

Thursday, June 4th 2015 – Raleigh

Time	Topic
9:00	Pick up from hotels
9:30 - 10:00	Coffee + Welcome
10.00 - 10.15	Introductory remarks
10.15 - 10.45	Global operations: Overview & Strategies
10.45 - 12.00	Bioscience: Growing demand
12.00 - 12.30	Diagnostic: A new global franchise
12.30 - 13.30	Lunch
13.30 - 14.15	Plasma procurement progress
14.15 - 15.00	Future of plasma derivatives and Grifols initiatives
15.00 – 16.00	Aging and the therapeutic benefits of plasma

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Time	Topic
16.00	Coffee break
16.30 -17.15	Financials
17.15 - 17:30	Final remarks: Conclusions
17:30 - 18.00	Q&A
18.00	Transfer
19.00	Pick up from hotels
19.30	Dinner & Movie: Plasma proteins manufacturing

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Friday, June 5th 2015 – Clayton

Time	Topic
8:00	Pick up from hotels
9:00 - 9:30	Coffee + Welcome. Introduction to the tour
9.30 - 10:15	Visit: North Fractionation Facility
10:15 - 10:45	Visit: Pilot plant, specialty plasma
10:45 - 11:30	Visit: New plasma warehouse
11:30 - 12:00	Final Q&A
12:00 - 13:00	Lunch in NFF (Buffet)
	Transfers to airport

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Analysts and Investors meeting. Raleigh, June 4-5, 2015

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Introductory remarks *Gregory Rich*

Global operations: Overview & Strategies Ramón Riera

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Grifols mission & values

Grifols is a leading, diversified, global Bioscience company with a growing position in the Diagnostic and Hospital fields







Our mission is to improve the health and well-being of people around the world by providing state of the art therapies, products and services to patients and customers while delivering value to shareholders

PRIDE - SAFETY - EFFORT - COMMITMENT - EXCELLENCE - TEAMWORK - INNOVATION

Grifols to date

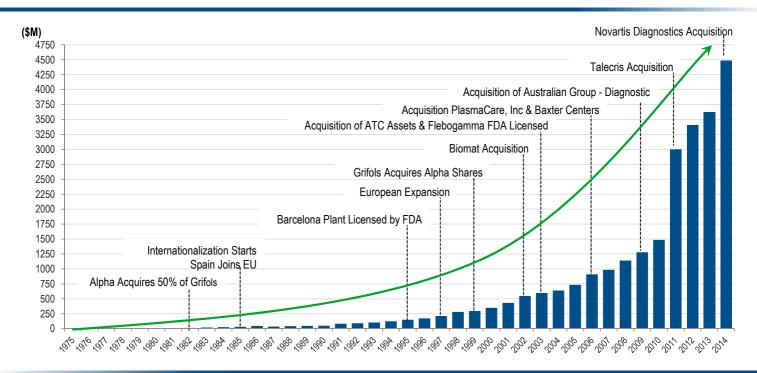
PROFILE IMAGE GROWTH A global employer with A reputation built on Grifols 2006 public stock 14,000 employees, commitment to quality and offering set the stage for safety with a unique position subsidiaries in 30 countries accelerated global growth, as family profile and longest and world-class with Talecris and Novartis manufacturing facilities legacy in the industry Diagnostic acquisitions located in the US, Europe further transforming the and Australia organization

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Grifols successful track record



Grifols strategic plan



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Grifols new global organization

Grifols new global organization

Grifols has always been a dynamic and lively company. This means that changes are part of our culture. Some of those changes are bigger than others and always have been a challenge for all of us



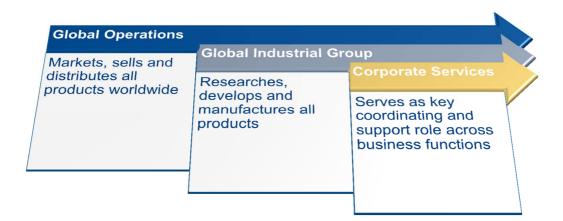
- ✓ In order to better accomplish the goals of our Strategic Plan the company has established a new, internal organizational structure across the world
- ✓ Our aim is to anticipate to new health scenarios and enable the company to offer a more competitive, effective and integrated response to the needs of customers and patients

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New corporate organization



The new corporate organization is focused around **Business Divisions**.

Industrial and **commercial** responsibilities are clearly differentiated, with new regional areas for the 3 commercial divisions

New global operations' structure



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Grifols headquarter structure

The increased operational importance of the divisions is reflected in the creation of headquarters for each one

HEADQUARTERS	LOCATION	
Corporate HQ	Sant Cugat (Barcelona – Spain)	
Bioscience HQ	Raleigh (North Carolina – US)	
Diagnostic HQ	Emeryville (San Francisco – US)	
Hospital HQ	Sant Cugat (Barcelona – Spain)	
Worldwide Warehouse and Distribution	Dublin (Ireland)	
	Corporate HQ Bioscience HQ Diagnostic HQ Hospital HQ Worldwide Warehouse and	Corporate HQ Sant Cugat (Barcelona – Spain) Raleigh (North Carolina – US) Diagnostic HQ Emeryville (San Francisco – US) Hospital HQ Sant Cugat (Barcelona – Spain) Worldwide Warehouse and

Bioscience Division

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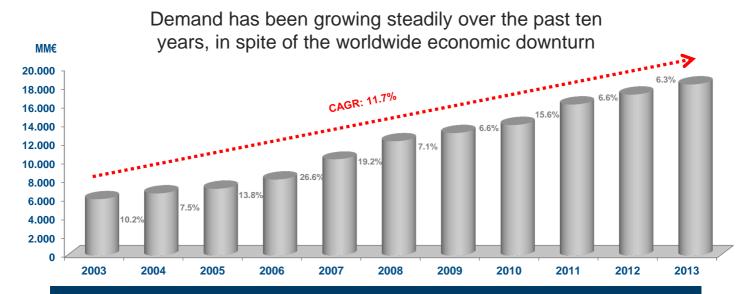


Two essential questions to address

- ✓ Is there a growing and sustainable demand for plasma derivatives products?
- ✓ What is Grifols competitive position in terms of:
 - Quality and safety
 - Production capacity
 - Commercial and distribution power
 - Pipeline



Plasma derivatives market: steady growth



...and it will continue to grow based on the multiple new indications, undiagnosed patients and unpenetrated markets

Source: MRB 2013

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Excellence in manufacturing

A major differentiating factor for Grifols

- ✓ Grifols is the only manufacturing company which combines the capacity to produce biological and non-biological pharmaceutical products, disposable sterile products, reagents and instrumentation, the development of software and engineering solutions, and self-sufficiency in raw materials
- ✓ Grifols has created its own engineering company to develop technology for our
 production companies and to support and supply solutions to other manufacturers of
 pharmaceutical products

Grifols Engineering: unique solutions developed by our engineering experts represent a **clear competitive advantage**

Grifols quality & safety differentiation

The FDA and Industry Standards (IQPP & QSEAL) set in place a basic framework to ensure the quality and safety of plasma-derived products

Quality and safety are of such fundamental value to Grifols that we demonstrate our commitment by going beyond these basic requirements

The activities outlined below set a more robust industry standard:



DONATION

- Commitment to Source Plasma
- Grifols Donor Mgmt. System



PLASMA TESTING & TRACEABILTY

- Plasma Sampling
- RFID System



PRODUCTION

- Automated Bag/Bottle Opener
- Sterile Filling Systems



PRODUCT TRACEABILTY

- PediGri® System
- Laser Etching System

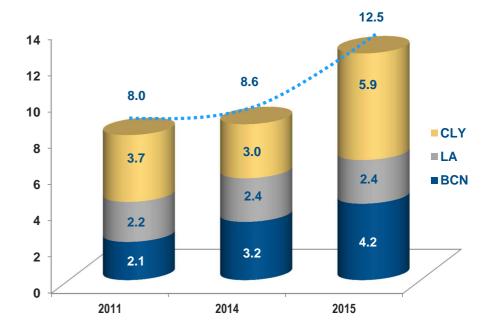
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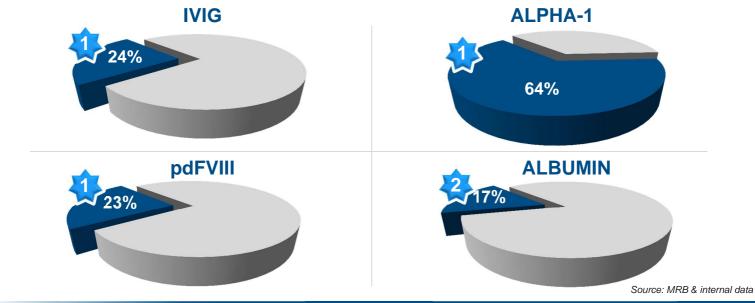
Capacity in place for growth

- 12.5 million liters of total plasma fractionation capacity completed and approved by FDA and EMA
- With balanced purification capacity for equivalent amounts of individual proteins



Grifols a worldwide leader

Grifols leads the global worldwide market in three out of the four biggest plasma proteins



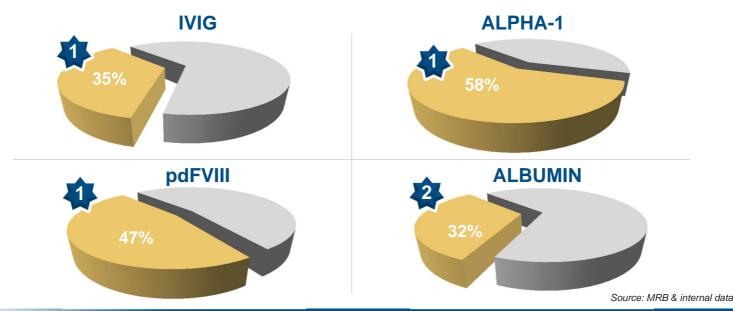
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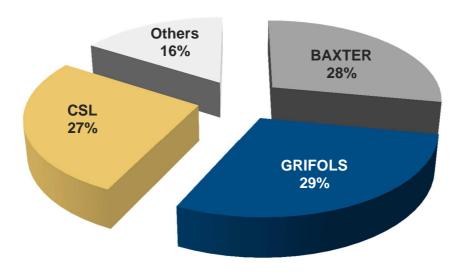


In the US and Canada market

.....also leads in three of them



Grifols is the Num. 1 supplier in the US market of plasma proteins



Source: MRB

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Robust R&D pipeline

- ✓ New indications for Albumin, IG, Alpha-1, Antithrombin
- ✓ New formulations, presentations and administration routes for Albumin, IG, Alpha-1, Factor VIII
- ✓ New products from plasma, fibrin sealant, plasmin, fibrinogen
- ✓ New products non plasma, Pulmaquin® synergistic with our Pulmonology franchise

In 2014, 73% of Grifols R&D clinical investment was spent in phase III trials

Diagnostic Division

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Update acquisition of the new Diagnostic business in 2014

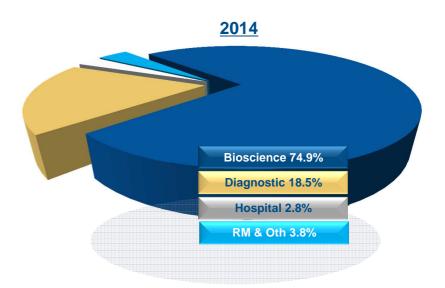
- ✓ Today the business is fully integrated and managed as a single Diagnostic division
- ✓ The acquisition of the new Diagnostic unit has:
 - Positioned Grifols as a leading global, integrated provider of transfusion medicine solutions, from donation to transfusion
 - Increased Grifols' global presence in the market of transfusion safety
 - Diversified Grifols' business and added balance through a large and growing diagnostics unit
- ✓ In 2014, Grifols Diagnostic division accounts for more than 18% of revenues, with a sales of 620 million euros

A transformation of Grifols Diagnostic division

Net revenue by division 2014 vs 2013

Bioscience 89.3% Diagnostic 4.8% Hospital 3.5% RM & Oth 2.4%

Business diversification



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Grifols Diagnostic vision

Expand our leadership in Transfusion Medicine

Build a strong Specialty Diagnostic business

Leverage internal manufacturing and R&D capabilities

Capitalize on external partnerships to build a leading global diagnostic player

Hospital Division

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Contract manufacturing

✓ Contract manufacturing by Laboratorios Grifols (LG) has been and it will continue to be one of the strategic areas of development of the Grifols Hospital Division. LG already has some FDA approved facilities





✓ We have a significant number of internal and external ongoing projects that should represent business opportunities for the coming years

Grifols acquired 50% of share capital of Kiro Robotics

- ✓ Kiro Robotics is a technological company specialized in the development of machinery and equipment to automate hospital processes
- ✓ Spin-off of Mondragon Health
- ✓ The company is the developer of some of the world most sophisticated hospital pharmacy technology, the Kiro Oncology Robot

Product	Status
Kiro Oncology (for chemotherapy preparations)	Commercialized product
Kiro IV (for batch compounding)	Launch scheduled for 2017
Kiro Onkosoft	Launch scheduled for 2017



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Across the board opportunities

Cross - over opportunities

- ✓ Leverage our hospital products and manufacturing capabilities to reduce dependence on 3rd party suppliers, increase efficiencies, and provide market advantages
 - Plasma operations (saline sodium solution, anticoagulant solution, etc.)
 - Bioscience product administration kits (diluent for lyophilized products)
 - Innovative Bioscience product presentations (Albumin in bags)

- Leverage our diagnostics development and manufacturing capabilities to increase efficiencies and optimize treatments
 - Plasma operations (donor screenings)
 - Companion diagnostics to optimize diagnosis of patients susceptible to be treated with plasma proteins
- Leverage division sales forces and existing customer relationships
 - Co-promotion of products from different divisions to the same target customer or channel

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Distribution

Distribution: A flexible global distributor



- ✓ Grifols has a responsive, effective logistics organization that is able to meet the needs of hospital centers throughout the world, punctually
- ✓ In Ireland, Grifols is near completion of a global facility for warehousing, labelling, final packaging and worldwide distribution of Bioscience products
- ✓ Estimated number of employees: 140

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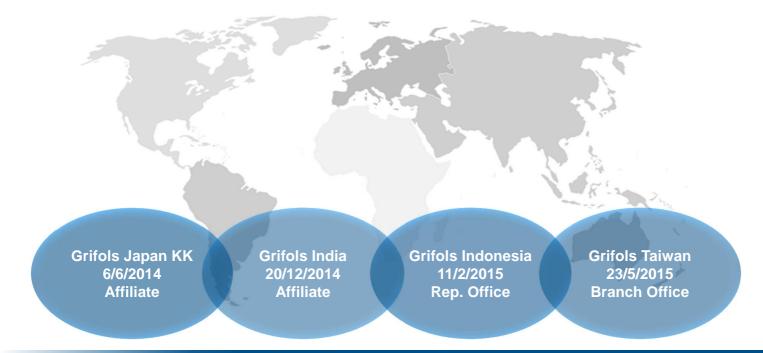


Grifols global footprint: Direct presence in 30 countries



Grifols direct growing presence through entities established in 30 countries to be closer to serve our customer needs

Latest legal entities incorporated



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Key Global operations Takeaways

Key Global operations Takeaways - I

√ Core Business Optimization

- Grow demand for our products
- Balance the liter

√ Geographical Expansion

- Focus on emerging markets
- Expanding diagnosis and indications in developed markets

✓ Innovation Acceleration

Strong R&D product pipeline to secure sustainable growth

√ Capacity Leadership

"Best in Class" manufacturing facilities in continuous expansion to meet market demand

✓ Multi-business build

Leveraging capabilities across de different divisions

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Key Global operations Takeaways - II

- ✓ Grifols is active in markets with long term growing demand and is enjoying a strong competitive position based on
 - Strong portfolio of products
 - Technology and quality
 - Manufacturing capacity
 - Geographical footprint and worldwide sales, marketing and distribution

