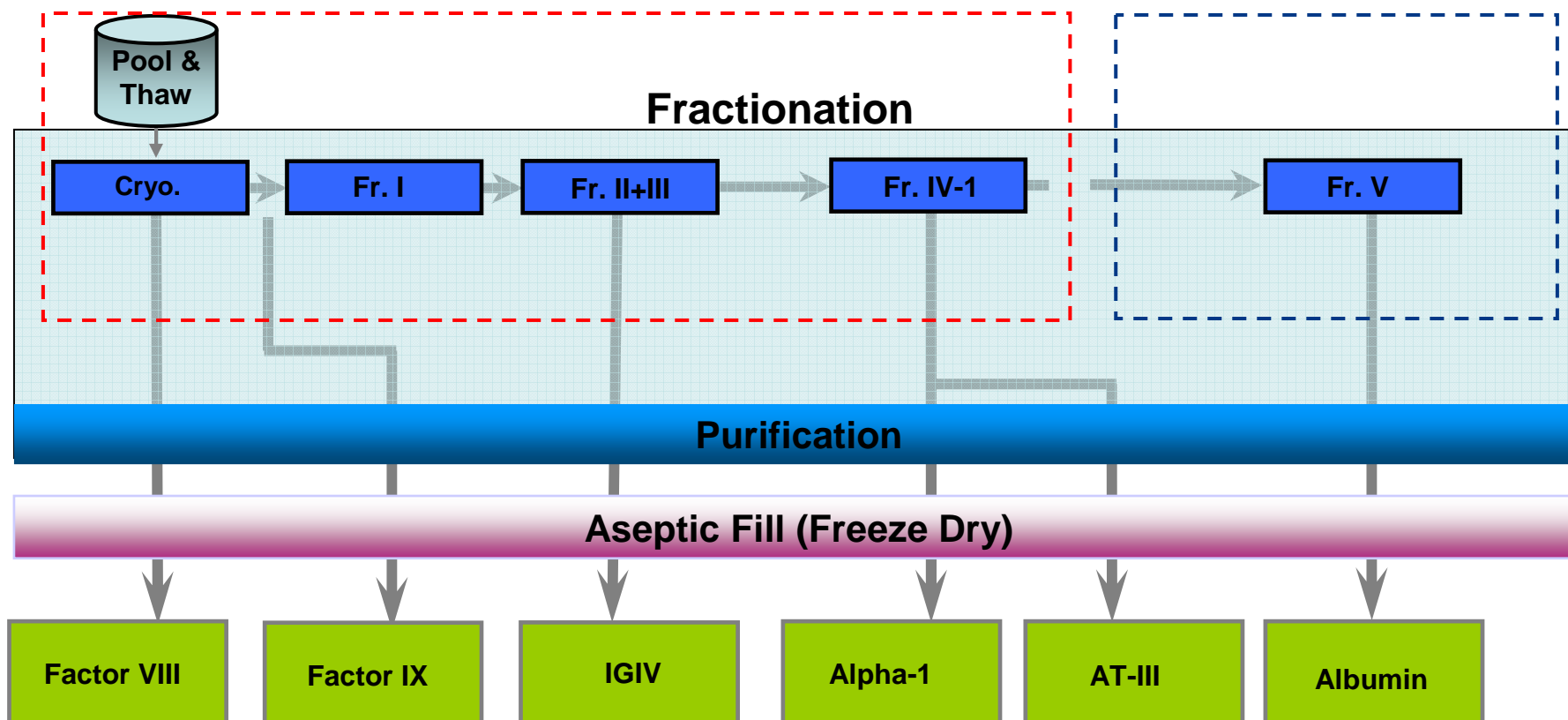
# Capital expenditure plan 2011-2015 - II



	2011	2012	2013	2014	2015	2011-2015
<b>Total Grifols Bioscience Facilities</b>	<b>238</b>	<b>154</b>	<b>118</b>	<b>96</b>	<b>79</b>	<b>686</b>
<b>Plasma</b>						
Expansion and Relocation donor centers	9	15	11	11	27	73
Testing Lab	4	8	6	9	1	27
Maintenance - Logistics	6	6	4	4	3	23
<b>Total Grifols Plasma</b>	<b>20</b>	<b>29</b>	<b>20</b>	<b>24</b>	<b>30</b>	<b>123</b>
<b>Hospital &amp; Diagnostic</b>						
<b>Grifols Hospital &amp; Diagnostic</b>	<b>21</b>	<b>10</b>	<b>12</b>	<b>5</b>	<b>5</b>	<b>53</b>
<b>Corporate</b>						
<b>Grifols Corporate</b>	<b>16</b>	<b>31</b>	<b>10</b>	<b>16</b>	<b>10</b>	<b>84</b>
<b>Commercial</b>						
<b>Commercial</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>18</b>
<b>Total Capex</b>	<b>296</b>	<b>227</b>	<b>165</b>	<b>144</b>	<b>132</b>	<b>964</b>



# Manufacturing process overview



## Balanced capacity for all fractions



- Fractionation - under construction
- FVIII, albumin – existing capacity
- Alpha-1, ATIII - new facilities (Clayton)
- IVIG – new facility (L.A.)



*IVIG: mechanically complete in 2011*



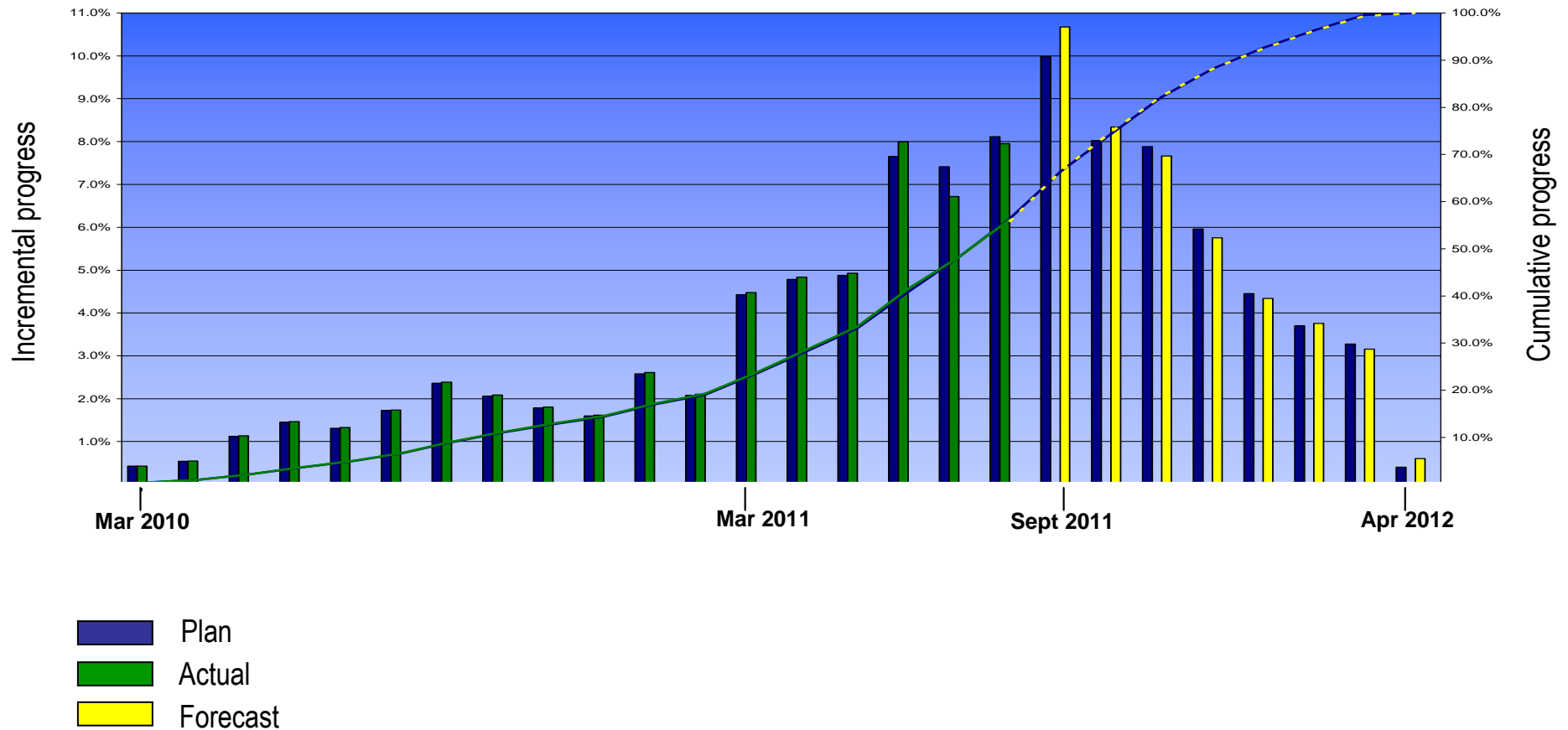
*Prolastin-C: licensed 2009*



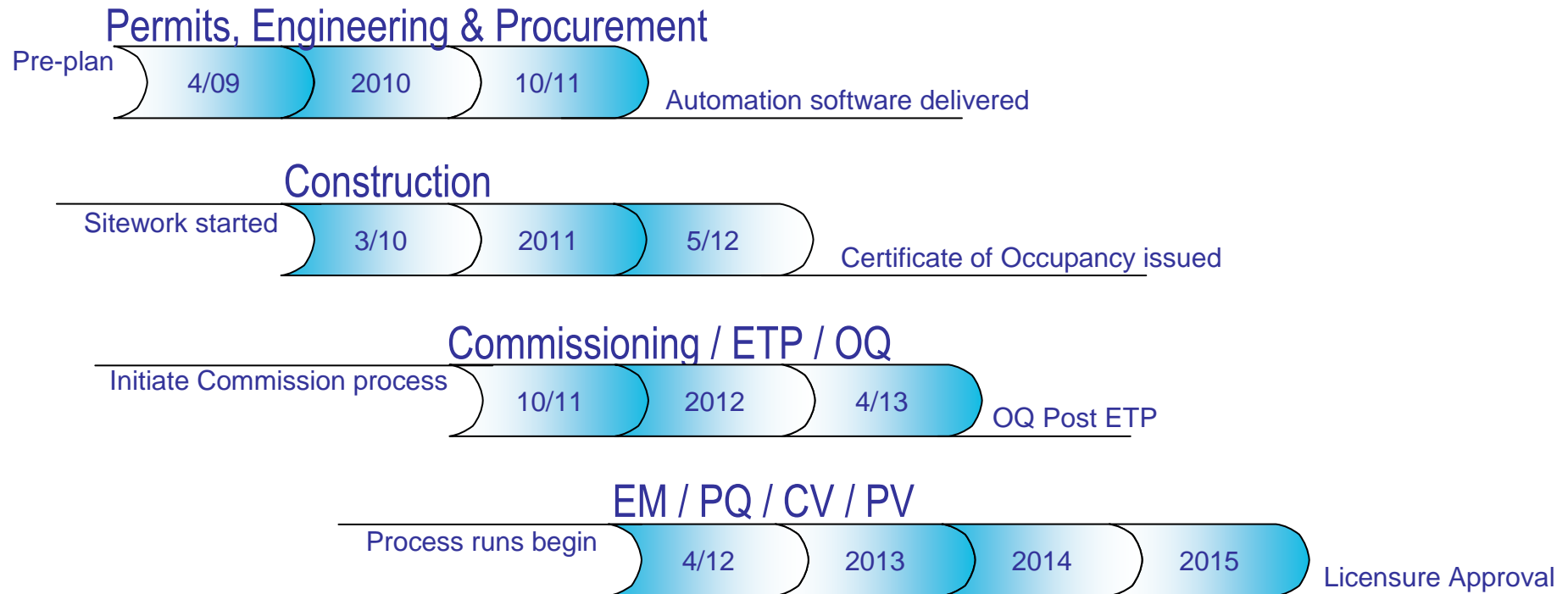
*AT-III: filed 2011*



# North Fractionation Facility monthly progress curve



# North Fractionation Facility master schedule



# North Fractionation Facility objectives



- Fractionation capacity increases to 6mm liters
- Same process with updated technology
- Closed processing and minimal operator intervention to optimize compliance
- Increased batch sizes; highly automated; minimal clean and cold room space to optimize operating costs
- More aggressive licensure schedule with modular construction and Westphalia BSH30 Pilot



# North Fractionation Facility (NFF)



✓ *On time*

✓ *On budget*



 *Super Skid Shop*

 *New NFF*

*Supported by local & state Government*



## North Fractionation Facility to Date



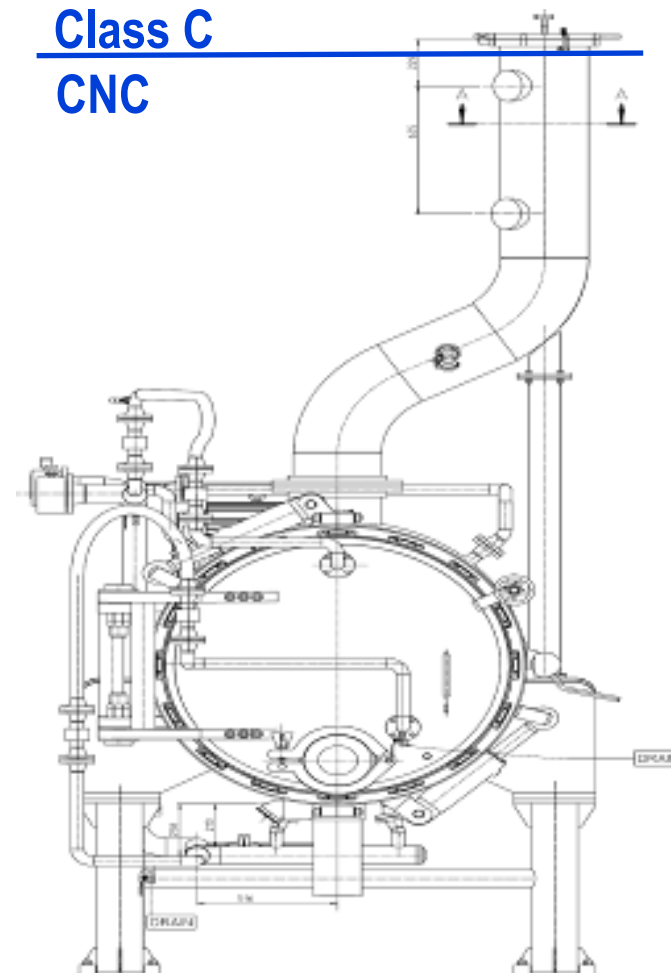
- 150,000 sq ft facility
- Only 12% clean room space
- Infrastructure nearly 100% complete
- Construction 62% complete
- 2,347 tons of structural steel



## Thawing: same process, new technology



- Enhanced heat transfer accelerates thawing optimizing yield
- Fully steam sanitizable
- Located completely in clean “non-classified” space
- More efficient pooling



# Protein separation: same process, new technology



*The old Sharples*



*The new Westphalia BSH30*

- Closed processing
- Minimal equipment in clean room space
- Enhanced temperature control
- Maximized solid and effluent recovery
- Steam sanitizable

## What is a “skid” ?



- Skid includes piping, electrical, equipment and instrumentation for unit process



- Detailed view of alcohol initiation valves on top of precipitation tank skid



## “Super skid” shop



- Build completely out of place in “clean” environment
- Simultaneous construction of building and equipment
- Enhanced quality and efficiency of assembly
- Equipment testing prior to final installation



# One super skid transfers to North Fractionation Facility



Eighteen super skids are being constructed in the “shop” on site and then transferred to the NFF building

## Precipitation unit



- *Weighs 800,000 pounds*
- *120,000 man hours to fabricate*
- *1,694 valves*
- *9,400 welds*





# Super skid installed in North Fractionation Facility

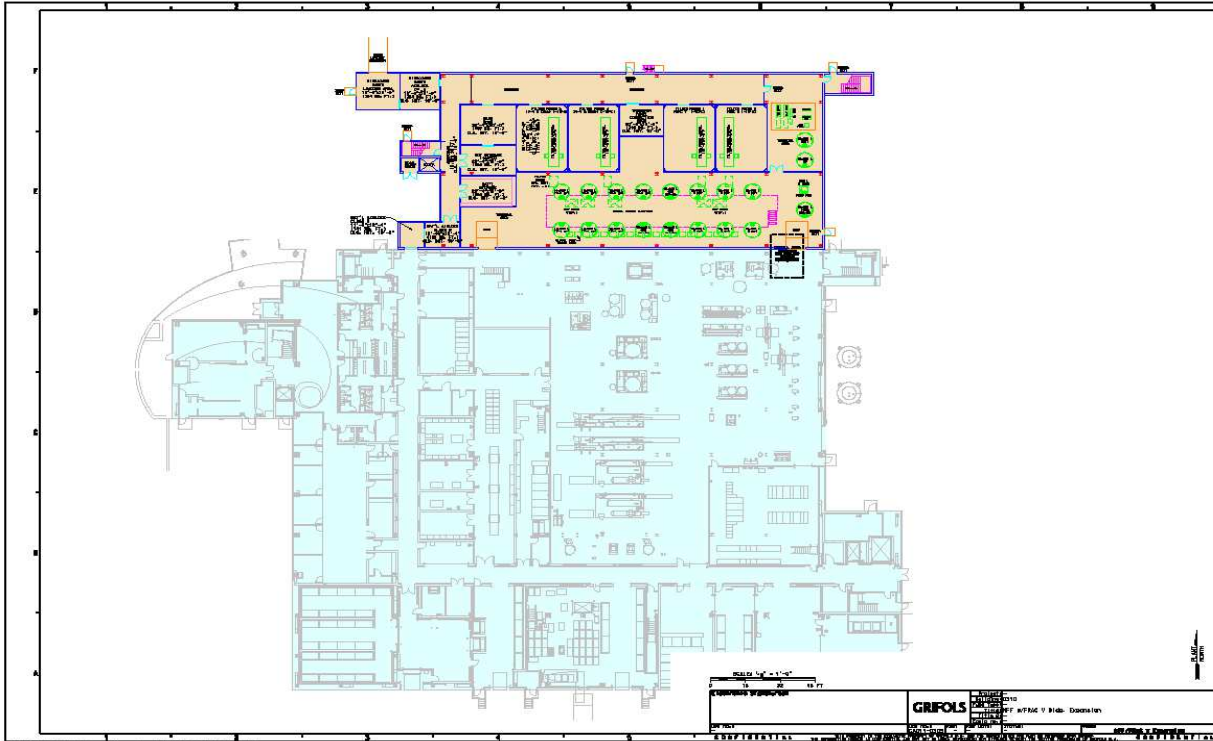


# North Fractionation Facility Project – exterior piping



Project includes infrastructure/ piping for NFF as well as future North property expansions

# Expanded scope includes capacity for Fraction V



...WFF-FRAC V Expansion.dgn 9/28/2011 3:09:32 PM

Utilization of Grifols Engineering and technology allows acceleration of plan for Fraction V capacity

## Summary manufacturing operations / CAPEX



- Capital investment plan balances capacity
- North Fractionation Facility project is progressing as scheduled and within budget
- Capital investments increase capacity, efficiency and reliability of future manufacturing operations



**GRIFOLS**

# Financials

*Alfredo Arroyo*

*- CFO Grifols, S.A. -*



# Key Magnitudes LTM June 2011



<b>Net Revenues (€ million)</b>	2,268
<b>Adj. EBITDA (€ million)</b>	593
<b>Adj. Net Income (€ million)</b>	295
<b>Operating Cash Flow (€ million)</b>	280
<b>Market Cap (Shares A+B)</b>	3,807 <sup>(1)</sup>
<b># Patents</b>	673 <sup>(2)</sup>
<b># Licenses</b>	624

<b>Headcount</b>	11,174
<b>Countries with Market Distribution</b>	100
<b>Countries with direct Subsidiaries</b>	24
<b>Fractionation capacity in liters (million)</b>	8.5
<b>Plasma Collection Centers (USA)</b>	147
<b>Collections in-house liters (million)</b>	5.6

(1) Stock price at Oct. 11<sup>th</sup>, 2011

(2) Excluding Talecris

## Sales by Division YTD June 2011



	TOTAL CONSOLIDATED (Proforma)			
	Actual 2010	Actual 2011	% growth	% growth at constant rate
(Million €)				
<b>Bioscience<sup>(*)</sup></b>	<b>949.3</b>	<b>1,013.4</b>	6.8%	7.6%
<b>Hospital</b>	<b>45.1</b>	<b>49.3</b>	9.2%	8.8%
<b>Diagnostic</b>	<b>54.4</b>	<b>56.8</b>	4.4%	3.8%
<b>Others<sup>(*)</sup></b>	<b>12.8</b>	<b>14.2</b>	10.5%	10.6%
<b>Subtotal</b>	<b>1,061.7</b>	<b>1,133.7</b>	6.8%	7.5%
<b>Raw Materials<sup>(*)</sup></b>	<b>1.8</b>	<b>5.2</b>	184.9%	214.6%
<b>TOTAL</b>	<b>1,063.5</b>	<b>1,139.0</b>	<b>7.1%</b>	<b>7.9%</b>

(\*) - Maquila Kedrion reclassified from Bioscience Division to Raw Materials.

- Royalties & Others moved from Bioscience Division to Others Division.

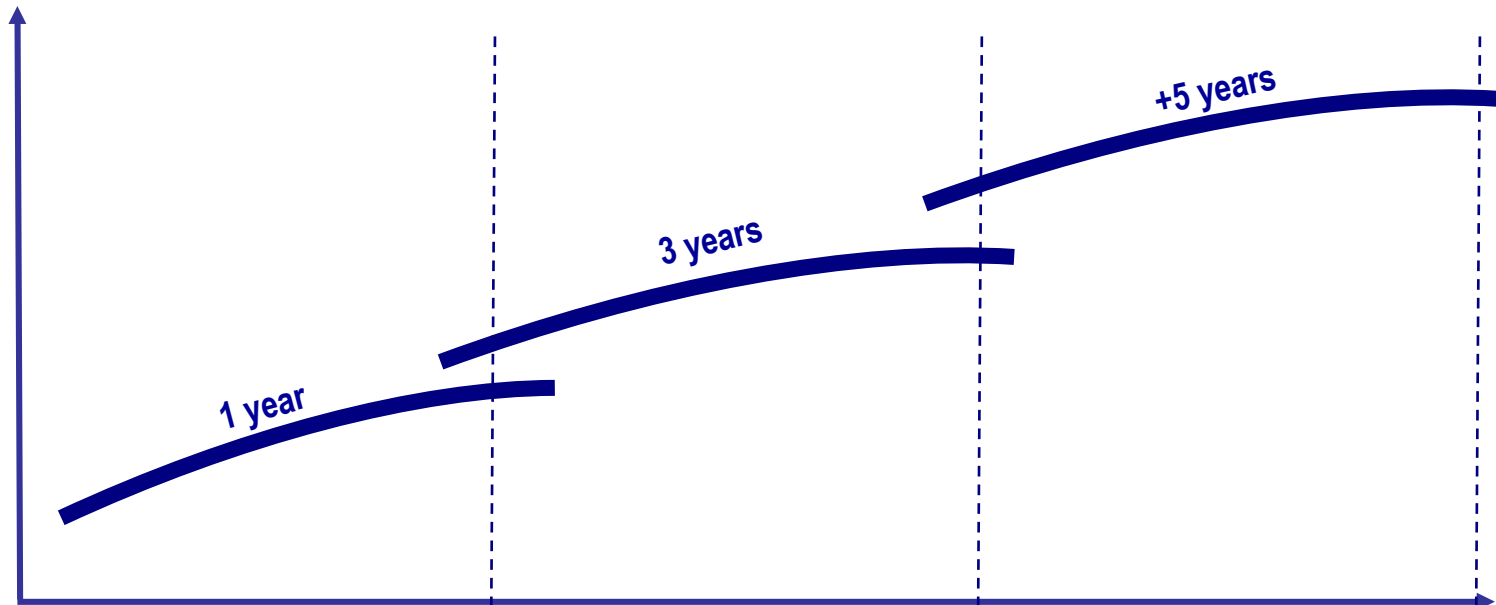
## Sales by Region YTD June 2011



	TOTAL CONSOLIDATED (Proforma)					
	Actual 2010	%	Actual 2011	%	% growth	% growth at constant rate
(Million €)						
<b>USA + CANADA</b>	<b>622.3</b>	<b>58%</b>	<b>674.8</b>	<b>60%</b>	<b>8.4%</b>	<b>10.2%</b>
<b>EU</b>	<b>292.8</b>	<b>28%</b>	<b>308.1</b>	<b>27%</b>	<b>5.2%</b>	<b>4.8%</b>
<b>ROW</b>	<b>146.6</b>	<b>14%</b>	<b>150.8</b>	<b>13%</b>	<b>2.9%</b>	<b>1.5%</b>
<b>Subtotal</b>	<b>1,061.7</b>	<b>100%</b>	<b>1,133.7</b>	<b>100%</b>	<b>6.8%</b>	<b>7.5%</b>
<b>Raw Materials<sup>(*)</sup></b>	<b>1.8</b>	<b>0%</b>	<b>5.2</b>	<b>0%</b>	<b>184.9%</b>	<b>214.6%</b>
<b>TOTAL</b>	<b>1,063.5</b>	<b>100%</b>	<b>1,139.0</b>	<b>100%</b>	<b>7.1%</b>	<b>7.9%</b>

<sup>(\*)</sup> - Maquila Kedrion reclassified from Bioscience Division to Raw Materials Division.

