

## Gentium S.p.A (GENT)

**Initiating Coverage of Gentium S.p.A. with an  
OUTPERFORM Rating and \$16 Fair Value**

- Gentium, S.p.A, is a cash-flow positive biotechnology company focused on using defibrotide to treat and prevent Venous Occlusive Disease (VOD), a Stem Cell Transplant (SCT) complication with a high mortality and morbidity rate. The company currently treats patients through a compassionate use/named patient program (it is not currently approved by FDA or EMA); we estimate \$28 million (current exchange rate) in revenues from the program.
- We expect that approval by FDA and EMA could occur Q4:11/Q1:12, which we believe will allow for more rapid sales growth. For Gentium's defibrotide revenues and royalties, we project \$37 mm, \$56 mm and \$100 mm for 2011, 2012, and 2013, respectively. In the Americas, Gentium receives 38% of estimated net sales as per its agreement with Sigma-Tau Pharmaceuticals. We also note that VOD could become a more frequent problem as allogeneic bone marrow transplants could double over the next 5 years.
- We view FDA/EMA approval as an important driver to increased adoption, especially in the USA; however, even without approval, Gentium trades at ~3X sales, is cash flow positive and profitable. GENT trades at a discount to the commercial biotechnology universe, and even without approval, we see upside to the share price. With defibrotide regulatory approval, we expect multiple expansion to the more "typical" biotechnology sales multiple of 6x, along with an acceleration in sales growth to move the stock price closer to our price target.
- An additional indication of preventing acute Graft versus Host Disease (GvHD) could expand the market for defibrotide. Defibrotide-treated patients also appear to have lower rates of acute GvHD. While we do not include use of defibrotide in GvHD prophylaxis in our model, we recognize its use in that setting (on- or off-label) as upside to our estimates.
- We are initiating coverage with a **OUTPERFORM** rating and a **\$16** fair value. We derive our fair value estimate by applying a 6x multiple to 2012 defibrotide sales, combined with an 15X multiple on 2012 US royalty income, discounted 25% annually, as Gentium is already essentially a commercial company. We use the current exchange rate of \$1.38: €1.

March 14, 2011

Price  
**\$9.15**

Rating  
**OUTPERFORM**

Fair Value Estimate  
**\$16**

Gregory R. Wade, Ph.D.  
(415) 274-6863  
greg.wade@wedbush.com

David M. Nierengarten, Ph.D.  
(415) 274-6862  
david.nierengarten@wedbush.com

Christopher N. Marai, Ph.D.  
(415) 274-6861  
chris.marai@wedbush.com

### Company Information

Shares Outst (M)	15.0
Market Cap	\$136.8
52-Wk Range	\$1.46 - \$10.50
Book Value/sh	\$1.09
Cash/sh	\$0.86
Enterprise Value (M)	\$134.0
LT Debt/Cap %	17

### Company Description

Gentium, S.p.A., based in Como, Italy, is developing defibrotide for the treatment and prevention of Venous Occlusive Disease (VOD) and the prevention of Graft-versus-Host Disease (GvHD) in the stem cell transplant (SCT) setting.



Source: Thomson Reuters

FYE Dec	2010E		2011E			2012E		
REV	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.	
Q1 Mar	\$6.9A	\$9.8E	--	--	\$9.5E	--	--	
Q2 Jun	10.4A	10.5E	--	--	15.1E	--	--	
Q3 Sep	8.2A	11.2E	--	--	17.3E	--	--	
Q4 Dec	8.3E	11.9E	--	--	19.6E	--	--	
Year*	<b>\$33.7E</b>	<b>\$43.3E</b>	--	--	<b>\$61.6E</b>	--	--	
Change	131%	28%			42%			
	2010E		2011E			2012E		
EPS	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.	
Q1 Mar	(\$0.00)A	\$0.21E	--	--	\$0.19E	--	--	
Q2 Jun	0.22A	0.24E	--	--	0.46E	--	--	
Q3 Sep	0.14A	0.28E	--	--	0.56E	--	--	
Q4 Dec	0.14E	0.30E	--	--	0.68E	--	--	
Year*	<b>\$0.50E</b>	<b>\$1.04E</b>	--	--	<b>\$1.37E</b>	--	--	
P/E	18.4x	8.8x			6.7x			
Change	214%	109%			32%			

Consensus estimates are from Thomson First Call.

\* Numbers may not add up due to rounding.

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## **Investment Thesis**

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Gentium is, in our view, an undervalued revenue and cash-generating biotechnology company. It is unusual in that it can generate these revenues without market approval due to its niche in the named-patient and cost-recovery programs that allow for defibrotide use in transplant patients prior to its potential approval. With regulatory approval, expected by late 2011/Q1:12, the named patient restrictions will end, and we believe that defibrotide sales could significantly increase due to increases in both numbers of patients treated and per-unit pricing of defibrotide. Additionally, with US FDA approval, the company's partner, Sigma-Tau, can begin actively marketing defibrotide in the USA (and Americas) and pay 38% of US net sales to Gentium (7% royalty, 31% supply margin).

### **Valuation**

Our fair value of \$16 is derived from applying a 6x multiple to 2012 estimated ex-US defibrotide sales, discounted by 25%, added to 15x our estimate of 2012 US royalties paid on defibrotide sales, also discounted by 25%. We estimate total defibrotide sales in 2012 to be \$66 million. Of that total, we estimate \$49 million coming from European sales (accruing to Gentium) and we estimate that GENT will receive \$6 million in royalty payments from sales ex-EU. This represents a market penetration in 2012 of 23% in VOD treatment and 3% and 10% in the US and EU VOD prevention patient population, respectively.

### **Risks**

Risks to achievement of our fair value include failure to gain regulatory approval, commercial risk and the reduction or elimination of named-patient programs. Currency fluctuations may also affect the translation of Euro-based earnings into US dollars.