Bioscience: Growing demand

Lafmin Morgan – Joel Abelson

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Bioscience strategies

Strategic plan pillars: Bioscience priorities



CORE BUSINESS OPTIMIZATION

Increasing CIDP Diagnosis & Treatment

Continuing Alpha-1 Diagnosis campaign

Expanding Albumin promotion

Price competition

Impelling teams



GLOBAL EXPANSION

IG entry into select EU markets

2016 Fibrin Sealant EU launch

Alpha-1 model expansion

New market entries



CAPACITY LEADERSHIP

NC NFF fully operational

Next round capacity upgrades presented

Continued progress on paste exchange



INNOVATION ACCELERATION

Alzheimer's results

Albumin in bags

Gamunex®

Nanofiltration (EU)

Alphanate® 2000 iu

Gamunex® 40g

Prolastin®-C Liquid

Pulmaquin® launch



MULTI-BUSINESS BUILD

Identify crossdivision opportunities with Hospital & Diagnostic

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Promotional levers

Patient ID/Diagnosis

- CIDP
- Primary Immune Deficiency
- Alpha-1
- Rabies and Tetanus prophylaxis

Treatment choice

- IG
- Albumin
- pdFVIII
- ATIII

Brand choice

- Gamunex® & DIF 5%
- Prolastin®-C
- Alphanate[®]

Dosing persistence / compliance

- Gamunex® CIDP
- Prolastin®-C

Executive summary: Bioscience division plan

Current growth

Accelerate U.S. IG pull-through growth by growing CIDP market

Strengthen position of Flebogamma® in US

Increase IVIG market share in EU

Continue investing in Alpha-1 model

Prepare Fibrin Sealant launch in EU

Mid-term growth

Deliver on product innovation (Alpha-1 liquid, Albumin bags)

Expand treatment with IVIG in UK, Spain, Germany, Italy

Expand geographic penetration

Expand Alpha-1 model

Accelerate ATIII diagnostic development

Launch Fibrin Sealant in US

Launch of Pulmaquin®

Long-term growth

Deliver on product innovation

(Sub-cu with differentiation, FS with differentiation, New indications for Alpha-1, IG, Albumin, ATIII)

New protein development

Complimentary technology and product acquisition

Grifols maintains capacity leadership throughout planning period

Significant focus on execution and expanding markets while delivering innovation

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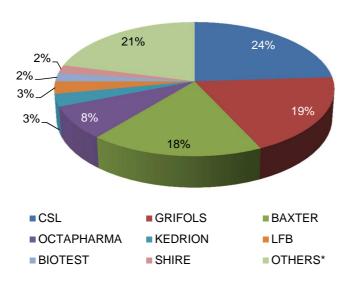
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Bioscience performance

Grifols second largest manufacturer of plasma-derived therapies

Total market 2013 (values)



Source: Internal data, MRB & Secondary official data year 2013

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Grifols market leader for three major proteins

Core business optimization

Product	Market share	Global ranking
IVIG	24%	Number 1
Alpha-1	64%	Number 1
pdFactor VIII	23%	Number 1
Albumin	17%	Number 2

Source: Internal data, MRB & Secondary official data year 2013



US +11.4% CAGR

- ✓ Maintained leadership in IG market Gamunex®-C preferred IVIG in CIDP
- ✓ Product differentiation through launch of Gamunex®-C (40g), Alphanate® (2000 IU vial)
- ✓ Expanded managed markets team and created new payer team focused on maintaining and improving access
- ✓ Increased Alpha-1 diagnosis and treatment through increased testing and expanded promotion

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China, Asia Pacific, & Middle East Bioscience 2011 - 2014 growth

China, Asia Pacific & Middle East +10.4% CAGR

- ✓ Significant Albumin sales growth in China through strengthened commercial presence
- ✓ Converted the branch office in China (Shanghai) into a commercial subsidiary of the Group in 2013
- ✓ Increased presence in emerging markets (Turkey, Russia and Dubai)
- ✓ Grifols became IG market leader in Turkey retail market in 2014 where Grifols is developing a new commercial model involving a closer presence and stronger support for our distributor's network

Germany Bioscience 2011 - 2014 growth

Germany +7.2% CAGR

- ✓ Increased demand of IG, Albumin, and Prolastin® driving record sales of all three products in 2014
- ✓ Successful launch of new patient service program. New patient identification program prepared to start in 2015

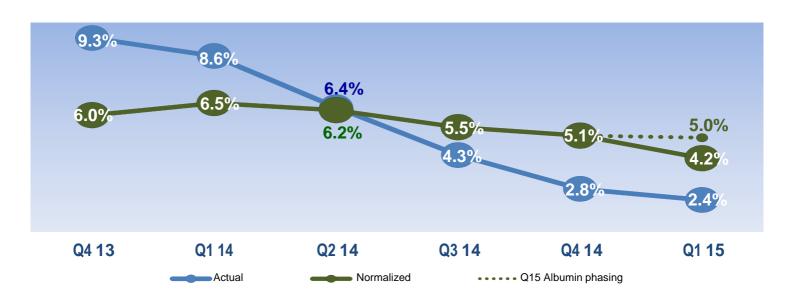
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Bioscience Sales LTM Performance

Bioscience sales volume growth - LTM quarterly



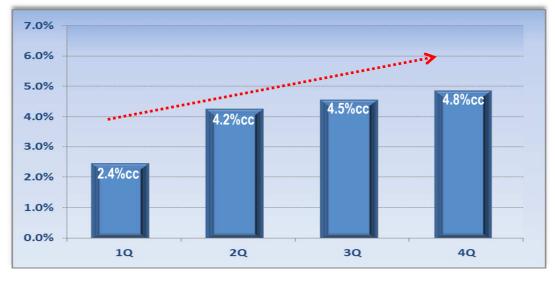
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2014 Bioscience revenue quarterly growth acceleration

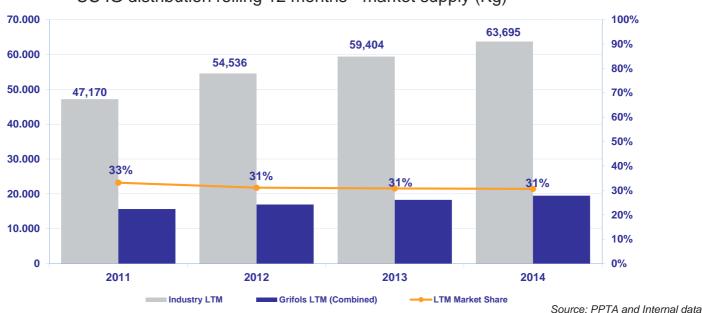
Growth vs. prior year quarter at cc



Constant Currency (CC) excludes the impact of exchange rate movements

Grifols IG market share in US steady since 2012

US IG distribution rolling 12 months - market supply (Kg)



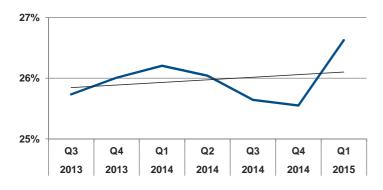
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Underlying IG US business trends

Grifols IG brand share for all disease states by procedure count: 2013-2015



Grifols IG brand share with CIDP diagnosis: 2013-2015



Grifols has maintained share overall and grown share in CIDP CIDP procedures have consistently grown faster than the total

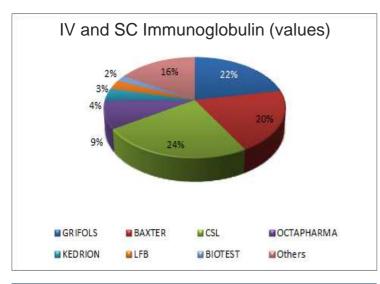
Source: Health Market Sciences

Grifols Immunoglobulin

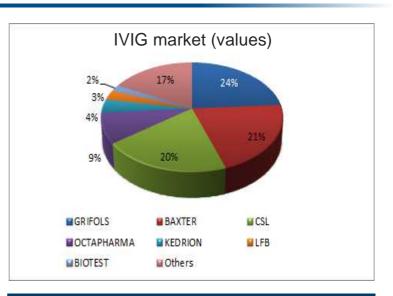
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Global IG market share







Grifols is #1 in the IVIG market

Source: Internal data, MRB & Secondary official data year 2013

Global IG market share





Grifols is the market leader in the US Hyperimmunes market

Source: Internal & MRB 2013 data

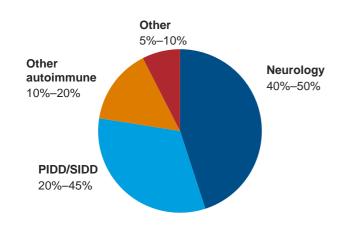
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Neurology drives IG market

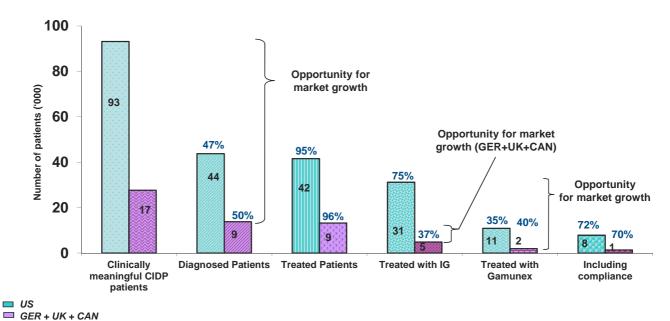
IG Prescribing (% grams)



- ✓ Neurology accounts for largest share of IG use in key markets:
 - CIDP, GBS, MS, MMN, other autoimmune neuropathies
 - CIDP is the largest driver with 25%-30% of all IVIG use
 - Consistent across key markets such as US, Germany, Canada, UK and Australia
- ✓ Immune deficiencies (PIDD or SIDD due to CLL, ALL, transplant, etc.) are next largest segment:
 - Less PIDD use in Germany than US and Canada or UK

CIDP = Chronic Inflammatory Demyelinating Polyneuropathy; GBS = Guillen-Barre Syndrome; MS = Multiple Sclerosis; MMN = Multi-focal Motor Neuropathy; SIDD = Secondary (Acquired) Immunodeficiency disorders; PI = Primary Immunodeficiency disorders; CLL = Chronic Lymphocytic Leukemia; ALL = Acute Lymphoblastic Leukemia Sources: US Habits and Practices; Brogan IGIV Utilization in Quebec Hospitals, Mar13; ORBCON 2012 IVIG Utilization Report; Genactis Germany Habits & Practices, Dec10; UK Third National Immunoglobulin Database Report, Aug12; Australia NBA National Report on the Issue and Use of IVIG for 2010-11

Global CIDP opportunity



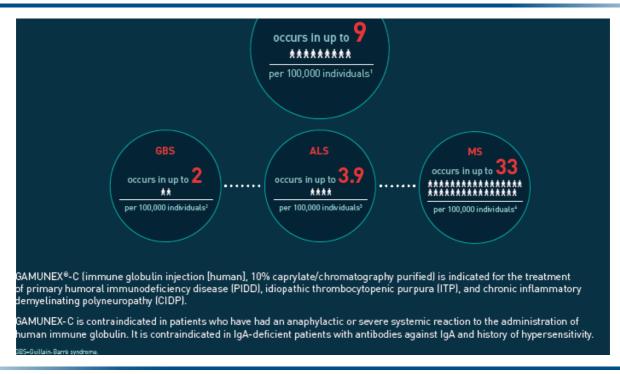
Source: Internal Data & Market Research

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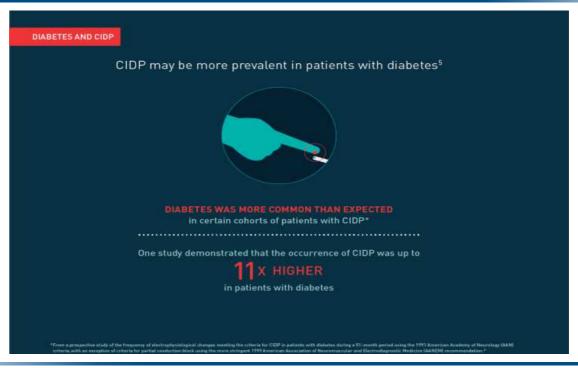
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How common is CIDP?



CIDP prevalence in patients with diabetes

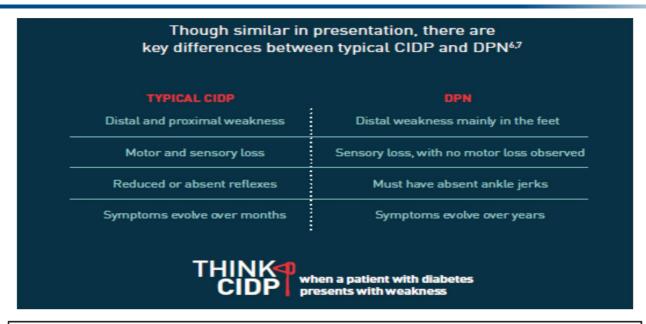


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Market expansion focus on peripheral neuropathies & diagnosis of CIDP



The occurrence of CIDP may be higher in patients with diabetes

Product segmentation: Germany

GAMUNEX®



Dedicated neurology sales team since 2011

FLEBOGAMMA® DIF



New campaign and dedicated sales team launched in 2013

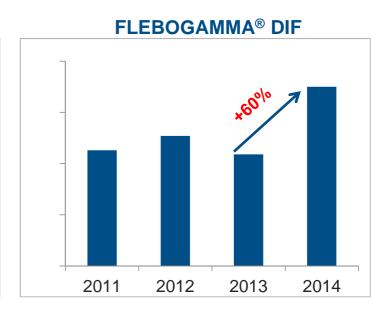
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Product segmentation: Germany

9.3% CAGR 2011 2012 2013 2014



Optimize position in markets where Grifols IG brands are market leaders

- ✓ United States
- ✓ Germany
- ✓ Canada

Launch and grow Grifols IG brands in other key markets

- ✓ France
- ✓ Turkey
- ✓ Latin America

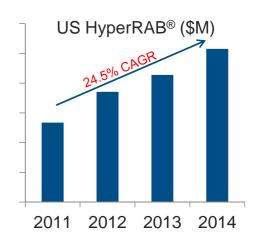
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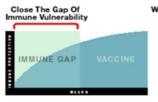
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Hyperimmune growth: Rabies and Tetanus

- ✓ Rabies is essentially 100% fatal, but also 100% preventable
- √ 59% of patients who get rabies vaccine do not get rabies IG despite CDC recommendation for passive immunity (RIG) plus active immunity (vaccine) after exposure
- ✓ HyperRAB® is one of two RIG products available in US and has over 90% share (MRB 2013)
- ✓ New dedicated Hyperimmune team will raise awareness of appropriate rabies prevention and drive brand preference for HyperRAB®









Building around core customer: Tetanus IG and Vaccine - I

CDC guidelines suggest tetanus immunoglobulin (TIG) & Vaccine treatment for patients with less than three doses of vaccine or an uncertain vaccination history

Vá	accination History	Type of wound	Tetanus Vaccine Booster	Tetanus Immunoglobulin
	< 5 years since last dose	All wounds	NO	NO
3 or	5-10 years since last dose	Clean minor wounds	NO	NO
more doses		All other wounds	YES	NO
	> 10 years since last dose	All wounds	YES	NO
. 0 .		Clean minor wounds	YES	NO
< 3 dose	s or uncertain	All other wounds	YES	YES

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Building around core customer: Tetanus IG and Vaccine - II

- ✓ CDC Post-Exposure Prophylaxis guidelines to include TIG for those within uncertain vaccination history are *not* routinely followed
- ✓ Grifols has 100% share of the Tetanus IG market with HyperTET[®] and has licensed a tetanus diphtheria (Td) vaccine from MassBiologics (currently holds 1/3 of a two-product market)
- ✓ Call point at emergency department is same for post-exposure prophylaxis of rabies and tetanus
- ✓ Focused selling team, targeting, and message expected to add over \$10M in vaccine sales to US portfolio within two years, while also driven HyperTET® growth

Immunoglobulin portfolio summary

- ✓ Focused product positioning for Gamunex® and Flebogamma® DIF is strengthening the leading global immunoglobulin portfolio
- ✓ Emphasis on patient diagnosis and optimal treatment creates additional growth opportunity for Gamunex[®]
- ✓ New market launches plus expansion in underdeveloped markets is a core part of our immunoglobulin strategy
- ✓ Grifols' Hyperimmune portfolio is an important driver of value and we are investing to increase growth through emphasis on guideline-based treatment and brand choice

