



Gentium S.p.A.

Focused on Life

**Corporate Presentation
May 2011**

Safe Harbor

The following presentation contains forward-looking statements that are based on our management's beliefs and assumptions and on information currently available to our management, and represent our management's beliefs and assumptions only as of the date hereof. These statements involve known and unknown risks, uncertainties and other factors, including those described in the "Risk Factors" section of our Form 20F for our latest fiscal year, that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Given these uncertainties, you should not place any reliance on these forward-looking statements.

Gentium Highlights



Headquarters, Como, Italy

NASDAQ-listed company (ticker – GENT; Current Market Cap \$150 m)

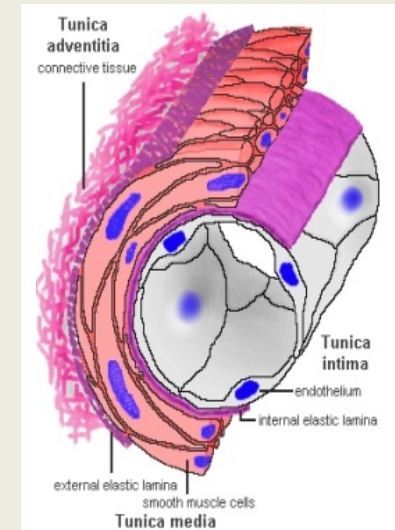
Board and Management with extensive Industry experience (62 FTE's)

A Strategic Regional Partnership (Sigma-Tau Inc. for Americas)

- **Late Stage Clinical Compound for an unmet medical need for Veno-Occlusive Disease (VOD) - post stem cell transplantation complication associated with high morbidity and mortality**
- **Manufacturing API's**
- **Revenue stream, Cash flow positive & Profitable
(Revenues 2010 = €24.55m (\$32.5m))**

An Overview of Veno-Occlusive Disease (VOD): A Post Stem Cell Transplant Complication

- Conditioning regimens prior to hematopoietic stem cell transplant e.g., high dose radiation/chemotherapy (Busulfan, Sirolimus/methotrexate & cyclophosphamide), cause damage to the endothelium and lead to VOD
- VOD is characterized by hyperbilirubinemia, ascites, hepatomegaly and weight gain >5% over baseline.
- Risk factors for VOD: allogeneic SCT, intensity of conditioning regimen, prior hepatic injury, age.
 - *Estimated incidence of VOD in the range of 10% to 17% of all SCT's²*
 - *Up to 28% of VOD patients have severe VOD (SVOD) with multiple organ failure(MOF)³ and mortality in SVOD patients VOD is 75% (only 9% achieve a complete response within 100 days after SCT) ⁴.*



1. 2003 IMBTR & EBMT registry data, Multinational Biotech Company (name not disclosed due to confidentiality reasons)
2. Coppell et al, Biol Blood Marrow Transplant 16: 157-168 (2010)
3. Carreras et al, Blood Vol 92, No 10 (1998)
4. Richardson et al. ASH 2009

VOD Patient Categories & Management

53,000 HEMATOPOIETIC STEM CELL TRANSPLANTS/YEAR

- 20,000 Patients with High Risk for VOD – Prevention via prophylaxis
- 8,000 Patients with Diagnosed VOD – Treatment
- 2,000 Patients with Severe VOD - Treatment

Number of transplants to double in the next five years. Ferrara et al., Lancet (2009)

- *No approved drugs to treat or prevent VOD*
- *Defibrotide could meet this Unmet Medical Need*

Defibrotide Clinical Trial Data

Defibrotide (DF) has completed three PIII trials (25mg/kg/day, 4x daily infusion)

2 Phase III trials - Treatment of Severe VOD (SVOD) with Multi-Organ Failure (MOF)

Open-label, DF Treatment arm versus Historical Control arm

1 Phase II/III trial – Prevention of VOD & Acute graft versus Host Disease (GvHD)

in high risk Pediatric patients

Open-label, DF prophylaxis versus No treatment

Compassionate use program (1998-2009)

Named Patient Program/ US Cost Recovery Program under treatment IND

Results of Phase 3 Treatment Trials in SVOD/MOF

Phase 3 Trial	Endpoint	Historical Control	ITT Population DF	PP population DF
DF 2005-1	Complete Response (Day 100)	9% (3/32)	24% (24/102) P= 0.0148*	29.5% (18/61) P= 0.009
Interim T-IND	Complete Response (Day 100)	9% (3/32)	34% (23/68) P= 0.006	
DF 2005-1	Mortality (Day 100)	75% (24/32)	62% (63/102) P= 0.0508	51% (31/61) P= <0.0001
Interim T-IND	Mortality (Day 100)	75% (24/32)	66% (45/68) P= 0.0463	

Statistically significant increase in complete response and a marked decrease in mortality

adjusted by quintiles of propensity score based on 4 stratification variables: 1) allogeneic/autologous SCT, 2) adult/pediatric, 3) 1 or 2+ SCTs, 4) ventilator/dialysis dependence.
p value for CR from Chi Square Test; p value for Mortality from stratified Logrank Test.