### **Key Points**

- Over 1800 patients have been treated with defibrotide, and we estimate 900 patients will have been treated in 2010. Gentium derives revenues through named patient/compassionate use programs which are sufficient to have made it profitable.
- FDA and EMA approvals, which should come in the Q4:11 – Q1:12 timeframe, will allow for greater market penetration in our view, especially in the USA/Americas (Gentium licensed American commercialization rights to Sigma-Tau Pharmaceuticals). We also believe there is the possibility for significant upside in pricing post-approval.
- Additional growth could come from use to prevent GvHD in allogeneic SCT patients. We do not model additional revenues from the prevention of GvHD, but we view the clinical data as encouraging relative to historical controls.

### **Gentium Overview**

Gentium, S.p.A. is based in Como, Italy, and is focused on the treatment and prevention of life-threatening complications of patients receiving stem cell transplants (SCTs). Its lead product candidate, defibrotide, is based on DNA extracted from pig intestines, and has shown positive results in two pivotal Phase II/III trials for the treatment and prevention of veno-occlusive disease (VOD), a common, serious SCT transplantation. Currently, the company generates revenues (€18.6 million, first three quarters 2010) from name patient sales in Europe and cost recovery programs in the USA, and it is cash flow positive (€8.2 million, first three quarters 2010). Gentium is partnered with Sigma-Tau in the Americas, whereby Sigma-Tau would pay 38% of net sales to Gentium post-approval.

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## **Clinical Pipeline Highlights**

### **Defibrotide**

Defibrotide is based on a mixture of single- and double-stranded DNA that is extracted from pig intestines and purified to a set of defined molecular weights and charge. It appears to protect the endothelium of blood vessels from the effects of stem cell transplant conditioning regimens, and it also appears to restore fluid balance in the microvessel environment in the liver. Unlike other supportive care agents, it does not appear to have significant, systemic anti-coagulation properties. It has been extensively used in the SCT setting, and despite administration to a critically ill population, does not appear to have serious side effects.

### **Upcoming milestones**

Q2:11	File defibrotide NDA with FDA and EMA
H1:11	Publication of pediatric VOD prevention Phase II/III trial
YE:11	Potential defibrotide approval US and EU

## Product Development Summary

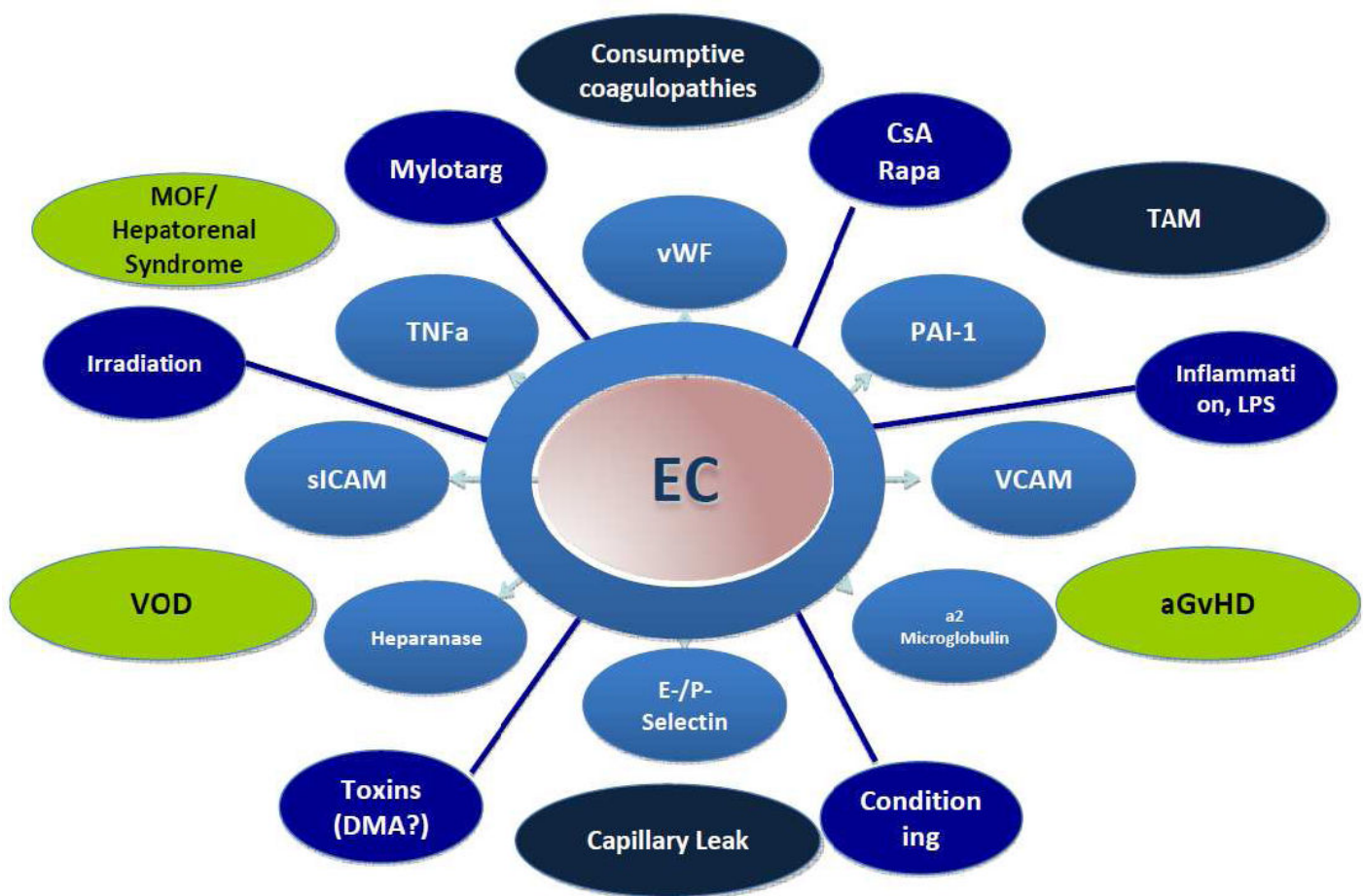
Defibrotide	Status	2012 Estimated Global Revenues
Treatment of Severe VOD (US)	Phase III trials complete	\$66 million (current exchange rates), \$56 million estimated Gentium revenues after royalty split.
Treatment IND Expanded Access (US)	Ongoing	
Pediatric Prevention of VOD (EU)	Phase II/III trial complete	
Prevention of VOD (US)	(likely off-label use)	
Prevention of GvHD	Part of prospectively-defined analysis in Phase II/III trial	Not included in estimates