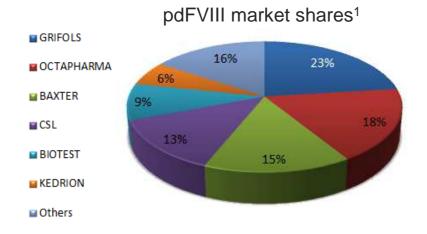
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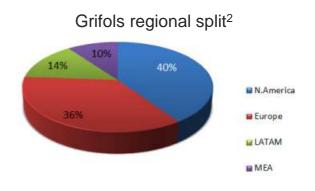
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Grifols pdFVIII

Grifols holds leading pdFVIII position (values)



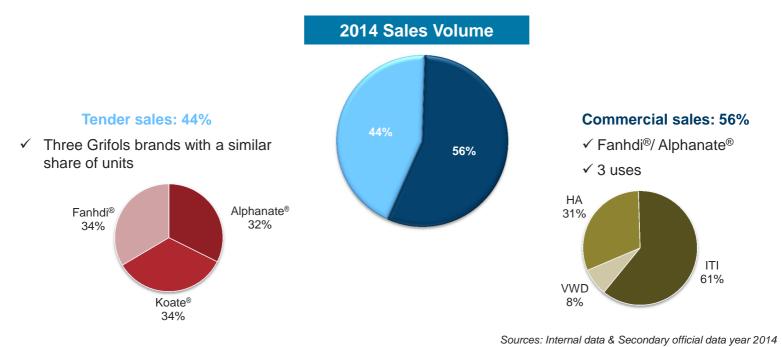


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Grifols FVIII sales split - I



¹ Internal data, MRB & Secondary official data year 2013

² Grifols 2014 net revenues

2014: Grifols FVIII products maintain leadership and grow equal or faster in promotion sensitive markets

	Volume growth			
Countries	Market pdFVIII	Grifols pdFVIII		
US	8%	8%		
Italy*	2%	24%		
Spain	6%	13%		
TOTAL	5%	9%		

Sources: Internal data & Secondary official data year 2014 *Excluded National Plasma self-sufficiency market

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Growth to continue for plasma-derived therapies - I

Key drivers of success for the commercial market:

Improve brand choice in ITI treatment:

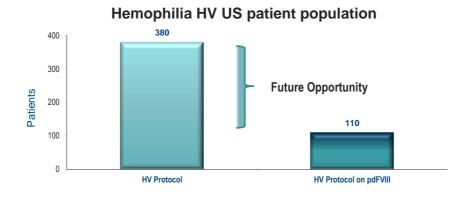
- ✓ Alphanate[®] is the preferred natural factor VIII among hematologists practicing in hemophilia treatment centers
 - Survey participants preferred Alphanate® over the other five available natural factor VIII products by a statistically significant margin [(p<0.05) 95% confidence interval
 - Alphanate® has captured 83% of the plasma derived pdFVIII high volume market*
- ✓ Improve Fanhdi® and Alphanate® labelling:
 - Experience labelling on ITI (UK, Italy, Germany, Czech Rep, Slovak Rep, Poland & Spain)
 - ITI prospective trial (Alphanate® trial)

* Source: Adivo / MRB

Growth to continue for plasma-derived therapies - II

Key drivers of success for the commercial market:

- ✓ Improve Fanhdi® and Alphanate® convenience:
 - High vial assays: Alphanate[®] 2000 IU vial
 Future projects: higher assays, reduce the volume



Source: UDC date 2011 / MRB / PPTA / Market Research

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Grifols pdFVIII summary

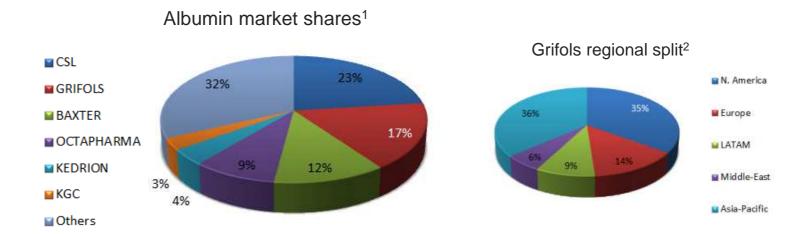
- ✓ Grifols maintains a leading position in the pdFVIII market with 23% global share that keeps the FVIII as one of the key proteins to balance the liter
- ✓ Grifols pdFVIII is growing faster than the market with the promotion of natural FVIII used to treat patients that develop inhibitors
- ✓ Alphanate® has a leadership position in the US with a 45% of overall market share and 83% share of the high volume market. Alphanate® is the preferred natural Factor VIII among hematologists practicing in hemophilia treatment centers

Grifols Albumin

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Grifols is a global leader with strong positions in China & US



¹ Internal data, MRB & Secondary official data year 2013

² Grifols 2014 net revenues

Grifols well positioned

- ✓ Grifols well positioned as market demand estimated to grow at 9.1% CAGR
- ✓ Growth driven by US and China, where Grifols is expected to grow above the market.
- ✓ Developing countries are expected to grow at double digit rate in the coming years
- ✓ FDA & EMA restrictions on HES allow for Albumin growth (mainly EU)
- ✓ Grifols is investing in Albumin:
 - New indications: Alzheimer, cirrhosis and other diseases
 - Field promotion in key markets
 - New packaging: Albumin in bags
 - Expanded manufacturing capacity

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Grifols Albumin summary

- ✓ Grifols maintains a global leading position in Albumin sales with strong positions in the largest markets: China and US
- ✓ Grifols is investing in Albumin as a new therapeutic agent for Cirrhosis, Acute Liver Failure and ALS. Should these clinical trials be successful this would reinforce Albumin properties beyond fluid management and could create a sales opportunity of approximately 500M+ euros over a five year period
- ✓ Albumin market demand will continue to grow and this will be driven by the US and China where Grifols is expected to grow above market with specific promotion in the main identified indications

Grifols Alpha-1 Antitrypsin

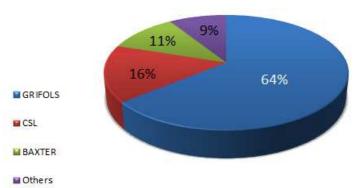
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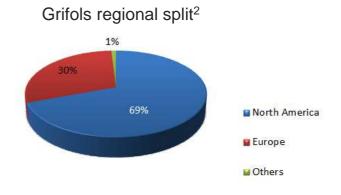


Grifols holds leading Alpha-1 position

Grifols is the leading manufacturer in the worldwide Alpha-1 business



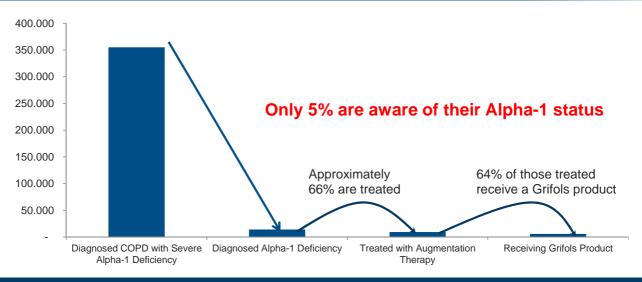




¹ Internal data, MRB & Secondary official data year 2013

² Grifols 2014 net revenues

Global Alpha-1 opportunity remains significant



As many as 350,000 diagnosed COPD patients in US, Canada, Europe and other accessible global markets may have severe Alpha-1 deficiency as the underlying cause of COPD*

* Grifols estimates based on published prevalence studies and internal data

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Global Alpha-1 strategy

Dedicated pulmonary teams

- Established in US, Canada and Germany
- Expanding to Spain, Portugal, Italy and LATAM

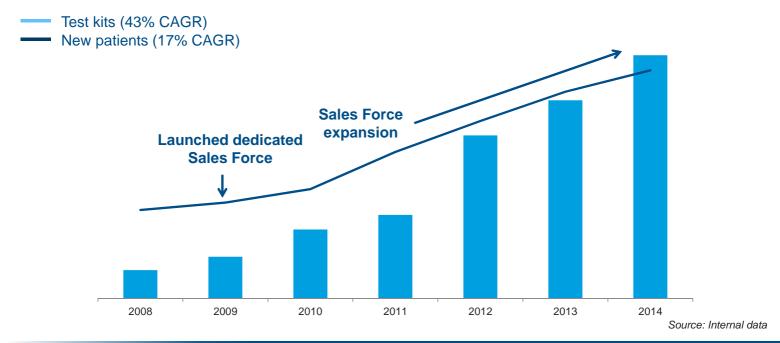
Focused Alpha-1 testing

- Proprietary test kits (US, Canada and Europe)
- New targets (e.g. COPD patient pilots in US and Germany)

Alpha-1 disease management

- Prolastin Direct with AlphaNet in US and Canada
- AlphaCare in Germany

Testing and patient enrollment respond to increased promotion in US market

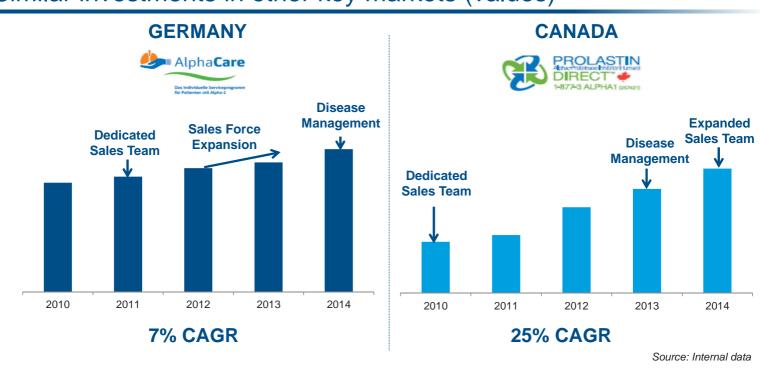


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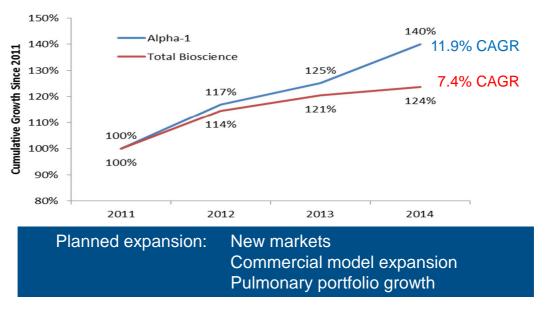
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Similar investments in other key markets (values)



Alpha-1 strategy maintains leadership, delivers growth, balances plasma use



Source: Internal data

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Pulmonary summary

- ✓ Grifols maintains a leading position in the Alpha-1 market with 64% global share that
 is increasing revenue efficiency per liter
- ✓ The global opportunity in Alpha-1 patient identification and treatment is large, making new and underdeveloped markets a core part of our growth strategy
- ✓ Our model of driving patient identification through dedicated pulmonary teams and offering disease management for Alpha-1 patients has proven successful in US, Canada and Germany and we are expanding the strategy to new markets
- ✓ The addition of Pulmaquin® for non-cystic fibrosis bronchiectasis (NCFBE) will be the first portfolio addition to take advantage of our commercial strength in the specialized pulmonary market

Building around the core customer: Pulmaquin®

- ✓ An exclusive, worldwide license signed by Grifols for Aradigm's proprietary formulations of inhaled ciprofloxacin (Pulmaquin®) for the treatment of severe respiratory diseases (August 2013)
- ✓ Pulmaquin® is a once daily, dual release inhaled formulation that is a mixture of encapsulated and unencapsulated ciprofloxacin
- ✓ Initial indication is for NCFBE with launch anticipated in the US in 2017 and EU in 2018
- ✓ Pulmaquin® will have commercial synergies with Grifols' Alpha-1 business

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Addressing Unmet Needs in Respiratory Medicine *Igor Gonda*

Safe-harbor statement



This presentation contains forward-looking statements that are based on Aradigm's current expectations and beliefs and are subject to a number of risks, uncertainties, and assumptions that could cause actual results to differ materially from those described. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including estimates of revenues, operating margins, capital expenditures, cash, the extent of cash needs and the sufficiency of cash resources, other financial metrics, expected legal, arbitration, political, regulatory, or clinical results, and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission (SEC) reports filed by Aradigm, including Aradigm's most recent annual report on Form 10-K and most recent periodic reports on Form 10-Q and Form 8-K. Please refer to Aradigm's most recent Forms 10-K, 10-Q, and 8-K for additional information on the uncertainties and risk factors related to our business. Unless otherwise noted, Aradigm is providing this information as of May 11, 2015 and expressly disclaims any duty to update information contained in this presentation.

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Company overview



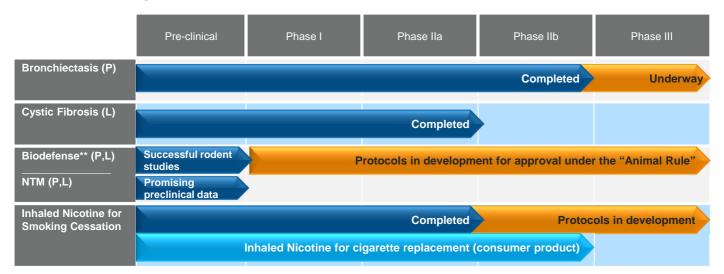
Experts in medications administered by inhalation

- Emerging respiratory specialty pharma company
- ✓ Exclusively focused on prevention and treatment severe pulmonary disease
- ✓ Located in the San Francisco Bay Area
- ✓ Most of the development team worked at Genentech

Therapeutic product pipeline*



Development stage (P= Pulmaquin®, L=Lipoquin®)



*NIH-funded diagnostic program in humans underway as well **Tularemia, Plague, Melioidosis and Q-Fever

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Investment highlights



Applied pulmonary expertise provides multiple opportunities

Pulmaquin®: Proprietary Inhaled Ciprofloxacin for Lung Diseases

- Currently in phase III for chronic therapy for Bronchiectasis an Orphan Drug indication
 - Protocols designed with input from both FDA and EMA; QIDP designation and fast track received from FDA
- Compelling phase IIa data in Cystic Fibrosis (orphan disease), animal data against bioterrorism infections and preclinical results in non-TB mycobacteria
- Global licensing deal in place with Grifols, S.A
- Patents granted in multiple geographies exclusivity to 2031

Bronchiectasis (BE): Background



✓ BE is a severe obstructive lung disease

Vicious cycle of lung injury, infection, inflammation, airflow obstruction and eventually death due to respiratory complications

Many diseases can lead to BE (TB, CF, COPD)

√ "Non-CF BE" > 110,000 patients in US (growing at ~ 8.7% p.a.), 210,000 in EU
who are not CF patients and whose disease is unlikely to be caused by
smoking

Aradigm has Qualified Infectious Disease Product (QIDP) designation and orphan drug designation for BE in US

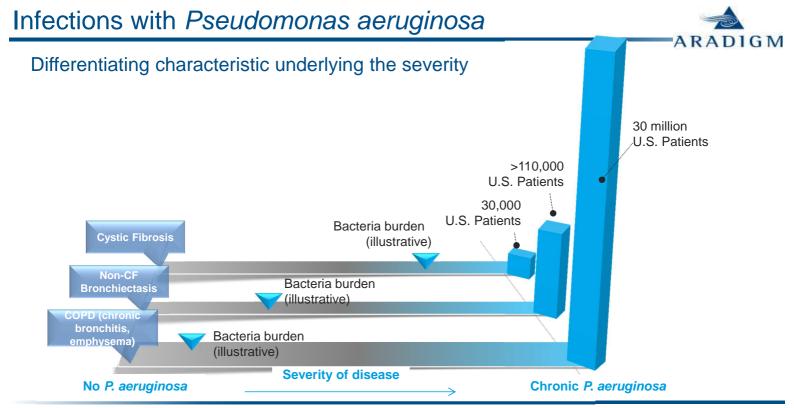
- ✓ Large populations in Asia and other parts of the world
- √ No specific treatment approved
- ✓ Respiratory infections are the key reason for pulmonary exacerbations leading to a high incidence of hospitalizations