* Initially powered for 99% confidence

Results of Pooled analysis: Treatment of SVOD/MOF

Endpoint	Historical Control (n = 32)	ITT Population DF (n=201)	Difference in rate (95% CI)
Complete Response (Day 100)	9% (3/32)	30% (61/201) P= 0.0015	20.7% (7.9, 33.4)
Mortality (Day 100)	75% (24/32)	60% (120/201) P= 0.0294	15.2%

Statistically significant increase in complete response and decrease in mortality

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Compassionate Use Program 12/1998 to 3/2009

- **1129 patients**
- **39 Countries**
- **311 Centers**

- **Outcome received for 711 patients**
- **Patients with VOD
(not limited to only severe VOD)**

Baltimore Criteria

Hyperbilirubinaemia ≥ 2 mg /dl before day 21 after SCT and at least two of the following:

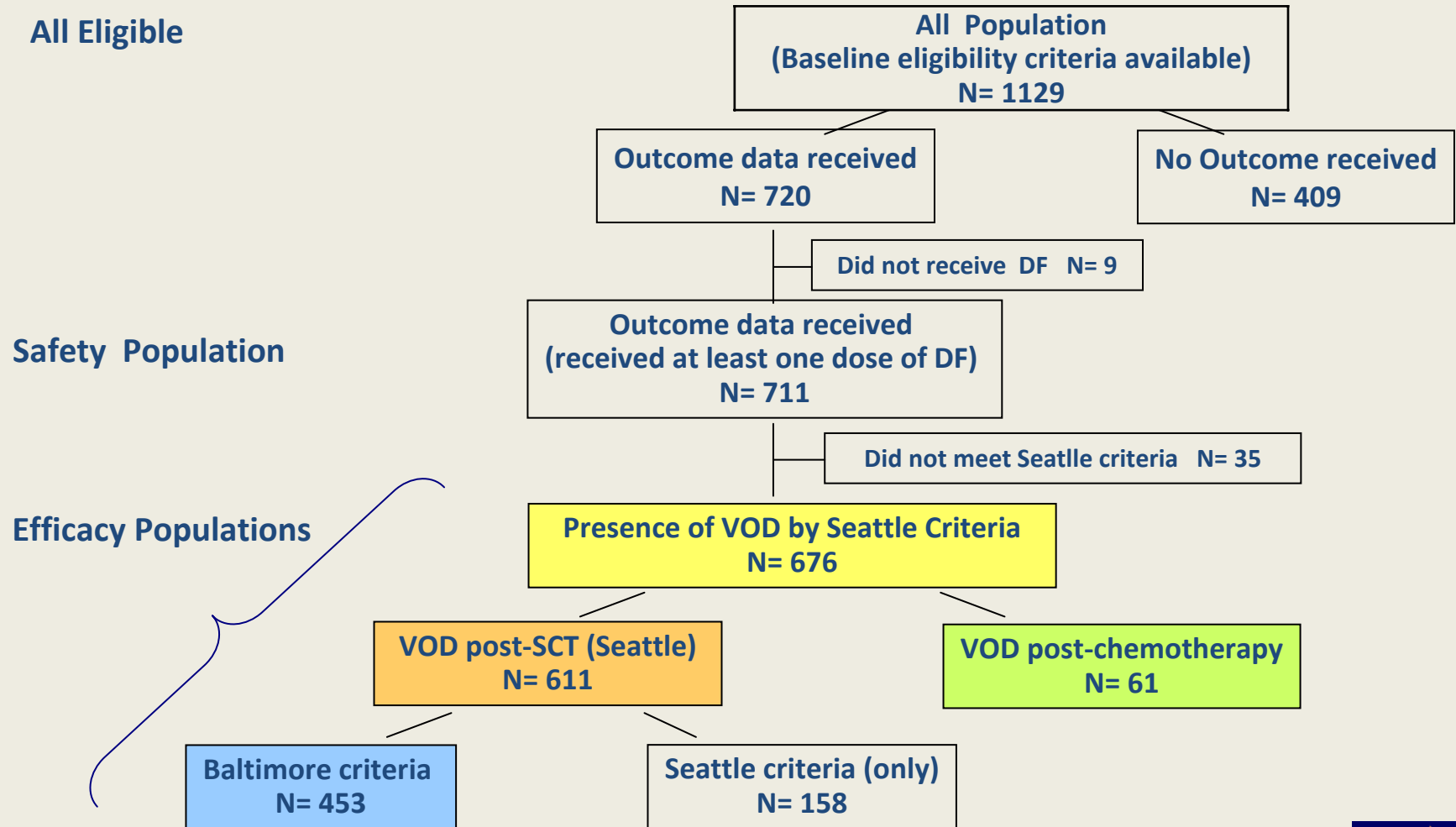
- *Hepatomegaly (usually painful)*
- *Ascites*
- *Weight gain $>5\%$ from baseline*

Seattle Criteria

Presence before day 20 after SCT of two or more of the following:

- *Bilirubin ≥ 2 mg /dl*
- *Hepatomegaly, right upper quadrant pain*
- *Ascites \pm unexplained weight gain of $>2\%$ baseline*