Source: *Wedbush PacGrow Life Sciences*

## Stem Cell Transplant Overview

Approximately 53,000 people per year worldwide receive stem cell transplants as a treatment for various hematological cancers. Prior to transplantation of bone marrow, the recipient's bone marrow must be ablated (the conditioning phase), which is performed with high dose radiation and chemotherapy. The donor (allogeneic) or stored (autologous) stem cells are injected into the recipient, and the patient goes into the engraftment phase, where the cells home to the bones and establish new marrow. Stem cell transplantation carries with it a range of side effects and complications that can be broadly divided into complications from the lack of functional bone marrow (infections), those from post-transplant immune dysfunction (graft versus host disease), and complications arising from the high-dose chemotherapy used to ablate the bone marrow (veno-occlusive disease, mucositis). Many complications are not necessarily clearly demarked in terms of causation, however.

### Exhibit 1: Universe of Stem Cell Transplant Complications and Factors



Source: Gentium, S.p.A.; EC=Endothelial Cells; MOF=Multiple Organ Failure, aGvHD=acute Graft versus Host Disease, VOD=Veno-Occlusive Disease

As seen in the exhibit above, the endothelial cells, in response to a number of insults associated with SCT conditioning, produce multiple factors that lead to transplantation complications such as VOD, organ failure and GvHD. These complications contribute a large portion of the mortality risk associated with SCTs — overall mortality associated just with SCT is approximately 10-15%, depending on the patient and underlying condition — and controlling them is a major goal of transplanting physicians.

**Veno-Occlusive Disease (VOD)**

Veno-Occlusive Disease is a serious complication that occurs in 10-17% of transplant patients and usually begins about 2 week after the conditioning phase. The pathophysiology of hepatic VOD is not well understood, but it is thought to be caused by injury to the area surrounding the central veins where damage is seen in sinusoidal endothelial cells and hepatocytes, due to the high dose chemotherapy used. Generally, a pro-coagulant/hypofibrinolytic state is present throughout, with low plasma levels of antithrombin III (AT III) and protein C, consumption of Factor VII, and increased levels of plasminogen activator inhibitor 1 (PAI-1). Later pathologic changes include deposition of fibrin, fibrinogen and factor VII-vWF at the interface between sinusoids and terminal venules, deposition of collagen in the sinusoids, sclerosis of venular walls, and fibrosis of venular lumens. Progressive venular occlusion and sinusoidal obstruction contributes to the structural damage and ultimately widespread liver disruption manifests as hepatic VOD. Hepatocellular necrosis and vascular occlusion lead to hepatorenal pathophysiology, liver failure, multi-organ failure and death. Mortality rate in severe VOD approaches 75%, and with severe VOD, only 9% achieve a complete response within 100 days of transplant without defibrotide treatment.

Treatment with defibrotide has resulted in survival rates of 41% (severe VOD) to 59% (non-severe VOD) in real-world use through compassionate use programs. Additionally, prophylaxis with defibrotide appears to reduce the incidence of VOD in a high-risk, pediatric population by 40% and also reduces VOD-related morbidity and mortality.

**Graft versus Host Disease (GvHD)**

A complication of allogeneic SCT is Graft versus Host Disease (GvHD). Acute GvHD occurs in 30-50% of patients and is caused by the donor's T-cells present in the graft attacking the recipient's tissue. Treatment is usually with steroids, however, there is a careful balance needed between suppressing the unwanted immune system activity and suppressing the regeneration of a healthy immune system. Further complicating treatment, while the GvHD response is unwelcome in patients, donor T-cells can help mediate a beneficial response: graft versus leukemia (GvL) or graft versus tumor. Clinically, acute GvHD manifests through a rash of varying severity, elevated liver enzymes and diarrhea, vomiting, and other significant GI disturbances, and all of these complications can become life-threatening.

Additionally, chronic GvHD can develop. Generally chronic GvHD occurs 100 days or more after allogeneic stem cell transplantation. Multiple systems are affected, with a wide variety of skin abnormalities, liver enzyme elevations, eye problems, dry mouth, obstructive lung disease and some GI disturbances. However, the main cause of mortality is infections caused by immune suppression.