# The growth drivers prospects



- Revenue  
- EBITDA  
- Cash Flow

} Growth drivers

- Acquisition benefits
- $\Delta$  Market share in existing markets
- Interest rates optimization

- Geographical expansion
- Pricing management
- New licenses
- Economies of scale
- Lower leverage, low interest

- Manufacturing capacity expansion
- Alliances / Partnerships
- New indications
- New businesses
- New products

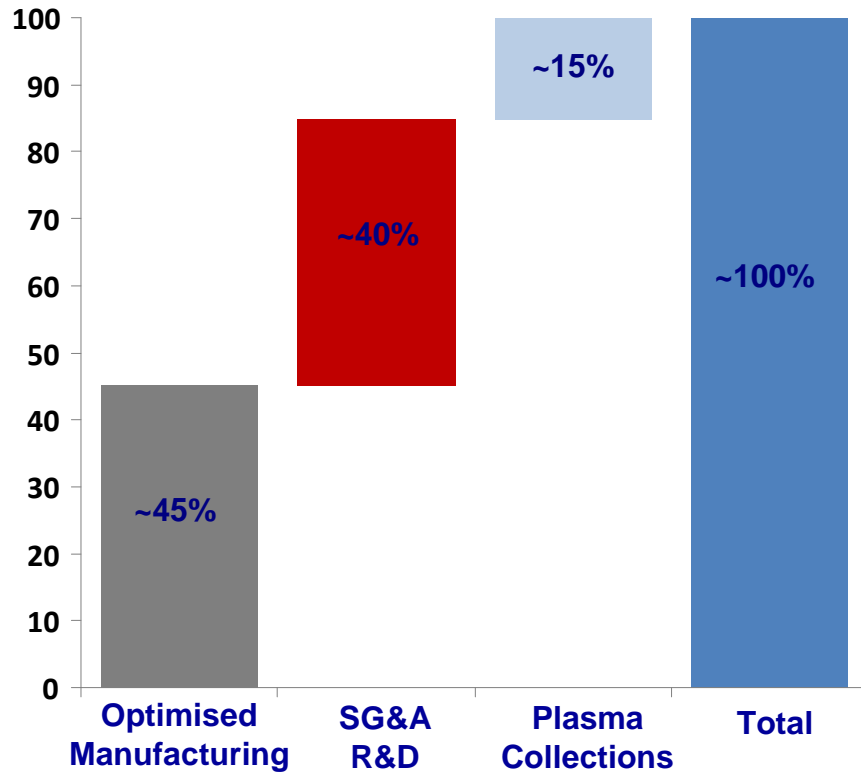


# Confirmed operational synergy



**% of total cost synergies**

~ \$230 p.a.



**Annual synergies of \$230m beyond 2015**

<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
~ 40%	~ 60%	~ 80%	~ 100%



Estimated phase out synergies achievements

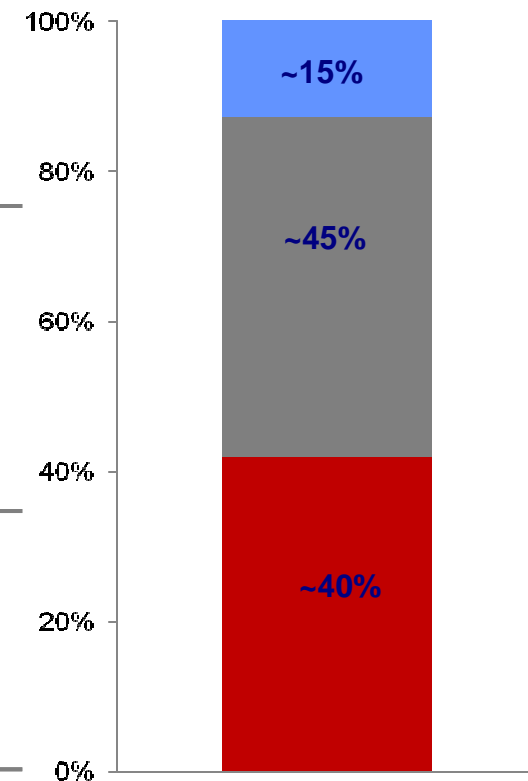
# Operational synergies description



~ \$230m cost synergies p.a.

% of total cost synergies

<b>Plasma collection</b>	<ul style="list-style-type: none"> <li>• Create more efficient plasma collection network</li> <li>• Economies of scale</li> <li>• Testing costs savings</li> </ul>
<b>Optimized manufacturing</b>	<ul style="list-style-type: none"> <li>• Fraction II+III paste approved, transferred and produced</li> <li>• Cross licensing of products and facilities for all manufacturing sites</li> <li>• Utilize processes with highest production yield</li> <li>• Improving plasma economics, revenue per liter</li> </ul>
<b>SG&amp;A / R&amp;D</b>	<ul style="list-style-type: none"> <li>• Optimize corporate functions</li> <li>• Streamline sales &amp; marketing structure</li> <li>• Integrate IT and networks</li> <li>• R&amp;D projects optimization</li> </ul>



➔ No revenue synergies are considered

## Significant cash synergies



### Capex synergies

~ \$280m until 2015 without impacting the company fractionation capacity growth

### Working Capital synergies

~ \$50-100m inventory optimization, up to 2015  
- DSO will improve as a result of the new regional share

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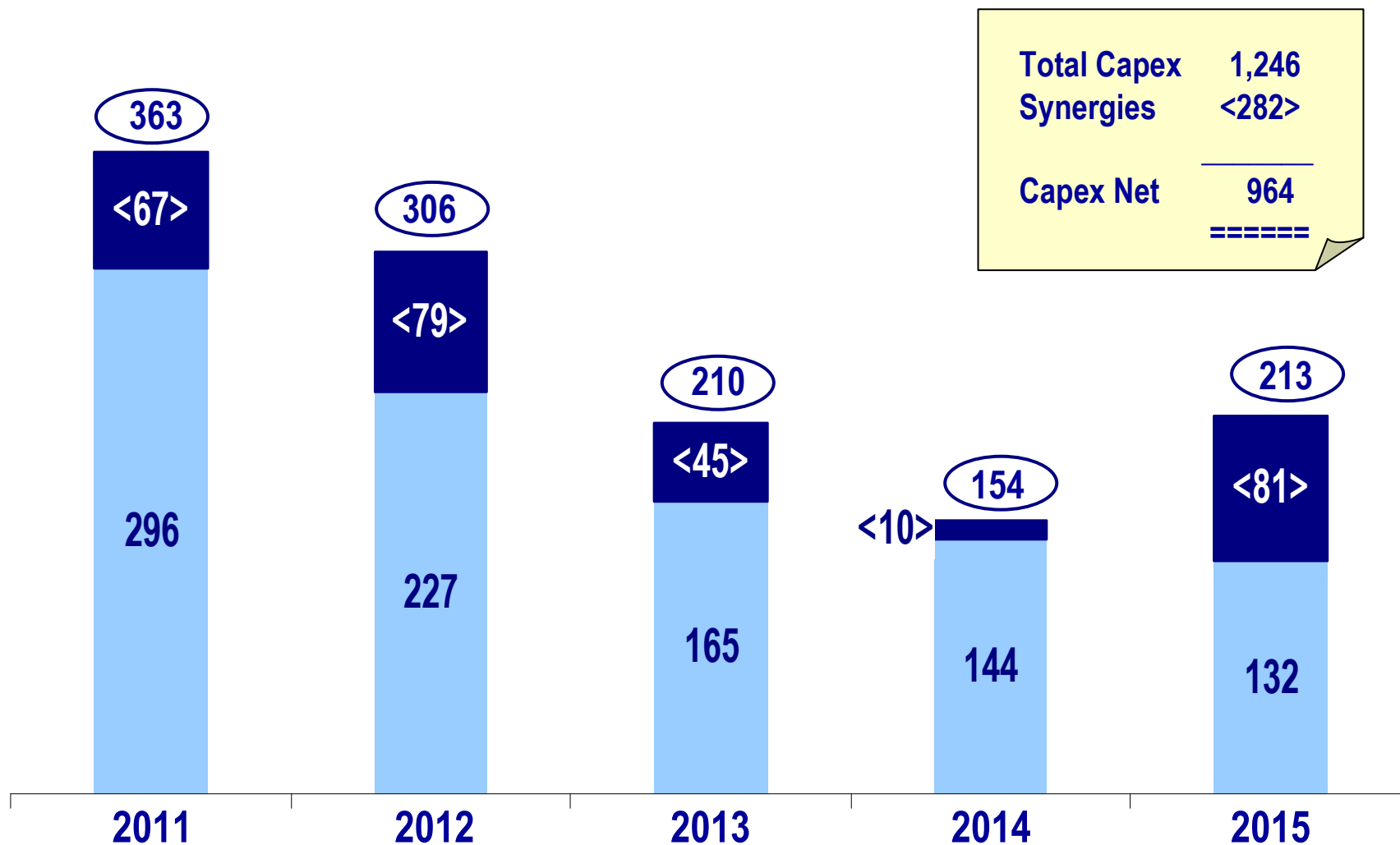
### Integration costs

~ \$70m up to 2014, lower than the initial estimate

# CAPEX Plan / Synergies 2011 - 2015



Figures in \$ million

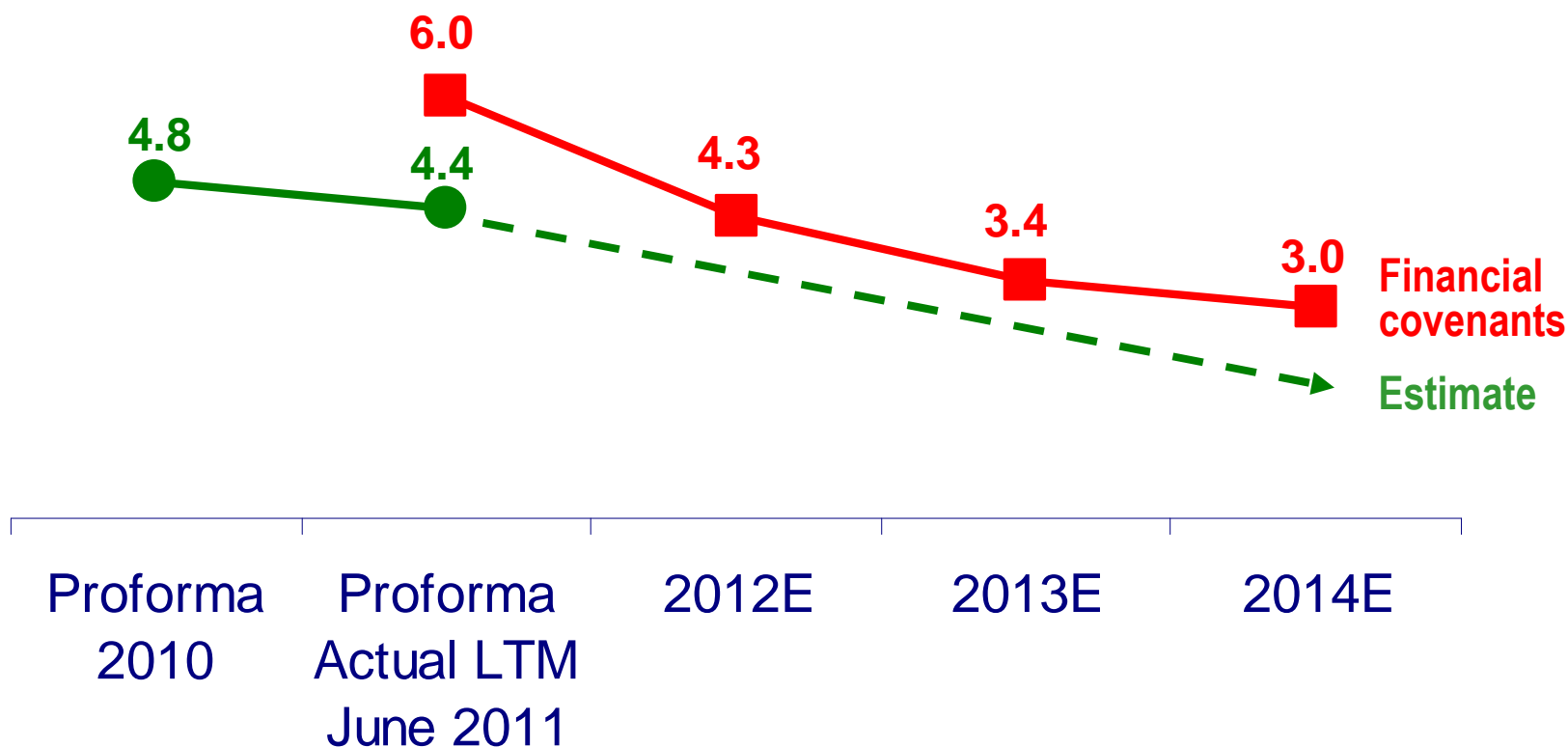




# Quick deleverage path aligned with projections used for financing



## Leverage ratio: Net Debt / Adj. EBITDA



# Financing acquisition package to pay Talecris cash consideration and refinance existing Grifols and Talecris debt



<u>Source</u>	<u>Amount (\$bn)</u>	
<b>Loans</b>	<b>\$3.4</b>	<ul style="list-style-type: none"> <li>• \$3.4bn senior secured facilities structured with a combination of:                             <ul style="list-style-type: none"> <li>– \$300m Revolving Credit Facility tranching as \$250m / \$50m euro equivalent, 5 year, L + 375 bps <sup>(1)</sup></li> <li>– \$1.5bn Term Loan A tranching as \$1.2bn / \$300m euro equivalent, amortising, 5 year, L + 375 bps <sup>(1)</sup></li> <li>– \$1.6bn Term Loan B tranching as \$1.3bn / \$300m euro equivalent, bullet, 6 year, L + 425 bps <sup>(1)</sup></li> </ul> </li> </ul>
<b>High yield</b>	<b>\$1.1</b>	<ul style="list-style-type: none"> <li>• The \$1.1bn high yield issuance priced in January 2011                             <ul style="list-style-type: none"> <li>– Marketed at 8.25%</li> </ul> </li> </ul>
<b><u>Total</u></b>	<b><u>\$4.5</u></b>	

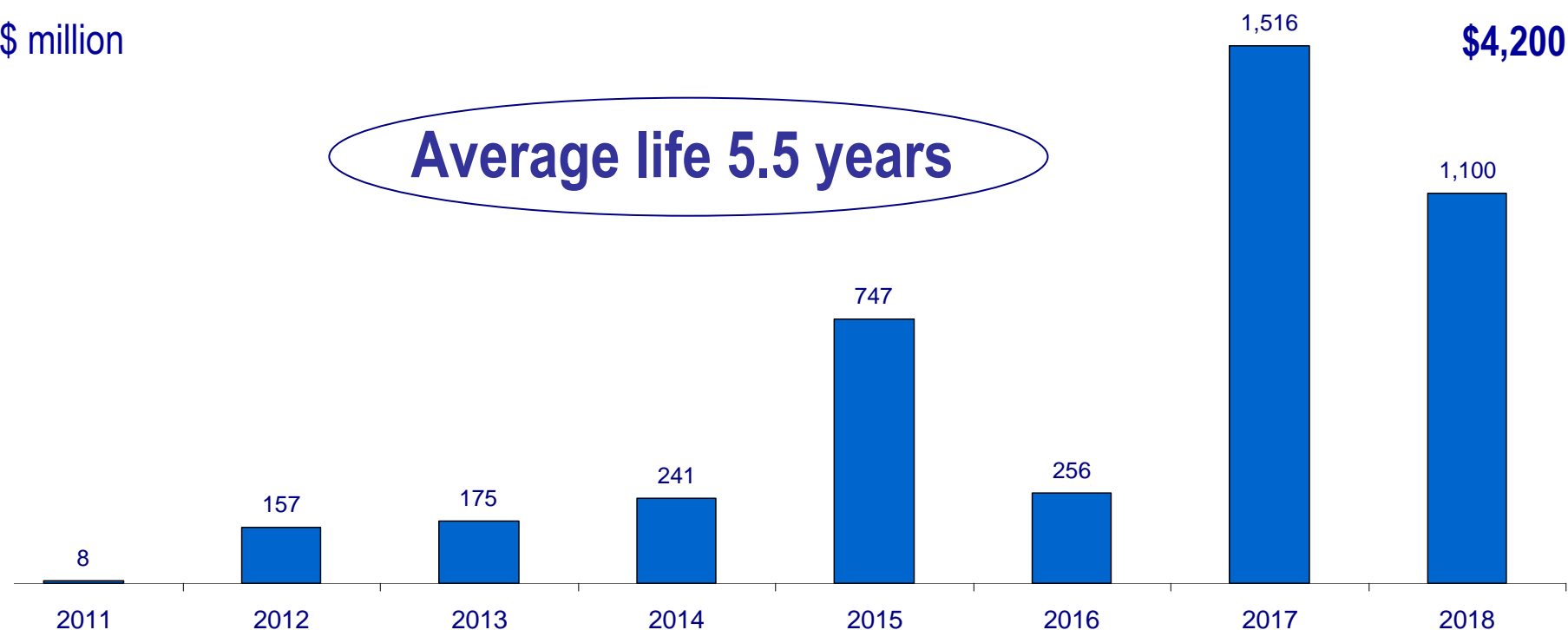
1. Pricing on the Euro tranches is 25 bps wider than the dollar tranches

## Debt Maturity Profile and available Cash



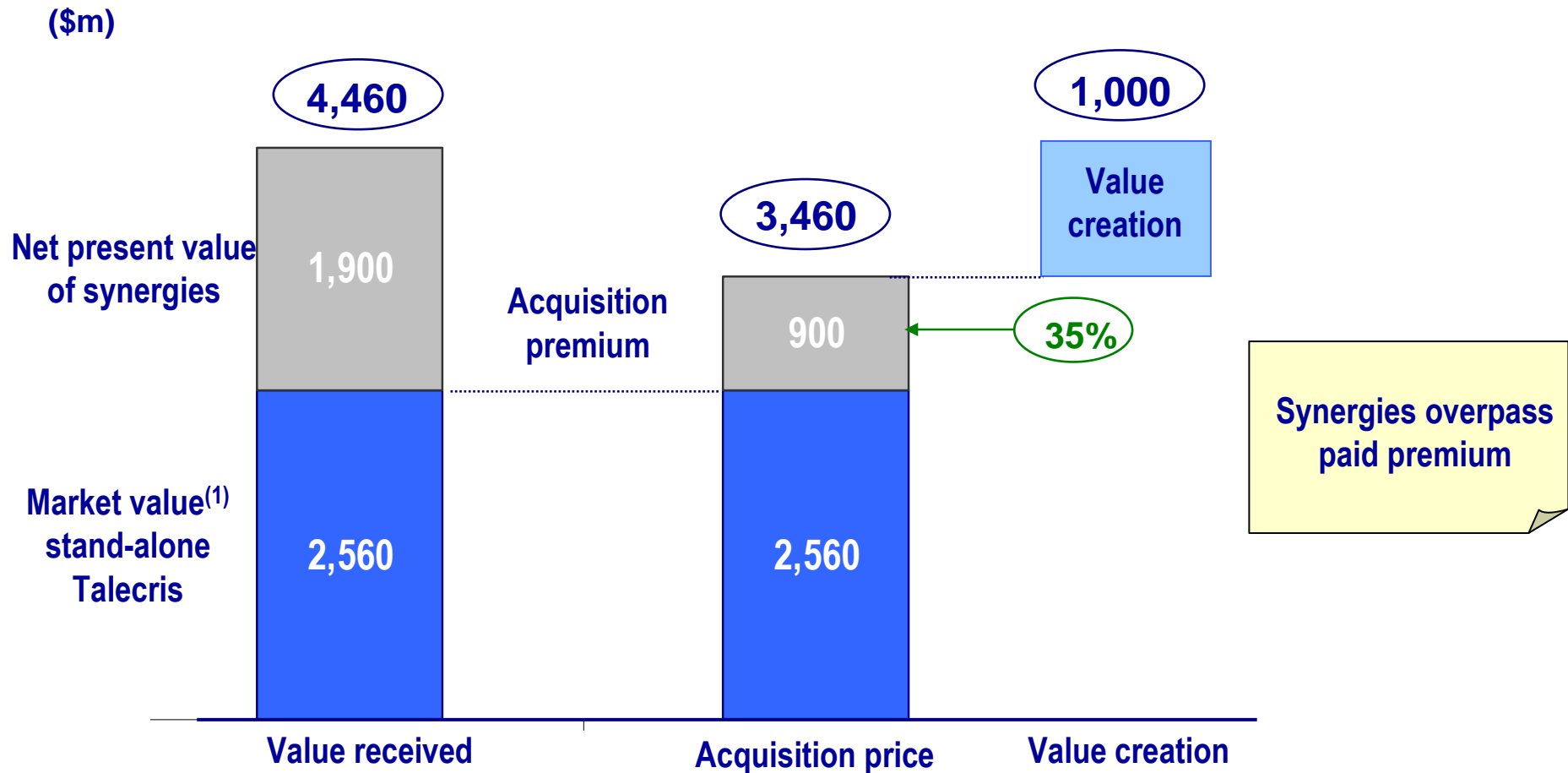
→ Limited near term maturities, approx. 85% of debt matures from 2015 and beyond

\$ million



→ Significant available liquidity via the undrawn revolver (\$300 million), bilateral facilities and retained cash on balance sheet