Average cost: \$42,000 per hospitalized event

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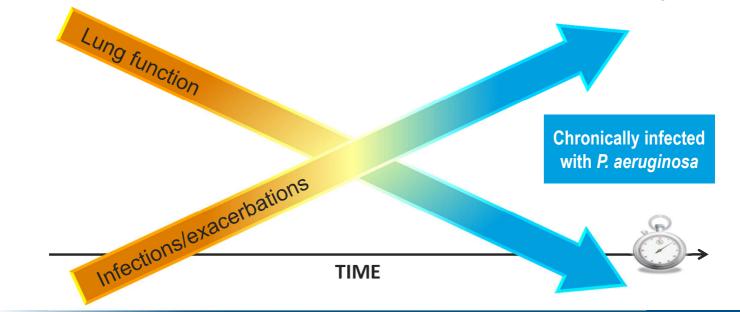




Colonization with P. aeruginosa:



The presence of PA rapidly increases rate of exacerbations and decline in lung function



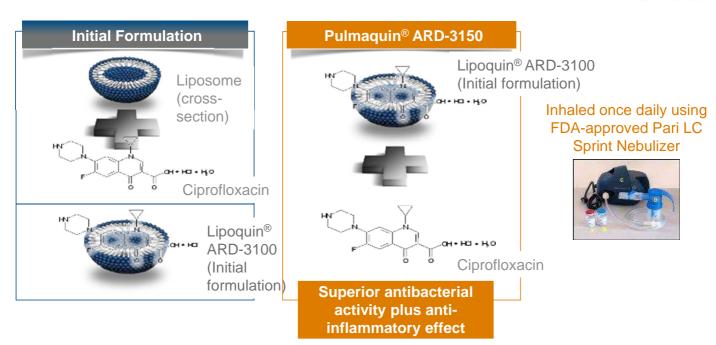
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Aradigm's lead product: Pulmaquin®





Aradigm's opportunity in BE





Orphan condition with no approved therapies, QIDP designation and Fast Track received

High treatment costs and premature death Fast track, priority review possible



Strong IP protection

Four patents issued in US, two in Australia, one each in Japan and EU— protection to 2031 US QIDP and orphan drug status granted



Approvable endpoint achieved in ORBIT-2 – Phase IIb trial

Increase in time to exacerbation is beneficial for payers and patients

Phase III program underway



Few competitors pursuing this indication

Previous attempts using "unencapsulated" inhaled antibiotics (e.g., TOBI, Cayston, colistin) failed



Aradigm's unique approach:

Potent antibacterial activity
Good pulmonary safety and tolerability
Significant positive impact on pulmonary
exacerbations



Aradigm believes Pulmaquin® for BE is a "billion \$ plus" opportunity

Grifols has stated sales expectations of \$300 million in Year 3 post launch

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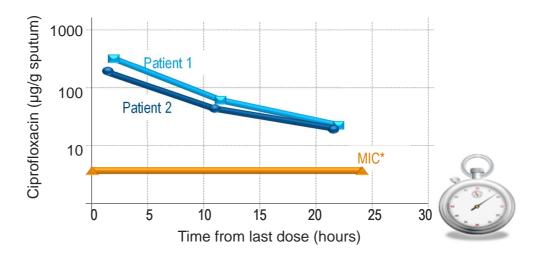
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Very high sustained Ciprofloxacin sputum levels



Unachievable with oral or IV Ciprofloxacin

Pulmaquin®



* Moskowitz SM et al., (2004), J Clin Microb 42:1915-1922

Preventing pulmonary exacerbations



Why do we use inhaled Liposomal Ciprofloxacin?



Choice of drug: Ciprofloxacin

Broad spectrum antibiotic – different class from approved inhaled antibiotics, no cross-resistance

Approved as tablets and injections

Tablets and injections used to treat acute lung infections – rarely used chronically for **prevention** of pulmonary exacerbations because:

- Ciprofloxacin has systemic side effects
- There are concerns about emergence of antibiotic resistance with systemic antibiotic use



Choice of delivery method: Inhalation

Rapid onset of action, improved efficacy (rapid and sustained high antibiotic concentrations at the sites of infection in the respiratory tract)

Low blood levels – less likely systemic side effects and resistance



Choice of formulation:

Slow Release Liposomal Encapsulation

Reduces frequency of dosing (once daily vs. twice daily for TOBI® and three times for Cayston®)

Improves respiratory tolerability compared to unencapsulated inhaled antibiotics

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ORBIT-2 phase IIb study of Pulmaquin® vs placebo in bronchiectasis



42 patients, 3 cycles of 28 days on/28 days off (~ 6 months)

Endpoint	Drug*	Placebo*
P. aeruginosa colony-forming units/Logs at 28 days (primary)	-4.44 (27,000 fold)	+0.13
Median time to first pulmonary event (secondary)	134 days	58 days
Required supplemental antibiotics (secondary)	7 patients	15 patients

ORBIT-2 demonstrated that controlled release of inhaled ciprofloxacin in the lung results in excellent anti-infective activity coupled with good safety and tolerability, leading to a statistically significant increase in the median time to first pulmonary exacerbation – **an approvable primary endpoint**. No evidence of emergence of resistance due to treatment

^{*}Safety: Superior pulmonary adverse events profile in the treatment group vs. the placebo group. No significant change in lung function (FEV1)

Pulmaquin® in BE



Phase III design cleared with FDA and EMA

✓ Two phase III pivotal trials currently enrolling

- ✓ Trial design
 - ~ 255 patients per trial
 - 6 cycles of once daily treatment with Pulmaquin® vs placebo (6x28 days on/28 days off ~ 1 year) + 28 days open label extension
 - Primary endpoint: time to first pulmonary exacerbation
 - ORBIT-2 met this endpoint with statistical significance: 134 days with Pulmaquin® vs 58 days on placebo
- √ FDA and EMA agreement on design

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Pulmaquin® potential markets



Unmet or poorly met medical needs present high value opportunities

- ✓ Pseudomonas aeruginosa
 - Non-CF Bronchiectasis (BE) (phase III underway)
 - Cystic Fibrosis (CF) (phase IIa)
 - Severe COPD
 - Japan: Diffuse Panbronchiolitis

✓ Other infections

- Non-TB mycobacteria (preclinical funded by NIH grant)
- Broad-spectrum prophylaxis and treatment of "bioterrorism infections": inhalational tularemia, Q-fever and plague (animal data, funded by UK and Canadian defense research labs)

Key Bioscience Takeaways

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Key Bioscience Takeaways

- ✓ Strategic focus is on market growth and geographic expansion while delivering innovation
- ✓ In the countries that account for 80% of Grifols Bioscience sales, the CAGR was 11% from 2011 to 2014
- ✓ Growth rates slowed into 2014 due to depletion of Albumin inventory synergies, slower market growth and pricing pressures, but within 2014, growth strengthened throughout the year
- ✓ Grifols sustains a leading position within our core business of plasma-derived therapies, being #1 in most of the major proteins
- ✓ Products like the TD vaccine and Pulmaquin® are building around the core of our business with the customer in mind
- ✓ Grifols has invested in the Bioscience division to sustain growth throughout the planning period (Commercial investments, Fractionation capacity, R&D)
- ✓ Significant growth opportunities remain for key proteins

Diagnostic: A new global franchise

Carsten Schroeder

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2014 Highlights

2014 Highlights: Fully integrated new business

GLOBAL EXPANSION

- ✓ Strengthened presence in strategic markets
- ✓ Gained momentum in US for blood typing solutions

CAPACITY LEADERSHIP

 Continued investment to upgrade and expand Diagnostic manufacturing plants

INNOVATION ACCELERATION

- ✓ Received FDA clearance and CE mark for key products
- ✓ Initiated first project to capitalize on synergies with Bioscience

MULTI-BUSINESS BUILD

✓ Integrated the newly acquired blood screening business

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Where we are today



Diagnostic vision

A global diagnostics company focused on select, high-value markets providing innovative solutions to:



Detect human diseases



Monitor therapies



Ensure a safe blood and plasma supply

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Overview & Strategy

Diagnostic division

AT-A-GLANCE



1,000+ full-time employees supporting Diagnostic success



Integrated from assay/ instrumentation development through commercialization



FDA, GMP & CE Licenses



Commercial leader in Transfusion Medicine and emerging Specialty Diagnostics Portfolio



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Diagnostics overview

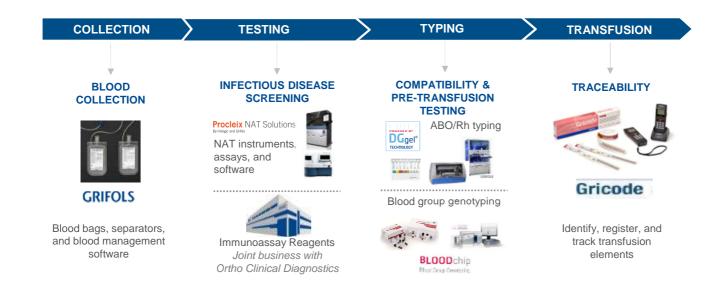
	Nucleic Acid Testing (NAT)	Immunoassay	Blood typing	Other
2014 Net revenue % share	53%	26%	14%	7%
Market share ¹	57%	50 - 80%	7%	-
Partner/ Business model	Hologic 50% revenue share	Ortho Clinical Diagnostics 50% profit share	-	-
Products	Instruments, assays	Antigens	Gel cards (typing), genotyping, instruments	Blood bags, clinical analysis, hemostasis

93% of today's Diagnostic revenue comes from the Transfusion Medicine

¹ Nucleic acid testing represents the adopted market; Immunoassay represents OCD/ Grifols, depending on segment and geography



A global leader in Transfusion Medicine



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A global leader in Transfusion Medicine



World-leading manufacturer and supplier of HCV & HIV antigens



We supply HCV and HIV antigens to the top three immunoassay players

Market position established with proprietary IP and sustained through manufacturing expertise for more than 20 years

Consistent source of financial returns

50-80% immunoassay market share depending on segment and geography

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Grifols & Ortho Clinical Diagnostics partnership

Grifols contributions

- ✓ HCV & HIV patents
- ✓ Antigen research, manufacturing & supply
- ✓ Assay research support

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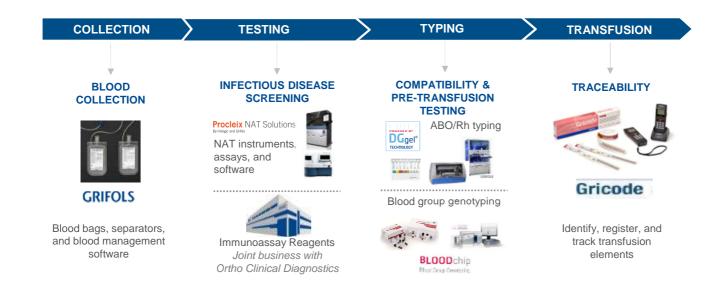
OCD contributions

- Assay development & manufacturing
- ✓ Instrument development & manufacturing
- ✓ Product commercialization

Ortho Clinical Diagnostics
THE CARLYLE GROUP

Delivering 26% of the total Grifols Diagnostic division net revenue

A global leader in Transfusion Medicine



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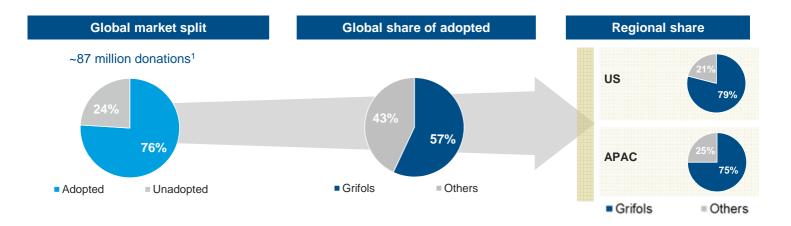
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A global leader in Transfusion Medicine



A global leader in NAT blood screening



- ✓ Differentiated automated platforms and best-in-class assays
- ✓ Customer value and satisfaction through focus on sales, service and support

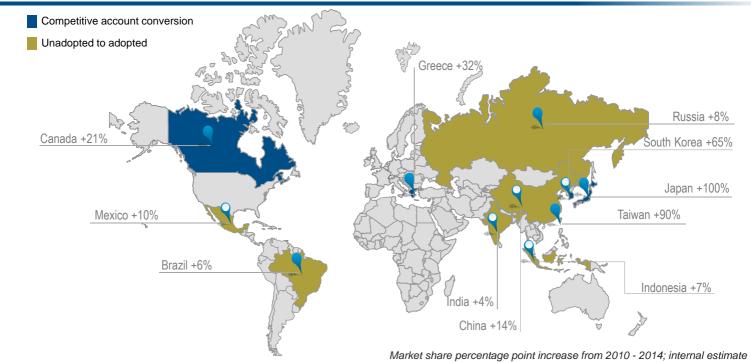
¹ Represents 2014 data for select countries, internal estimate

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Converting unadopted markets and accounts



Grifols contributions

- ✓ HCV & HIV patents
- ✓ Product commercialization, technical service, support & training
- Regulatory activities outside of US

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Hologic® contributions

- ✓ Product development & manufacturing
- ✓ Technology (TMA) patent
- Regulatory activities in the US

HOLOGIC

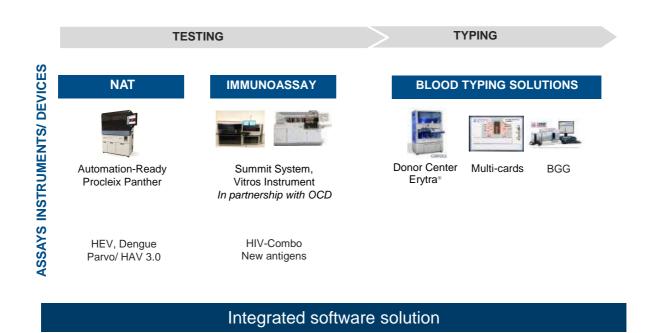
Delivering 53% of the total Grifols Diagnostic net revenue

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Transfusion Medicine pipeline



Expanding our Transfusion Medicine business

GLOBAL EXPANSION

- ✓ Protect and grow the business
- ✓ Enter targeted emerging markets
- ✓ Continue best-in-class service & support

CAPACITY LEADERSHIP

 Continue investment to upgrade and expand Diagnostic manufacturing plants

INNOVATION ACCELERATION

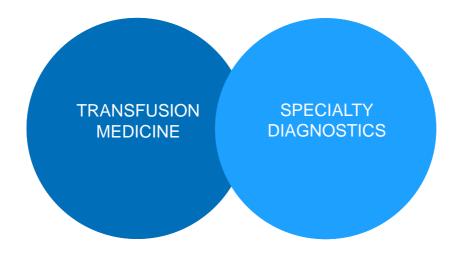
- ✓ Invest in strategic partnerships/ technologies
- ✓ Offer innovative and integrated solutions

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Our current business



Specialty Diagnostics product portfolio



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Build a strong Specialty Diagnostics business

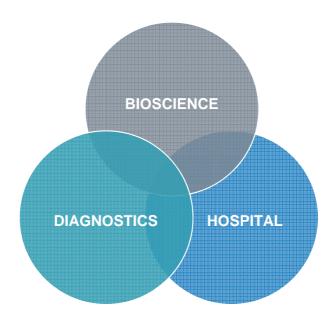
GLOBAL EXPANSION

✓ Leverage instrument installed base and current product portfolio

INNOVATION ACCELERATION

- ✓ Focus on unmet medical needs
- ✓ Develop proprietary, high value tests
- ✓ Evaluate next generation sequencing platform

Leverage capabilities across divisions



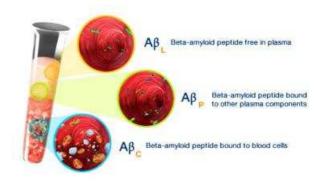
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Maximize market opportunities for Bioscience

- ✓ Alzheimer's disease needs an early diagnosis
- ✓ Araclon has developed kits that has allowed a direct determination of beta-amyloid proteins in blood
- Clinical studies are underway to validate our Aβ test kits as indicative tools in the diagnosis of Alzheimer's



"Alzheimer's kills more than prostate and breast cancers combined."

