Gentium S.p.A.
Form 424B3
January 14, 2011

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PROSPECTUS

Gentium S.p.A.

1,500,000 American Depositary Shares
Representing 1,500,000 Ordinary Shares

The selling security holder identified in this prospectus is offering up to 1,500,000 American Depositary Shares ("ADSs"), each representing one ordinary share of our company, Gentium S.p.A. All of the ADSs are outstanding and issued to the selling security holders listed herein. Our ADSs are listed on the Nasdaq Global Market under the symbol "GENT." The lasted reported sale price for our ADSs on the Nasdaq Global Market on January 13, 2011 was $8.09 per ADS.

We will not receive any proceeds from the sale of ADSs by the selling security holder, FinSirton S.p.A. We are not offering any ADSs for sale under this prospectus. See "Selling Security Holder" on page 16 for a description of the selling security holder. See "Plan of Distribution" beginning on page 18 for a description of how the ADSs can be sold.

Our business and an investment in our ADSs involve significant risks. These risks are described under the caption "Risk Factors" beginning on page 4 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

January 14, 2011

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form F-3 that we filed with the Securities and Exchange Commission (or the SEC) using a "shelf registration" process. Under this process, FinSirton S.p.A. may, from time to time, sell the offered securities described in this prospectus in one or more offerings, up to a total of 1,500,000 ADSs.

This prospectus does not contain all of the information included in the registration statement and the exhibits thereto. This prospectus includes statements that summarize the contents of contracts and other documents that are filed as exhibits to the registration statement. These statements do not necessarily describe the full contents of such documents, and each such statement made in this prospectus or any prospectus supplement concerning any such documents filed as exhibits to the registration statement is qualified in its entirety by reference to that exhibit. You should refer to those documents for a complete description of these matters. It is important for you to read and consider all of the information contained in this prospectus and any applicable prospectus supplement before making a decision whether to invest in our ADSs. You should also read and consider the information contained in the documents that we have incorporated by reference as described below under the headings "Incorporation of Certain Information By Reference" and "Where You Can Find More Information" in this prospectus.

You should rely only on the information provided in this prospectus and any applicable prospectus supplement, including the information incorporated by reference. We have not authorized anyone to provide you with additional or different information. If anyone provides you with additional, different or inconsistent information, you should not rely on it. We are not offering to sell or soliciting offers to buy, and will not sell, any securities in any jurisdiction where it is unlawful. You should assume that the information contained in this prospectus or in any prospectus supplement, as well as information contained in a document that we have previously filed or in the future will file with the SEC and incorporate by reference in this prospectus or any prospectus supplement, is accurate only as of the date of this prospectus, the applicable prospectus supplement or the document containing that information, as the case may be. Our financial condition, results of operations, cash flows or business may have changed since that date.

We have not taken any action to permit a public offering of the ADSs outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about and observe any restrictions relating to this offering of the ADSs and the distribution of the prospectus outside of the United States. See "Plan of Distribution."

PROSPECTUS SUMMARY

This prospectus summary highlights selected information contained elsewhere in this prospectus and the documents incorporated by reference. You should read the following information together with the more detailed information regarding our company and the ADSs being sold in this offering, with information appearing elsewhere in this prospectus and in selected portions of our Annual Report on Form 20-F for the year ended December 31, 2009 and other documents filed with the SEC that we have incorporated by reference into this prospectus.

Our Business

We are a biopharmaceutical company focused on the development and manufacture of our primary product candidate, defibrotide, an investigational drug based on single-stranded DNA extracted from pig intestines. Our development of defibrotide has been focused on the treatment and prevention of a disease called hepatic veno-occlusive disease, or VOD, a condition in which some of the veins in the liver are blocked as a result of cancer treatments, such as chemotherapy or radiation treatments, that are given prior to stem cell transplantation. Severe VOD is the most extreme form of VOD and is associated with multiple-organ failure and high rates of morbidity and mortality. We have completed two clinical trials, a Phase III trial of defibrotide for the treatment of severe VOD in the U.S., Canada and Israel and a Phase II/III pediatric trial in Europe for the prevention of VOD. Defibrotide has been given "orphan" status by the U.S. Food and Drug Agency, or FDA, and the European Medicines Agency, or EMEA, which means that we will have limited market exclusivity upon regulatory approval. Defibrotide has also been granted "fast-track product" designation by the FDA for the treatment of VOD. While we have not yet obtained regulatory approval to market defibrotide, we are authorized to distribute defibrotide on a pre-approved basis under a treatment IND protocol in the U.S. and through a named-patient program throughout the rest of the world. We do not know of any FDA or EMEA approved treatments for VOD.