Compassionate use Program: Disposition of Patients



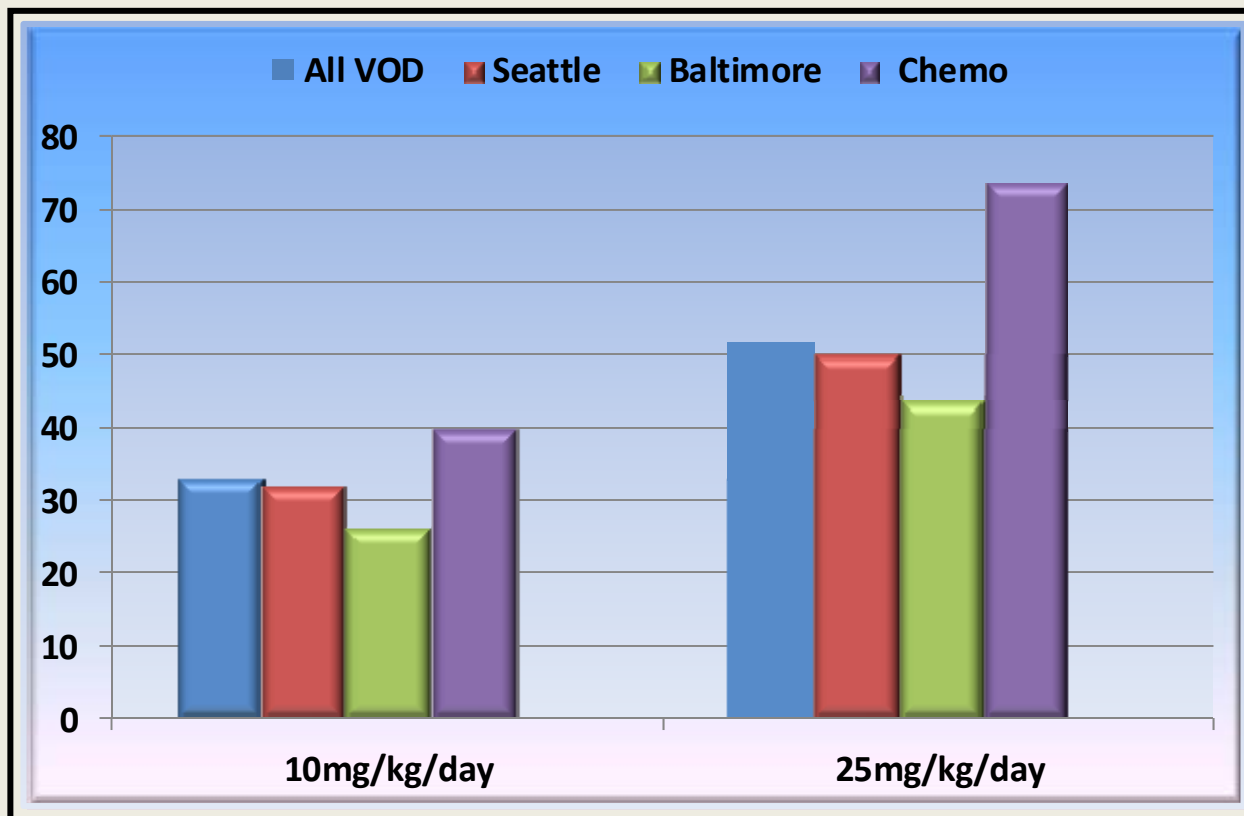
Compassionate Use Program

Complete Response & Survival

	Complete Response (D +100)	Mortality (D +100)
ALL VOD	47%	44%
Non-Severe VOD	59%	35%
Severe VOD	29%	57%
Post-Chemo VOD	57%	31%

Complete response and survival rates in severe VOD are concordant with Phase 3 trials

Compassionate Use Program Complete Response by Dose



Superior Complete Response and Survival with 25mg/kg/day

Delay in Start of Treatment Significantly Impacts Survival

Delay in the initiation of Defibrotide treatment > 2 days from VOD/sVOD diagnosis results in higher mortality at Day 100 post-SCT