❖ Alzheimer's Association - www.alz.org May 2015

Maximize market opportunities for Bioscience

- ✓ Alpha-1 deficiency which often goes undetected, is a genetic disorder that can lead to serious health issues such as lung disease
- Early diagnosis and intervention is important
- ✓ Grifols is developing a novel Alpha-1 diagnostic test and offers plasma therapies for Alpha-1deficiency



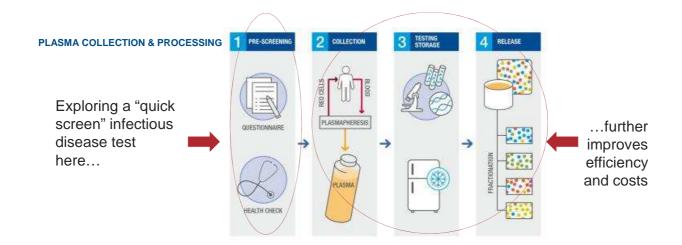


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Cost and efficiency opportunities in plasma collection



Key Diagnostic Takeaways

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Key Diagnostic Takeaways

GLOBAL EXPANSION

- ✓ Continue to expand Transfusion Medicine leadership
- ✓ Build a strong Specialty Diagnostic business

CAPACITY LEADERSHIP ✓ Continue investment in manufacturing plants to meet growing Diagnostic business

INNOVATION ACCELERATION

- ✓ Invest in strategic partnerships and technologies
- ✓ Launch innovative integrated solutions

MULTI-BUSINESS BUILD

✓ Capitalize on commercial synergies with Bioscience and Hospital

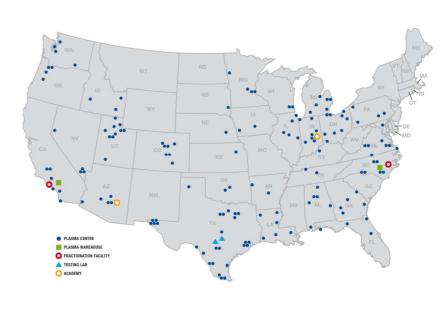
Plasma procurement progress Shinji Wada

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"Integration" to "Excellence"

- ✓ Network of 150 centers maintained while supporting the company's increasing plasma throughput
- Critical processes harmonization progressed under the Grifols Plasma Operations Management team
- ✓ Field organization was restructured and streamlined for better oversight and tactical execution
- ✓ Three testing laboratories were integrated to two Texas labs with in-house NAT testing platform



Completion of NC plasma logistics center



- √ 7,760 m² Fully automated plasma storage and clearing warehouse
- √ 5,032 pallet positions for 3.2 million liters capacity

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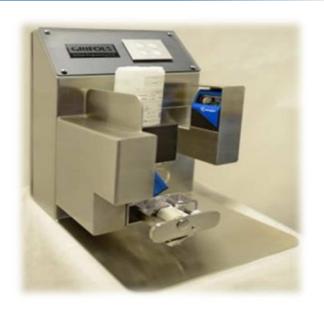
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Donor center automation projects - I

Plasma Bottle Sampling (PBS) System

- ✓ Designed and build by Grifols Engineering
- √ Simplify extraction of plasma samples
- √ Verify integrity of unit/sample identification
- ✓ Improved employee safety during the process
- ✓ Rollout to Grifols donor centers will be completed in 2015



Donor center automation projects - II

Grifols Donation System (GDS)

- Donor Center Management Software designed and build by Grifols IT
- ✓ Tailored to Grifols Best Practices and SOP for further quality excellence
- ✓ Powerful data and logistic management functions



Significant labor cost saving and process efficiency improvement expected

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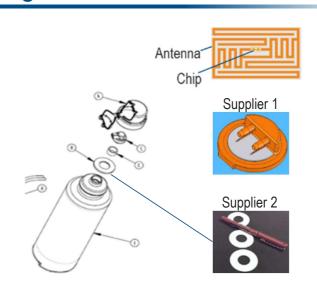
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Technological advance for plasma logistics

Plasma RFID Bottle

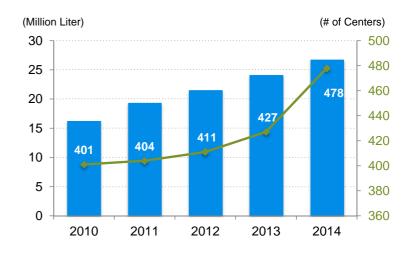
- ✓ Patented RFID technology for Plasma unit management
- Developed with major soft goods suppliers
- Assure complete traceability and quality of plasma unit handling at donor centers, logistic center and fractionation plant



Reduce significant manual work load of plasma unit logistics

US plasma collection industry

- ✓ Double digit y-o-y volume Increase for the last 3 years
- ✓ Rapid increase of new donor centers
- Declining recovered plasma availability
- Increasing competition among donor centers
- √ Industry focus on donor-safety



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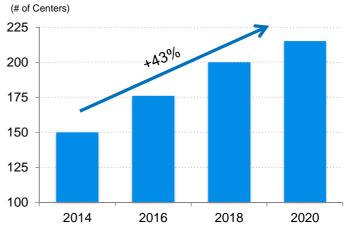
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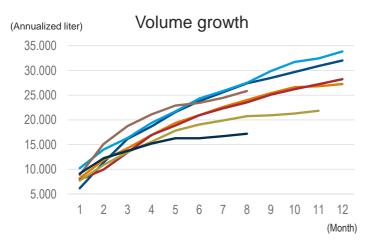
Supporting growing plasma demand

- √ 15 new donor centers opened or relocated and upgraded to "Grifols Standard"
- √ 12 major remodeling completed
- Average collection volume of existing centers nicely growing
- ✓ Aggressive new center opening, planned (65 facilities in 5 years) to warrant company's long-term growth and capacity leadership

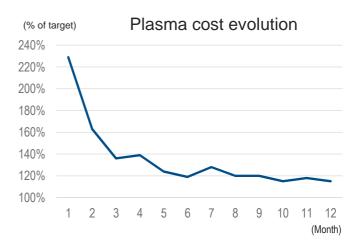
Grifols Plasma Operations donor centers



New donor centers in start-up



✓ Need careful balancing of quality operation and collection volume increase



- \checkmark Controlling cost at any new center is challenging
- √ 2 plus years to reach cost target

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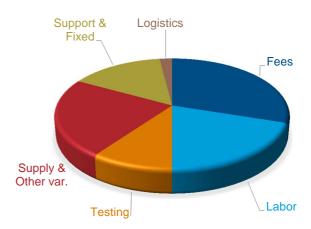




Aggressive plasma cost management

- Fixed cost absorption by planned volume growth
- Accelerating process automations with new technologies for significant labor cost and process efficiency improvements
- Re-engineering donor center labor management model
- Pursuing further synergies with other Grifols divisions
- ✓ Further investments for center employees development





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Quality of employees matters

Grifols Academy accredited by ACCET

The Grifols Academy received accreditation for a five year period by the Accrediting Council for Continuing Education and Training (ACCET)

Provides national recognition to the Academy

Allows the Academy to grant continuing education credits (CEUs) to be used by Grifols employees



Grifols Academy's partnership with the College for America

Grifols Plasma Operations employees who want to continue to grow their career with Grifols can receive their necessary education through College for America

221 Employees actively enrolled

179 Associates degree



3 Completed the program





Grifols partnership with the College for America was recognized by the White House after President Obama's State of the Union Address on January 20, 2015

Key Plasma procurement progress Takeaways

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Grifols Plasma Procurement progress Takeaways

- ✓ Continue maximizing plasma collection at existing, licensed donor centers
- √ Aggressively adding new centers for long-term capacity leadership
- ✓ Improvement of plasma cost efficiency by innovative solutions, labor model reengineering and continuous process improvements
- ✓ Continue investment to employee competency development through Grifols Academy programs
- ✓ Enhance specialty plasma programs to support hyper-lg franchise

Future of plasma derivatives and Grifols initiatives Toni Paez

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Grifols initiatives

- √ Plasma derivatives as natural products
- √ Immunoglobulins in infectious disease and immunology
 - Specific IGs
 - World plasma pool
- ✓ Liver failure
- $\checkmark\,$ Aging, age-related conditions and other diseases
 - Alzheimer's
 - ALS (Lou Gehrig's disease) and others
 - Young plasma derivatives

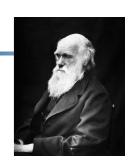
Plasma derivatives are natural products

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Natural plasma proteins

- ✓ Until the 80's there was just one type of therapeutic plasma proteins that found in Nature
- √ Found in human plasma
- ✓ Consequence of human evolution through Natural selection
- ✓ Hundreds of millions years needed to evolve
- ✓ Critical components for the equilibrium of multiple functions



Engineered proteins

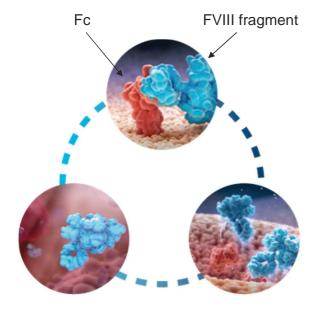
- ✓ Recombinant and Transgenic: produced from the 80's as "copies" of natural proteins in genetically modified cells or animals, with a few differences due to post-translational modifications, which came to satisfy the required amount for certain diseases
 - recombinant Factor VIII (success)
 - transgenic A1P1(failure)
- ✓ Fusion proteins: new artificial proteins "created" from other proteins modifying their natural function and metabolism
 - Fc Fusion

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Fc Fusion



- ✓ Assembly of a recombinant Factor VIII fragment and an immunoglobulin portion
- ✓ Factor VIII is not bound to its natural partner, von Willebrand Factor
- ✓ Not found in Nature
- ✓ Potentially more immunogenic than the natural protein and its copies
- ✓ Other risks not yet known (multiple functions)
- ✓ Little advantage in front of the natural (e.g. 2 weekly infusions instead of 3)

IG in infectious disease and immunology

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IG as a treatment of infectious diseases

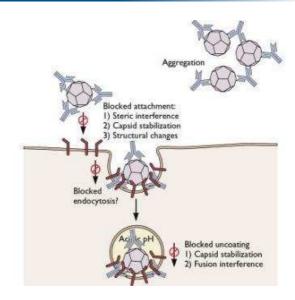
- ✓ Human immune system can avoid re-infection in patients recovered from a first infection (e.g. measles)
- √ Immune system produces IG against pathogens (defenses)
- ✓ Such IG can be used to treat disease during its course
- √ Specific IG target specific pathogens
- ✓ Same concept leads to vaccination: the immune system produces specific IG
- ✓ In addition, immunodeficient patients cannot be vaccinated

But regardless of vaccination, IG have been used for treatment of infections. The scientific world has forgotten this use

Not all IGs are the same

- Different IG bind to different sites of a toxin or pathogen and with different intensity
- ✓ Monoclonal IG bind to a single site
- ✓ Natural IG bind to multiple sites
- ✓ Natural IG present a higher likelihood of neutralizing a toxin or pathogen
- Natural IGs are capable of inhibiting multiple paths to infectivity

Grifols has and is developing neutralizing tests to explore new indications for our natural immunoglobulins



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Development of hyperimmune natural IG

- √ Vaccination of a naïve population without the disease
- √ Immune system produces specific IG against disease
- √ Hyperimmune plasma collection from donors
- √ Vaccine is not available
- ✓ Population that has recovered from disease has high titers of specific IG against disease
- Convalescent plasma collection from recovered patients





Naïve population





Convalescent population

Potential opportunities for hyperimmune IG

- ✓ Hyperimmune plasma to approach diseases with an active vaccine
- ✓ May include all infectious diseases for which there is an effective vaccine



Hyperimmune IG can be used in countries where there is no effective vaccination

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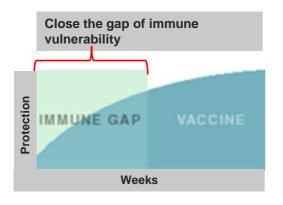


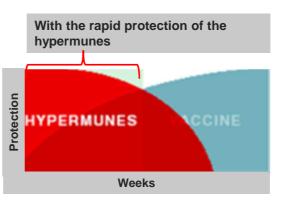
Grifols has a broad hyperimmune portfolio

North America	Worldwide Markets	Indication	Dosage	Co-therapeutic	Packaging
HyperRab S/D	HyperRab S/D	Post-exposure prophylaxis for rabies	20 IU/kg (0.133 mL/kg)	rabies vaccine	2mL and 10mL vials
HyperTet S/D	lgantet	Post-exposure prophylaxis for tetanus	4.0 units/kg (<7 yrs) 250-IU IM injection (>7yrs)	tetanus vaccine	250 unit prefilled syringes (PFS)
HyperRho S/D	Igamad, Igantid	Rh hemolytic disease of the newborn (HDN)	1500 IU ante-partum and post-partum series	none	1500 IU PFS
HyperHepB S/D	Igantibe, NIULIVA	Post-exposure prophylaxis for hepatitis B virus	0.06 mL/kg IM within 7 or14 days of exposure; 0.5 mL IM on day of birth	hepB vaccine	0.5 (neonatal), 1 and 5 mL PFS
GammaStan S/D	Igamplia	Pre- and post-exposure prophylaxis for hepatitis A virus; prophylaxis for measles and rubella during 1st trimester of pregnancy	HAV -0.02 mL/kg, up to 2 weeks post exposure; Measles - 0.25 mL/kg.	none	2 mL and 10 mL single dose vials

Hyperimmune IGs can cover the vulnerability gap

- ✓ There is a gap between administration and protection timepoints in vaccination
- √ Immune vulnerability gap
- √ Hyperimmune IGs can cover the gap





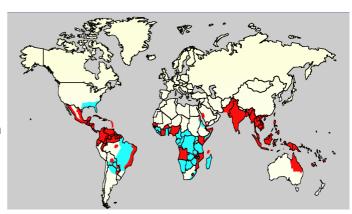
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Convalescent hyperimmune IG: dengue virus distribution

- ✓ Dengue is endemic in at least 100 countries in Asia, the Pacific, the Americas, Africa, and the Caribbean
- ✓ Nearly all dengue cases reported in the 48 continental states were acquired elsewhere by travelers or immigrants
- ✓ The last reported continental dengue outbreak was in south Texas in 2005
- ✓ Local transmission of dengue was reported for the first time in France and Croatia in 2010
- ✓ In 2012, an outbreak of dengue on the Madeira islands of Portugal resulted in over 2,000 cases and imported cases were detected in mainland Portugal and 10 other countries in Europe



No vaccine is available Potential treatment with convalescent immunoglobulin

Dengue virus IG facts

- ✓ Up to 500 million people are infected yearly with hundreds of thousands of severe cases occurring including 20,000 deaths
- ✓ Rates of dengue virus infection are increasing and the disease is spreading to new regions of the world
- ✓ IG may provide a useful tool to clinicians treating dengue patients
- ✓ Dengue virus antibodies have been detected in blood donations from endemic areas
- ✓ Convalescent plasma has been demonstrated to have neutralizing activity for other viruses of the same family

Grifols is developing tools that can be used to assess potential anti-dengue neutralizing activity in existing Grifols IG products and to develop new products

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Anti-Ebola convalescent hyperimmune IG: Grifols project

- ✓ Use of hyperimmune plasma from recovered patients
- ✓ Production of anti-Ebola hyperimmune IG preparations
- ✓ Modular plasmapheresis center to collect convalescent plasma in epidemic areas
- ✓ Convalescent plasma IG facility to produce anti-Ebola IG

Grifols plasmapheresis modular center for epidemic areas





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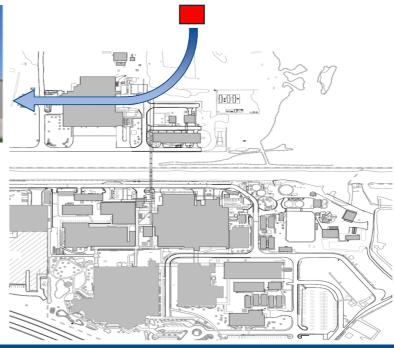


Grifols pioneering spirit: convalescent plasma IG facility



Clayton. Visit tomorrow, June, 5th

Probably the first and only completely isolated plasma IG facility in the world



World plasma pool: potential IG benefits

- ✓ Globalization facilitates human movements worldwide
- ✓ Infection patterns are different in different areas
- ✓ Immunodeficient patients are less protected

Unless

- ✓ Commercial IG have a broad representation against multiple agents from multiple world areas
- ✓ Combination of plasma collected from different areas of the world (world plasma pool) to be used in manufacturing IG
- ✓ Much broader spectrum against pathogens from multiple areas

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Spectrum of IG: Primary immunodeficiencies

- ✓ Commercial IG is a polyclonal pool of immunoglobulins
- ✓ Representation of different IG depends on donor population
- ✓ IG obtained from different donor populations have different antibody patterns
- ✓ Patients suffering from Primary immunodeficiency need IG to survive Vaccination does not work for them
- ✓ Better coverage against infectious disease if a broader spectrum of IG is contained into IG preparations

A mixture of plasma collected in different geographical areas would guarantee this broader antibody spectrum: **World Plasma Pool**

Analysis of IGs from different geographical plasma origins

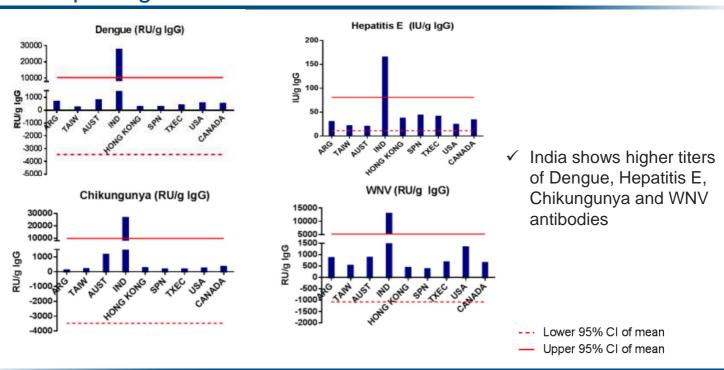


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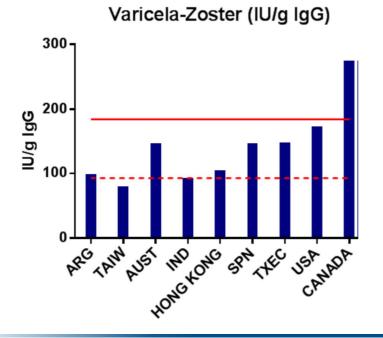
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Different pathogen antibodies in different world areas - I



Different pathogen antibodies in different world areas - II



✓ Canada shows higher titers of Varicela-Zoster, Poliovirus, Tetanus, etc.