We are currently completing certain preclinical and clinical studies requested by regulatory authorities. As part of our overall strategy, we anticipate filing for regulatory approval for defibrotide in the U.S. and Europe by the end of our second quarter in 2011. We are also working closely on our U.S. regulatory strategy with our commercial partner, Sigma-Tau Finanziaria S.p.A. and its affiliate Sigma-Tau Pharmaceuticals, Inc., to which we have licensed our commercial rights to defibrotide for both the treatment and prevention of VOD in the Americas.

We have a manufacturing plant in Italy where we produce active pharmaceutical ingredients, which are subsequently used to make the finished forms of various drugs. We believe that we are the sole worldwide producer of defibrotide. In addition to defibrotide, we manufacture urokinase and sulglicotide, both of which are sold to third parties. All of the Company's operating assets are located in Italy.

We are subject to a number of risks, including our ability to successfully obtain regulatory approval for defibrotide, the uncertainty that defibrotide will become a successful commercial product, our ability to generate projected revenue through our named-patient and cost recovery programs, our dependence on corporate partners, our ability to obtain financing, if necessary, and potential changes in the health care industry. Before making an investment decision, you should carefully consider the risks described under "Risk Factors" in this prospectus or any updates in our Reports on Form 6-K, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and any applicable prospectus supplement, in light of your particular investment objectives and financial circumstances. The risks so described are not the only risks facing us. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Our business, financial condition and results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. The discussion of risks includes or refers to forward-looking statements; you should read the explanation of the qualifications and limitations on such forward-looking statements discussed elsewhere in this prospectus.

Corporate Information and Executive Offices

We started as a group of pharmaceutical businesses founded in Italy in 1944 and have been involved in the research and development of drugs derived from DNA and DNA molecules since the 1970s. In 1993, FinSirton S.p.A. formed our company as Pharma Research S.r.L., an Italian private limited company, to pursue research and development activities of prospective pharmaceutical specialty products. FinSirton is our largest shareholder, and is controlled by Dr. Laura Ferro, our former Chief Executive Officer and President and currently one of our directors, and her family. In December 2000, Crinos Industria Farmacobiologica S.p.A., a subsidiary of FinSirton, contributed its plants, equipment and patents relating the development of biological pharmaceutical products, including all of its rights relating to defibrotide, to us in return for 98% of our ordinary shares. FinSirton continued to own the remaining 2% of our ordinary shares. At that time, we changed from a private limited company to a corporation and in July 2001 we changed our name to Gentium S.p.A.

In May 2002, Crinos Industria Farmacobiologica S.p.A. sold its commercial division, including its products, licenses and patents relating to pharmaceutical products in Italy, including the brand name "Crinos," to a newly formed subsidiary, called Crinos S.p.A., of Stada, a leader in the generic pharmaceutical industry in Europe. At that time, Crinos Industria Farmacobiologica S.p.A. changed its name to Sirton Pharmaceuticals S.p.A. since it no longer had the rights to the name "Crinos." In 2003 and 2004, Sirton distributed the 98% of our ordinary shares that it owned to FinSirton as dividends. As a result, FinSirton became our 100% shareholder at that time. In January 2005 and April 2005, FinSirton sold some of our ordinary shares that it owned to third parties. In June 2005, we made an initial public offering of 2,400,000 ADSs, each representing the right to receive one ordinary share, and listed the ADSs on the American Stock Exchange. FinSirton remains our largest shareholder, owning approximately 24% of our outstanding ordinary shares at September 30, 2010. FinSirton also holds 100% of the outstanding shares of Sirton.

Our principal executive offices are located at Piazza XX Settembre 2, 22079 Villa Guardia (Como), Italy. Our telephone number is +39 031 385111. Our website is located at www.gentium.it. The information contained on our website is not part of this prospectus. Our registered agent for service of process is CT Corporation System, located at 111 Eighth Avenue, 13th Floor, New York, New York 10011, telephone number (212) 894-8940.