# Value creation opportunity

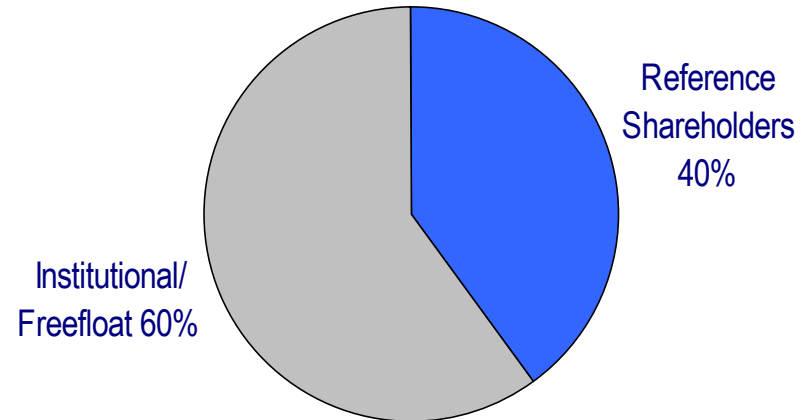


<sup>(1)</sup> Talecris average stock price, 3 months previous to the announcement

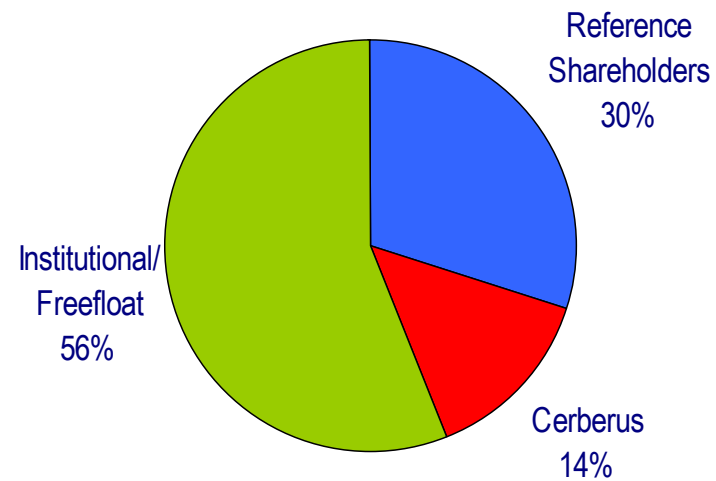
# Grifols shareholding structure at closing



## Voting structure



## Economic structure



## Shares B (non-voting shares) characteristics



**Shares B  
+  
voting rights**

**Shares A**

### Key non-voting share characteristics

Do not carry any voting rights

Entitled to the same dividend and other economic rights attributable to the Grifols voting shares<sup>(1)</sup>

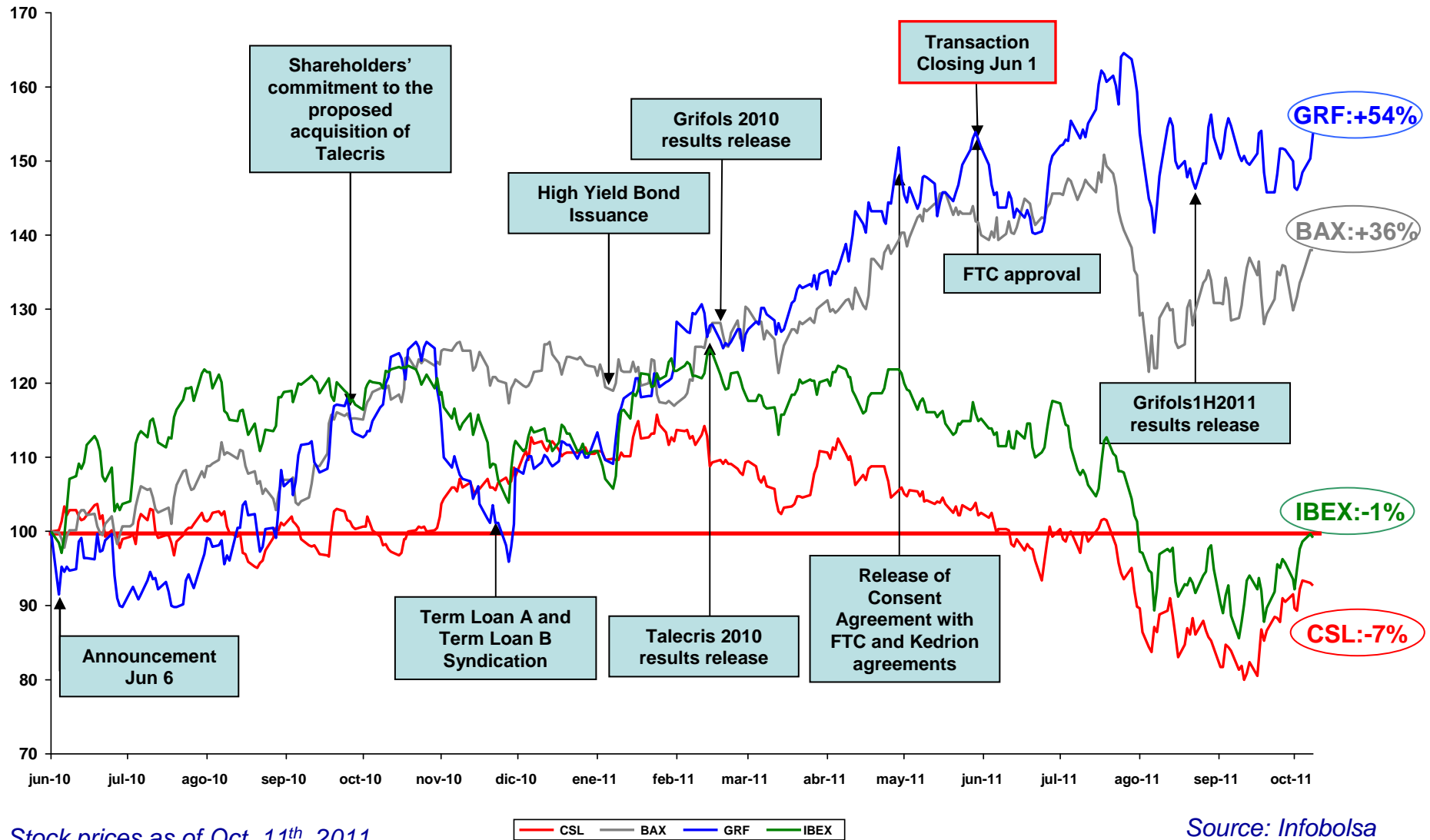
Redemption rights in the same terms as Grifols' voting shares

Listed on NASDAQ as ADR and Mercado Continuo (Spanish stock exchange)

Preferential liquidation order vs. Grifols voting shares

*1. In addition, holders of non-voting shares shall also be entitled to a minimum annual dividend of €0.01 per share*

# Positive Grifols share price reaction





- Strong growth drivers prospects that ensure financial outperformance
- Confirmed operational synergies, potential for additional ones
- Significant cash synergies are expected
- Quick deleverage path as result of strong cash generation
- Financing package with long term amortization schedule
- Shares B with same economic rights as Shares A
- Significant synergies as a source of value creation opportunity



A close-up photograph of a thick, blue, braided rope against a background of a bright, cloudy sky. The rope is the central focus, with its intricate braiding pattern clearly visible. The lighting is soft, highlighting the texture of the rope. The overall mood is clean and professional.

*Combining expertise*

**GRIFOLS**

a new era begins

## Tuesday, October 18th, 2011: Parets del Valles



- Global Commercial Area
  - Bioscience *(Ramón Riera)* 09:00
  - Sales & Marketing N.A. *(Greg Rich)* 09:45
  - Hospital and Diagnostic *(Ramón Riera)* 10:30
- Coffee break 10:45
- R & D Review *(Juan Ignacio Jorquera)* 11:15
- Coffee Break 12:00
- Site visit 12:30
- Wrap-up *(Victor Grifols)* 13:30
- Lunch 14:00
- Transfer to Airport / Barcelona

**GRIFOLS**

Global Commercial Area

Bioscience

*Ramón Riera*

- *President Global Commercial Division Grifols, S.A. –*

# Agenda

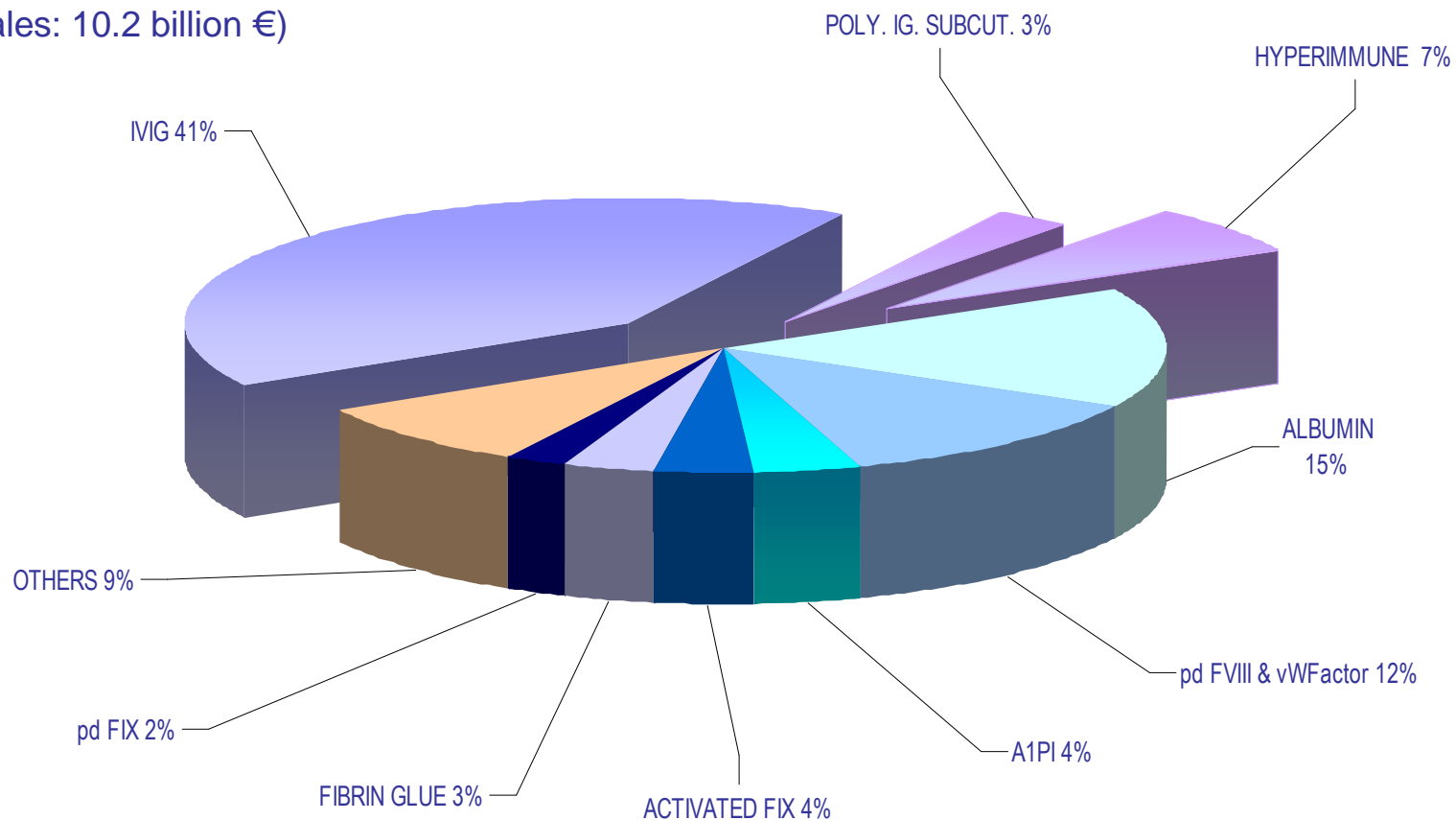


- **Worldwide Plasma Derivative markets (Product, Region, Company)**
- Market evolution and outlook
- Grifols global position
- Grifols global product growth strategies
- Key take aways

# The Global Plasma Derivatives 2010 by product (1)



(Total sales: 10.2 billion €)



**Immunoglobulins continue to be the main product for the plasma fractionation industry.  
Intravenous, intramuscular and subcutaneous Immunoglobulins represent 50% of total market**

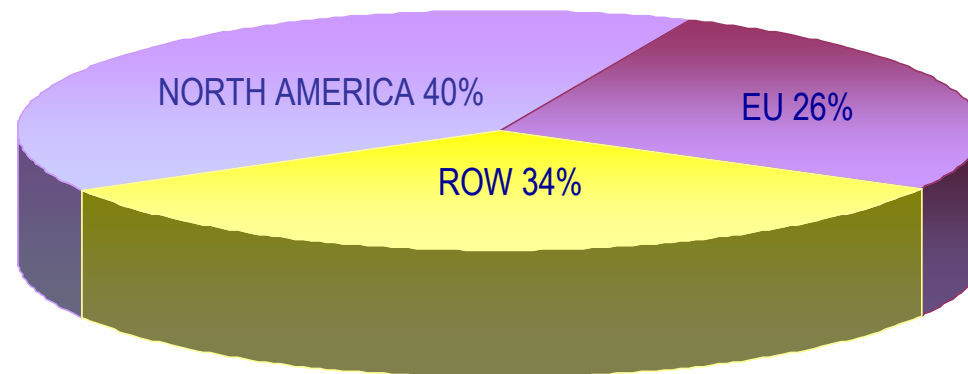
(1) Recombinants excluded

Source: MRB & company data

# The Global Plasma Derivatives 2010 by region (1)



(Total sales: 10.2 billion €)



**North America accounts for 40% of the global Plasma Derivatives market. The US is the most important single market and the worldwide reference for the industry**

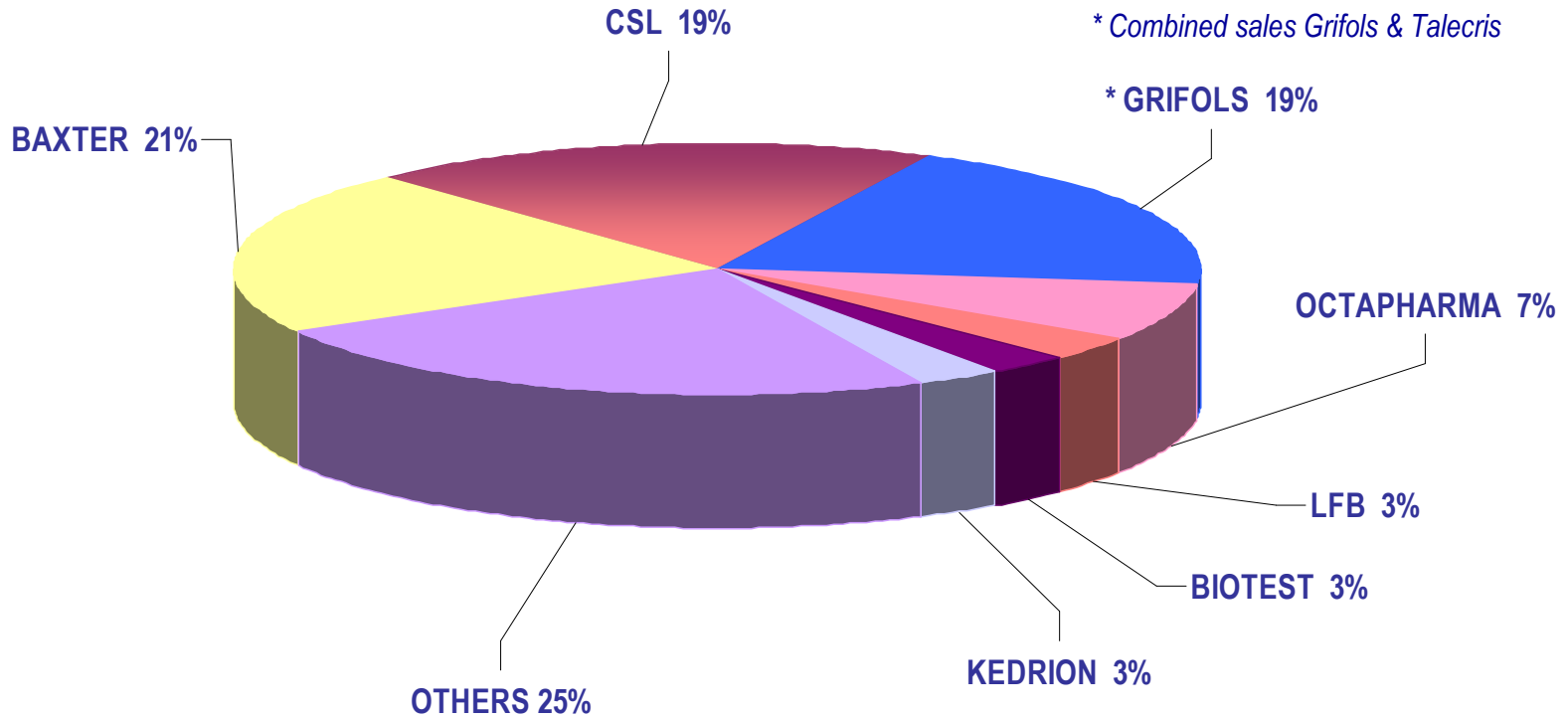
(1) Recombinants excluded

Source: MRB & company data

# 2010 market share by company (1)



(Total Sales: 10,2 billion €)



Three companies represent c.60% of the total market

(1) Recombinants excluded

Source: MRB & company data

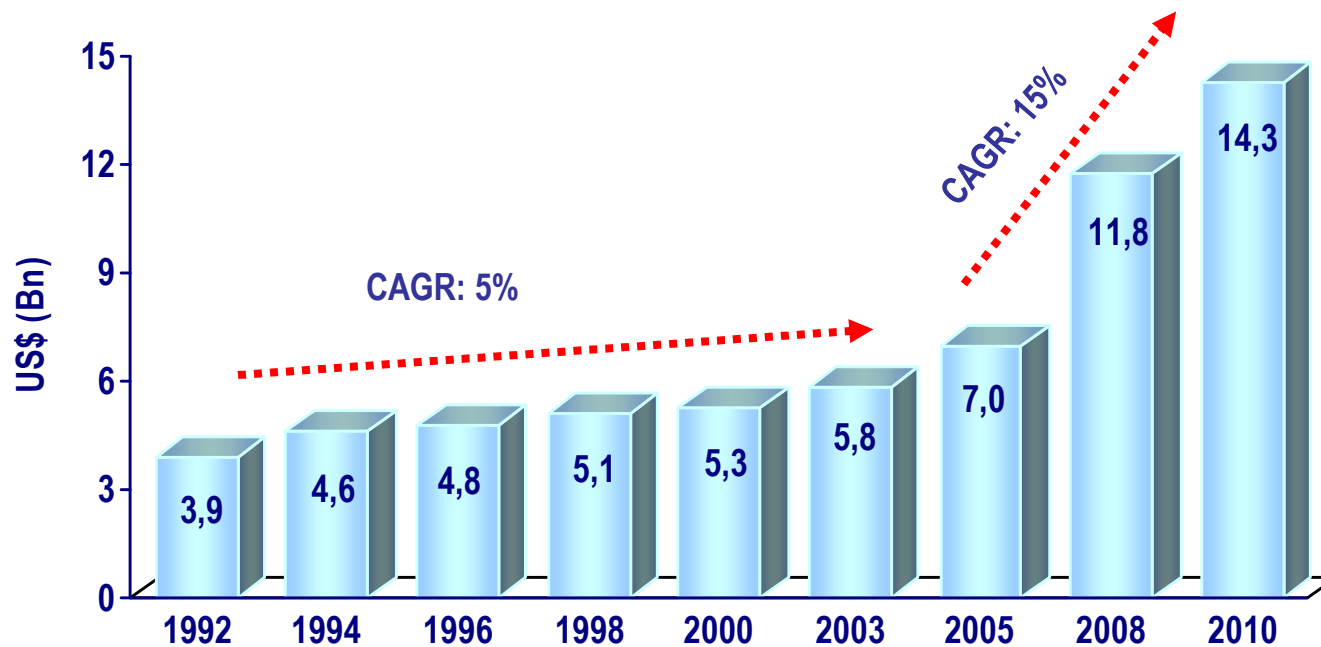
# Agenda



- Worldwide Plasma Derivative markets (Product, Region, Company)
- **Market evolution and outlook**
- Grifols global position
- Grifols global product growth strategies
- Key take aways



# The global market has been growing double digits the past years...



Based on our estimations the Plasma Derivatives market has grown at a sustained level during 2010 (between 6 and 7%) despite the worldwide challenging economic situation. The CAGR during the last 5 years has been of 15%.