Lower 95% CI of meanUpper 95% CI of mean

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The use of hyperimmune IG includes prevention and treatment

- ✓ Hyperimmune IG is obtained from vaccinated population plasma if vaccine is available
- √ Hyperimmune IG is obtained from convalescent plasma if vaccine is not available
- ✓ Hyperimmune IG can be used for prevention (immunodeficient patients)
- ✓ Hyperimmune IG can be used for treatment of infectious diseases (endemic, epidemic, emerging)

Not all the potential uses of IG have been developed yet

Albumin in Liver Disease

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A pilot study performed with Albumin

- ✓ Total plasma exchange with Albumin 5% in Acute-on-chronic liver failure (ACLF)
- ✓ High mortality complication of liver cirrhosis (ICU patients)
- ✓ Liver transplant is the only therapy life-saving
- ✓ Most patients die before an organ is available
- ✓ Ten patients in a single institution in BCN, Spain (completed)
- ✓ Principal investigator: V. Arroyo, MD, Chairman of the European Consortium of Chronic Liver Failure

Preliminary results: survival improvement

A pilot study performed with Albumin

- ✓ Use of Albumin 20% in cirrhotic patients with ascitis
- ✓ Regular weekly intravenous infusion
- √ Thirty patients in 6 centers in Spain (completed)
- ✓ Principal investigator: V. Arroyo, MD, Chairman of the European Consortium of Chronic Liver Failure

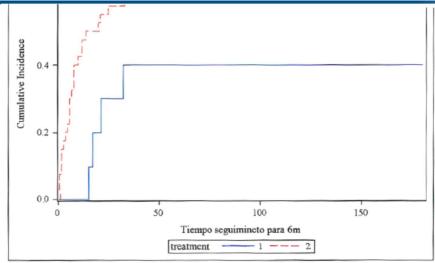
Preliminary results: prevention of circulatory dysfunction

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Effect of plasma exchange with Albumin on survival



	Plasma exchange	Controls		
	10 cases	40 controls matched by CLIF-c	Survival p-value	
28-day mortalty a 28 días	3(30,0)	23(57,5)	0,077	
90 day mortality	4(40,0)	26(65,0)	0,098	
6 month mortality	4(40,0)	27(67,5)	0,078	

Pivotal phase III clinical trials

Albumin 5%

- ✓ APACHE study. Plasma exchange in ACLF
- ✓ Approx. 350 patients in EU and US. Randomized, controlled
- ✓ Primary variable: survival
- ✓ Approval planned for 2020

Albumin 20%

- ✓ PRECIOSA study. Intravenous infusion of Albumin 20% in cirrhosis with ascitis
- ✓ Approx. 400 patients in EU and US. Randomized, controlled
- ✓ Primary variable: circulatory dysfunction
- ✓ Approval planned for 2020

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Albumin in Alzheimer's

Albumin: a therapeutic agent for Alzheimer's disease

Total plasma exchange

- ✓ Removal of a plasma volume from a patient and replacement with the same volume of Albumin 5%. Blood cells are injected back to the patient
- ✓ Removes Amyloid-beta and other substances potentially related with Alzheimer's etiology

Hemopheresis

- ✓ Removal of a limited volume of plasma (similar to that of a donation) from a patient and replacement with different doses of Albumin 20%. Blood cells are injected back to the patient
- ✓ IVIG is infused from time to time to replace the endogenous IG removed
- ✓ Maintenance treatment after total plasma exchange

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AMBAR clinical trial

Alzheimer Management by Albumin Replacement

- ✓ A multicenter, randomized, controlled study to evaluate the efficacy and safety of short-term plasma exchange followed by long-term plasmapheresis with infusion of human Albumin combined with intravenous immunoglobulin in patients with mildmoderate Alzheimer's disease
- √ Phase IIb/III
- ✓ Study sites: Spain, US
- ✓ Main goal: to evaluate cognition and function in mild-moderate AD



AMBAR clinical trial

- ✓ Phase IIb/III clinical trial
- √ 364 patients, mild-moderate Alzheimer's, randomized, controlled
- ✓ Weekly conventional plasma exchange combined with monthly low volume plasma exchange
- ✓ Three treatment arms with 3 doses Albumin + 1 control (sham) group
- ✓ Approx. 40 sites in Spain and the US

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AMBAR status

		Spain	US	
Participating sites		21	22	
Study Approval	Health Authorities	Spanish Agency	FDA	
	Ethics Committee / IRB	H.U. Vall d'Hebrón Ethics Committee	Shulman Associates IRB	
Active recruiting sites		16	11	
Patients	Recruited	120	50	
	Total	170 out of 364		

AMBAR interim analysis

- ✓ Planned with approx. 180 subjects
- ✓ Confirmation of safety and treatment feasibility
- ✓ No influence of the interim analysis on the trial conduction
- ✓ Expected end of 2015

No formal efficacy evaluation due to blinding

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Albumin in ALS (Lou Gherig's disease)

Developments in ALS (Lou Gherig's disease)

Use of plasmapheresis with 5% Albutein® in newly diagnosed patients

- ✓ Clinical trials:
 - Phase I, open-label, single-center, non-controlled clinical trial
 12 out of 13 patients included (April 2015) from Spain
 - Phase IIa, open-label, single-center, non-controlled clinical trial
 10 patients expected to be included in the US starting this year (2015)
- ✓ Potential role for low volume plasma exchange (hemopheresis) with 20% Albutein® (subject to results)

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Plasma proteins and anti-inflammation

Plasma proteins have a role in inflammation

Inflammation

- ✓ Inflammation is the common final pathologic path in many diseases
- ✓ Inflammation has a role in normal and pathologic aging (e.g. neuroinflammation in neurodegenerative disease)
- ✓ Oxidative stress is closely related with inflammation as a cause of disease

Plasma proteins

- ✓ Plasma proteins have known anti-inflammatory effects
- ✓ Antithrombin, Alpha-1, Albumin
- ✓ Albumin is the biggest antioxidant system in the body beyond its current role as a mere plasma expander (significant R&D opportunity)

Grifols has clinical development plans of Antithrombin in cardiac surgery, Alpha-1 Antitrypsin in diabetes and Albumin in cirrhosis and Alzheimer's

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Young plasma and aging

Plasma contains substances against age-related processes

From the Investors' and Analysts' meeting 2014 in Barcelona

THE WALL STREET JOURNAL.

U.S. NEW

Transfused Blood Rejuvenates Old Mice

Research May Point to Ways to Reverse Some Effects of Human Aging

In one study, researchers at Stanford University and the University of California, San Francisco found that blood transfusions from young mice reversed cognitive effects of aging, improving the old mice's memory and learning ability. The report was published Sunday in the journal Nature Medicine.

Two other reports appearing in Science from researchers at Harvard University found that exposing old mice to a protein present at high levels in the blood of young mice and people improved both brain and exercise capability. An earlier report by some of the same researchers linked injections of the protein to reversal of the effects of aging on the heart.



New blood 'recharges old brain', mouse study suggests

In the study, published in **Nature Medicine**, mice aged 18 months were given injections of the fluid part of blood (plasma) taken from mice aged three months.

The injected mice performed better on memory tests than mice of the same age that had not been given blood plasma.

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Grifols participation in Alkahest: 47.5%

THE WALL STREET JOURNAL.

U.S. NEWS

Grifols to make a major equity investment in Alkahest

4th March, 2015

Alkahest is a company founded in 2014 by leading scientists who demonstrated at Stanford University (US) that factors in the blood of young animals were able to restore mental capabilities in old animals

Grifols acquires 47.5% of the equity of Alkahest for \$37.5 million

Alkahest and Grifols to work together to develop plasma-based products for the treatment of cognitive decline in aging and other central nervous system (CNS) disorders, including Alzheimer's

Key Future of plasma derivatives and Grifols initiatives Takeaways

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Key Future of plasma derivatives and Grifols initiatives Takeaways

- ✓ Plasma proteins are **natural products** compared with recombinant, transgenic and fusion proteins
- ✓ IG preparations provide a means to **prevent and treat** infectious diseases (immunodeficient patients and normal population)
- ✓ Albumin, alone and through plasmapheresis, shows activity beyond plasma expansion (AMBAR, liver failure)
- ✓ Antithrombin, Alpha-1 Antitrypsin and Albumin have anti-inflammatory properties being explored in clinical trials (AMBAR, cardiac surgery, diabetes)
- ✓ Plasma "content" shows activity in modulating normal aging and age-related diseases (Alkahest/Stanford)

Plasma proteins provide many unexplored opportunities



Aging and the therapeutic benefits of plasma Karoly Nikolich – Tony Wyss-Coray

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Revitalizing therapies from plasma for age-related brain diseases



- ✓ Plasma carries soluble agents that influence brain function
- ✓ Powerful therapeutic potential for quality of life in aging

- ✓ Company founded in 2014
- ✓ Based on Tony Wyss-Coray's discoveries at Stanford University
- ✓ Investment by and partnership with Grifols in 2015
- ✓ Grifols-Alkahest partnership based on unique synergies
 - World-class plasma supply and plasma fraction production
 - Neuroscience expertise to focus on cognitive functions
 - Diseases affecting quality of life growing with aging population

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Alkahest, Inc.

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✓ Management:

- Karoly Nikolich, CEO (Genentech, Amnestix, Circuit Therapeutics, Stanford)
- Joseph McCracken, VP BD (Roche, Genentech, Aventis)
- Stephen Peroutka, CMO (Stanford, Genentech, PRA)
- Steven Braithwaite, CSO (Stanford, Wyeth, Circuit Therapeutics)
- Tammy Kent, VP Operations and HR (Venture Law, AGY, Circuit Therapeutics)

√ Scientific Advisory Board:

- Tony Wyss-Coray, Stanford, Chairman
- Lee Rubin, Harvard
- Eric Reiman, Banner Alzheimer's Institute
- Lennart Mucke, Gladstone Institute
- Saul Villeda, UCSF
- Tom Rando, Stanford

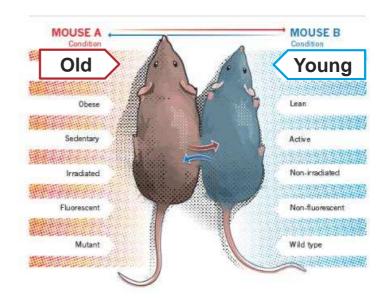
Tony Wyss-Coray 2011, 2014

Parabiosis, "Siamese mice"

- ✓ Old mouse: improved cognition (rejuvenation)
- ✓ Young mouse: impaired cognition

Plasma transfer

- ✓ Young plasma into old mice improved cognition
- ✓ Old plasma into young mice impaired cognition



Scudellari, Nature, January 2015

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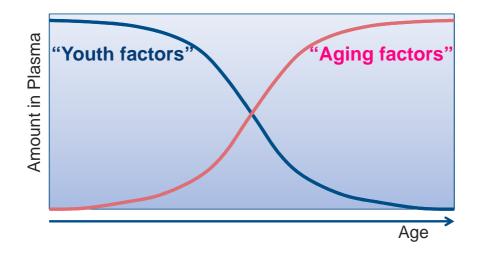
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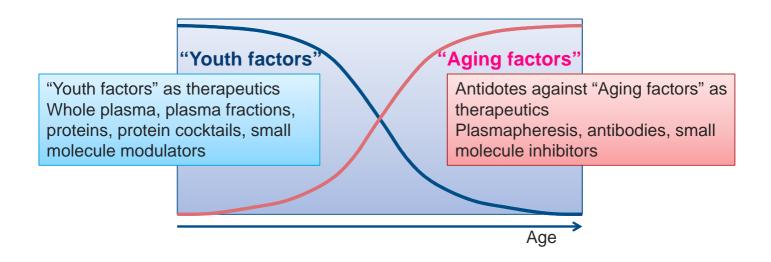
Plasma contains factors that modulate brain function

OALKAHEST

"Youth factors" are beneficial; "Aging factors" are detrimental



Alkahest's foundational science and intellectual property



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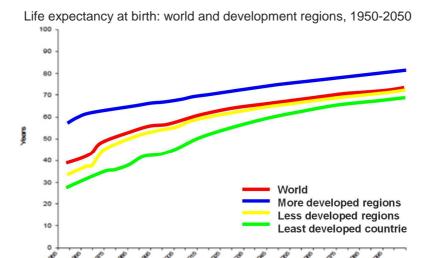
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Why Aging Matters

One of the most important medical challenges of our generation

Lifestyle, nutrition, healthcare have increased life expectancy



United Nations: World Population Aging 2013

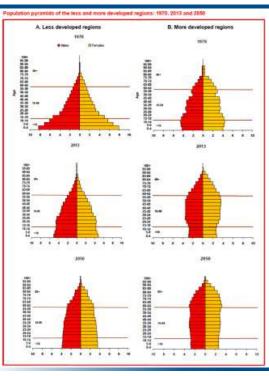
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But can we deal with old age?