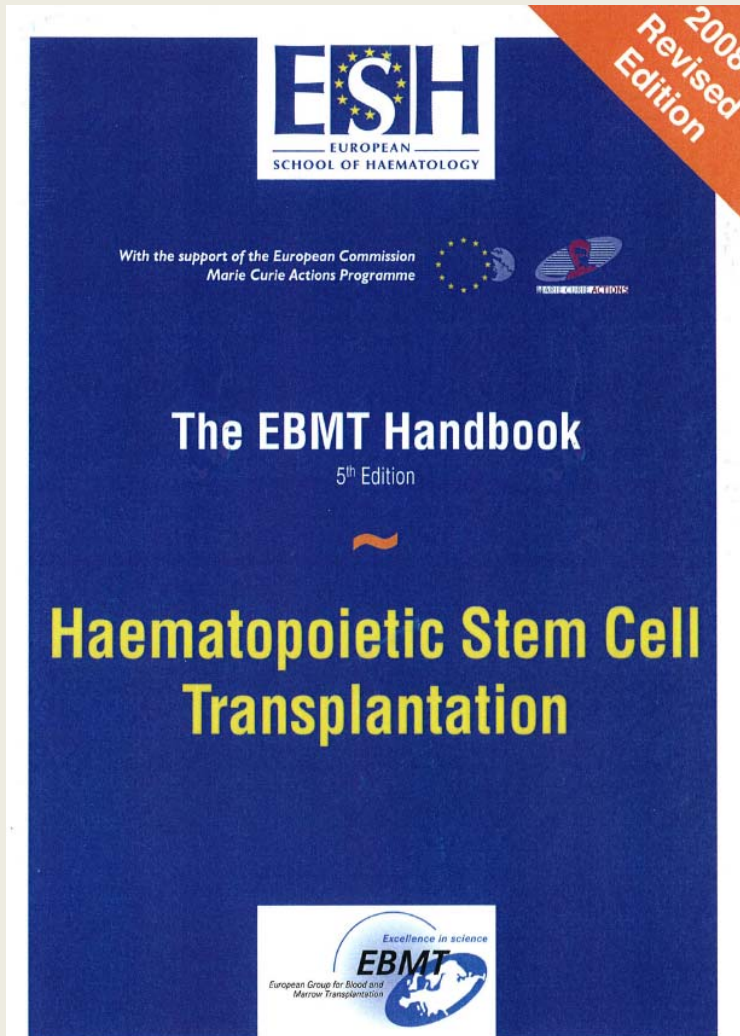
<i>Richardson</i> , ASH 2010, EBMT 2011	Time from VOD diagnosis to DF Administration (N=103)*		
	≤ 2 Days	> 2 Days	P-value
Survival at Day+100	30/67 (45%)	8/36 (22%)	0.0237

<i>Niederwieser</i> , EBMT 2011	Time from VOD diagnosis to DF Administration (N=572)		
	≤ 3 Days	> 3 Days	P-value
Survival at Day+100	242/401 (60%)	84/171 (49%)	0.048

p values calculated based on the Chi square test.

* Data for 1 pt was missing at the time of analysis

EBMT Handbook Guidance for Treatment of VOD



Treatment of established VOD (6, 8) (Table 3)

Table 3: Treatment of established VOD	
First line therapy	
Symptomatic (a)	<ul style="list-style-type: none"> - Restriction of salt and water intake ± diuretics - Maintain intravascular volume and renal perfusion by means of albumin, plasma expanders and transfusions (haematocrit >30%)
Specific (b)	<ul style="list-style-type: none"> - Defibrotide 6.25 mg/kg IV in 2 h infusion q 6 h IV during 14 days (1) (c) (d) - rt-PA 0.05 mg/kg/h during 4 hours (maximum 10 mg/day) for 2–4 days ± sodium heparin 20 U/kg as a bolus (maximum 1000 U) followed by 150 U/kg/day by continuous infusion for 10 days (e)
Other measures	
Symptomatic (a)	<ul style="list-style-type: none"> - Low dose dopamine (effectiveness not demonstrated) - Analgesia - Paracentesis / thoracocentesis - Haemodialysis / haemofiltration - Mechanical ventilation
Specific	<ul style="list-style-type: none"> - TIPS (transvenous intrahepatic portosystemic shunt) (f) - Surgical shunt - Liver transplantation

rt-PA: recombinant tissue plasminogen activator.

(a) Symptomatic treatment should be established first, reserving specific measures for most severe cases.

(b) Although other agents have been used (antithrombin III, prostaglandin, corticosteroids, glutamine/vitamin E, N-acetylcysteine, etc.) the only ones occasionally effective are those mentioned.

(c) Defibrotide permits the resolution of 50–55% of severe VOD with multiorgan dysfunction and a 47–60% of survival at day +100 with no secondary effects in adults and children (8, 10).

(d) In a randomised study defibrotide at 25 mg/kg/day has shown similar effectiveness to the classical dose of 40 mg/kg/d (8).

(e) rt-PA has been shown to be effective only in patients with a non-advanced VOD. Its use is contraindicated in patients with multi-organ dysfunction syndrome (MODS), haemorrhages or severe hypertension.

(f) Despite improvement in portal hypertension and ascites, long term efficacy and survival are extremely poor.