Source: MRB & company data

....and is expected to continue to grow in the future



- The main demand growth drivers for the expected growth will be :
  - New indications for IVIG, Albumin, AT III
  - IVIG in Neurology
  - Development of the Alpha 1 market, specially in Europe
  - Increased use of Plasma proteins in developing markets
  - Plasma Derivatives are products covering under-treated diseases

# Agenda



- Worldwide Plasma Derivative markets (Product, Region, Company)
- Market evolution and outlook
- **Grifols global position**
- Grifols global product growth strategies
- Key take aways

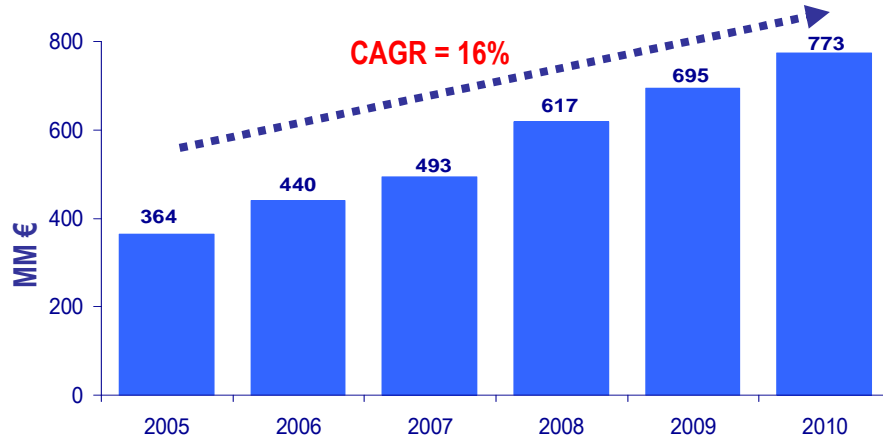


- Bioscience Division specializes in the research, development, production and marketing of high quality plasma derivatives
- Plasma derivatives are purified proteins with therapeutic properties that are obtained from fractionated human plasma. Grifols purifies these proteins from plasma donated by qualified donors
- From the plasma donation to the therapeutic use of the product, a comprehensive system ensures the highest quality process standards to provide the highest level of safety for patients

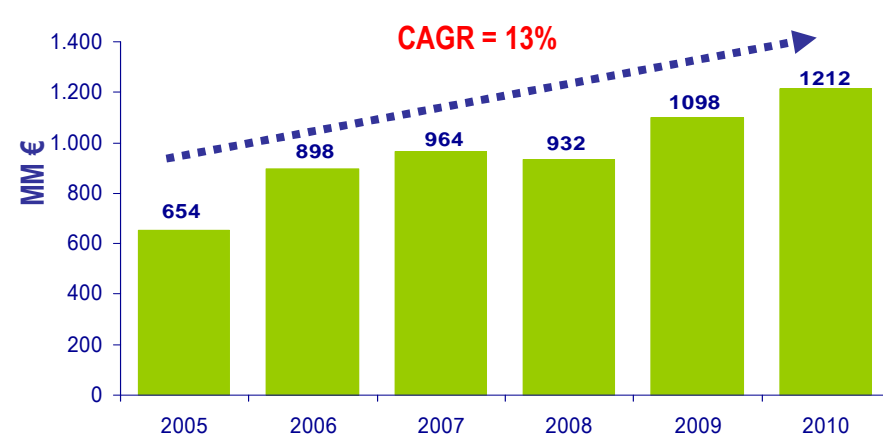
# Strong sustained growth during the last 5 years



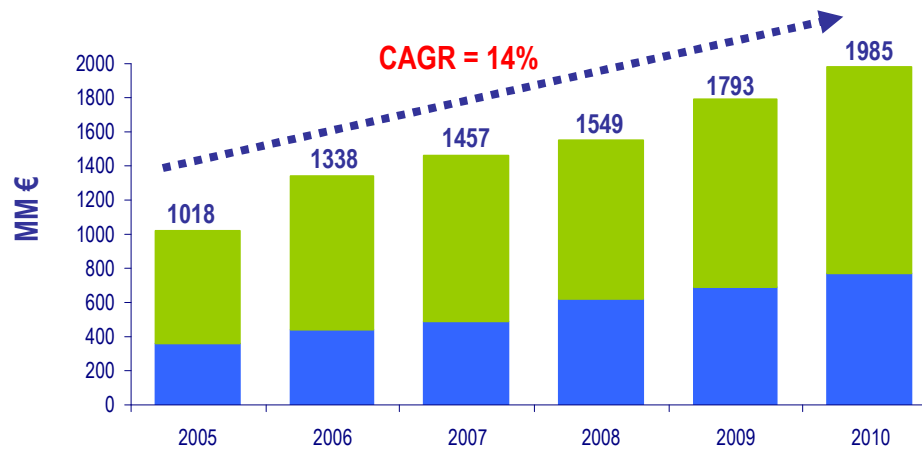
### Grifols Bioscience Sales



### Talecris Bioscience Sales



### Grifols + Talecris Bioscience Sales



Source: MRB & company data

# Bioscience has a broad product portfolio ...



Human Albumin Grifols® 5, 20 and 25%	Gamunex® / Gamunex-C®
Albutein® 5, 20 and 25%	HyperRHO® S/D
Plasbumin® 5 and 25%	Igamad® / Igantid® / Anti-D Grifols®
Plasmanate® 5%	HyperTET® S/D
Koate DVI®	Anti-T Grifols® / Igantet®
Alphanate®	HyperHEP B® S/D
AlphaNine®	Anti Hepatitis-B Grifols® / Igantibe®
Thrombate III®	Gamastan® S/D
Anbinex®	HyperRAB® S/D
Factor IX Grifols®	Niuliva®
Fanhdi®	Igamplia® / Human Immunoglobulin Grifols® 16%
Profilnine® SD	Prolastin® / Prolastin-C®
Flebogamma® 5%	Trypsone® / Trypsan®
Flebogamma® 5 and 10% DIF	

...and Grifols main products hold leading positions



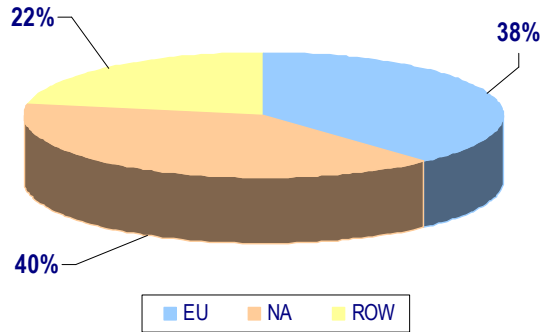
PRODUCT	MARKET SHARE	WW POSITION
IVIG	27%	N. 1
ALPHA 1	71%	N. 1
ALBUMIN	16%	N. 2
pd FACTOR VIII	16%	N. 3

Source: MRB & company data

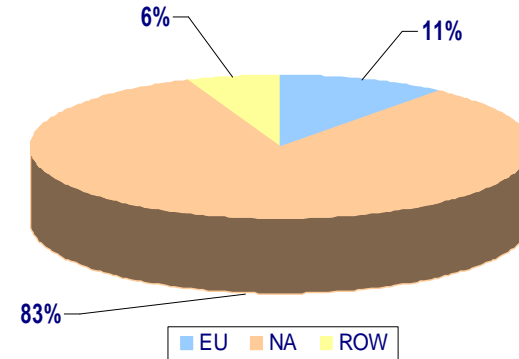
# Grifols maintains a strong position in the NA market and balanced in other regions



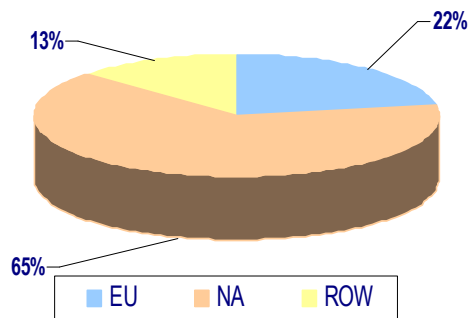
2010 Grifols sales by Region



2010 Talecris sales by Region



2010 Grifols + Talecris sales by Region

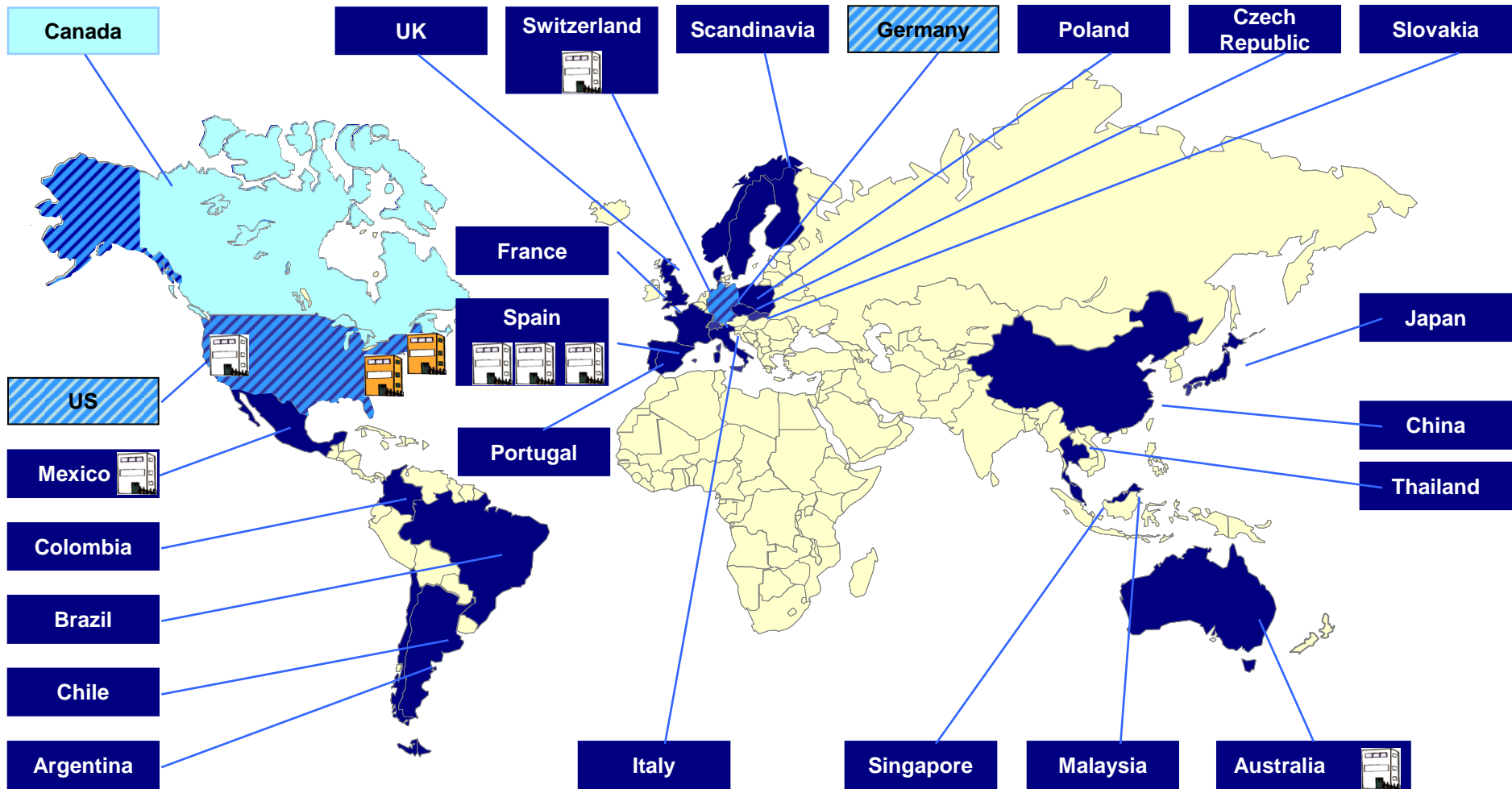


- In the new Company the NA sales accounts for two thirds of the total turnover in 2010
- This gives a new geographic diversification opportunity through the potential acceleration of sales growth in EU and ROW
- The combined products portfolio and the international infrastructure would support this opportunity

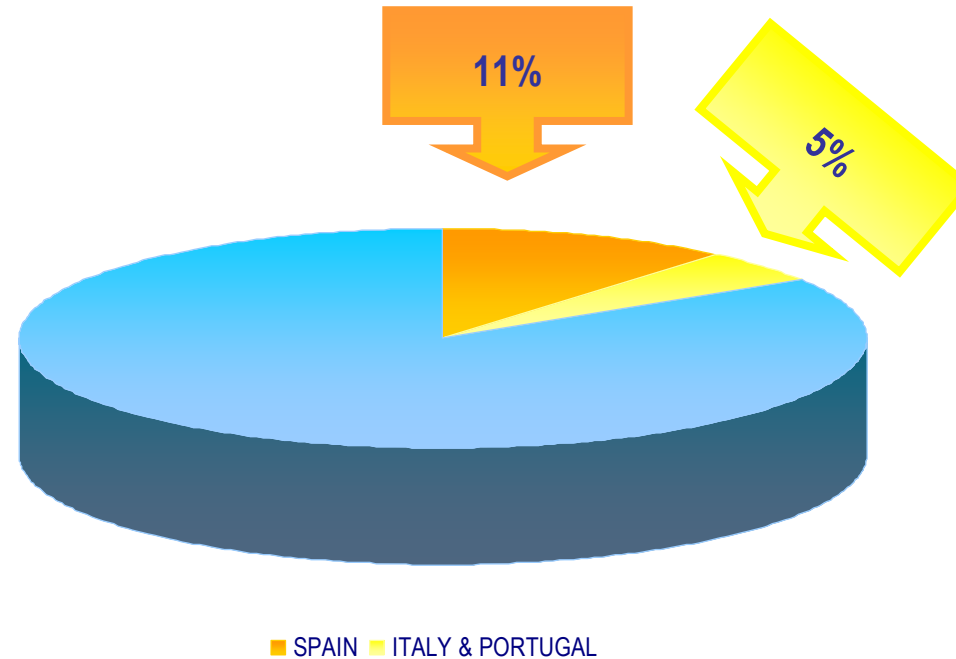
Source: MRB & company data



# Grifols + Talecris are globally well positioned



## New geographic sales distribution will improve effective collection days



The weight of Spain, Italy and Portugal has moved down from 33% to 16%

Source: MRB & company data

# Agenda



- Worldwide Plasma Derivative markets (Product, Region, Company)
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- Grifols global position
- **Grifols global product growth strategies**
- Key take aways

# Bioscience Division overall commercial strategy - I



- Increase the “Average revenue per liter of Plasma”:

Promote the sales of “second tier” proteins to increase the average income per liter of plasma fractionated. Specially focus on Prolastin and Antithrombin. In the longer term proteins such as Fibrinogen, Thrombin and Plasmin

- Consolidate Grifols global and US leadership position in IVIG:

Maximize the promotion of Gamunex for CIDP indication in developed markets. Promote the dual brand strategy and opportunity globally (Gamunex and Flebogamma)

- Strengthen global pd Factor VIII position:

Extend and secure the penetration of pd Factor VIII in the treatment of Haemophilia worldwide

## Bioscience Division overall commercial strategy -II



- Expand global usage of Prolastin:

Develop Alpha Antitrypsin deficiency treatment in under-diagnosed markets, replicating the successful US Talecris model

- Drive geographic expansion:

Pursue long term growth opportunities in EU and ROW through combined worldwide commercial network and product portfolio leverage. Develop new geographical balance of sales

- Increase own brand sales by reducing sale of intermediates:

Step up sales with own brand products versus the current intermediate materials sales. Specially Albumin and Factor VIII

## Contract manufacturing: a business model that is key for Grifols in several markets



### Contract manufacturing (maquila) experience:

- Spain: Since 1978 Grifols fractionates Spanish Hospital Plasma
  - Almost 400,000 liters fractionated in 2011
  - Full range of products produced: Albumin, AT III, FVIII, FIX, IVIG and A1PI
- Canada: Since 1988 Grifols (Bayer / Talecris) is the primary supplier to the Canadian Blood System
- Czech and Slovak Republics: Since 1992 Grifols has fractionated over 700,000 liters manufacturing a full range of products

**Plasma fractionated and products returned to plasma providers for a manufacturing fee**



**Flebogamma<sup>®</sup> 5%**  
**Flebogamma<sup>®</sup> 5 and 10% DIF**  
**Gamunex<sup>®</sup> / Gamunex-C<sup>®</sup> (IV - Subcut)**

## Polyvalent Immunoglobulin

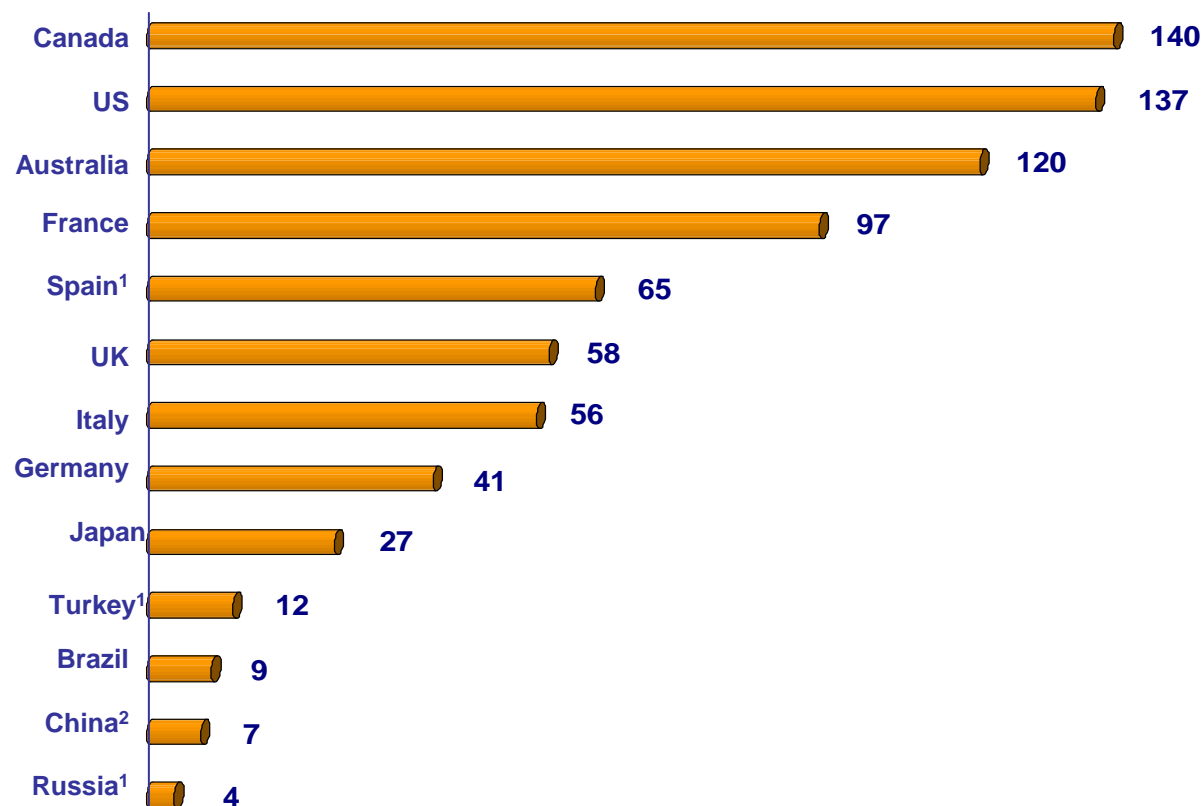
Indicated for the treatment of primary immunodeficiencies, certain secondary immunodeficiencies, chronic inflammatory and certain autoimmune diseases

- Gamunex is the unique immunoglobulin licensed with the CIDP
- Gamunex-C is approved for intravenous and subcutaneous administration
- Flebogamma DIF is the only ready to use product globally available with 5% and 10% strengths



## IVIG consumption per capita in selected countries – 2010

(Grams per thousand inhabitants)



(1) 2010' estimates

(2) 2009

Sources: all MRB except Japan (2009 'BPRO)

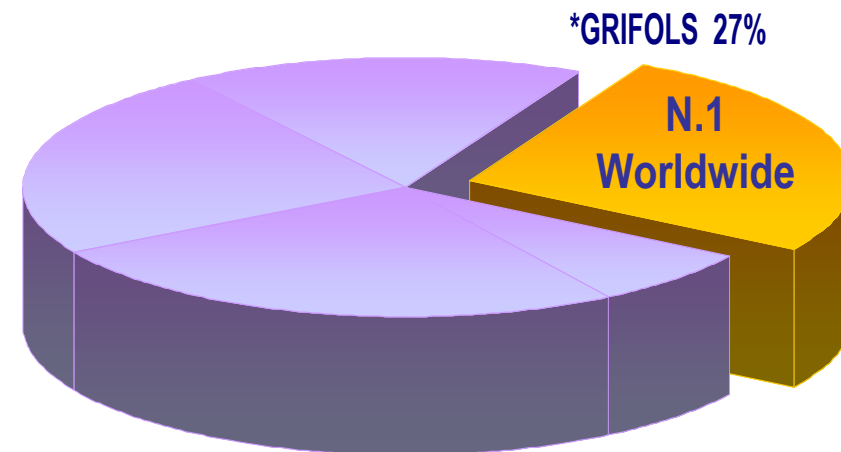




## Grifols + Talecris would have been global leader in 2010. Gamunex and Flebogamma accounted for 27% market share

- Drive Gamunex as the only IVIG with CIPD indication in the US and other markets
- Pursue this market segment with a dedicated neurology salesforce
- Position Flebogamma® DIF in market segments which consider the added value of having both concentrations
- Extend penetration in developed markets using the strategy of the dual product line

*\* Combined 2010 sales Grifols & Talecris*



*Source: MRB & company data*



**Prolastin® / Prolastin-C®**  
**Trypsone® / Trypsan®**

## Alpha-1-Antitrypsin

Indicated for chronic augmentation therapy in patients with congenital deficiency with clinically demonstrable pulmonary emphysema.

- Global leaders and market pioneers in the treatment of pulmonary emphysema.

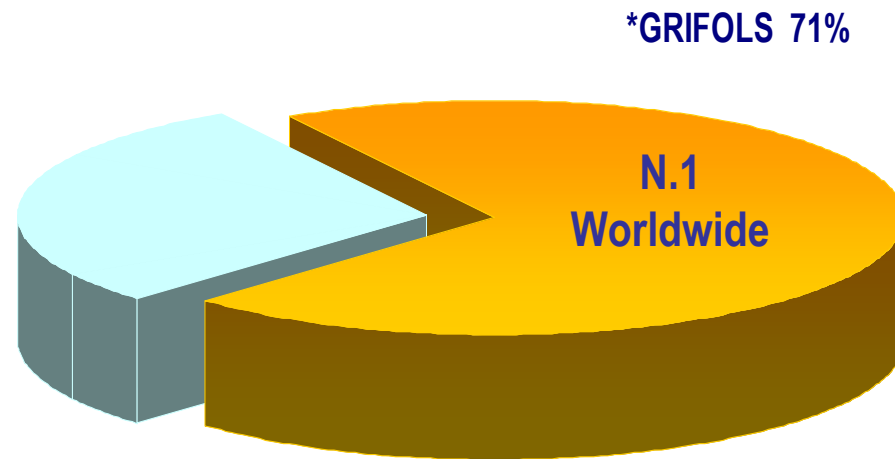
## Grifols worldwide market share and growth strategies: Alpha1 Antitrypsin



### Grifols + Talecris would have been a strong number 1 with opportunities

- Replicate the successful Talecris US sales model to other markets specially Europe to increase penetration with Prolastin
- Improve market access and reimbursement in several European and Latin American markets
- Improve diagnosis of Alpha 1 deficiency worldwide, through awareness and detection campaigns
- Step up marketing of Prolastin® through our own commercial network

\* Combined 2010 sales Grifols & Talecris



Source: MRB & company data



**Human Albumin Grifols® 5, 20 and 25%**

**Albutein® 5, 20 and 25%**

**Plasbumin® 5 and 25%**

## Albumin solutions

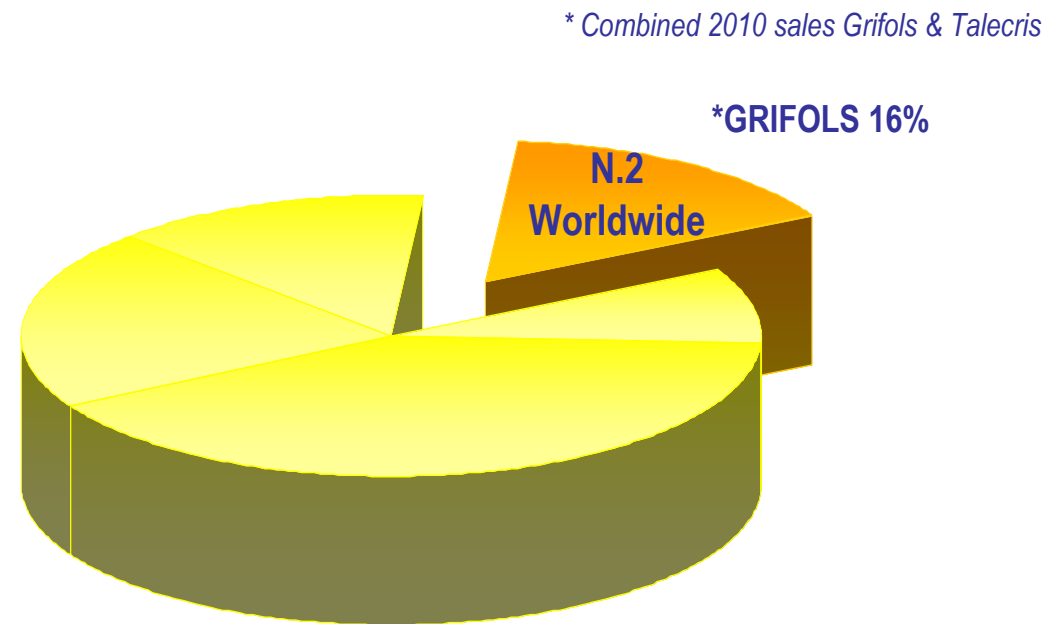
Indicated in restoration and maintenance of circulating blood volume where deficiency has been demonstrated and use of a colloid is appropriate (shock, trauma, cirrhosis)

- Broad Albumin range available at ww level



## Grifols is actively working in the development of new indications of Albumin

- Sensitize healthcare professionals about albumin properties besides plasma expansion
- Expand use in liver diseases in markets with lower usage
- Reinforce branding strategy globally



Source: MRB & company data



**Fanhdi®**  
**Alphanate®**  
**Koate DVI®**

FVIII / vWF complex

Indicated in Haemophilia A, acquired FVIII deficiency and von Willebrand Disease

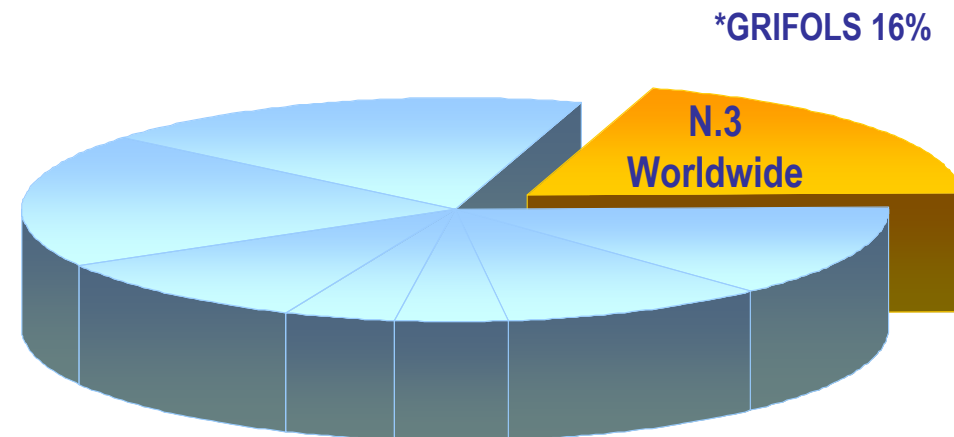
- Leading pd FVIII's in the management of Haemophilia in patients with inhibitors



### Grifols pd Factor VIII a strong and growing market choice

- Position the Grifols pd Factor VIII as the choice in the management of Haemophilia patients with inhibitors
- Expand labelling in von Willebrand indication to all countries
- Sensitize healthcare professionals about strong evidences of good safety profile of pds and better cost-effectiveness than recombinant products
- Promote initiatives in order to increase evidence of less incidence of inhibitors vs recombinants

\* Combined 2010 sales Grifols & Talecris



Source: MRB & company data

Global Portfolio is completed with a range of specialty products that provide a variety of business opportunities -I



**Anbinex<sup>®</sup>**  
**Thrombate III<sup>®</sup>**

### Antithrombin

Indicated in prophylaxis and treatment of thromboembolic complications in hereditary and acquired antithrombin deficiency.