- ✓ People aged 80 years or over will reach 400 million by 2050, more than 3x today
- √ This will present an unprecedented challenge for societies

United Nations: World Population Aging 2013

Among them, brain diseases are the most challenging

Other organs

- ✓ Arthritis
- ✓ Cancer
- ✓ Diabetes
- √ Heart attack
- √ Heart disease
- √ Osteoporosis
- ✓ Pneumonia

Brain

- √ Alzheimer's disease (AD)
- √ Amyotrophic lateral sclerosis (ALS)
- ✓ Delirium
- ✓ Multiple sclerosis (MS)
- ✓ Parkinson's disease (PD)
- √ Sleep disorders
- ✓ Stroke

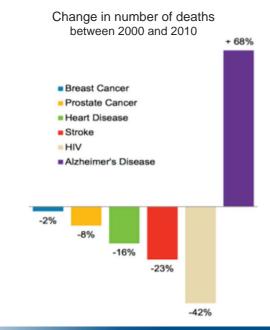
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Effective treatments for many diseases developed but not for CNS **OALKAHEST**

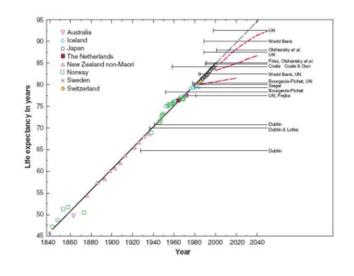
Dementia and neurodegenerative diseases are on the rise

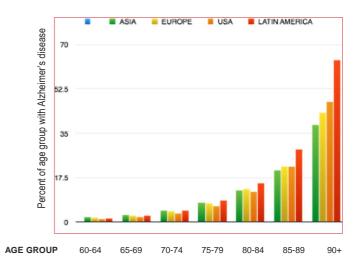


While treatments for cancers, infectious diseases have been developed, in contrast, no effective therapies have been discovered and developed for Alzheimer's disease

Alzheimer's Association, 2013

...but we will face an Alzheimer's epidemic





UN World Population Aging, 2013

WHO Estimates of dementia prevalence, Global Burden of Disease, 2013 (B. Duthey)

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Many studies have been carried out to treat Alzheimer's disease but no disease-modifying therapies have succeeded

Alzheimer's disease drug-development pipeline

WALKAHEST

AD drug-development: pipeline few candidates, frequent failures

Cummings J.L. et al, Alzheimer's Research and Therapy, 2014:

- ✓ Between 2002 to 2012, 413 AD trials were performed:
- ✓ 124 phase I trials, 206 phase II trials, and 83 phase III trials
- ✓ Very high attrition rate was found, with an overall success of 0.4% (99.6% failure)

We need fundamentally NEW approaches

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Pioneering Science: blood-brain communication

OALKAHEST

Tony Wyss-Coray, Stanford University Medical School



The ageing systemic milieu negatively regulates neurogenesis and cognitive function Saul A. Villeda,, Tony Wyss-Coray

Nature, 477: 90-95 (2011)



Young blood reverses age-related impairments in plasticity and cognitive function

Saul A. Villeda,, Tony Wyss-Coray

Nature Medicine, 20: 659-63 (2014)

A young systemic environment reverses degeneration in a mouse model of Alzheimer's disease

Jinte Middeldorp,, Tony Wyss-Coray

In review

Life-span and Health-span We want to live longer and healthier lives Cognitive competence is a key element

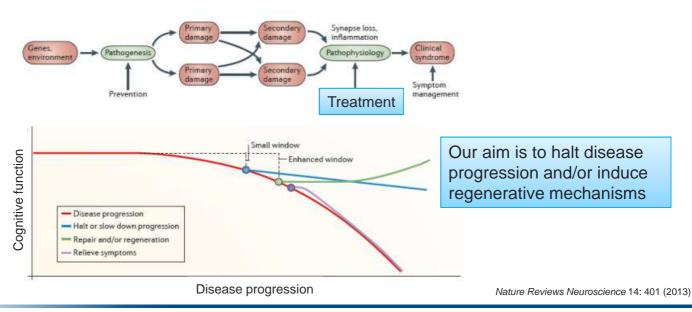
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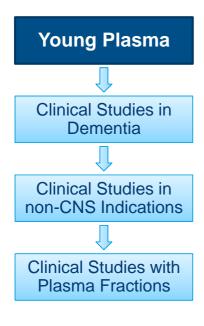


Alzheimer's disease:

OALKAHEST

What do we expect from plasma based therapies?





- ✓ Opportunity for direct clinical studies with whole plasma and with plasma fractions
- ✓ Identification of plasma fractions affecting brain plasticity and function
- ✓ In-depth characterization of plasma fractions

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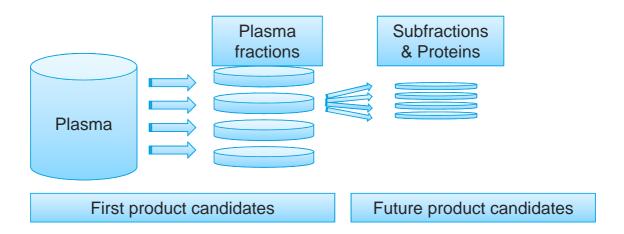
Young Plasma to treat Alzheimer's disease

OALKAHEST

Alkahest - Stanford Clinical Study



The Plasma for Alzheimer SymptoM Amelioration (PLASMA) Study	FDA ClinicalTrials.gov Identifier: NCT02256306	
Recovered plasma from young donors Age 18 – 25 years	Stanford Blood Center	
Phase I/IIa clinical study design under IRB with FDA support	Stanford Neurology Department Dementia Center	
Mild- to moderate Alzheimer's disease patients:	Rolling enrollment of up to 18 (24) patients	

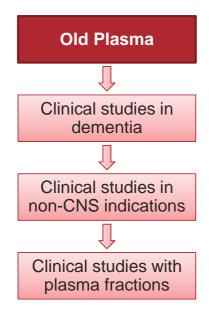


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"Aging factor" based therapeutics





- ✓ Identification of proteins from old human plasma that cause cognitive decline
- Antibodies against damaging proteins
- ✓ Functional studies with antibodies to test for neutralizing activity
- ✓ Potential to combine with plasmapheresis

Key Takeaways

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Key Takeaways

- ✓ Alkahest founded on groundbreaking science that plasma modulates cognitive function
- ✓ World-class team and scientific network
- √ Aging process:
 - Decline of positive modulators of brain function
 - Increase in aging factors negatively affecting brain function
- ✓ Alkahest Grifols partnership aims to:
 - Identify and develop plasma based therapeutics for age-related cognitive diseases
 - Multiple opportunities for products
 - Improve health-span, quality of life, not just life-span
 - Strong synergy in concepts, therapeutic approaches

The Landscape-Changing Science

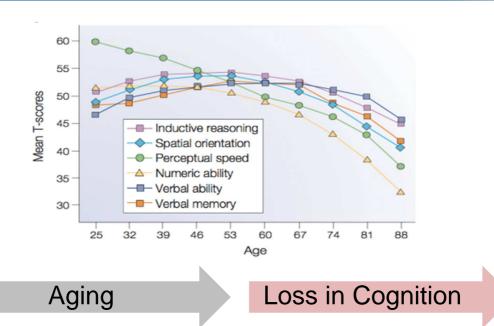
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Significant increase in the aging population worldwide **OALKAHEST**



Source: UN World Population Prospect



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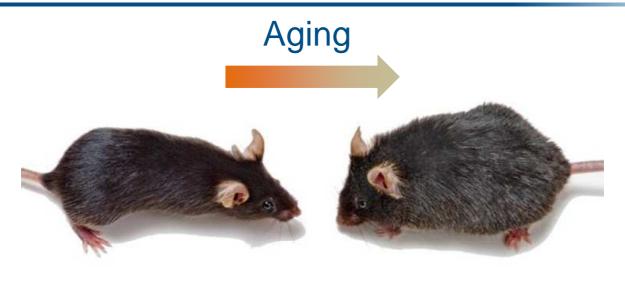
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Rejuvenation

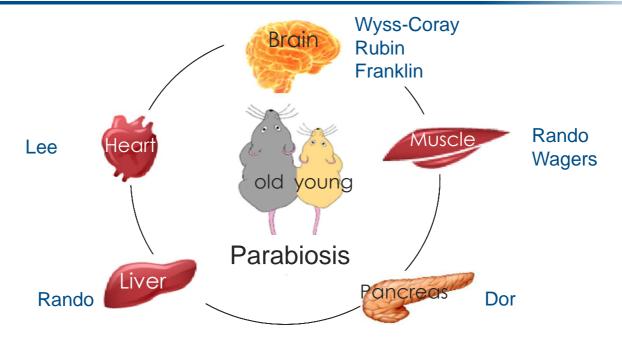


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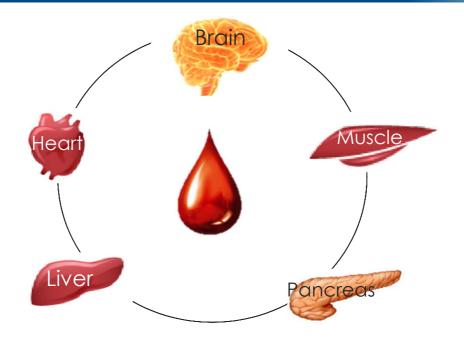


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A fountain of youth for mice?

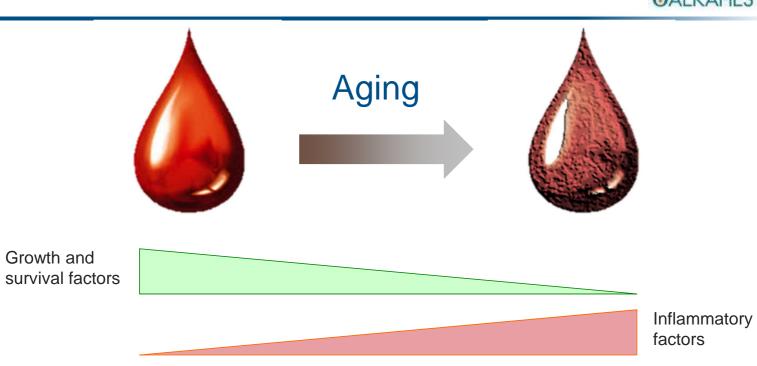


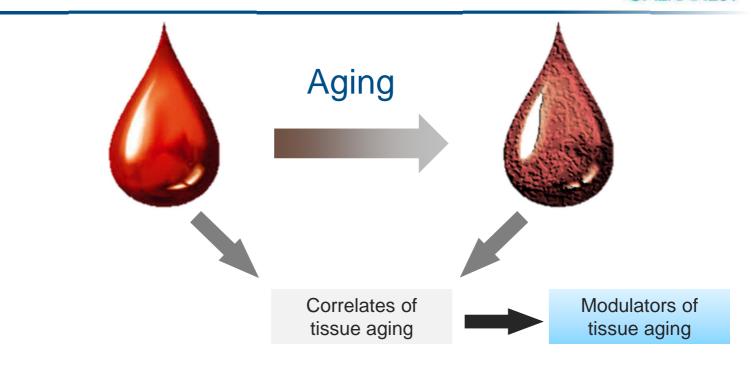




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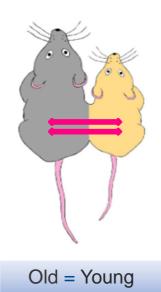




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Tissue rejuvenation through heterochronic parabiosis

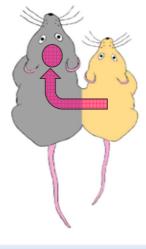


Tissue rejuvenation through heterochronic parabiosis

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18-month-old mouse ~

65-year-old human



3-month-old mouse ~ 20-year-old human

Old = Young

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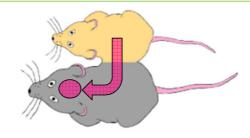
Effects of a young systemic environment on the old brain

OALKAHEST

Rejuvenation

- ✓ more neural stem cell activity
- √ higher synaptic activity
- √ higher levels of genes involved in memory
- ✓ less inflammation in the brain

Parabiosis

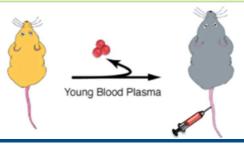


Villeda et al. Nature 2011, Nat Medicine 2014

Rejuvenation

- ✓ more neural stem cell activity
- ✓ higher synaptic activity
- √ higher levels of genes involved in memory
- ✓ less inflammation in the brain
- √ improved memory

Plasma transfer



Villeda et al. Nature 2011, Nat Medicine 2014

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Can this concept be applied to humans?



"NOD Scid Gamma Mice" (NSG)

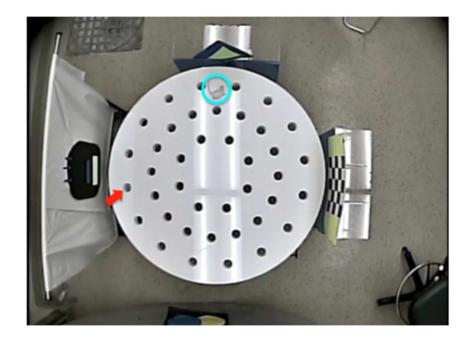
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Human plasma to immunodeficient NSG mice





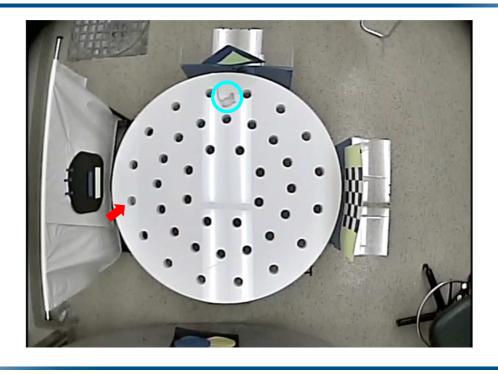


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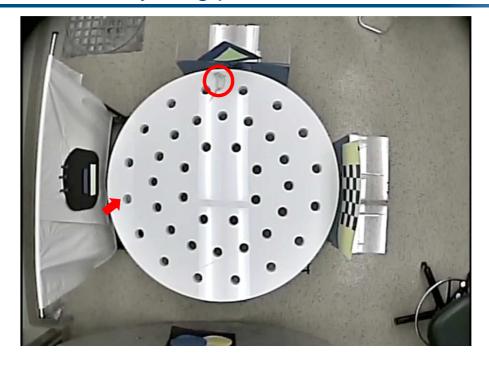
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Old mouse treated with saline





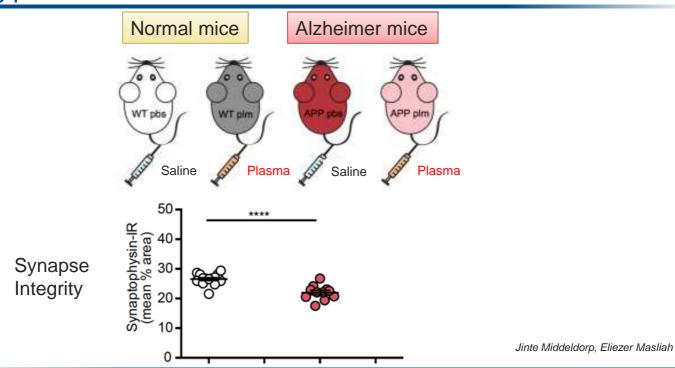




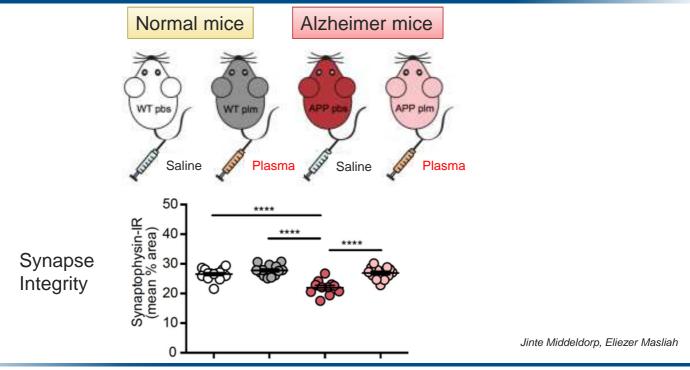
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Young plasma reverses Alzheimer-like disease in mice OALKAHEST



Young plasma reverses Alzheimer-like disease in mice OALKAHEST

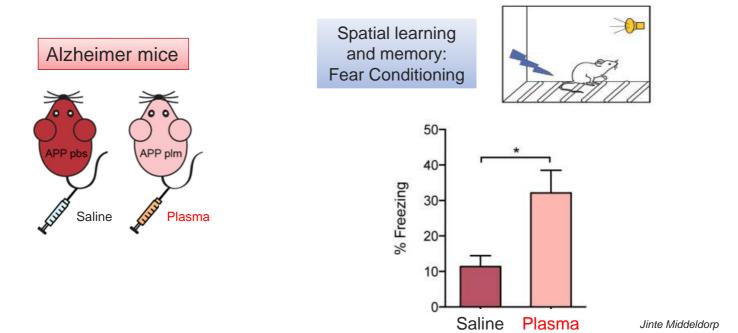


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Young plasma reverses Alzheimer-like disease in mice OALKAHEST



Rejuvenation



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Key Takeaways

- ✓ Blood plasma factors regulate brain functions
- ✓ Plasma from aged mice is detrimental for young mice
- ✓ Plasma from young mice reverses cognitive deficits in aged and Alzheimer's mice
- ✓ Proteins from aged blood plasma that contribute to neural damage can be neutralized in blood for therapeutic benefit
- ✓ Exclusive license to patent portfolio