Prevention Trial Results

Primary and Secondary endpoints

Incidence VOD (D30)	DF Prophylaxis	Control	P value
Competing Risk (ITT)	12% (22/180)	20% (35/176)	0.0488 ⁽¹⁾
Competing Risk (PP)	11% (18/159)	20% (34/166)	0.0225 ⁽¹⁾
Acute GvHD (D100)	47% (57/122)	65% (76/117)	0.0044 ⁽²⁾
Acute GvHD Grade 2-4 (D100)	22% (27/122)	37% (43/117)	0.013 ⁽²⁾

***Statistically significant reduction in incidence of VOD
and in incidence and severity of acute GvHD***

(1) P-value of Z test

(2) P-value from Chi-Square Test for incidence of GvHD by D+100

Safety: Drug-Related Adverse Events

Treatment of VOD

	N Patients	% Patients (N=1052)
Gastrointestinal hemorrhage	25	2.4
Coagulopathy	24	2.3
Pulmonary hemorrhage	18	1.7
Hypotension	12	1.1
Hemorrhage NOS	9	0.9
Cerebral hemorrhage	8	0.8
Nausea	7	0.7
Pyrexia	6	0.6
Epistaxis	5	0.5
Hemothorax	4	0.4
Hematemesis	4	0.4

Safety: Drug-Related Adverse Events

Prevention of VOD

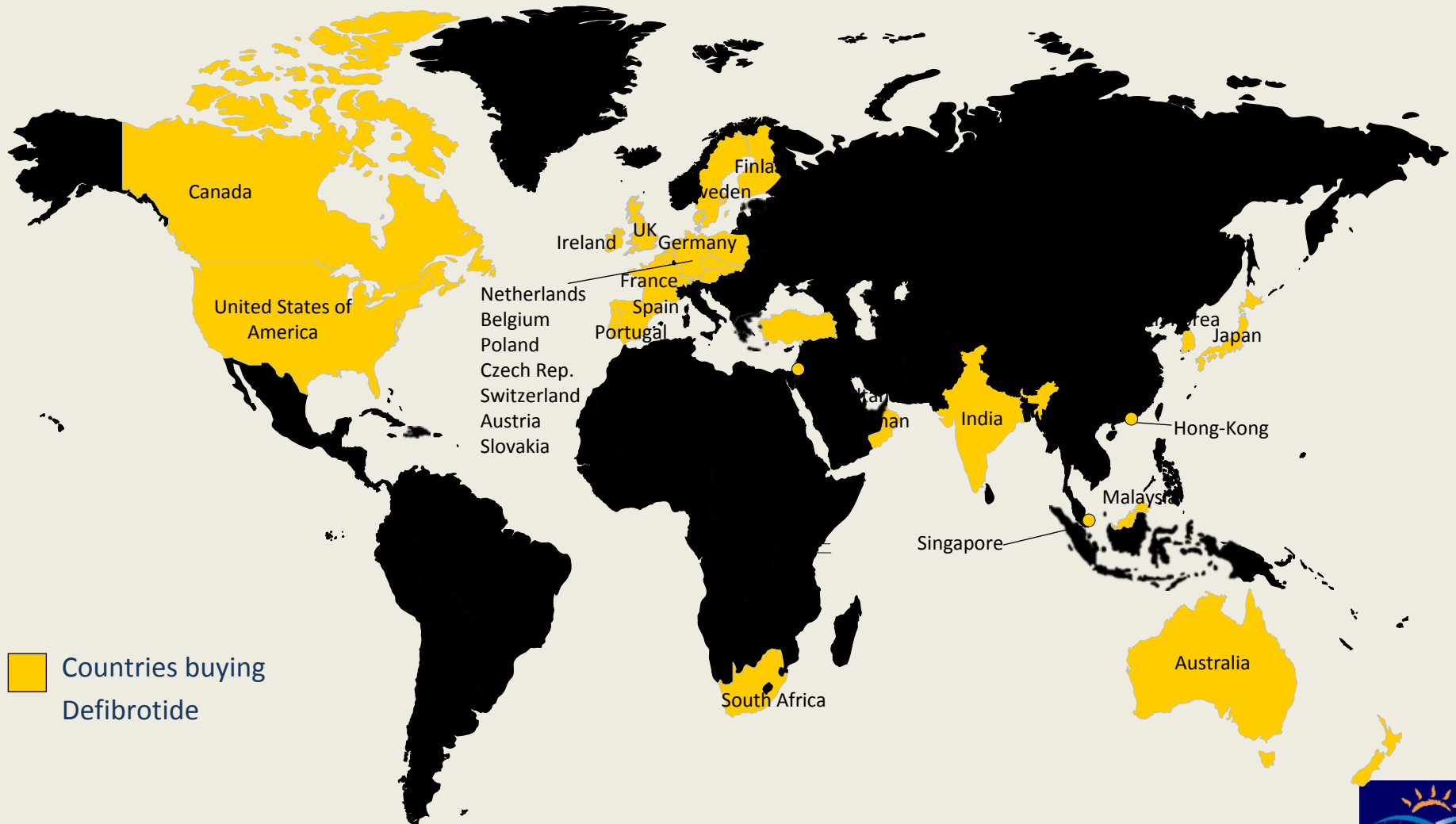
	N Patients	% Patients (N=772)
Gastrointestinal hemorrhage	2	0.3
Epistaxis	2	0.3
Nausea	1	0.1
Abdominal pain	1	0.1
Mouth hemorrhage	1	0.1
Vomiting	1	0.1
Hemorrhagic diarrhea	1	0.1
Hemorrhage NOS	1	0.1
Coagulopathy	1	0.1