We have Italian, United States and international trademark rights in "Gentium," United States and European Union trademarks in "Gentide," international and Italian trademarks in "Oligotide" and Italian trademark rights to "Pharma Research" and "Dinelasi." We also have a number of patent registrations issued and pending in Italy, the United States and other countries. This prospectus also refers to brand names, trademarks, service marks, and trade names of other companies and organizations, and these brand names, trademarks, service marks, and trade names are the property of their respective holders.

This prospectus may contain market data and industry forecasts that were obtained from industry publications.

RISK FACTORS

You should carefully consider the risks described below, in conjunction with the other information and financial statements and related notes included elsewhere in this prospectus, before making an investment decision. You should pay particular attention to the fact that we conduct our operations in Italy and are governed by a legal and regulatory environment that in some respects differs significantly from the environment that prevails in other countries with which you may be familiar. Our business, financial condition or results of operations could be affected materially and adversely by any or all of these risks. In that event, the market price of our ADS could decline and you could lose all or part of your investment.

We may not be able to meet our future cash requirements without obtaining additional capital from external sources.

As of September 30, 2010, we had approximately €9.3 million in cash and cash equivalents. Since 2009, we have generated a significant portion of our revenue thorough the distribution of our primary product candidate, defibrotide, on a pre-approved basis under a treatment IND protocol in the U.S., which we call our cost recovery program, and through a named-patient program throughout the rest of the world. We do not know how much longer we will be able to distribute defibrotide through these compassionate use programs. Before the initiation of these compassionate use programs, we had generated net losses since our inception

Historically, we have financed our operations primarily through the sale of equity and convertible notes, interest income earned on cash and cash equivalents, and debt provided through secured lines of credit. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we obtain additional debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, and the terms of the debt securities issued could impose significant restrictions on our operations. Any required additional capital through equity or debt financings, loans or collaborative agreements with corporate partners may not be available to us on favorable terms, if at all.

Our failure to raise additional funds in the future may delay the development of defibrotide.

The development of defibrotide has required a commitment of substantial funds and we may need to commit a substantial amount of additional funds in order to obtain regulatory approval to market and commercialize defibrotide.

Our future capital requirements are dependent upon many factors, some of which are beyond our control, including:

- the successful and continued development of defibrotide in preclinical and clinical testing in our existing and any required future clinical trials;
- the costs associated with protecting and expanding our patent and other intellectual property rights;
- future payments, if any, received or made under existing or possible future collaborative arrangements;
- the costs associated with building a future commercial infrastructure;
- the costs associated with implementing any upgrades to our manufacturing facility required by the United States Food and Drug Administration, or FDA, European Medicine Agency, or EMEA, or other regulation;
- the timing of regulatory approvals needed to market defibrotide;

- success of our named-patient and cost recovery programs; and
- market acceptance of defibrotide.

We cannot assure you that funds will be available to us in the future on favorable terms, if at all. If adequate funds are not available to us on terms that we find acceptable, or at all, we may be required to delay, reduce the scope of, or eliminate research and development efforts on defibrotide. We may also be forced to curtail, cease or restructure our operations, obtain funds by entering into arrangements with collaborators on unattractive terms or relinquish rights to defibrotide that we would not otherwise relinquish in order to continue independent operations.

We have started to generate limited revenues from sales of defibrotide and have had significant losses to date, and we do not know whether we will ever generate significant revenues.

We have generated limited revenues through commercial sales of our active pharmaceutical ingredients and, recently, pre-approval sales of defibrotide through our named-patient and cost recovery programs. We had total net product sales of €5.09 million, €5.44 million and €9.70 million in 2007, 2008 and 2009, respectively. Even if we are successful in obtaining regulatory approval to market defibrotide, we may have very limited markets and may not generate enough revenues from defibrotide to fund our business. In addition, the FDA and EMEA have designated defibrotide to treat severe VOD and defibrotide to prevent VOD, as "orphan drugs," which generally means that fewer than 200,000 people are affected by the disease or condition.

Our ability to continue as a going concern is largely dependent on the revenues being generated from the distribution of defibrotide on a pre-approved basis through our named-patient and cost recovery programs. If we fail to generate projected revenues from these compassionate use programs, we may need to obtain additional capital through equity or debt financings, loans and collaborative agreements with corporate partners, which may not be available to us on favorable terms, if at all.