Hypothesis: young plasma benefits Alzheimer's disease

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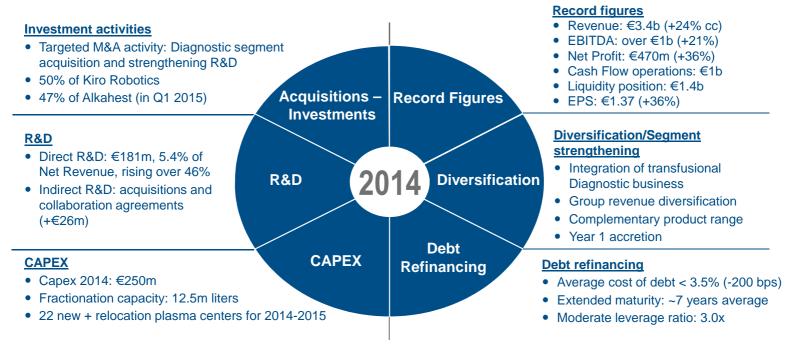
Financials *Alfredo Arroyo*

2014 Grifols Highlights

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2014 Grifols highlights



Q1 2015 Performance

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Q1 2015 Net revenue by division

(€ Million)	Q1 2015	% of Net Revenue	Q1 2014	% of Net Revenue	% Variance	% Variance at constant rate
Bioscience	681.0	75.0%	601.0	75.3%	13.3%	0.0%
Diagnostic	172.6	19.0%	146.6	18.4%	17.7%	6.0%
Hospital	23.3	2.5%	24.3	3.0%	-4.1%	-5.2%
Subtotal	876.9	96.5%	771.8	96.7%	13.6%	1.0%
Raw Materials & Others	31.5	3.5%	26.2	3.3%	20.2%	5.1%
TOTAL	908.4	100.0%	798.0	100.0%	13.8%	1.1%

Q1 2015 Net revenue by region

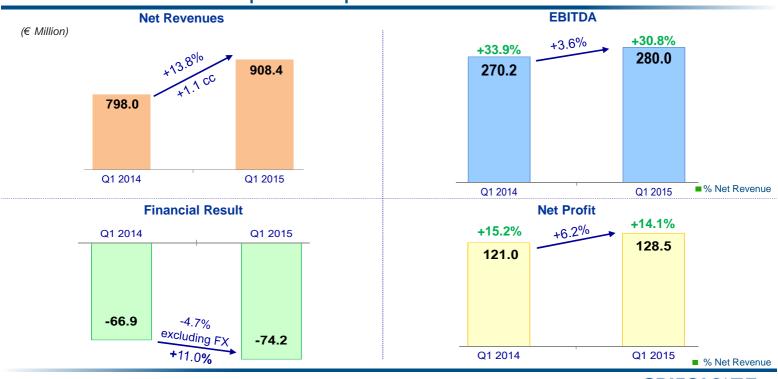
(€ Million)	Q1 2015	% of Net Revenue	Q1 2014	% of Net Revenue	% Variance	% Variance at constant rate
US + Canada	567.1	62.4%	484.8	60.7%	17.0%	0.2%
EU	171.0	18.8%	169.2	21.2%	1.1%	-0.7%
R.O.W.	138.8	15.3%	117.8	14.8%	17.8%	6.9%
Subtotal	876.9	96.5%	771.8	96.7%	13.6%	1.0%
Raw Materials & Others	31.5	3.5%	26.2	3.3%	20.2%	5.1%
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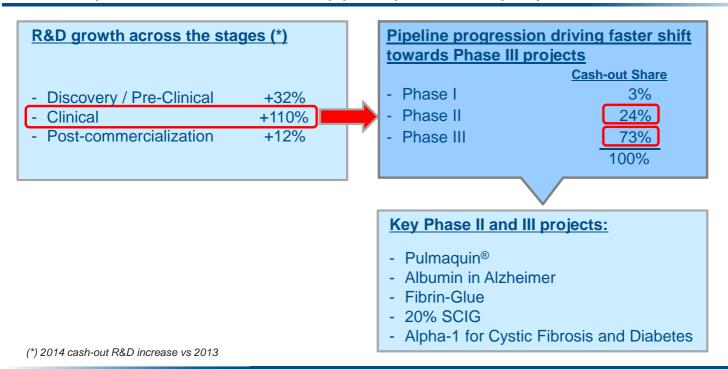
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Q1 2015 sustainable positive performance



R&D expense - shifted to support phase III projects



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Q1 2015 Financial result - interests declining from Q1 2014

Million)				
	Q1 2015	Q1 2014	% Variance	
Interest expense	41.2	47.1	-12.5%	
Financing deferred cost	15.4	16.5	-6.7%	
Other financial expense	2.7	0.0	NM	
Derivatives valuation	5.9	4.8	NM	
FX variance loss (gain)	9.0	-1.5	NM	
Total Financial Result	74.2	66.9	11.0%	- 4.7 excludii

Q1 2015 Cash flow

(€ Million)

Sources	
- Operating Cash Flow - Working Capital Variance	159.2 -96.9
- Net Operating Cash Flow	62.3
- Sale of fixed assets	12.0
- Cash Beginning Balance	1,079.2
- Cash Ending Balance - Cash Decrease	<u>797.8</u> 281.4
	Total 355.7

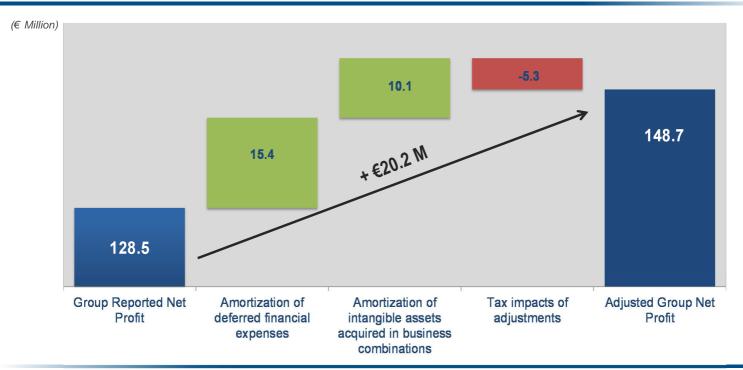
Uses					
- CAPEX and Intangible		-77.3			
- Fixed Assets Buy-Back		-276.5			
- Interest		-28.2			
- Alkahest acquisition		-33.0			
- Gross Debt Decrease		-29.5			
- FX and Others		88.8			
	Total	-355.7 ======			

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Q1 2015 Net profit reconciliation



FX impacts

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FX impacts – USD exposure

Profit & Loss - 2014

- Net Revenue 71.5%
- COGS+Opex 78.0%
- COGS+Opex+Financial Expenses 78.7%

Balance Sheet - 2014

- Total Assets 85%
- Gross Debt 88%
- Cash 86%

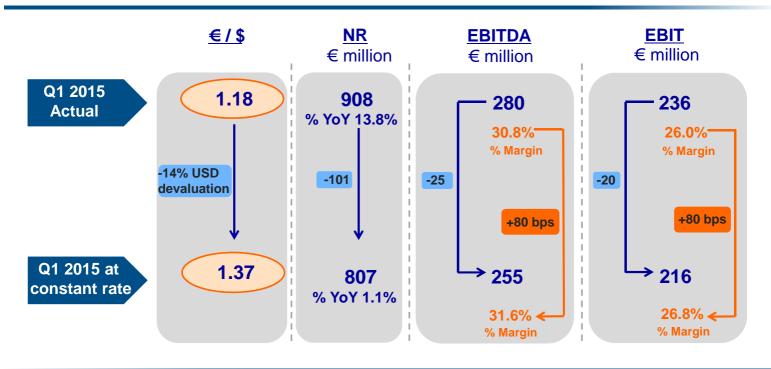
+5% USD revaluation USD variance impact (annual basis): - Positive on Net revenue + c.3.7% - Positive on EBITDA + c.€30m - Negative on EBITDA margin - c.25 bps - Negative on Financial expenses - c.€10m - Positive on Net income + c.€10m

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FX variance - How would Q1 2015 look like at constant rate?

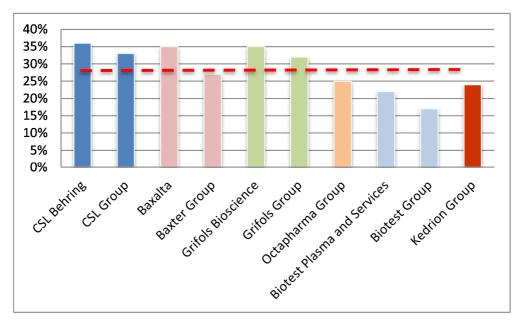


Plasma industry margin comparison

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Plasma industry margin comparison - Grifols leading margins



Source: Morgan Stanley Report March 24, 2015 (Exhibit 32)

Financial metrics - Peers benchmark

% of Net Revenue	<u>Grifols</u>	Player 1	Player 2	
– EBITDA	31.2%	30.0%	34.1%	
– EBIT	25.6%	26.5%	30.9%	
EBIT excl. intangible amortization	27.8% 🗸			
- CAPEX	7.5% 🗸	16.4%	14.1%	
- Cash from Operations	29.2% 🗸	16.7%	23.1%	
		•		

Source: 2014 Annual Reports

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Bioscience manufacturing facilities are on track - US

Project	Investment (USD Million)	Capacity / Size	Location	Current Status
North Fractionation Facility (NFF)	\$380 M	5.9 ML	Clayton	FDA Approved at the end of 2014. First lot of Gamunex [®] manufactured in the NFF, already
NFF Albumin Expansion	\$30 M	5.7 ML	Clayton	commercialized
Albumin Purification	\$20 M	4 ML	LA	Construction completed and validation started, expected FDA approval by Q2 2016
Warehouse Raw Material	\$10 M	6,400 m ²	Clayton	Construction completed, expected FDA validation by Q4 2015
Gamunex® purification	\$78 M	9,500 m ² and 4 ML	LA	FDA approved in Q4 2014, started operations in January 2015
5 Liquids filling lines	\$46 M	2,200 m ² . Multiformat filling	Clayton	Construction of new lines to be completed and approved by Q4 2016

Bioscience manufacturing facilities are on track - Europe

Project	Investment (USD Million)	Capacity / Size	Location	Current Status
GWWO - Warehousing / Logistics	\$80 M	22,000 m ² in 11 Ha. land plot	Dublin	Construction completed, validation in progress. Start
Labelling / Packaging lines	, , , , , , , , , , , , , , , , , , , 		Dubiiii	operations in Q1 2016
Prolastin® -C	\$45 M	7,250 m ² and 4.3 ML	Barcelona	Construction ongoing, completed by Q3 2016. Validations process through mid 2017
New Fractionation Plant	\$25 M	2.1 ML	Barcelona	Completed and validated. Production started in Q1 2014

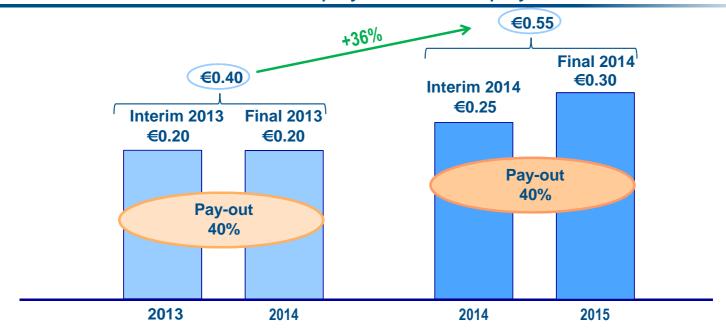
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Shareholders returns

Shareholders returns - 40% pay-out with 2 payments



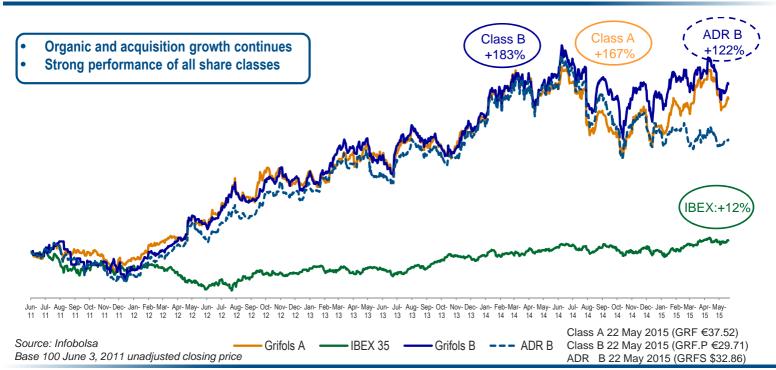
(*) The information above includes the related preferred dividends of €0.01

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Stock Price Grifols shares vs IBEX35 - June 2011 to 22 May 2015



Key Financials Takeaways

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Key Financials Takeaways

- ✓ Core business / financial fundamentals remain the same
- ✓ Opportunities to improve margins in Bioscience after new plants ramp-up
- ✓ Higher plasma collections will support plasma cost improvements
- ✓ R&D investment stabilized after 2014 pick-up, significant weight of phase III projects
- ✓ EBITDA margin: c.30% in the medium term, targeting 31% 33% in the long term
- ✓ Strong **FX tailwind** in 2015
- ✓ Financing: long term debt maturities, quasi bullet and low financing costs
- ✓ Tax rate: 20% 22% range
- ✓ Sustainable growth in EPS
- ✓ Continuous Shareholders reward through dividends:
 - 40% pay-out
 - Two payments per year (interim / final)

Conclusions & Final remarks Thomas Glanzmann

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Grifols Engineering, S.A. as a significant competitive advantage

- Grifols in-house Engineering advanced designing and construction skills enable to build state of the art manufacturing facilities at lower cost than our competitors and at faster pace
- → As a result of the large engineering expertise, the Grifols manufacturing Capex is very moderate, which is positively impacting our EBIT due to lower tangible depreciation and also in our Cash Flow
- → In the Q1 2016, Grifols will announce the location and timing of the next fractionation facility (4 million liters)
- → Based on the actual construction costs, the estimate manufacturing Capex for a 4 million liter fractionation / purification / filling, facilities will amount to \$310 million, which represents near 60% lower Capex than our competitors



Manufacturing facilities cost detail

Barcelona Facility actual cost (2 million liters)

Detail	\$Million	Comments
Land	0	Using existing facilities
Fractionation	30	New Fractionation
Purification	0	Using existing facilities
Offices & Warehouse	0	Using existing facilities
Services & Others	0	Using existing facilities
TOTAL	<u>30</u>	

US new Facility estimated cost (4 million liters)

Detail	\$Million	Comments
Land	0	Using existing facilities
Fractionation	58	New Fractionation
Purification	144	4 Proteins
Offices & Warehouse	66	Plasma and FG
Services & Others	42	Using existing facilities
TOTAL	<u>310</u>	



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Grifols Engineering, S.A. as a significant competitive advantage

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- → Based on the actual construction costs, the estimate manufacturing Capex for a 4 million liter fractionation / purification / filling, facilities will amount to \$310 million, which represents near 60% lower Capex than our competitors
- → Since the EBITDA does not include the depreciation charges, EBIT becomes a more meaningful metric when reviewing P/L performance and peer comparison

Conclusions: Key Messages - I

- → The plasma industry is healthy and demand keeps growing at steady rate, with a very positive future outlook
- → Pricing environment with up/downswings in the short term, stable in the long term. Price movements are not cycle-related
- Manufacturing and plasma collection capacity in place ready to cover additional sales opportunities
- → A new global organization is operational, focused on the three business divisions, with industrial and commercial activities clearly differentiated

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Conclusions: Key Messages - II

- → Geographical expansion, a key level for the short- and long-term growth
- → The company continues to proactively make investments in R&D, manufacturing, sourcing and commercial to support future growth
- → Diagnostic business fully integrated reflecting strategic fit. Ready for organic and non-organic growth
- Capturing across the board opportunities: FDA approval of IV Plant in process

Conclusions: Key Messages - III

- Acquisitions and partnerships to build the business and create growth platforms are an integral part of Grifols strategy
- Grifols will continue to pioneer and lead the plasma industry with new and innovative approaches, products and indications
- → The company is focused on delivering financial results as it has historically done over 75 years

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