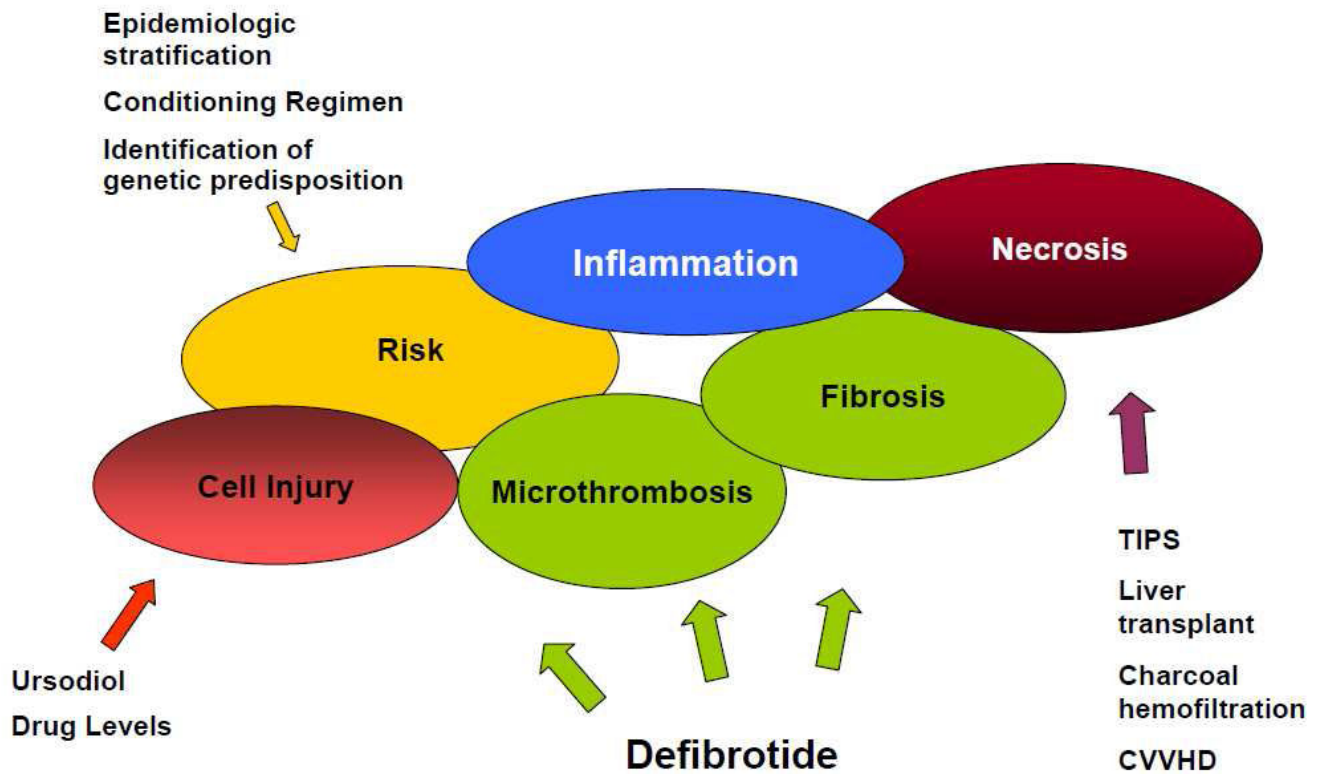
In a prospectively defined analysis of patients using defibrotide as a prophylactic treatment, 45% (n=57/126) of treated patients developed acute GvHD by 100 days after transplant, compared to 63% (n=76/120) of the control group, with a P-value = 0.0044.

**Defibrotide Composition and Mechanism of Action**

Defibrotide is a polydeoxyribonucleotide sodium salt extracted from pig intestines. It is a mixture of molecular weights, with defined size and charge exclusion criteria. Defibrotide has a number of pharmacological effects which contribute to its endothelial protective properties, with pro-fibrinolytic, antithrombotic, anti-ischemic, anti-inflammatory, anti-adhesive activities, but importantly without any significant systemic anti-coagulant effects. Defibrotide appears to reduce endothelial cell injury without enhancing systemic bleeding and protects sinusoidal endothelium without compromising the antitumor effects of cytotoxic therapy. Defibrotide has profibrinolytic activity and prevents fibrin deposition with selective activity in small vessels. Defibrotide promotes fibrinolysis via upregulation of Tissue Plasminogen Activator (t-PA) and Tissue Factor Pathway Inhibitor (TFPI) and reduces circulating levels of Plasminogen Activator Inhibitor-1 (PAI-1). In addition, defibrotide blocks TF (Tissue Factor) expression, and TF represents the most important activator of the coagulation cascade, and its inhibition may help reduce microvascular fibrin deposition that appears to contribute to the eventual development of organ dysfunction. Finally, Defibrotide modulates platelet activity by increasing levels of endogenous prostaglandins (PGI-2 and E-2) and thrombomodulin and studies on damaged endothelium have shown selective protective effects of defibrotide for microvascular, but not macrovascular, endothelium. These effects appear consistent with *in vivo* observations of decreased PAI-1, increased t-PA levels and increased overall plasma fibrinolytic activity in patients with VOD treated with defibrotide.

Defibrotide has been shown to bind to vascular endothelium and significantly decrease expression of CAMs, such as P-selectin and intercellular adhesion molecule-1, on endothelial cells. These effects can reduce the leukocyte rolling and adherence to the endothelium. The anti-adhesive properties of defibrotide on endothelium have been confirmed in murine and primate studies of stem cell mobilization where defibrotide has been shown to augment granulocyte colony stimulating factor-primed stem cell collection through the modulation of the expression pattern of adhesion receptors involved in stem cell trafficking.

## Exhibit 2: Defibrotide's Role in the Network of Conditions Causing VOD



Source: Gentium, S.p.A.

## Defibrotide and VOD in the Clinic

The goal for treatment of VOD is to control and normalize the blood vessels, vasculitis and fibrin deposition (to prevent fibrosis), along with supportive care. Anti-coagulants, t-PA, anti-thrombin and heparin have all been used. However, t-PA has significant potential side effects, including hemorrhage. Regarding anti-thrombin and heparin, there is little data available to support any efficacy claims. Supportive care consisting of painkillers, diuretics, surgery (to relieve ascites) and other procedures are also used with the goal of treating or preventing organ failure. There are no currently-approved products specifically for VOD.

Defibrotide has been used on a named patient/compassionate use basis for over a decade. In 2007, Gentium discontinued its fill and finish agreement with Sirtion, an affiliated company, that would then sell defibrotide in ampoule and capsule form to Crinos S.p.A, a distributor and subsidiary of Stada Arzneimittel AG. At YE:08, Gentium discontinued its distribution agreement with Crinos, and then launched the named-patient program for defibrotide in 2009 (administered in Europe by IDIS Limited), and the cost-recovery program (administered in the USA by US Oncology Clinical Development). In 2009, these sales were €4.9 million.