- Thrombate is the unique plasmatic Antithrombin approved in the US

**AlphaNine<sup>®</sup>**  
**Factor IX Grifols<sup>®</sup>**  
**Profilnine<sup>®</sup> SD**

FIX and FIX complex  
Indicated in Haemophilia B



## Global Portfolio is completed with a range of specialty products that provide a variety of business opportunities - II



Anti - D	Antitetanus	Antihepatitis B	Antirabies
Igamad® HyperRHO® SD	Igantet® HyperTET®SD	Igantibe® Niuliva® HyperHEP® B	HyperRAB®SD

### Hyperimmune Immunoglobulins

Extensive worldwide portfolio of products indicated in providing immunity against a range of potentially fatal infections, graft reinfection after liver transplantation and Rh incompatibility

**Igamplia®**  
**GammaSTAND® SD**

### Polyvalent immunoglobulin (IM)

Indicated in primary immunodeficiencies, certain secondary immunodeficiencies and post exposure prophylaxis for hepatitis A

# Agenda



- Worldwide Plasma Derivative markets (Product, Region, Company)
- Market evolution and outlook
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- Grifols global product growth strategies
- **Key take aways**

## Key take aways



- Grifols operates in an attractive growth market
- Grifols has leadership positions in key products and geographies
- The combination of Grifols and Talecris provides growth opportunities and synergies globally
- Grifols is well positioned for the future with its strong product portfolio and its global international position

The background of the slide features a dynamic pattern of blue light rays emanating from the bottom-left corner, creating a sense of motion and depth. The rays vary in intensity, from bright white at the source to deep blue at the edges.

**GRIFOLS**

# Sales & Marketing

*Greg Rich*

*- President & CEO Grifols Inc. -*



- US continues to be a growth market
  - 14% sales 5-yr CAGR
- Focused commercial business units designed to optimize sales potential and maximize balance of liter
- #1 US market share <sup>(1)</sup> in growing underserved market segments
  - #1 IVIG
  - #1 A1PI
  - #1 pdFVIII
  - #1 ATc

*(1) 2010 MRB data*

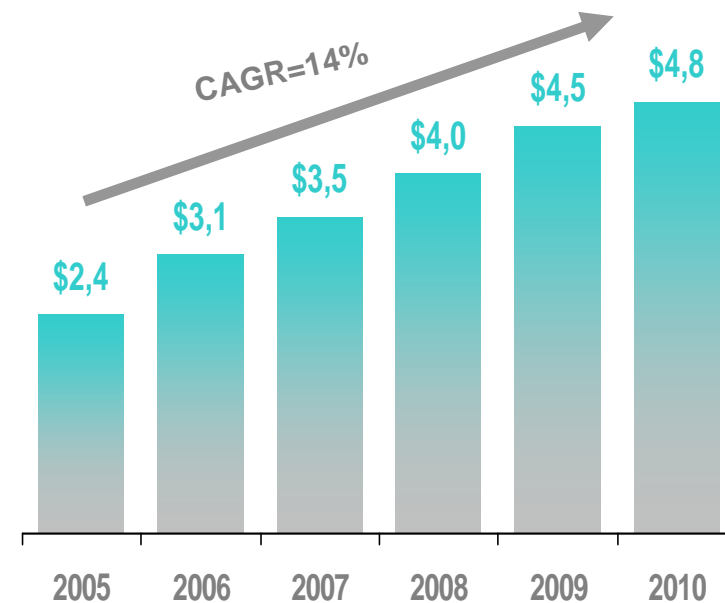
# Plasma Protein Therapies: industry background



Strong growth: \$4.8Bn<sup>(1)</sup> sales

- Under-diagnosed and under-treated indications
- 14% sales 5-yr CAGR
- Long-term anticipated 5 – 8% growth

U.S. Plasma derivative sales (\$Bn)



*Note: Share statistics are based on sales of non-recombinant products only  
(1) 2010 MRB data*

*Source: MRB*

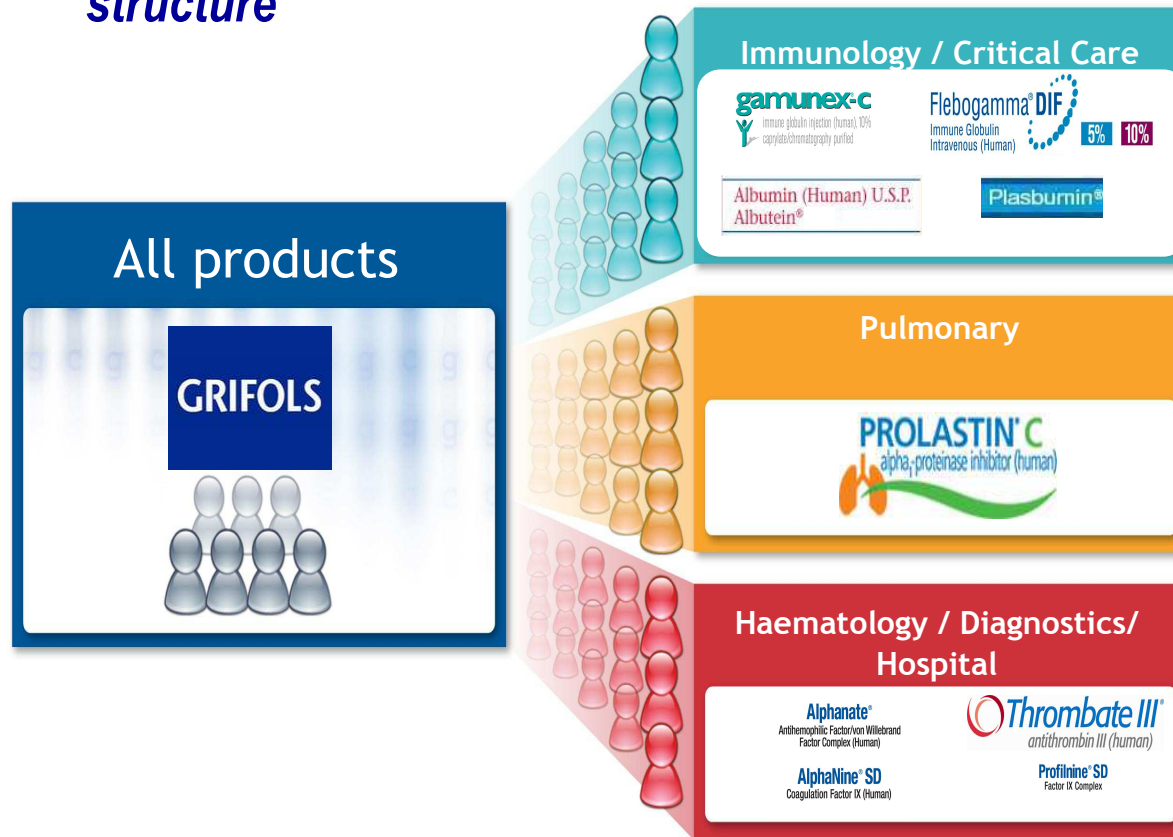
# US Business units focused on demand stimulation



*Legacy US commercial structure*



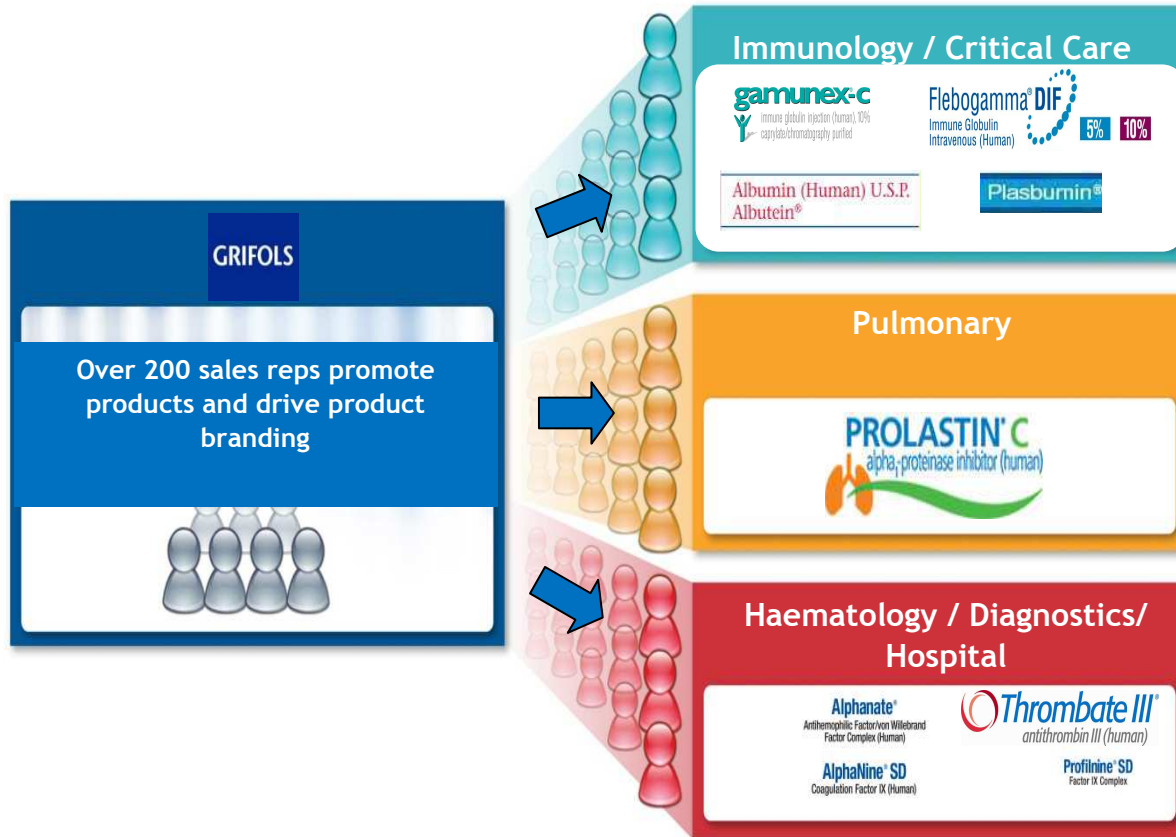
*Focused business units*



# Dedicated sales forces support specific therapies






## Focused business units





# Leading products for under-treated diseases



	 <b>Immunology</b>	 <b>Pulmonary</b>	 <b>Haematology / Diagnostics/ Hospital</b>
<b>Combined share</b>	IVIG <sup>(1)</sup> #1 sales share <sup>(2)</sup> in United States	Alpha-1 Antitrypsin #1 sales share <sup>(2)</sup> in United States	pdFVIII #1 sales share <sup>(2)</sup> in United States  Thrombate #1 sales share <sup>(2)</sup> in United States
<b>Primary indication</b>	Primary Immune deficiency (PI), CIDP, ITP	Alpha-1 Antitrypsin deficiency	Haemophilia A, Haemophilia B, von Willebrand, Hereditary ATIII deficiency
<b>Orphan drug population</b>	✓	✓	✓

Notes: Share statistics are based on sales of non-recombinant products only

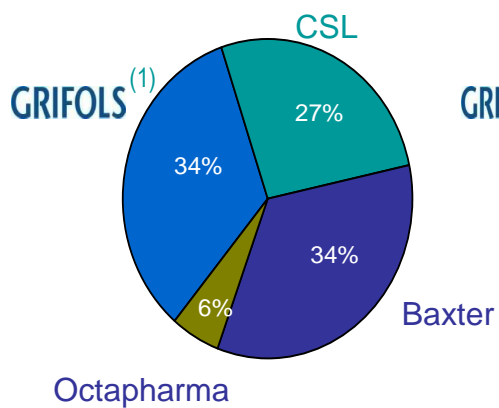
(1) Gamunex-C & Flebogamma

(2) 2010 MRB data

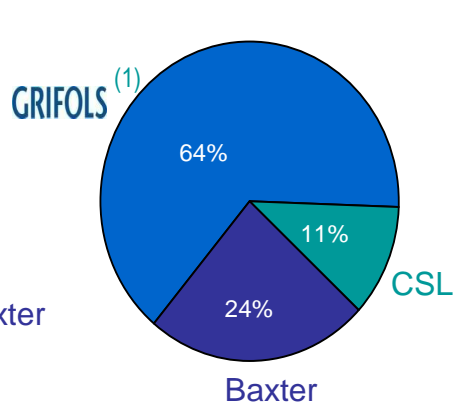
# Leading products for under-treated diseases



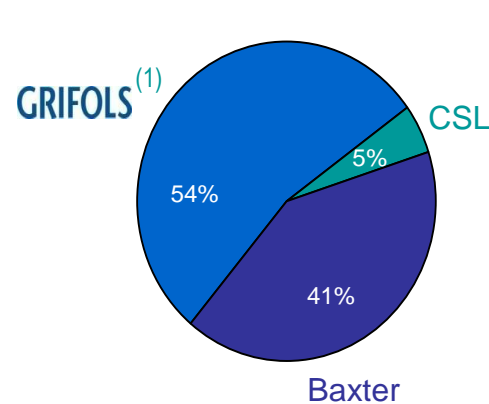
**2010 IVIG U.S. sales share**  
(% of sales)



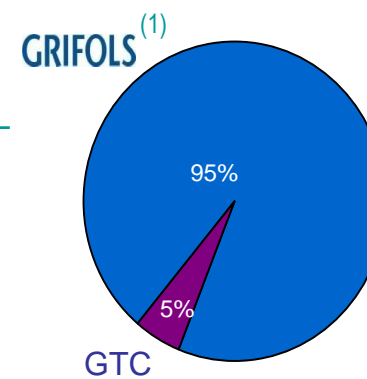
**2010 A1PI U.S. sales share**  
(% of sales)



**2010 pdFVIII U.S. sales share**  
(% of sales)



**2010 ATc U.S. sales share**  
(% of sales)



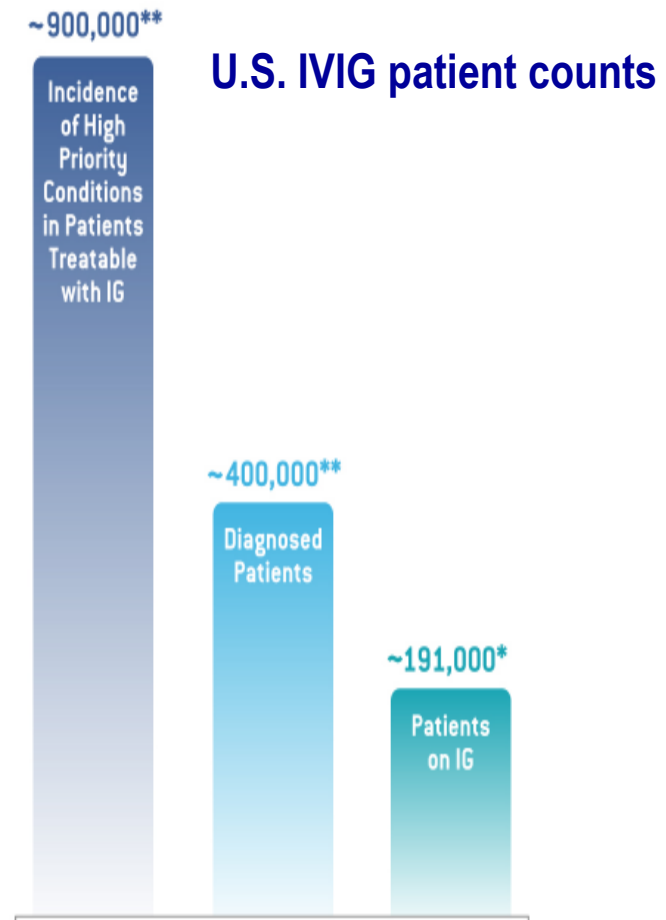
(1) Combines product sales for Grifols and Talecris

Source: 2010 MRB data

# IVIG – increased diagnosis drives growth



- U.S. volume has grown at a 16% CAGR<sup>(1)</sup> for over 20 years
  - Treats genetic and acquired immune deficiencies and autoimmune disorders
  - Increased use from additional indications
- Unit demand for IVIG projected to grow long-term at 6 – 8% for both International and U.S.
  - Under-diagnosing, under-dosing
  - Increased use in developing markets
  - R&D for new indications
  - No recombinant or synthetic means of producing IVIG currently exist



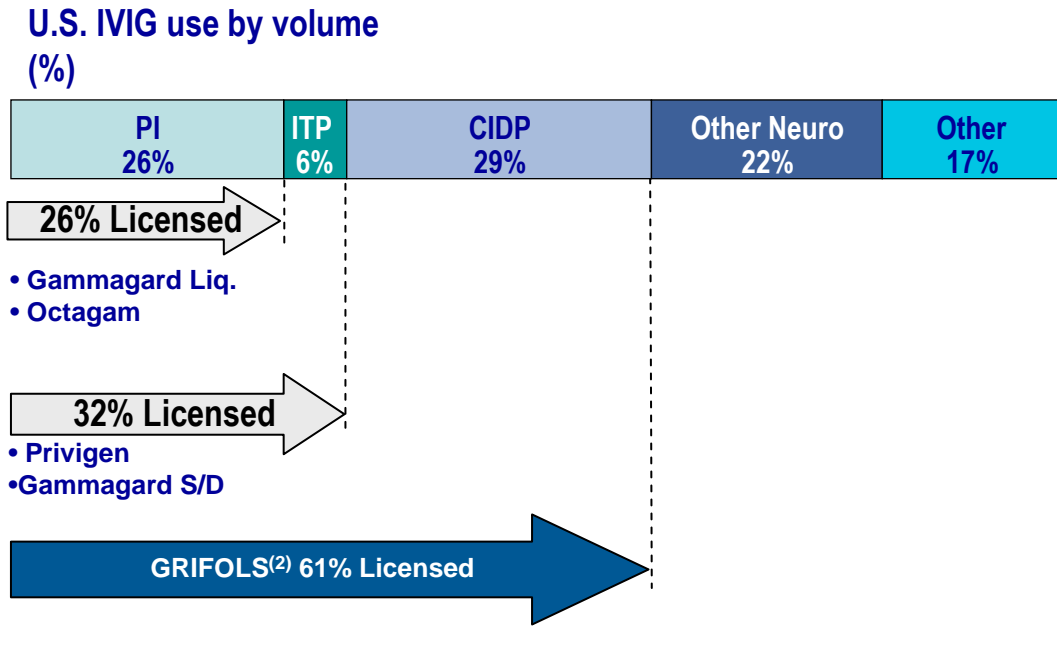
Source: 2009 Harris Interactive US IG Habits & Practices Research (Model Derived); n = 4,144 (14 specialties across 43 conditions) for incidence screen portion of study; n = 1,045 (including 350 Neurologists) for full survey portion of study; 99% confidence interval assigned by Harris Interactive to IG model data. \*\*Incidence & Prevalence databases.

(1) CAGR calculated from 1986 – 2009 (MRB)

# IVIG portfolio profile and dedicated sales force drive competitive advantage



- CIDP indication makes Grifols only<sup>(1)</sup> leading company with access to neurology
  - Orphan drug exclusivity through 2015
  - Patented caprylate process
  - Dedicated immunology/critical care sales force



**Grifols<sup>(2)</sup> FDA licensed indications (PI, ITP, CIDP) represent a significantly higher percentage of market than any other IVIG product**

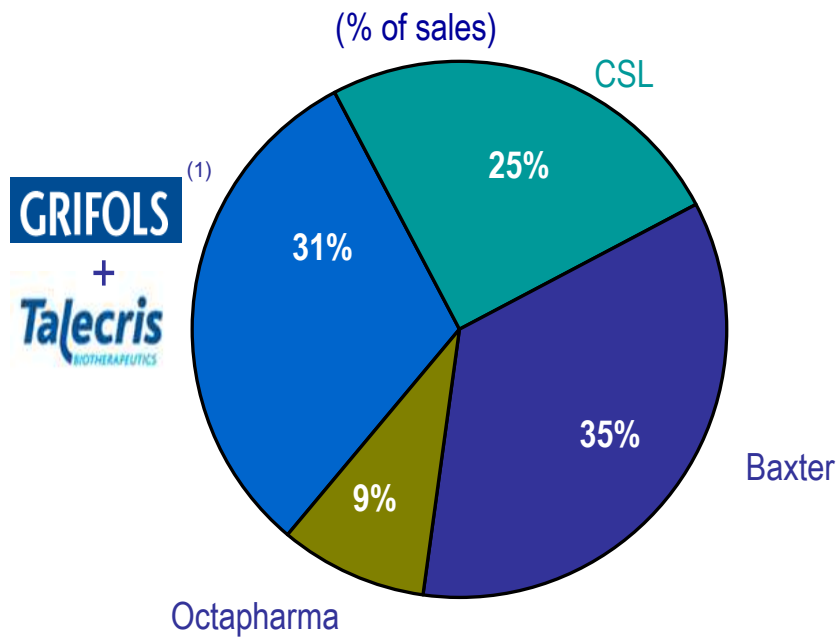
(1) Gamma-Ked also has CIDP indication.  
 (2) Gamunex-C indicated for PI, ITP, and CIDP, Flebogamma indicated for PI.