EXPANDED ACCESS PROGRAMS NAMED PATIENT & COST RECOVERY


Named Patient & Cost Recovery Programs

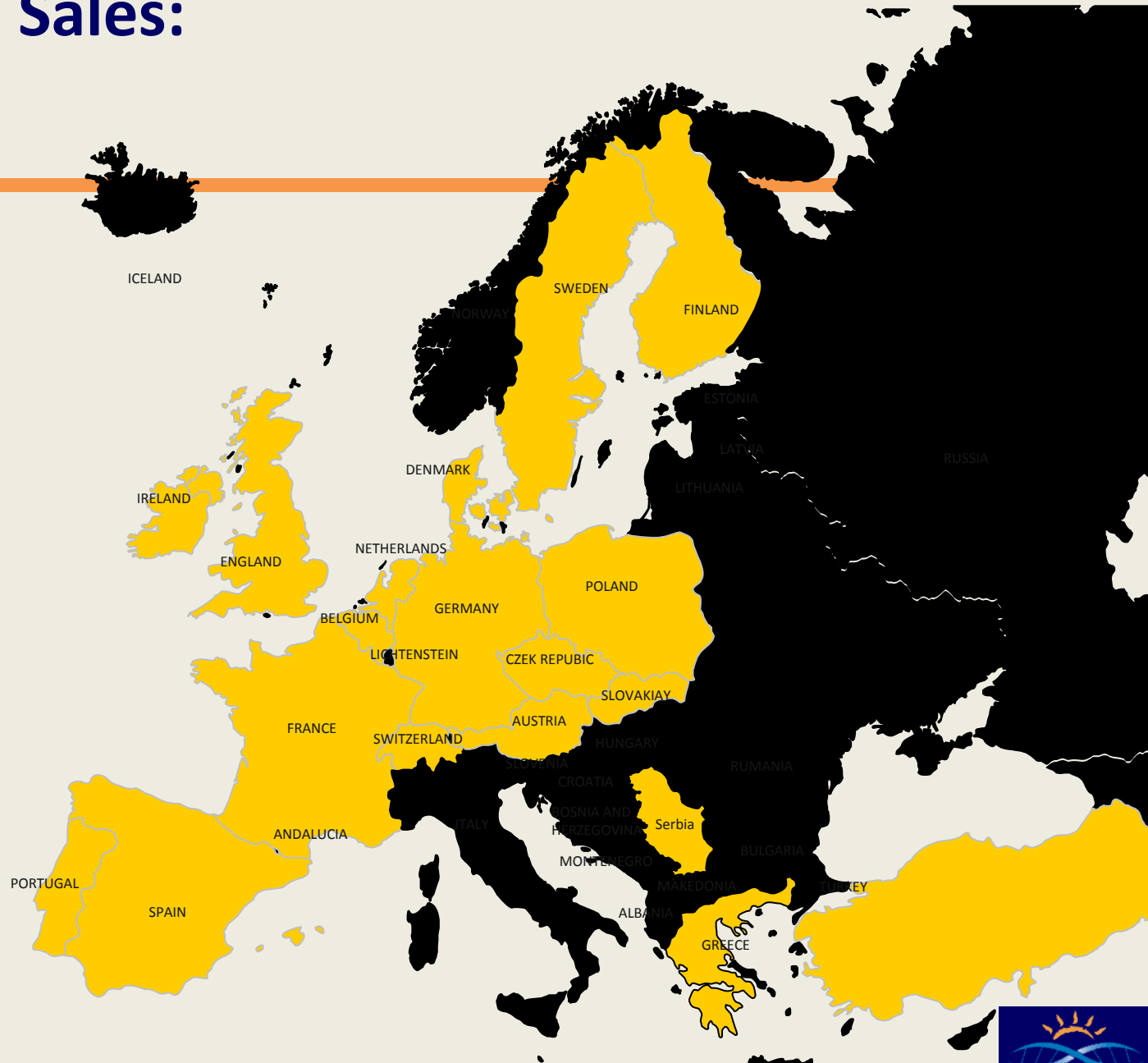
- **Named Patient Program, Ex-US, initiated April 2009**
- **Cost Recovery Program Under Treatment IND, US, initiated October 2009**
- **>200 clinics in >30 countries currently purchase defibrotide**
 - **In the US, >40 clinics use defibrotide to Treat diagnosed VOD under a US FDA-approved Treatment IND Protocol**
 - **Ex-US, >170 clinics use defibrotide to Prevent VOD in high risk patients and to Treat diagnosed VOD**