Gentium conducted two Phase III clinical trials for defibrotide for both the treatment of severe VOD and a Phase III trial for the prevention of VOD in pediatric patients undergoing stem cell transplantation who are at risk for VOD. A Phase III trial conducted by Gentium in 2009 showed strong trends in favor of defibrotide. The trial was a multi-center, open label, historically controlled study to evaluate defibrotide effects on treating severe VOD at 25/mg/kg/day. The primary endpoint was complete response at 100 days and the main secondary endpoints were survival at 100 days and 6 months post-diagnosis of VOD.

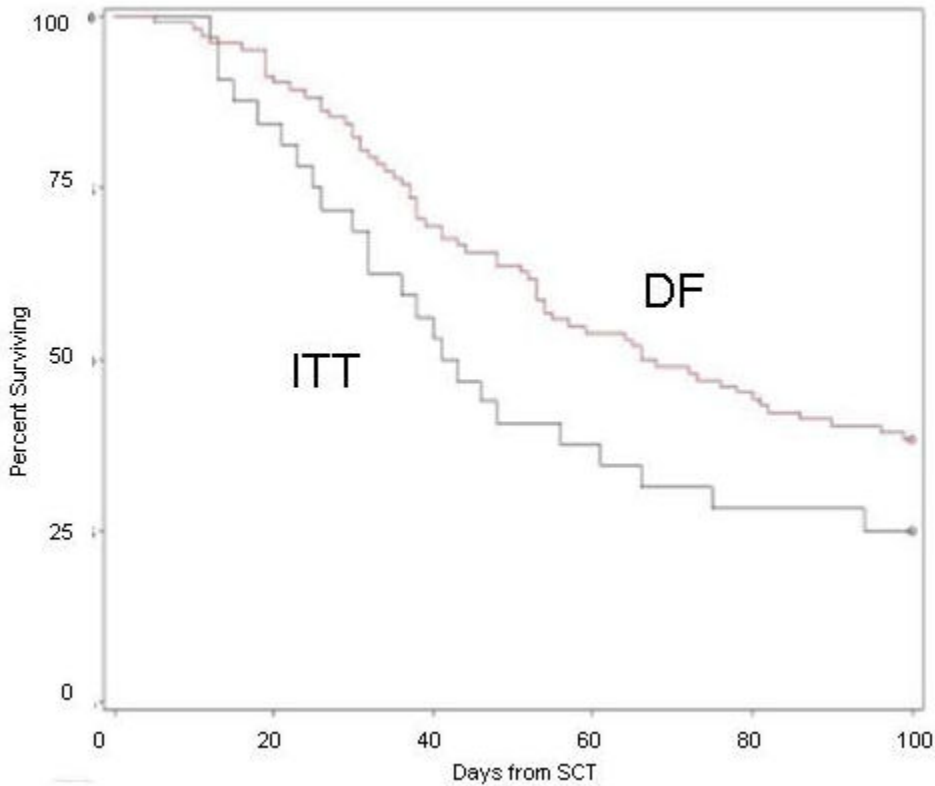
The treated group had a complete response rate at 100 days of 24% (n=102), compared to 9% in the historical controls (n=32), with a p-value of 0.015. Because the trial used historical controls, the protocol specified a p-value of less than or equal to 0.01, rather than 0.05 as is usually seen in clinical trials, so the determined p-value of 0.015 did not attain this stringent endpoint. The per protocol population did reach statistical significance, supporting the ITT data. We view the ITT data as more relevant to the FDA, but given the totality of clinical evidence, in addition to the high unmet medical need, we view approval as likely to happen.

### Exhibit 3: US Phase III Severe VOD Treatment Trial Results

US PIII Treatment Trial	ITT Population	Per Protocol Population	Historical Control
Complete Response (Day 100)	24% (24/102), p=0.0148, not statistically significant	29.5% (18/61), p=0.0091	9% (3/32)
Mortality (Day 100)	62% (63/102), p=0.0508, not statistically significant	51% (31/61), p=<0.0001	75% (24/32)

Source: Gentium, S.p.A.