Source: 2009 US IVIG Habits & Practices Research – Model Derived

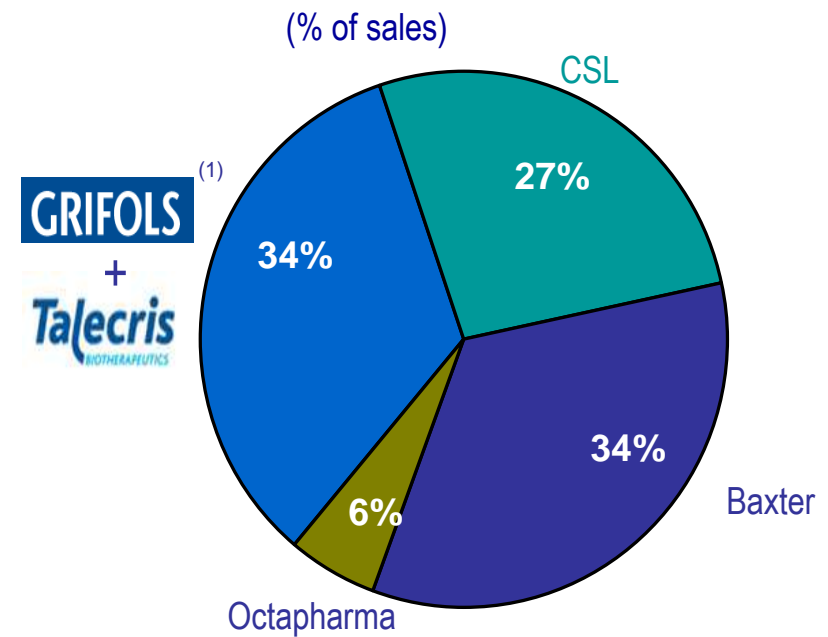
# U.S. IG Dollar sales share (MRB)



## 2009 US sales share (\$2.6B)



## 2010 US sales share (\$2.8B)



(1) Combines Gamunex and Flebogamma for 2009 & 2010

Source: MRB

# Key takeaways on Gamunex-C and Flebogamma DIF



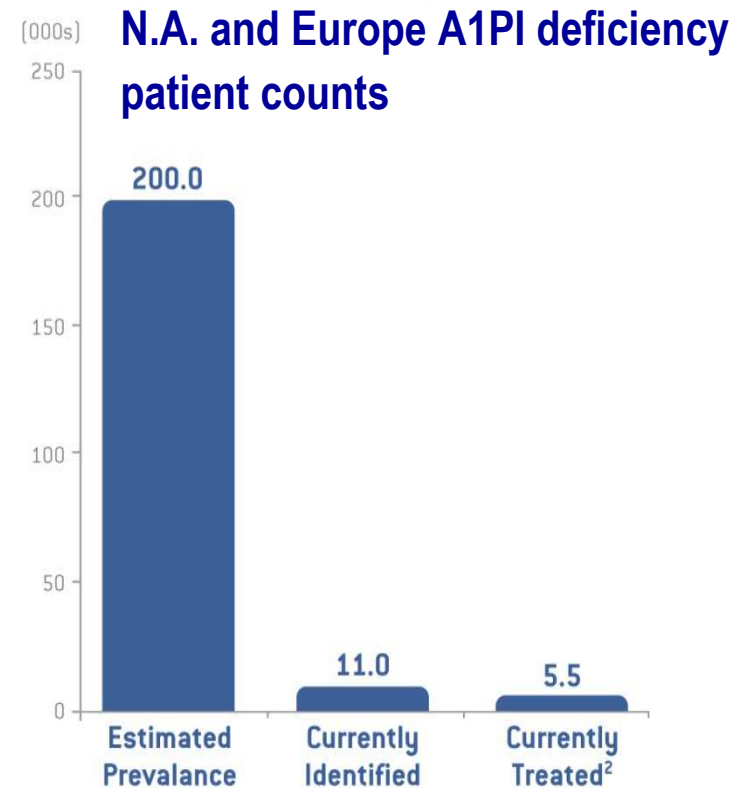
- IVIG
  - Usage has grown at 16% CAGR over last 20 years
  - Predicted to grow at 5 – 8% over long-term
- Gamunex-C
  - Premium 10% liquid IVIG product
  - Double U.S. market access versus competitors for licensed indications
  - Patented caprylate process
- Flebogamma DIF
  - Only liquid IVIG product available in both a 5% and 10% concentration to meet a broad range of medical needs
- Promotion
  - Exclusive call point into neurology with Gamunex-C
  - Dedicated immunology/neurology sales force
  - Leading IVIG market share with combined Gamunex-C and Flebogamma portfolio



# Prolastin-C – significant untapped potential



- Strong demand
  - Chronic, life-extending therapy helps ensure certainty of demand
  - U.S. A1PI sales have increased at a 6.1% CAGR since 2005
- Significant opportunities to expand sales
  - Patients remain under-identified and under-treated
  - 0.5% – 1% <sup>(1)</sup> of the 40 million patients with COPD have A1PI Deficiency
  - Simple blood test for diagnosis
  - Multiple EU countries with significant patient registries & no reimbursed A1PI product



**Medical education and diagnostic testing drive patient identification**

(1) Sources: Lieberman et al. Chest 1986; 89:370-373, De Serres et al. Journal of COPD 2006; 3:133-139; University of Florida – using Talecris Alpha Kits  
(2) Reflects MRB data and internal Talecris estimates

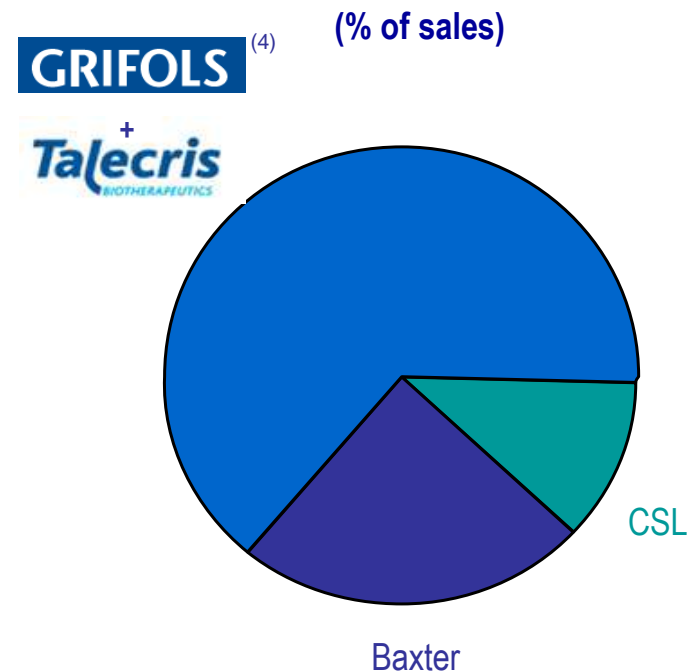
Sources: Silverman EK, et al. Am Rev Respir Dis. 1989; 140:961-966

# Prolastin-C – The leading A1PI product



- Prolastin-C leadership position
  - #1 sales share in U.S. (64.1%) and globally (74%) <sup>(1)</sup>
  - Prolastin-C patient base in US has grown 13% since launch of dedicated sales team in 4Q09
  - Prolastin is only A1PI product approved in 15 European countries; currently selling in 6 countries and seeking reimbursement in others
- Direct-to-patient distribution model, Prolastin® direct
  - Industry leading patient loyalty (95.5%) <sup>(3)</sup> and patient compliance rate (95.5%) <sup>(3)</sup>
  - Proven to improve health outcomes

2010 A1PI U.S. sales share



<sup>(1)</sup> U.S. share of 64.1% (MRB – 2010); Global share of 74% Prolastin (MRB – 2008)

<sup>(2)</sup> Includes LFB (2%) and Grifols (0.3%)

<sup>(3)</sup> Internal Data on File

<sup>(4)</sup> Combines Grifols and Talecris products



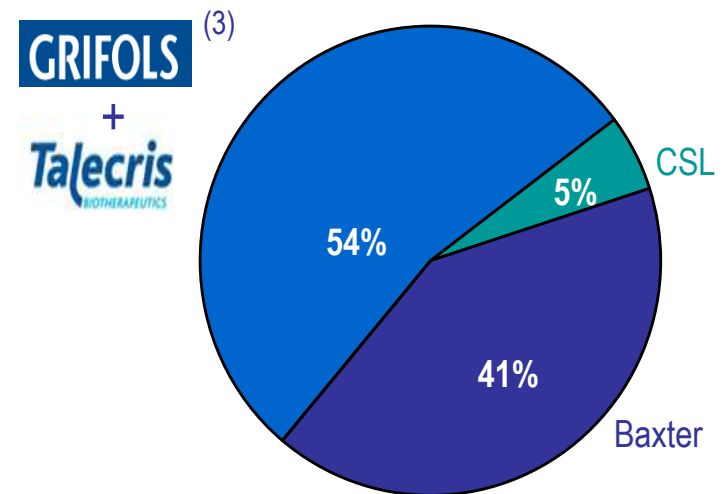
# Alphanate – The leading pdFVIII product for Haemophilia A



- Alphanate: leadership position
  - #1 sales share in U.S. (45%) <sup>(1)</sup>
  - Usage has grown at 17% CAGR over last 5 years <sup>(2)</sup>
  - Among plasma derived FVIII products, sales of FVIII/vWF complex products have increased while monoclonal antibody purified products have decreased
  - Dedicated sales force

## US sales share of pdFVIII products

(% of revenue)



(1) U.S. share of 45% (MRB – 2010) – Haemophilia A only

(2) 17% CAGR (MRB 2006-2010)

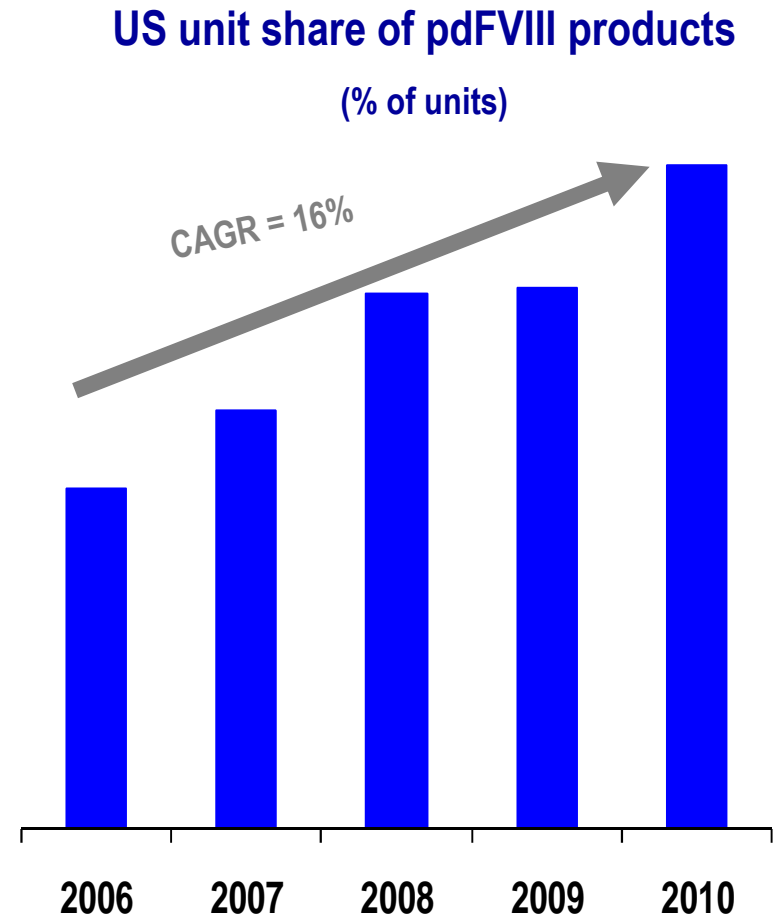
(3) Combines product sales for Grifols and Talecris

Source: 2010 MRB data

# Alphanate share of pdFVIII market continues to grow



- Product attributes
  - Indicated for patients with Haemophilia A and/or von Willebrand Disease (surgical and invasive procedures)
  - Four convenient vial sizes with low reconstitution volume
  - First FVIII/vWF product in the US stable for 3 years at room temperature at or below 25°C (77°F)



Source: MRB - Market Share – pdFVIII only Haemophilia A

# AlphaNine SD – pdFIX product for Haemophilia B



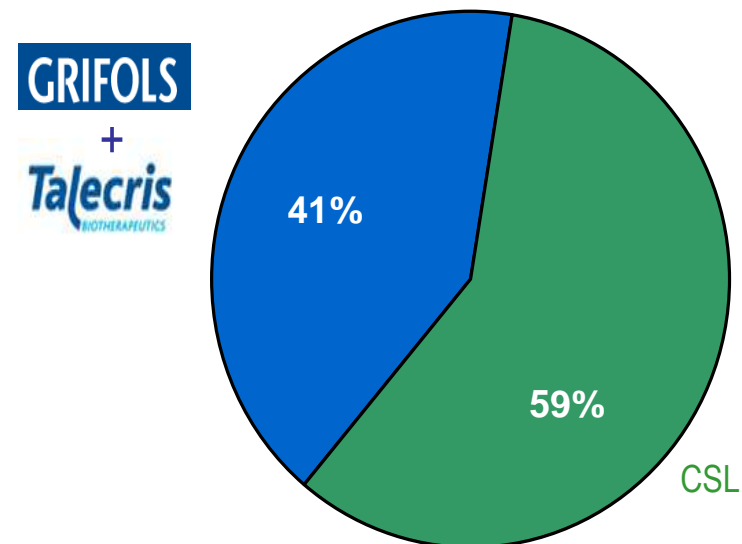
- AlphaNine SD leadership position
  - #2 unit share in U.S. (41%) <sup>(1)</sup>
  - Usage has grown at 11% CAGR over last 5 years <sup>(2)</sup>
  - In 2010, the factor IX market increased 4.4% in dollar sales from the previous year
  - Dedicated sales force
- Product attributes
  - Indicated for prevention and control of bleeding in patients with FIX deficiency due to Haemophilia B
  - Reliable control of factor level with surgery
  - Consistent pharmacokinetic profile whereby one IU raises the recipient's plasma FIX level by 1%, unlike rFIX products where low recovery in some patients requires higher doses to achieve the same haemostatic effect
  - Three convenient vial sizes with 10 mL diluent

*(1) U.S. share of 41% (MRB – 2010)*

*(2) 11% CAGR (MRB 2006-2010)*

## US sales share of pdFIX products

(% of revenue)



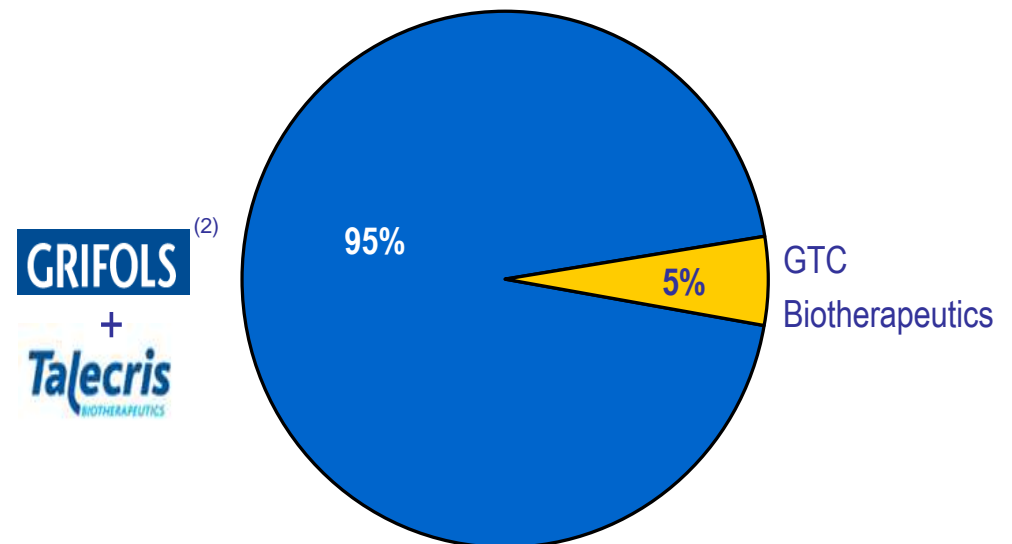
Source: 2010 MRB data

# Thrombate III – The leading Antithrombin concentrate product for hereditary Antithrombin deficiency



- Thrombate III leadership position
  - #1 market share in U.S. (95%) <sup>(1)</sup>
  - Limited uptake of recombinant ATc in US with 5% market share<sup>(1)</sup>
  - Dedicated sales force

US sales share of ATc products  
(% of revenue)



(1) U.S. share of 95% (MRB – 2010)

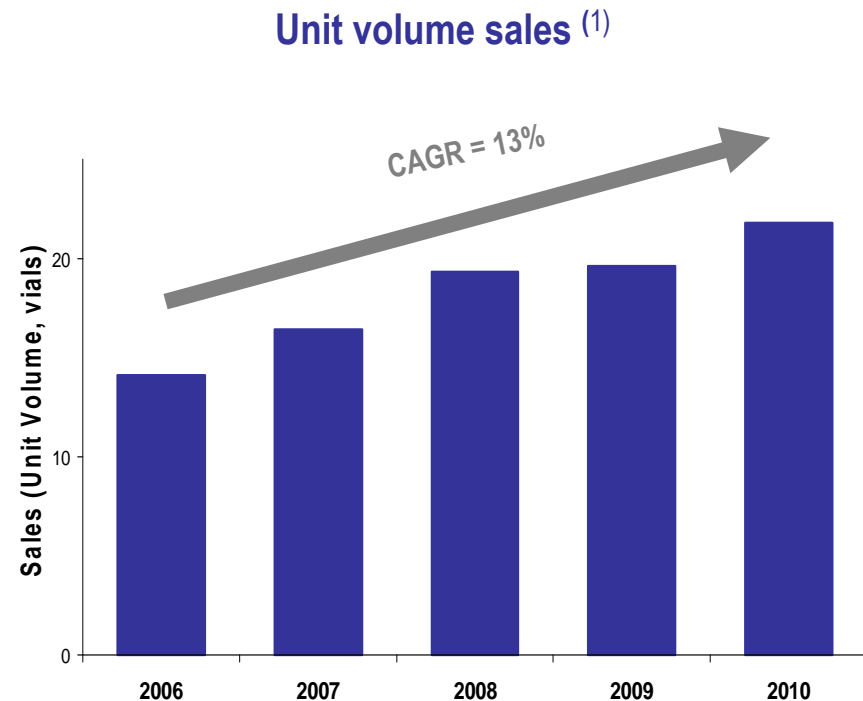
(2) Combines Grifols and Talecris sales

Source: 2010 MRB data

## Increased brand awareness and dedicated sales force drive growth of Thrombate III



- Product attributes
  - Indications for both prevention during high risk procedures and treatment of thromboembolism in hereditary AT deficient patients
  - Easy to administer due to bolus dosing
  - Room temperature storage



(1) Company data

# Albumin: annual unit growth remains strong at 8%



- Albumin: market position
  - 26.3% share of the U.S. market <sup>(1)</sup>
  - Usage has grown at 8% CAGR over last 5 years <sup>(2)</sup>
  - Over 100 clinical studies with human albumin currently being conducted in the U.S. including trials for Alzheimer’s disease, Acute Ischemic Stroke, Liver Cirrhosis and Sepsis <sup>(3)</sup>
- Product attributes
  - Indicated for hypovolemia, hypoalbuminemia, burn therapy, acute liver failure, adult respiratory distress syndrome (ARDS), neonatal haemolytic disease, acute nephrosis, renal dialysis and cardiopulmonary bypass procedures

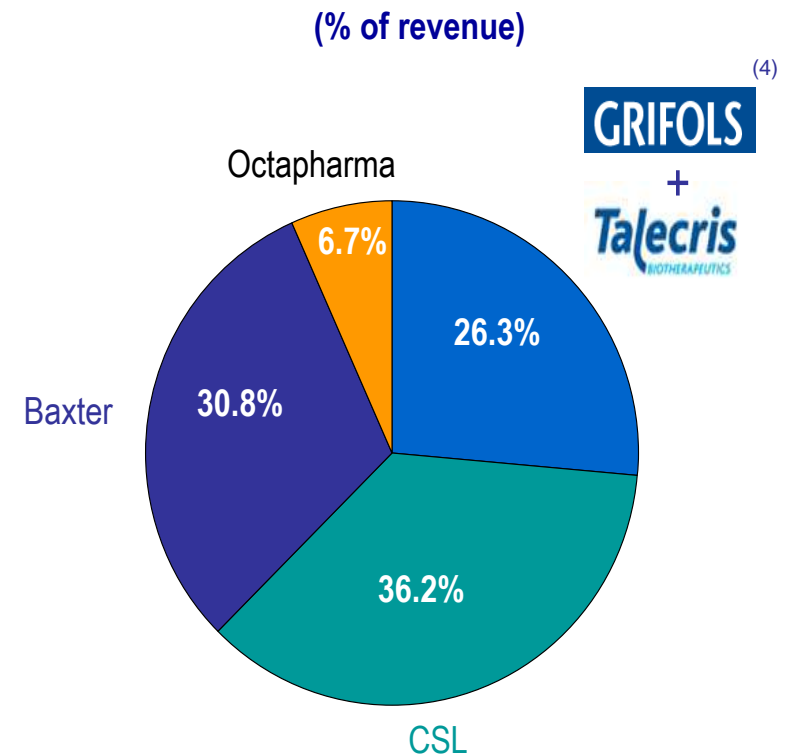
<sup>(1)</sup> U.S. share of 26.3% (MRB 2010)

<sup>(2)</sup> 8% CAGR (MRB 2006-2010)

<sup>(3)</sup> Clinical trials.gov, last accessed 9/30/2011

<sup>(4)</sup> Combines Grifols and Talecris sales

## U.S. sales share of Albumin products

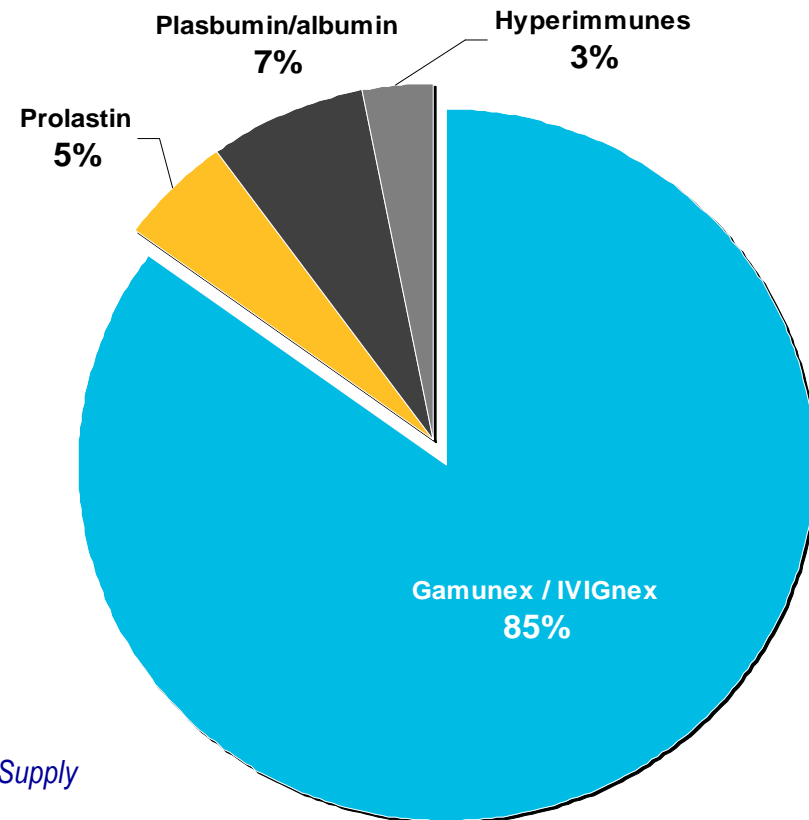


# Grifols is the primary supplier to the Canadian Blood System



- Grifols (Bayer/Talecris) has been awarded primary supplier status in successive national tenders since 1988
- Primary fractionator for Canadian plasma for Canadian Blood Services and Héma-Québec<sup>(1)</sup>
- Majority supplier of plasma products and primary supplier of IVIG<sup>(2)</sup>
- Canada has one of the highest per capita uses of IVIG globally<sup>(3)</sup>, forecasted to grow 5-9% annually<sup>(4)</sup>

## Canada product revenue share



(1) Consecutive contracts awarded to Grifols and predecessors by National Blood Supply Operators (Canadian Blood Services & Héma-Québec)

(2) Talecris Media Press Release, March 31, 2008 (Toronto, Ontario)

(3) Anderson et al. *Transf Med Rev* (2007); Apr.21(2 Suppl 1):S9-56

(4) Canadian Blood Services Customer Letter #2011-07

Source: 2011 Grifols Canada product revenue forecast

## Summary – North American commercial operations



- US continues to be a growth market
  - 14% sales 5-yr CAGR
  - 6% - 8% long term growth
- Grifols IVIG
  - Only manufacturer with a 5% and 10% liquid
  - Gamunex-C the only product licensed for treatment of CIDP
- Despite market size untapped potential for both IVIG and A1PI
  - Under-diagnosed and under dosed
- Dedicated sales force for each area of therapy
- Continued large presence in the Canadian market



**GRIFOLS**

Global Commercial Area  
Hospital & Diagnostic

*Ramón Riera*

*- President Global Commercial Division Grifols, S.A. -*

# Agenda – Hospital Division



- Description
- Hospital products
- Business overview
- Drivers for future growth

## Hospital Division



- The Hospital Division specialises in manufacturing and marketing i.v. medication for hospitals as well as enteral and parenteral clinical nutrition
- Oncotools: Introducing new concepts in hospital pharmacy procedures: modular clean rooms, compounding systems, oncology management software and special devices
- Hospital Division has created a logistics management model including the software and equipment needed for ensuring the full traceability of medicines and other consumables in hospitals
- As a perfect complement to enlarge our presence inside the hospital field, Hospital Division markets disposable surgical and medical materials

# Hospital Products



## IV Therapy

The leader IV manufacturer in Iberia

## Intravenous solutions

- Large variety of safe and effective parenteral solutions
- Wide range of containers: glass, PVC bags and PP bags

## Intravenous medication

- Ready to use prediluted solutions of potassium, antibiotics (Metronidazole, Gentamicin), gastroprotective agents (Ranitidine), levofloxacin and paracetamol.