Global Defibrotide Sales: Named Patient & Cost Recovery Programs

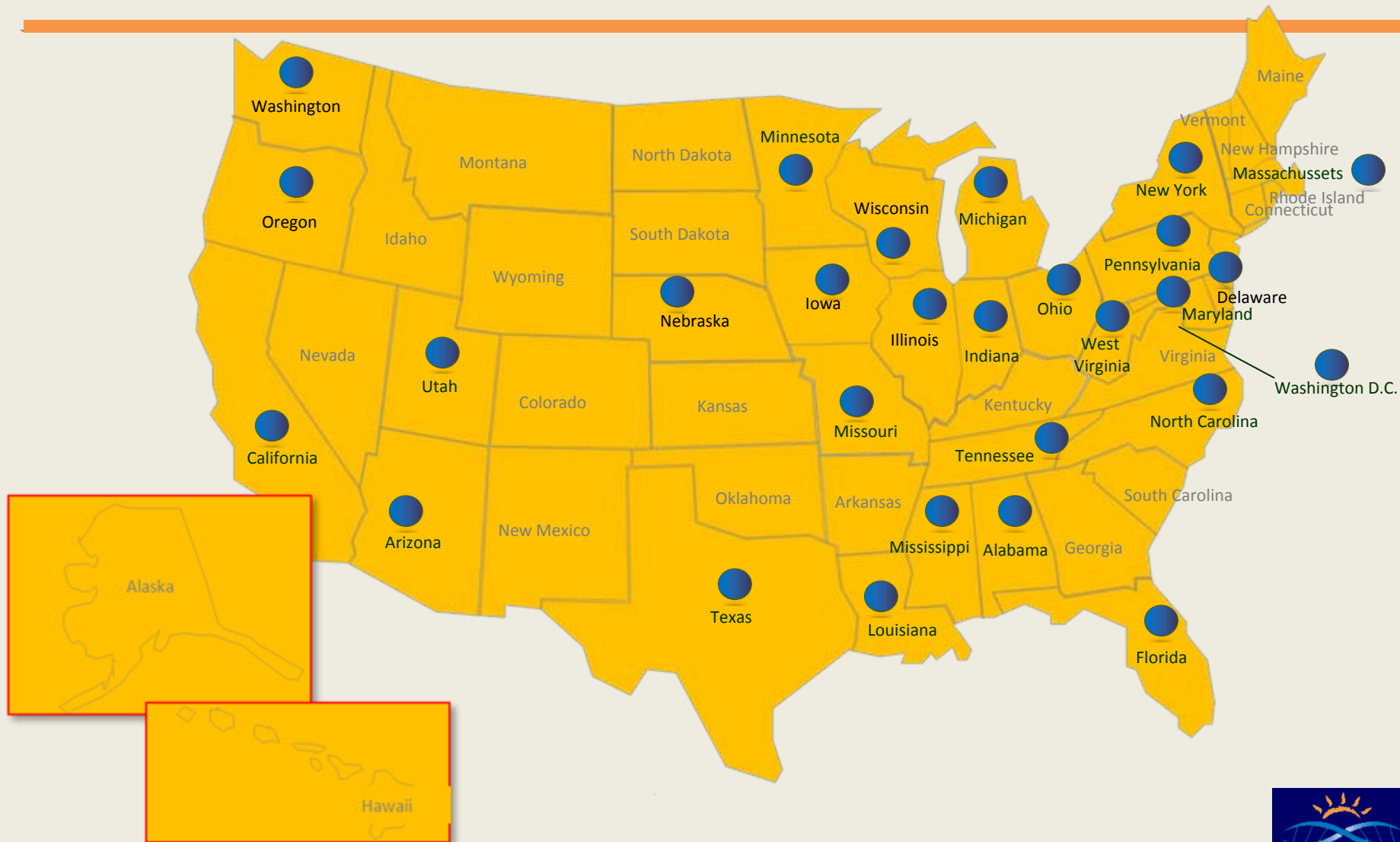


Defibrotide Sales: Europe

 Countries buying
Defibrotide



Defibrotide Sales: United States of America



Defibrotide: Conclusions

- **Treatment with DF results in an increased rate of complete response compared to a Historical Control and a strong trend towards decreased mortality**
- **Complete response strongly correlates with survival. Early use of DF results in better prognosis**
- **Prophylactic DF significantly reduces the incidence of VOD in a pediatric high risk population**
- **DF may be useful for the prevention of other post-stem cell transplant complications e.g., acute GvHD**
- **DF was well-tolerated in >1800 stem cell transplant patients**
- **Named patient program and Cost-recovery program (validation of demand - revenue generation)**

Defibrotide: Corporate Deal with Sigma-Tau

- **Cost Sharing: Sigma-Tau funds 50% of studies required for NDA filing**
- **Up to 15 million USD in milestone Payments (post-approval transfer of NDA to Sigma-Tau) – First milestone payment of 7 million USD (Feb. 2010)**
- **Gentium will receive 38% on net sales (7% royalty and 31% supply margin)**

Commercialization Rights	Americas	EU	RoW
Treatment (VOD)	Sigma-Tau	Gent**	Gent
Prevention (VOD)	Sigma-Tau	Gent**	Gent
All other indications	Gent*	Gent	Gent

•Sigma-Tau has a right of first refusal on all other indications or other formulations in the Americas.