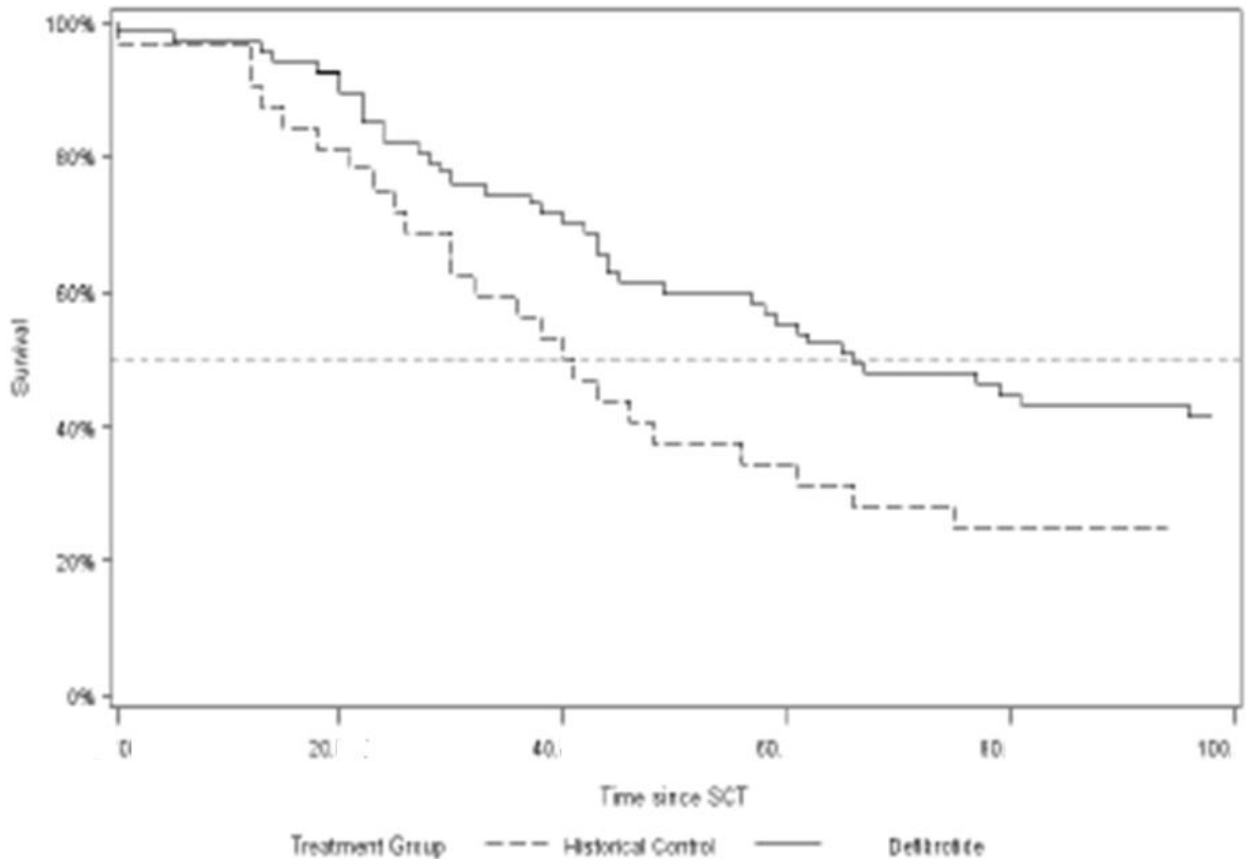
**Exhibit 4:  
Kaplan-Meier Curve of Defibrotide Compared to Historical Controls**



Source: Gentium, S.p.A.

The second Phase III trial of defibrotide was a Treatment IND program. Of the 102 patients treated in this study, 68 would have met the historical control eligibility criteria and so were included in the analysis. Twenty-three of the 68 patients (34%) had a complete response by day 100, compared again to the 9% of the control group (3/32), and 66% of the defibrotide group died compared to 75% of the historical control group. The p-values were 0.003 for the complete response rate and 0.0468 for the mortality improvement, both statistically significant.

## Exhibit 5: Kaplan-Meier Curve of Defibrotide in Treatment-IND Phase III



Source: Gentium, S.p.A.

It is important to note that the combined data are supportive of registration with FDA and EMA, and the company is using these data and the Phase II safety data to support its registration of defibrotide. In addition, Gentium is submitting its Phase II/III trial of defibrotide for the prevention of VOD in the pediatric population with its EMA package.

The pediatric population is highly susceptible to VOD, and so Gentium examined whether defibrotide could prevent VOD in this vulnerable population. This trial was a randomized, controlled study with 356 patients in the ITT analysis (180 patients in the prophylaxis arm, and 176 in the control arm). In the defibrotide group, patients had a 40% reduction in the incidence of VOD within 30 days post-transplant, with 12% of prophylactically-dosed defibrotide patients developing VOD, compared to 20% of the control group ( $p=0.0488$  Competing Risk,  $p=0.0507$  Kaplan-Meier). In the per-protocol analysis, the VOD incidence was still 20% in the control arm and 11% in the prophylaxis arm ( $p=0.0225$  Competing Risk,  $p=0.0234$  Kaplan-Meier), where  $p=0.05$  was needed in this trial to achieve statistical significance.

## Exhibit 6: EU Phase III VOD Pediatric Prevention Trial Results

EU PII/III Prophylaxis Trial	DF Prophylaxis	Control	P-value
ITT: Competing Risk: CICR (95% CI)	12% (22/180) 0.13 (0.08, 0.19)	20% (35/176) 0.20 (0.15, 0.27)	0.0488
PP: Competing Risk: CICR (95% CI)	11% (18/159) 0.11 (0.07, 0.17)	20% (34/166) 0.2 (0.15, 0.28)	0.0225

Sources: Gentium, S.p.A.

Additionally, due to the participation of patients in named-patient programs throughout Europe, Gentium has accumulated significant amounts of patient data showing real-world clinical use benefits to defibrotide.

## Exhibit 7: EU Named-Patient Program Results

EU Compassionate Use	All patients (n=477)	Severe VOD CR	Non-Severe VOD CR
CR	48%	32%	53%
Survival	54%	41%	59%
	Survived D+100 All Patients (n=447)	Survived D+100 Non-Severe VOD (n=335)	Survived D+100 Severe VOD (n=112)
Complete responders	89%	88%	97%
No response	10%	13%	5%

Sources: Gentium, S.p.A. and Wedbush PacGrow Life Sciences

Finally, aggregating the clinical trial and compassionate use data shows benefits to defibrotide use throughout, generally reducing mortality from 75% to 56-66% and increasing complete response from 9% to 24-46%.

## Exhibit 8: Summary of Clinical Benefits of Defibrotide

Trial	Complete Response (Day 100)	Mortality (Day 100)
Phase II	36-46%	56-61%
US Phase III	24-30%	51-62%
EU Compassionate Use	32%	59%
US Treatment IND Phase III	34%	66%
Historical Control	9%	75%

Sources: Gentium, S.p.A. and Wedbush PacGrow Life Sciences

## Graft-versus-Host Disease

For those patients receiving an allogeneic transplant in the prospective pediatric trial, it was found that those patients receiving defibrotide saw a reduction of incidence of acute GvHD to 45%, compared to 63% in the control group (p=0.0046); and defibrotide patients also saw a reduction of severity, exemplified by a reduction in renal failure from 6% to 1% (p=0.0169). This was a prospectively defined analysis.