Grifols Partnership



Better together

## Grifols Partnership

As a matter of expanding i.v. medication know-how, Grifols moved to establish a contract manufacturing activity.

# Hospital Products



## IV Therapy – Oncotools

Experts in offering solutions for pharmaceutical procedures

### Gri-fill®

Compounding cytotoxic and intravenous mixtures

### Misterium®

Modular cleanroom system

### Oncofarm®

Oncology prescription software

### Phaseal®

Closed cytotoxic transfer device

### Accufuser®

Infusion elastomeric pumps



# Hospital Products



## Hospital Logistics

Complete solutions for medication and supplies traceability and inventory control

### Pyxis®

Automatic dispensing systems. Stock control on hospital wards

### Kardex®

Automatic storage systems for Pharmacy or Central Warehouse

### BlisPack®

Automatic system for cutting blisters and labeling unit doses

### Silicon®

Pharmacy Management and CPOE software

### StockKey®

Wireless electronic ordering and refilling system

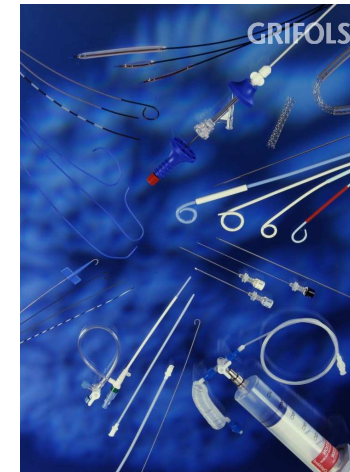






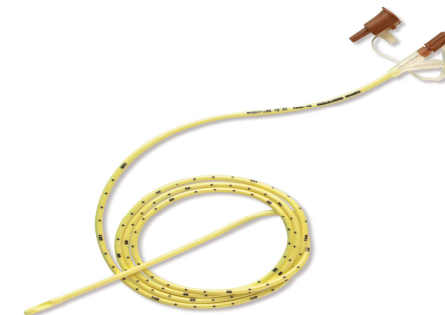
## Medical Devices

Medical products for non invasive surgery in the fields of Cardiology, Neurology, Anaesthesia, Urology and Radiology



## Clinical Nutrition

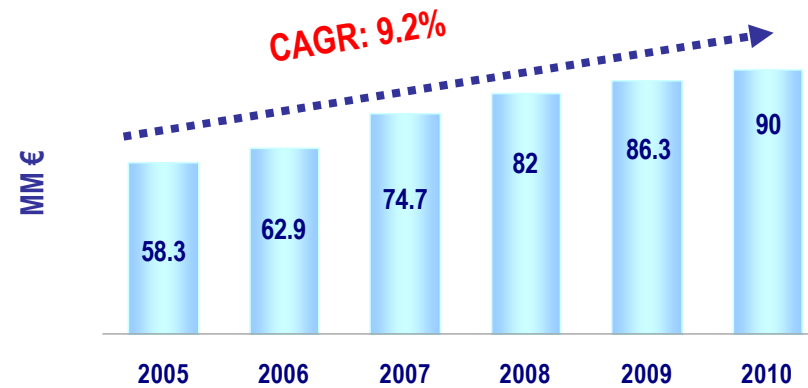
- Enteral and Parenteral diets
- Administration medical devices
- Home care special nutrition



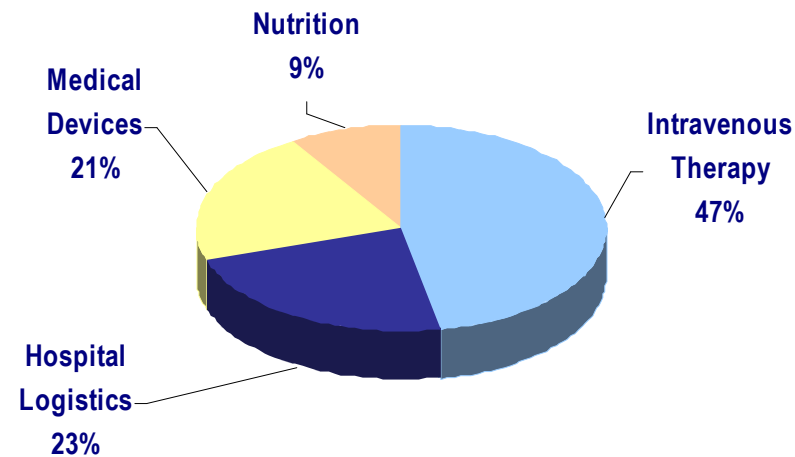
# Sustained growth and progressive global expansion



## Hospital Division sales evolution



## Hospital Division by business segment - 2010



Source: MRB & company data



## Hospital Division: drivers for future growth



- Grifols Partnership: Continuous development of Contract Manufacturing Agreements with relevant Pharmaceutical Companies of injectables in plastic or glass
- Blispack<sup>®</sup>: Launch in several international markets through the Distribution Agreement with Carefusion. Expansion through our own sales forces in Italy, Mexico, Chile and Brazil
- Progressive introduction in the US market of Oncotools
- Clinical Nutrition: Increase of the product range with new diets addressed to the homecare segment. Introduction in the Probiotics market

# Agenda – Diagnostic Division



- Description
- Hospital Products
- Business overview
- Drivers for future growth

# Diagnostic Division



- Focuses on researching, developing, manufacturing and marketing of *in vitro* diagnostics products for clinical laboratory analysis
- Diagnostic systems composed of auto analyzers, reagents and software
- Products for Hospital Blood Banks and Transfusion Centres
- Diagnostic division main areas:
  - Transfusion medicine
  - Immunology
  - Haemostasis



# Diagnostic Products



## Transfusional Medicine

### Blood Bags:

- Standard blood bags
- Leukored® (blood bags with in line Leukoreduction)

### Pathogen Inactivation: of blood components for transfusion



### Immunoematology:

- DG Gel®: Blood typing system including reagents and instrumentation

### Bloodchip®: **BLOOD**chip<sup>ID</sup>

- Genetic blood typing system



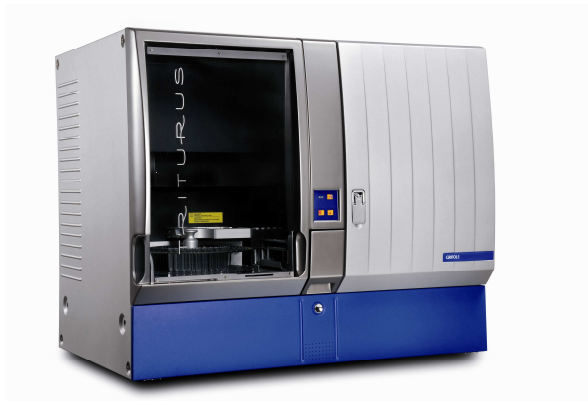
# Diagnostic Products



## Clinical analysis

### Triturus® System

The first completely open, fully automated, multi-test, multi-batch immunoassay system



## Haemostasis

### Q® Analyzer and Reagents

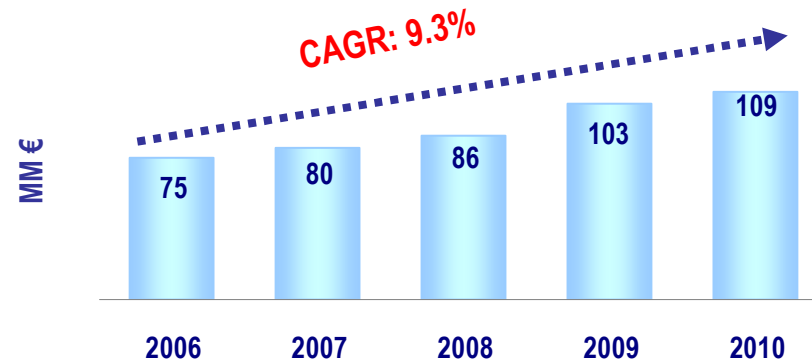
Fully automated haemostasis analyzer for clotting, chromogenic and immuno-turbidimetric tests



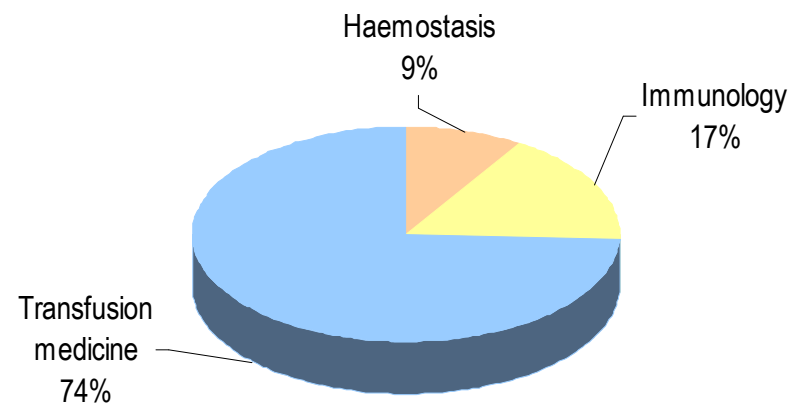
# Diagnostic Business overview



## Diagnostic Division sales evolution



## Diagnostic Division by business segment - 2010



## Diagnostic Division: drivers for future growth



### Transfusional medicine

- Increase in market share of Immunohaematology (DG Gel) in all markets driven by Grifols automation range specially Erytra
- Development of the agreement with Novartis for the commercialization of the Immunohaematology line in the US. Molecular Biology starting in 2012 and Gel Cards and automation in 2013
- Market development of Progenika's products "Bloodchip" based in Molecular Biology in several markets
- Introduction of the Multicard product range in multiple markets following Regulatory approvals

### Development of New Instrumentation

- New platform for ELISA in Microplates as the evolution of the actual Triturus. Installed base of 1,200 instruments. Available in 2013
- New auto-analyzer for Haemostasis with increased throughput to be addressed to higher volume labs market segment

## Hospital and Diagnostic Division



- Hospital and Diagnostic Divisions provide through tools for a more global presence and a better understanding of the health care community
- Hospital and Diagnostic are part of Grifols roots and history
- Hospital and Diagnostic present synergies with Bioscience products in areas like coagulation disorders, immunology, Hepatology, Hospital Pharmacy, blood and plasma collection, and many others
- Hospital and Diagnostic present future growth opportunities, both organic and through partnerships and acquisitions



**GRIFOLS**

## R & D Review

*Mr. Juan Ignacio Jorquera*

*- R & D Director Instituto Grifols, S.A. -*



# Alzheimer's Disease Project

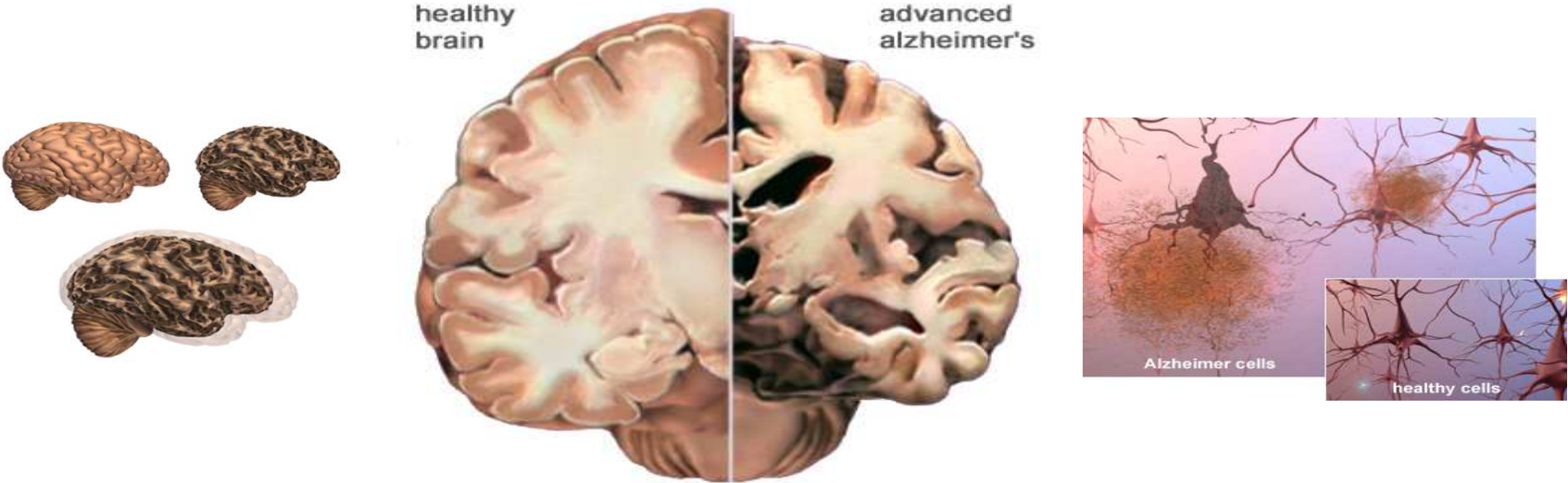
# Alzheimer's Disease (AD)



A neurodegenerative disease characterized by a progressive loss of cognitive functions, associated, among other phenomena, with amyloid beta neuronal deposits. Current therapies are symptomatic for improving or stabilizing the memory and cognitive functions



# Alzheimer's Disease (AD)



## Grifols' approach to Alzheimer's Disease research



In vitro and clinical research on the potential roles of plasmapheresis as well as Albutein<sup>®</sup> and Flebogamma<sup>®</sup> DIF infusion on amyloid beta circulation in blood

Independent studies confirmed the potential of these actions to modify the course of amyloid beta in blood and lead to the definition of a combined strategy looking for a synergistic effect



### Plasma exchange (PE) with albumin replacement

- According to several researchers, up to 90% plasma amyloid beta may be bound to albumin
- Albutein® (therapeutic albumin) has the capacity to bind this agent
- PE removes amyloid beta-saturated patient's albumin and replaces it with amyloid beta-free Albutein®

## Conclusions (I)



Replacement of endogenous albumin with 5% Albutein<sup>®</sup> through a plasma exchange program is feasible in AD patients

The procedure can modify amyloid beta kinetics in plasma

A consistent trend to cognitive stabilization has been observed in both the pilot study and the phase II clinical trial interim analysis

## Grifols' approach (II): IVIG study



Study extension using Flebogamma<sup>®</sup> DIF based on recent published results with similar products

Objective: variation in plasma amyloid beta levels



## Conclusions (II)



Flebogamma® DIF modifies plasma amyloid beta levels in a way similar to that of 5% Albutein® in plasmapheresis and also similar to that of other IVIGs

This justifies further studies with Flebogamma® DIF and suggests the possibility of a combined treatment of Flebogamma® DIF with 5% Albutein® in haemoperesis, in search of a synergistic effect

## Grifols' approach (III)



### Preliminary definitions

#### Plasma exchange:

- Exchange of plasma volume (approx. 2.5l) with the same volume of 5% Albutein®

#### Haemopheresis:

- Exchange of a volume of plasma similar to one regular plasmapheresis donation (approx. 800 ml) using Albutein®

## Synergy: triple mechanism of action



- Plasmapheresis:
  - Extract plasma albumin with bound amyloid beta
  - Extract other proteins which also bind amyloid beta (including immunoglobulins)
- Replacement with Albutein®:
  - Restore plasma capacity to continue binding amyloid beta
- Flebogamma® DIF:
  - Restoration of the antibodies against amyloid beta
  - Binds amyloid beta and avoids its accumulation

## Alzheimer's study project development



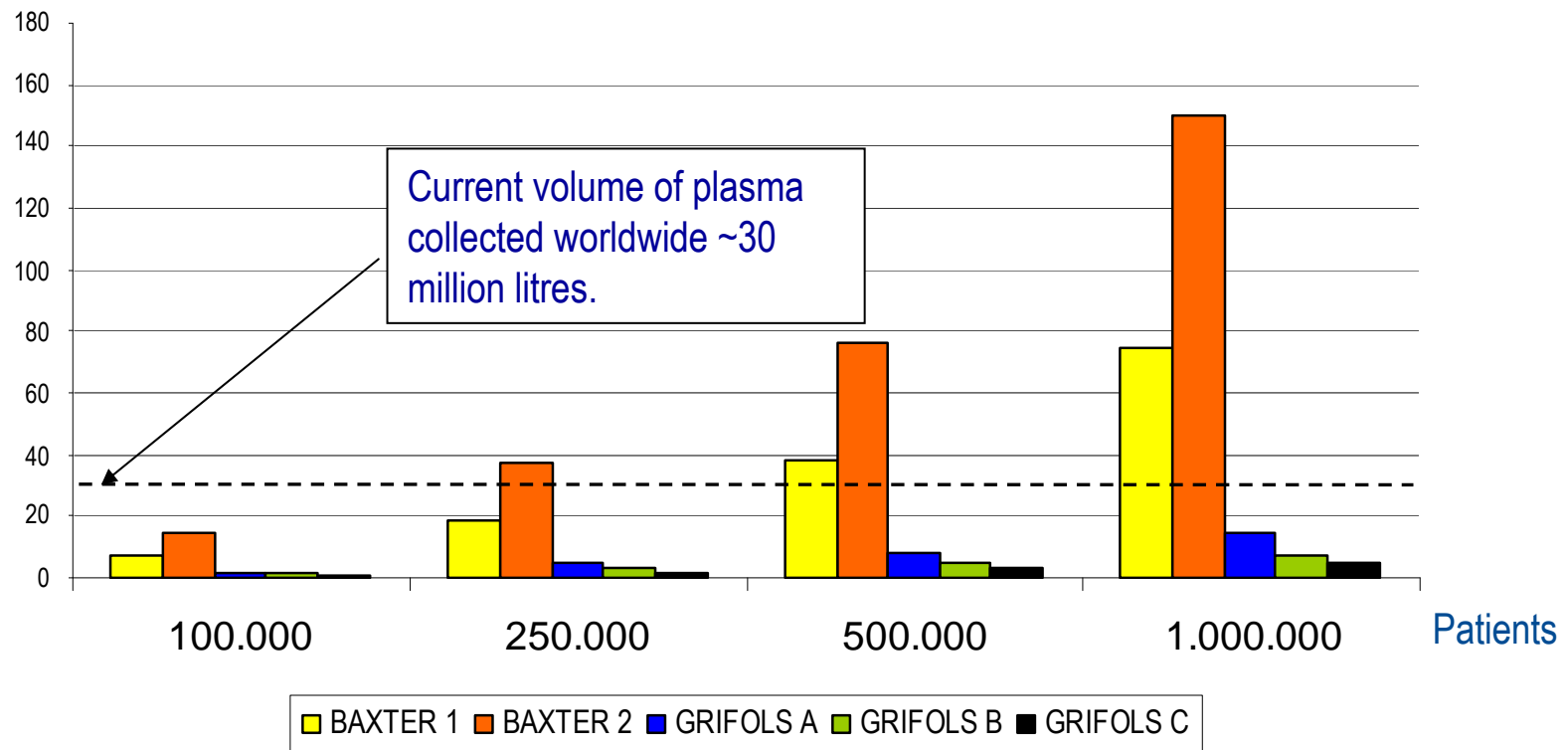
Ethics Committee approval was obtained and the clinical study has already started, as a continuation of the previous studies

The study will last until 2014

# Grifols' vs Baxter's approaches: plasma needed



Plasma liters (millions)



Source: IBPN News 28 (19): 143, 2011.