**1.5% royalty on net sales to Stada (7 years post-launch in major 5 EU countries)

Gentium Manufacturing API Business Snapshot



- Fully GMP compliant Facility
- Four Natural Product API's

Defibrotide

Sulglycotide

Heparin

Urokinase

- Gentium's Customers include

IDIS

US oncology

Samil Pharmaceuticals

Stada

Synermed

UCB

> \$ 8.5 m from API sales in 2010



FINANCIALS

Highlights Financials FY 2010

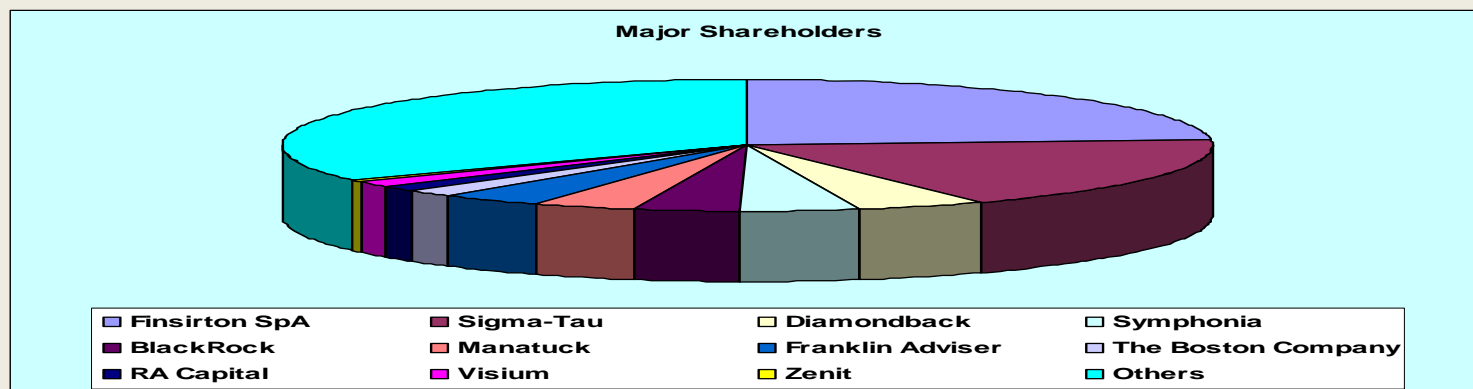
US\$1.3269/Euro exchange rate

- **Cash position increased by €7.4 mln (US\$ 9.6 mln)**
- **Long term debt decreased from €3.5 mln to €2.9 mln**
- **Doubled product sales**
- **Four consecutive cash flow positive quarters**
- **Three consecutive profitable quarters**
- **Net income as of 12/31/2010 of Euro 4.0 million (US\$ 5.3 million)**

Financials as of March 31, 2011

US\$ 1.4207/Euro exchange rate

Cash	€9.4 million	US\$ 13.4 million
Long Term Debt	€2.7 million	US\$ 3.8 million
Market Capitalization		US\$ 143 million
Shares Outstanding	14,966,317	



Analyst Coverage: Wedbush, PacGrow LifeSciences

(*) BoNY, Shareholders Report February 2011

Highlights Financials Q1/2011

US\$1.4207/Euro exchange rate

- **Cash position increased by €0.7 mln (US\$ 1.0 mln)**
- **Product sales increased 30%**
- **Cash flow positive in Q1/2011**
- **Profitable in Q1/2011**
- **Net income as of 03/31/2011 of Euro 1.7 million (US\$ 2.4 million)**

Financials (Q1/2011 versus Q1/2010)

All amounts in millions

	For the three months period ended March 31,		
	<u>2011</u>	<u>2010</u>	
Total Product Sales	€5.09	€3.92	+30%
Total revenues	€6.05	€4.99	+21%
Operating costs and expenses (**)	(€4.16)	(€5.10) *	-18%
Net income/(loss)	€1.70	(€0.03)	

Product Sales revenue guidance for 2011 of Euro 23-25m (US\$30-35m)

* including one time restructuring charge of €0.95

** including non cash expenses such as depreciation, amortization and stock based compensation

Gentium Milestones (12 months)

- ✓ **Completion of preclinical hERG channel study and reproductive toxicity study in dogs**
- ✓ **Completion of Thorough QT/QTc study & PK study in volunteers**
- ✓ **Completion of technology transfer and CMC documentation of drug product manufacturing**
- ✓ **Initiated establishment of commercial infrastructure in EU**
- ✓ **Completion of CTD documentation (eCTD format)**
- ✓ **Filing of MAA for marketing authorization with EMA**

Filing of NDA for marketing authorization with US FDA

Gentium Summary

- **Defibrotide, granted orphan drug status, addresses a significant unmet medical need for the treatment and prevention of VOD**
- **Defibrotide has potential for use in other indication (e.g. Acute GvHD)**
- **Extensive use of Defibrotide through named-patient & compassionate use programs underscores the wide knowledge and adoption of defibrotide within the physician community**
- **Gentium has a corporate partnership for distribution of Defibrotide in Americas but retains exclusive rights for Europe and RoW.**
- **Strong management focus on progressing the development of defibrotide in EU and US towards approval**
- **Own specialized manufacturing facility producing four drug substances**
- **Revenue stream (Named-Patient & Cost recovery program; API business)**
- **Cash-flow positive and profitable (achieved projected forecast of €24.55)**