## Exhibit 9: GvHD Prevention

Allogeneic SCT	Defibrotide Prophylaxis	Control	P-value
Acute GvHD, D+100	45% (57/126)	63% (76/120)	0.0044
Chronic GvHD, D + 180	13% (16/126)	14% (17/120)	0.7356

Source: Gentium, S.p.A.

Importantly, the analysis also revealed that there was no statistically significant effect on Graft versus Leukemia, a beneficial “side effect” of allogeneic stem cell transplants where the graft attacks the leukemia cells, sometimes producing a durable remission.

**We project \$37 million, \$66 million and \$124 million for 2011, 2012, and 2013 global defibrotide revenues, respectively.** Taking into account the royalty split with Sigma-Tau, we estimate Gentium’s share of defibrotide-related revenues in those years as \$37 million, \$56 million and \$100 million.

### Intellectual Property

There is no composition of matter intellectual property covering defibrotide, however, with Orphan Drug exclusivity, we would expect a minimum of 7 years of US market exclusivity and 10 years of EU market exclusivity for Gentium.

## Exhibit 10: Management

Position	Background
Khalid Islam, PhD, CEO, Chairman	From 1999 to 2008, Dr. Islam was the President and Chief Executive Officer of the SWX-listed anti-infective company Arpida AG. Prior to Arpida, he worked in various R & D functions at Hoechst Marion Roussel and Dow Chemicals.
Massimo Iacobelli, MD, Scientific Director	Dr. Iacobelli has served as the Senior Vice-President, Scientific Director since 2002 and as the VP, Clinical Development and Chief Medical Officer from 1995 to 2002. From 1990 to 1994, he was the Senior VP, Medical Marketing, at Sirtex. From 1988 to 1989, Dr. Iacobelli directed the Drug Safety Department at Bayer S.p.A.
Salvatore Calabrese, CFO	Salvatore Calabrese has served as the Chief Financial Officer and Senior VP, Finance since December 2010, as senior VP, Finance since April 2010 and as Vice-President, Finance and Secretary since February 2005. From December 2003 until February 2005, he was an Accounting and Finance Manager for Novuspharma, S.p.A., a development stage biopharmaceutical company focused on the discovery and development of cancer drugs and a subsidiary of Cell Therapeutics, Inc., a public company.
Adrian Haigh, SVP Commercial Operations	Adrian Haigh has 28 years of experience in commercial operations. He was former Regional VP of Commercial Operations at Biogen Idec, and spend several years at Amgen, SmithKline Beecham, Schering Plough and Novo-Nordisk.

Sources: Gentium, S.p.A and Wedbush PacGrow Life Sciences

## Exhibit 11: Financial Model

**Wedbush PacGrow Life Sciences**

Gregory R. Wade, Ph.D.

415-274-6863

**Gentium, S.p.A**
*in thousands except per share data*
*Current Dollar/Euro rate: \$1.38: €1*

	2009A	2010E	2011E	2012E	2013E	2014E	2015E
<b>Revenues:</b>							
Net Product Sales	\$13,625	\$27,421	\$37,260	\$49,363	\$84,435	\$117,649	\$145,832
Contracts and Grants	947	6,309	6,072	6,072	6,072	6,072	6,072
Royalties	0	0	0	6,150	15,150	27,135	37,875
<b>Total Revenues</b>	<b>14,572</b>	<b>33,730</b>	<b>43,332</b>	<b>61,585</b>	<b>105,657</b>	<b>150,855</b>	<b>189,780</b>
<b>Cost and Expenses:</b>							
Cost of Sales	5,736	7,790	10,400	14,780	25,358	36,205	45,547
R&D	5,033	8,453	8,638	9,240	9,885	10,575	11,376
SG&A	8,651	7,520	7,918	8,470	9,061	9,693	10,369
<b>Total Operating Expenses</b>	<b>21,133</b>	<b>23,762</b>	<b>26,956</b>	<b>32,491</b>	<b>44,304</b>	<b>56,473</b>	<b>67,292</b>
Operating Income (Loss)	(6,487)	9,968	16,376	29,094	61,353	94,382	122,487
Net Interest Income (Expense)/Other Income	74	117	567	1,465	2,635	4,151	6,552
<b>Income Before Income Taxes</b>	<b>(6,413)</b>	<b>10,085</b>	<b>16,944</b>	<b>30,558</b>	<b>63,988</b>	<b>98,534</b>	<b>129,039</b>
Provision for Income Taxes	0	(298)	0	0	14,876	27,147	35,658
<b>Net Income (Loss)</b>	<b>(6,413)</b>	<b>10,383</b>	<b>16,944</b>	<b>30,558</b>	<b>49,112</b>	<b>71,386</b>	<b>93,381</b>
<b>Non-GAAP EPS</b>	<b>(0.43)</b>	<b>0.69</b>	<b>1.12</b>	<b>1.98</b>	<b>3.16</b>	<b>4.57</b>	<b>5.94</b>
<b>GAAP EPS</b>	<b>(0.43)</b>	<b>0.50</b>	<b>1.04</b>	<b>1.89</b>	<b>3.07</b>	<b>4.46</b>	<b>5.83</b>
Total Shares Outstanding	14,956	14,956	15,085	15,458	15,533	15,633	15,733

Sources: Gentium, S.p.A and Wedbush PacGrow Life Sciences

**Analyst Certification**

I, Gregory R. Wade, Ph.D., David M. Nierengarten, Ph.D., Christopher N. Marai, Ph.D., certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

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Neutral: 38%	Neutral: 1%
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**Capital Markets Disclosures as of March 14, 2011**

Company	Disclosure
Gentium S.p.A	1

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## GENT



\* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009.