# Fibrin Sealant Project

# Fibrin Sealant Project



Fibrin Sealant Grifols is a combination of two plasma proteins (fibrinogen and thrombin) that is being developed as an adjunct to surgical haemostasis. When locally applied, both proteins mix up and coagulate producing a biological adhesive that mimics the natural fibrin blood clot

- *Vascular surgery*
- *Solid organ and soft tissue surgery*



## Fibrin Sealant Grifols characteristics



Compared to similar existing products Fibrin Sealant Grifols presents relevant advantages

- Pre-loaded “ready to use” syringes
- High purity components
- Highly effective safety steps included: Solvent – Detergent and Nanofiltration for both components
- Only 20 nm nanofiltered fibrinogen component, using patented technology





During arterial repair surgery local haemorrhage is relatively common, mainly in the suture line (especially in anticoagulated patients). In these circumstances supportive treatment for improvement of coagulation may be needed, where standard surgical techniques are ineffective or impractical

Currently, 142 out of a maximum of 312 patients have been enrolled in a pivotal safety and efficacy trial performed in Canada, UK and Spain. Another similar pivotal trial will be carried out in USA. Fibrin Sealant Grifols should reduce time to the stop of bleeding, blood loss and overall surgery duration

## Solid organ and soft tissue surgery



During abdominal solid organ (e.g. liver, kidney) and soft tissue (prostate, uterus) surgical procedures bleeding in the form of oozing, and even overt hemorrhage, is relatively common. In these circumstances supportive treatment for improvement of coagulation may be needed, where standard surgical techniques are ineffective or impractical

One pivotal trial will be performed in each of the above mentioned types of surgeries, currently planned to be performed in the USA. Efficacy and safety will be evaluated. Fibrin Sealant Grifols should reduce time to the stop of bleeding, blood loss and overall surgery duration

## Fibrin Sealant



The combination of the results from the four trials should allow obtaining a global indication for Fibrin Sealant Grifols as a supportive treatment for improvement of haemostasis (coagulation) in all types of surgeries, where standard techniques are ineffective or impractical

The initial results from these trials should allow for a first filing for the license during 2013 in Europe, followed by additional filings in 2014



Two additional products under development derive from the Fibrin Sealant Grifols project:

- Topical Thrombin Grifols to help stop bleeding during surgery in specific settings, will help extending the surgery-specific line of products
- Intravenous Fibrinogen Grifols, for congenital and acquired deficiencies. Previous Grifols' experience combined with new technological advances allow for high volume scale production and unprecedented safety levels

# New production facilities



The new production plant for Fibrin Sealant, topical Thrombin and intravenous Fibrinogen is finished and under validation





# Plasmin Projects

## Plasmin projects



Plasmin is a protein whose physiological role is to digest blood clots. Originally is present in plasma as a non-active precursor (plasminogen). A patented formulation allows stabilizing the activated form in a therapeutic catheter-deliverable form, suitable to dissolve pathological blood clots

Obtained from a previously discarded material, this product would represent increased value without the requirement of increased plasma collection

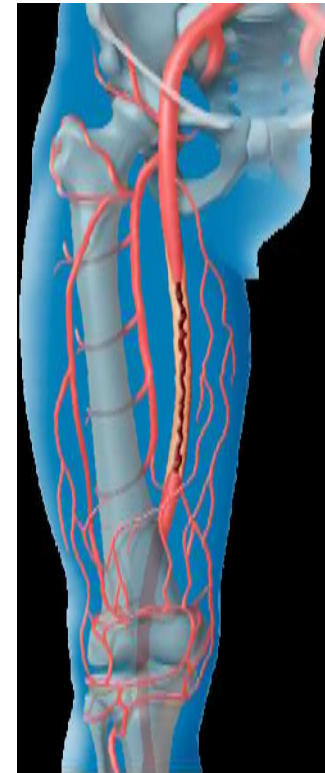
- *Acute arterial peripheral occlusion*
- *Acute ischemic stroke*

# Acute arterial peripheral occlusion



Lower extremity acute arterial peripheral occlusion occurs due to a thrombosis primarily due to a reduction of blood flow. This is a limb-threatening and life-threatening condition. The underlying condition of peripheral arterial disease affects approximately 17% of men and 21% of women who are 55 years of age or older

There are no approved drugs for this condition in North America and only urokinase is approved in a few European markets



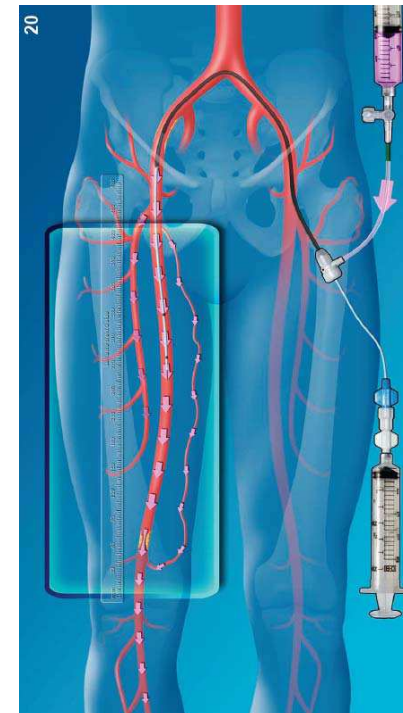


# Acute arterial peripheral occlusion



The objective is to demonstrate in clinical trials that Plasmin Grifols is safe and efficacious as a treatment for acute peripheral arterial occlusion

A phase I safety study was completed, with good results and better effect at higher doses, underlying the relevance of proper catheter administration. Phase II study ongoing



# Relevance of correct catheter administration

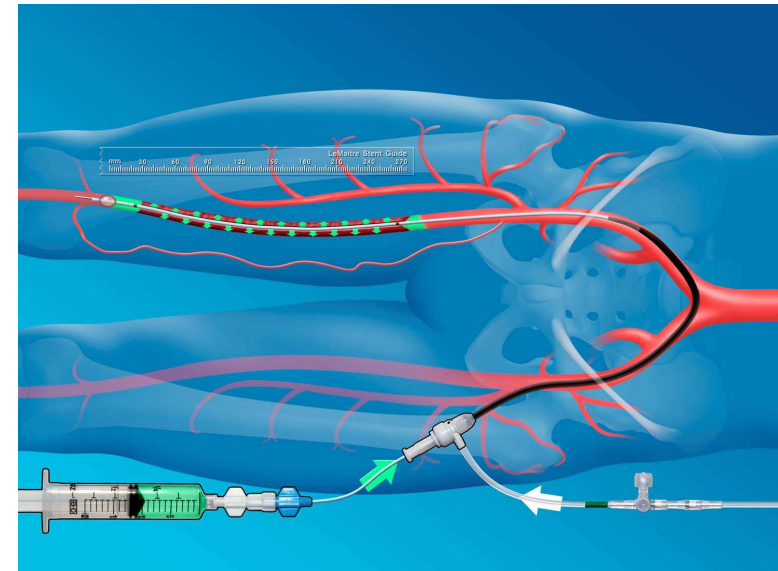


Delivery is important - Plasmin cannot circulate or is inactivated, there is a need to maximize its presence within the clot

Control of flow may be important so that the product is not washed away

Partially degraded free-flowing clots may represent a potential thromboembolic (blood vessel obturation) risk

A new catheter design is under preparation. The experience of Hospital and Diagnostic Divisions may deliver potential synergies



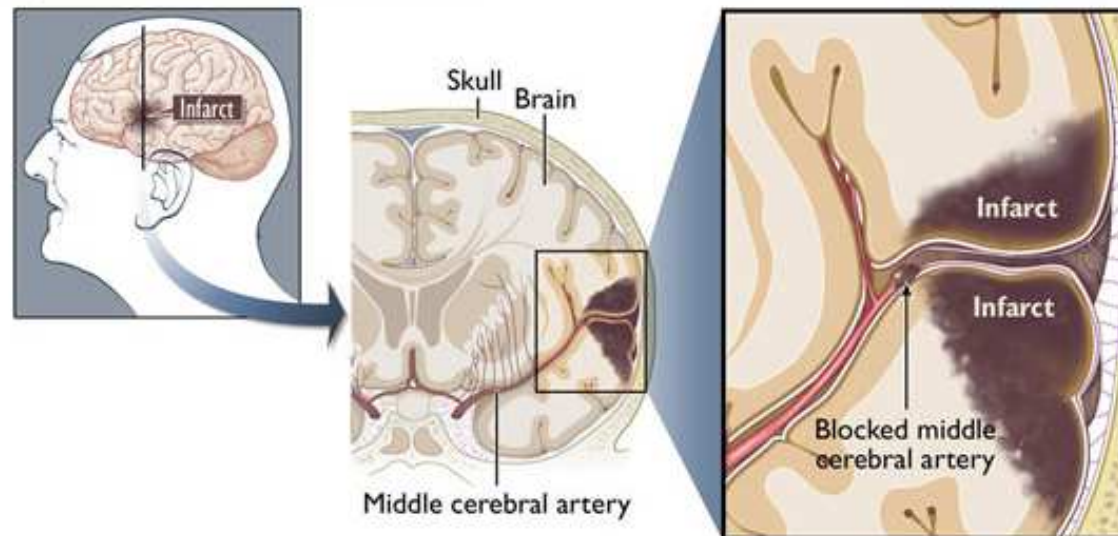
# Acute ischemic stroke



Rapidly developing loss of brain functions due to disturbance in the blood supply, primarily due to blockage of a blood vessel. Leading cause of death and disability worldwide. Each year 15 million people suffer a stroke, with 5 million deaths and another 5 million permanently disabled

The only approved drug is Alteplase (tissue plasminogen activator that generates active plasmin), with limited treatment window and efficacy, carrying significant bleeding risk

Large ischemic stroke in the brain



## Acute ischemic stroke



The objective is to demonstrate in clinical trials that Plasmin Grifols is safe and efficacious as a treatment for stroke

A phase I proof of concept study is ongoing to evaluate the safety of Plasmin Grifols, given in escalating doses within 9 hours of stroke onset, in patients with acute ischemic stroke. Additionally, the proportion of treatment successes will be determined. Preliminary results indicate good safety and tolerability, with improved blood clot digestion at the higher dose



# Antithrombin Projects

## Antithrombin projects



Antithrombin is a plasma protein that inhibits thrombin activity, helping to prevent excessive blood coagulation. Congenital (current indication) and acquired deficiencies of this protein may associate with thrombosis. Evaluating potential additional indications:

- *Cardiac surgery with cardiopulmonary by-pass*
- *Severe burns*

## Cardiac surgery with cardiopulmonary by-pass (artificial extracorporeal circulation)



Decreased levels of antithrombin can be detected after cardiac surgery and may be associated with poor clinical outcomes

A clinical study where Anbinex<sup>®</sup> was administered (versus untreated controls) before cardiac surgery with cardiopulmonary by-pass is ongoing. The treatment of the 200 recruited patients is completed. The main objective is monitoring antithrombin blood levels. Duration of hospital stay, thromboembolic events and mortality were also recorded. The results are under evaluation

## Severe burns



Patients suffering severe burns show, among other consequences, a marked reduction of the regulators of blood coagulation, including antithrombin. This acquired deficiency of antithrombin correlates strongly with several clinical symptoms, duration of hospital stay and even mortality. Previous studies suggest that antithrombin improves time to wound healing, improves symptoms and reduces morbi- mortality (up to 25%) in severe burns

A clinical study will be performed to evaluate the efficacy and safety of Anbinex<sup>®</sup> treatment in patients suffering severe burns



## Antithrombin projects



The evaluation of new potential indications for antithrombin was started with Anbinex<sup>®</sup>, manufactured in Barcelona and licensed in several European countries. Thrombate<sup>®</sup>, manufactured in Clayton (NC) and licensed in North America will be included in the evaluation program



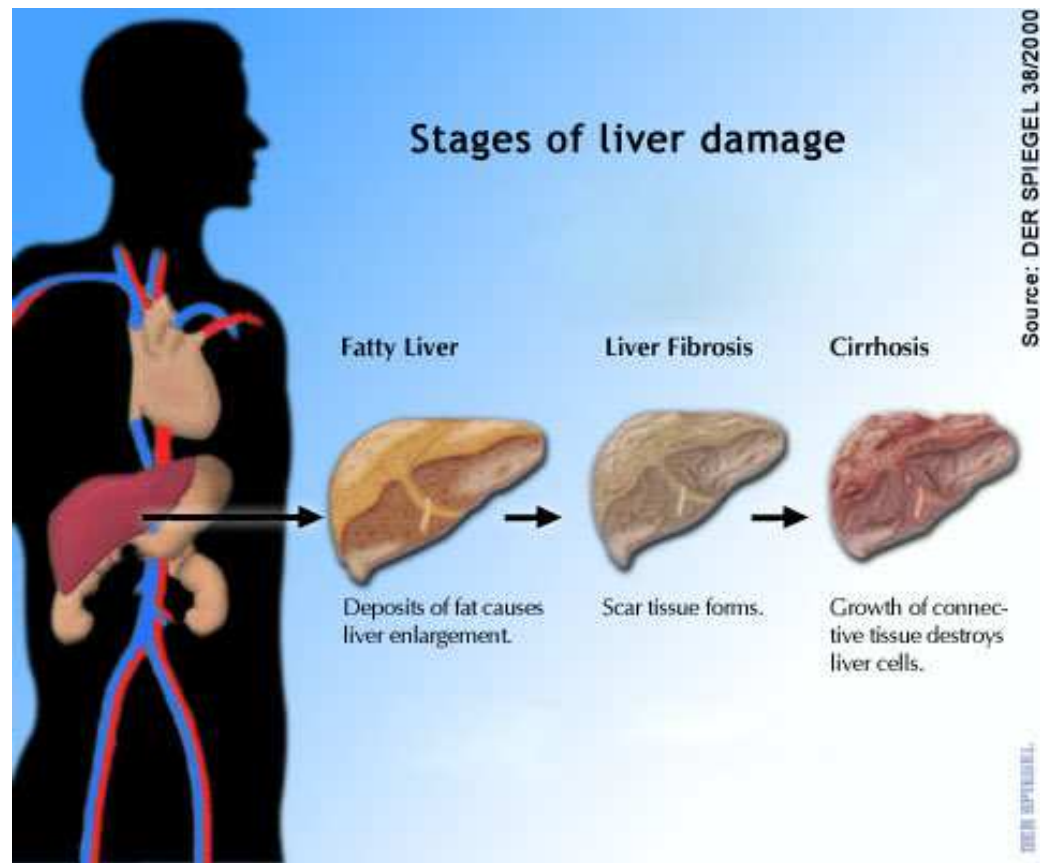
# Albutein<sup>®</sup> in Liver Cirrhosis

# Albutein® in Liver Cirrhosis



Liver Cirrhosis is a degeneration of the liver because of different conditions (toxics such as alcohol, viral diseases, fatty liver ...).

- *Advanced cirrhosis with ascites*
- *Acute-on-chronic liver failure*



## Albutein® in advanced cirrhosis with ascites



Ascites is the accumulation of fluid in the abdominal cavity. Removal of ascites worsens blood circulatory function. Preliminary evidence suggests that albumin administration after ascites removal mitigates the circulatory worsening

Grifols is performing a pilot clinical (Phase IV) study on the effects of long term administration of Albutein® on cardiovascular, renal and hepatic functions in this type of patients. The recruitment of patients has reached 50% of the expected target (30 subjects) and the study will progress towards completion during 2012

## Albutein® in acute-on-chronic liver failure



Acute-on-chronic liver failure is a sudden aggravation of a pre-existing cirrhosis consisting of a rapid deterioration of the liver function that occurs after a variable triggering event in previously stable patients. Its short term mortality is very high (50% to 90%), in spite of treatment at the intensive care units. Most of the toxic substances associated with this condition circulate in blood bound to albumin. Additionally, preliminary evidence suggests that the functionality of patients' albumin may be impaired

A clinical (phase IV) pilot research program has recently been started with the aim of substituting patients' albumin with 5% Albutein® through plasma exchange



# Additional Research

## Additional research: Intravenous Immunoglobulin



Following the success of the highly relevant indication on Chronic inflammatory demyelinating polyneuropathy (first neurological Indication of current IVIGs in USA and second indication in Europe), additional potential relevant uses are being explored, such as Alzheimer Disease (Grifols' synergistic approach) or Post Polio Syndrome

## Additional research: Alpha 1 Antitrypsin



- Liquid Alpha 1 Antitrypsin (advanced development stage)
- Alpha 1 Antitrypsin in Cystic Fibrosis (advanced preclinical stage)
- Alpha 1 Antitrypsin in Diabetes (feasibility research stage)



## Additional research: preclinical stage



- Topical Thrombin (advanced preclinical stage)
- Supplement for cell culture (advanced development stage)
- Intravenous Fibrinogen (intermediate preclinical stage)
- Reversal of Oral Anticoagulation therapy (early preclinical stage)



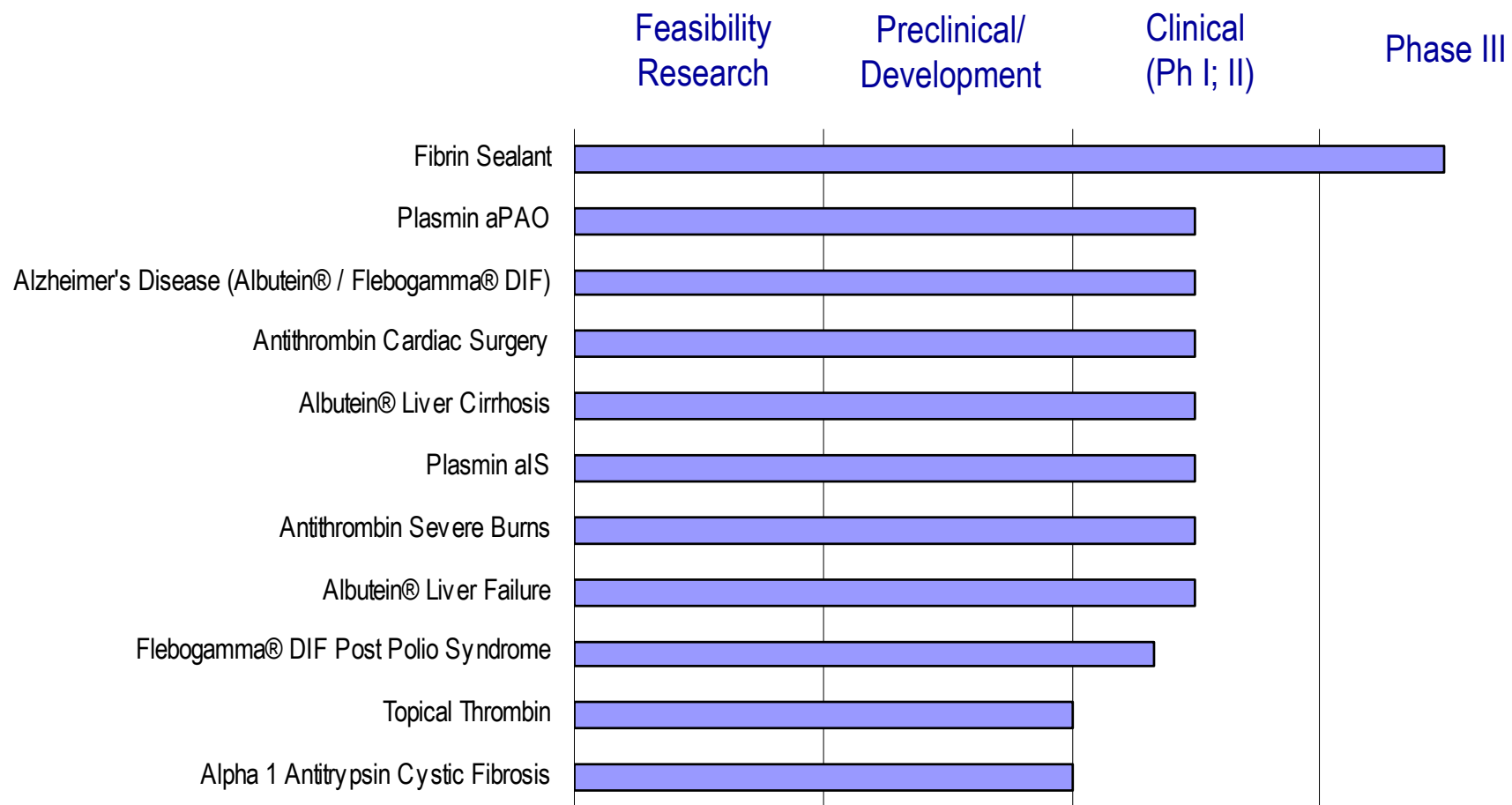
- High concentration Factor VIII/vWF
- Recombinant Alpha 1 Antitrypsin
- Recombinant Plasmin
- Recombinant Factor VIII
- Longer acting coagulation factors

## Research and development future strategy



All existing Grifols and Talecris R&D projects are under evaluation to define priorities, in order to deliver the highest return to the company in the shortest possible timeframe

# Summary: Research and Development status



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# GRIFOLS

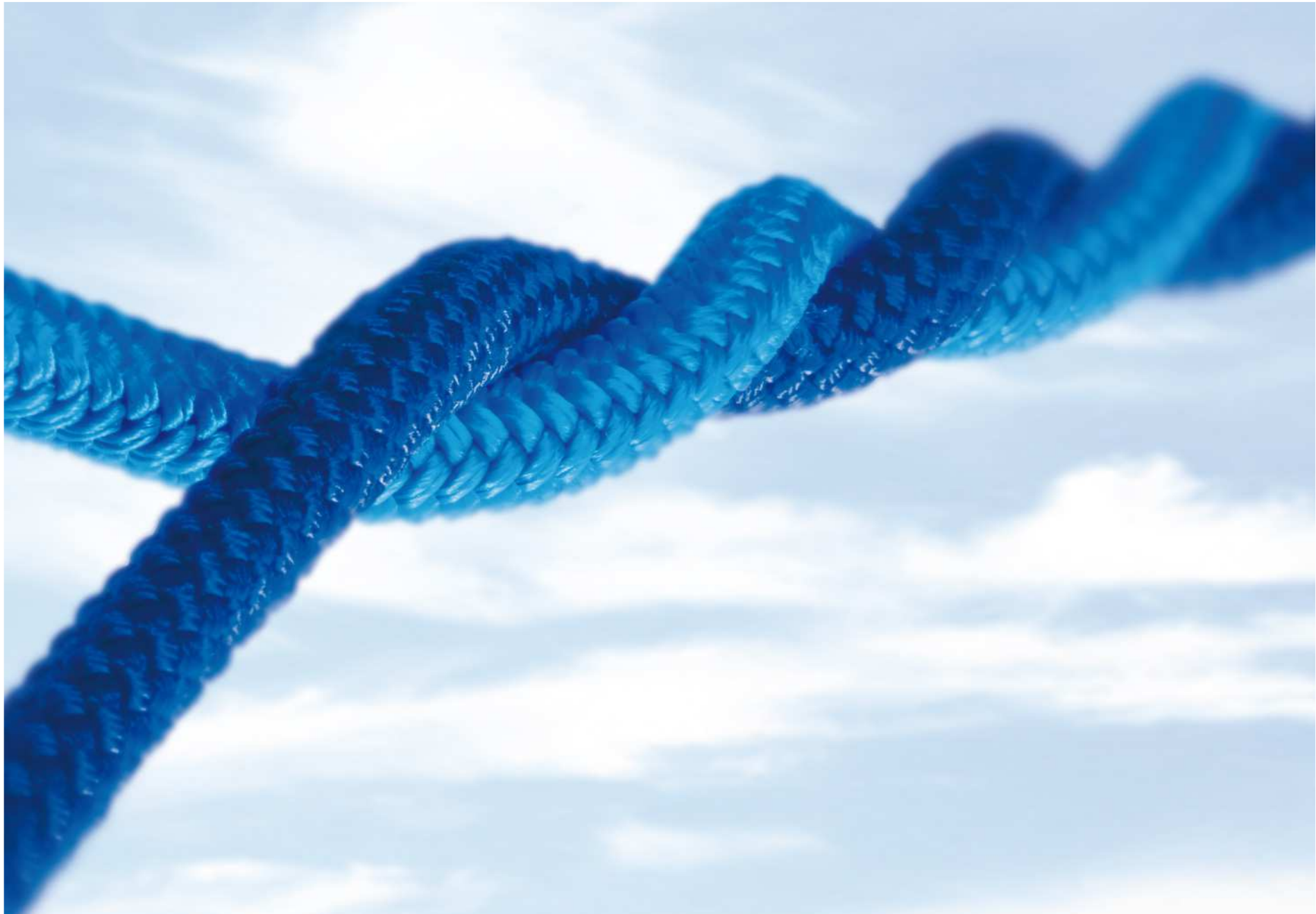
## Wrap-up

*Victor Grifols*

- *Chairman / CEO Grifols, S.A.* –



- One of the top three haemoderivative producers in the world
- Integration process focus on business consolidation
- Progression to full vertical integration
- Increase in fractionation and purification capacity
- Optimization of existing organization: distribution, industrial, R&D
- Fine-tuning of capex programmes: timing, targets and synergies
- Operational synergies are being confirmed and potential for additional ones
- Shareholders value creation



**GRIFOLS**

a new era begins