Please access the attached hyperlink for WS' Coverage Universe: <http://www.wedbush.com/services/cmg/equities-division/research/equity-research> Applicable disclosure information is also available upon request by contacting Ellen Kang in the Research Department at (213) 688-4529, by email to [ellen.kang@wedbush.com](mailto:ellen.kang@wedbush.com), or the Business Conduct Department at (213) 688-8090. You may also submit a written request to the following: Business Conduct Department, 1000 Wilshire Blvd., Los Angeles, CA 90017.

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**RESEARCH DEPT. \* (213) 688-4505 \* [www.wedbush.com](http://www.wedbush.com)**

**EQUITY TRADING Los Angeles (213) 688-4470 / (800) 421-0178 \* EQUITY SALES Los Angeles (800) 444-8076**

**CORPORATE HEADQUARTERS (213) 688-8000**

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# WEDBUSH

EQUITY RESEARCH DEPARTMENT  
(213) 688-4529

DIRECTOR OF RESEARCH  
Mark D. Benson (213) 688-4435

## CONSUMER PRODUCTS AND SERVICES

### Consumer Products

Rommel T. Dionisio (212) 938-9934  
Kurt M. Frederick, CFA CPA (213) 688-4459

### E-Commerce

Edward Woo, CFA (213) 688-4382  
Nick McKay (213) 688-4343

### Entertainment: Toys

Edward Woo, CFA (213) 688-4382  
Nick McKay (213) 688-4343

### Footwear and Apparel

Camilo Lyon (212) 938-9924  
Alicia Jenks (213) 688-4355

### Healthy Lifestyles

Kurt M. Frederick, CFA CPA (213) 688-4459

### Specialty Retail: Hardlines

Joan L. Storms, CFA (213) 688-4537  
John Garrett (213) 688-4523

Camilo Lyon (212) 938-9924  
Alicia Jenks (213) 688-4355

### Specialty Retail: Softlines

Betty Chen (415) 273-7328

### Specialty Retail: Sporting Goods

Camilo Lyon (212) 938-9924  
Alicia Jenks (213) 688-4355

## RETAIL/CONSUMER MARKET RESEARCH

Gabriella Santaniello (213) 688-4557

## CLEAN TECHNOLOGY AND INDUSTRIAL GROWTH

### Aerospace and Defense

Kenneth Herbert (415) 274-6875  
Andrew Doupé (415) 274-6876

### Clean Technology

Craig Irwin (212) 938-9926  
David Giesecke (212) 938-9925

### Environmental Services

Al Kaschalk (213) 688-4539  
Kevin Lee (213) 688-4303

### Industrial Biotechnology

Liana Moussatos, Ph.D. (415) 263-6626  
Christopher N. Marai, Ph.D. (415) 274-6861

### Solar Technology

Christine Hersey (213) 688-4311

### Water and Renewable Energy Solutions

David Rose, CFA (213) 688-4319

## TECHNOLOGY, MEDIA AND TELECOM

### Communications Equipment

Rohit Chopra (212) 668-9871  
Sanjit Singh (212) 938-9922

### Datacenter Technologies

Kaushik Roy (415) 274-6873  
David Kaczorowski (415) 274-6883

### Enterprise Software

Michael B. Nemeroff (212) 668-9876  
Michael J. Anderson (212) 668-9778

### Entertainment: Retail

Michael Pachter (213) 688-4474

### Entertainment: Software

Michael Pachter (213) 688-4474  
Edward Woo, CFA (213) 688-4382  
Nick McKay (213) 688-4343

### Financial Technology

Gil B. Luria (213) 688-4501  
Nick Setyan (213) 688-4519

### Internet and Social Media

Lou Kerner (212) 668-9874

Edward Woo, CFA (213) 688-4382  
Nick McKay (213) 688-4343

### Internet and Media Technologies

Kerry Rice, CPA (213) 688-4538

### Media

James Dix, CFA (213) 688-4315  
Max Pinigin (213) 688-4518

### Movies and Entertainment

Michael Pachter (213) 688-4474  
Edward Woo, CFA (213) 688-4382  
Nick McKay (213) 688-4343

### Semiconductors

Patrick Wang (212) 938-9938

Betsy Van Hees (415) 274-6869  
Ryan Jue (415) 263-6669

### Telecommunications Software

Scott P. Sutherland, CFA (213) 688-4522  
Suhail Chandy (213) 688-4380

### Wireless Equipment

Scott P. Sutherland, CFA (213) 688-4522  
Suhail Chandy (213) 688-4380

## LIFE SCIENCES

### Biotechnology/Biopharmaceuticals

Gregory R. Wade, Ph.D. (415) 274-6863  
David M. Nierengarten, Ph.D. (415) 274-6862  
Christopher N. Marai, Ph.D. (415) 274-6861

Y. Katherine Xu, Ph.D. (212) 938-9955

### Cardiovascular, Devices and Regenerative

Duane Nash, MD JD MBA (415) 263-6650  
Akiva Felt (415) 263-6648

### Emerging Pharmaceuticals

Liana Moussatos, Ph.D. (415) 263-6626  
Richard Lau (415) 274-6851  
Christopher N. Marai, Ph.D. (415) 274-6861

### Healthcare Services - Managed Care

Sarah James (213) 688-4503  
Daniel Patt (212) 938-9937

### Medical Technology

Phillip Naibone (415) 274-6884  
Jeffrey Chu (415) 274-6885

### Medical Diagnostics and Life Sciences Tools

Zarak Khurshid (415) 274-6823

## EQUITY SALES

Los Angeles (213) 688-4470 / (800) 444-8076  
San Francisco (415) 274-6800  
New York (212) 938-9931  
Boston (617) 832-3700

## EQUITY TRADING

Los Angeles (213) 688-4470 / (800) 421-0178  
San Francisco (415) 274-6811  
New York (212) 344-2382  
Boston (617) 832-3700

## CORPORATE HEADQUARTERS

1000 Wilshire Blvd., Los Angeles, CA 90017-2465  
Tel: (213) 688-8000 [www.wedbush.com](http://www.wedbush.com)