We currently do not have any regulatory approvals to sell defibrotide to treat or prevent VOD, and we cannot guarantee that we will ever be able to sell defibrotide to treat or prevent VOD anywhere in the world.

We must demonstrate that defibrotide satisfies rigorous standards of safety and effectiveness before the FDA, EMEA and other regulatory authorities will approve defibrotide for commercial marketing. While we have completed two clinical trials for defibrotide to treat and prevent VOD, the data obtained from these trials may not be sufficient to obtain regulatory approval and we may be required to conduct additional clinical trials. We do not currently have the funds to run an additional clinical trial and we would likely need to obtain additional capital through equity or debt financings, loans and collaborative agreements with corporate partners, which may not be available to us on favorable terms, if at all. As a result, we may not be able to commercialize defibrotide for sale anywhere in the world.

The FDA and other regulatory authorities may require us to conduct other clinical trials of defibrotide to treat severe VOD or prevent VOD, which may delay or prevent approval and commercialization of our product candidate.

On December 7, 2009, we announced final clinical trial results for our current Phase III clinical trial of defibrotide to treat severe VOD and our Phase II/III pediatric prevention trial in Europe to prevent VOD, both of which were presented at the American Society of Hematology Conference in New Orleans. While data from these two trials are encouraging, we may have to conduct a new clinical trial for defibrotide to treat VOD using a concurrent control group of untreated patients before obtaining regulatory approval in the U.S. or Europe for either the treatment or prevention indications. We currently do not, and we may never, have enough capital to commence and complete a new clinical trial of defibrotide to treat VOD. In addition, even if we are able to commence a new clinical trial, one or more clinical centers where the clinical trial is to be conducted may not be willing to conduct such a clinical trial on the basis that it is unethical to refuse treatment to patients when the treatment being investigated could potentially save their lives. The committee of clinical investigators who sponsored a Phase II/III clinical trial of defibrotide to treat VOD in Europe conducted by Consorzio Mario Negri Sud, which had a concurrent control group of untreated patients, cancelled the trial in October 2005 due to a lack of patients enrolling. We believe that patients were reluctant to enroll due to the possibility of being placed into the control group and not receiving treatment. Therefore, we may never be

able to obtain regulatory approval of defibrotide to treat VOD.

We may be required to suspend or discontinue any future clinical trials, if necessary, due to adverse events or other safety issues that could preclude approval of defibrotide and negatively affect our business model and stock price.

If we are required to conduct any future clinical trials for defibrotide, the trials may be suspended at any time for a number of safety-related reasons. For example, we may voluntarily suspend or terminate such clinical trials if at any time we believe that defibrotide prevents an unacceptable risk to the clinical trial patients. In addition, institutional review boards or regulatory agencies may order the temporary or permanent discontinuation of our clinical trials at any time if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements, including if they present an unacceptable safety risk to patients.

Administering any product candidate to humans may produce undesirable side effects. VOD is a complication associated with high dose chemotherapy and stem cell transplantation. Adverse events involving vascular disorders, coagulation and potentially life-threatening bleeding have been reported in patients with VOD treated with defibrotide, which potentially could be related to the defibrotide therapy. Hypotension has been reported as a possibly related serious adverse event in the trials of defibrotide to treat severe VOD. Also, we discontinued a 69-patient Phase I/II clinical trial of defibrotide to prevent deep vein thrombosis after hip surgery in Denmark in 2002 after three patients experienced hypotension after receiving the defibrotide intravenously. That trial was discontinued due to the hypotension and because defibrotide can also be administered orally to prevent deep vein thrombosis. These adverse events reports will be weighed by the FDA and other regulatory authorities in determining whether defibrotide can, from a risk-benefit perspective, be considered to be safe and effective to treat severe VOD and prevent VOD, to prevent deep vein thrombosis, or any other indication for which approval is sought.

It is possible that additional adverse events or safety issues could emerge from future data, which could impact conclusions relating to the safety of defibrotide. Any problems that arise from the use of defibrotide would severely harm our business operations.

Defibrotide could be subject to restrictions or withdrawal from the market and we may be subject to penalties if we fail to comply with regulatory requirements, if and when defibrotide is approved.

Any product for which we obtain marketing approval, together with the manufacturing processes, post-approval commitments, and advertising and promotional activities for such product, will be subject to continued regulation by the FDA and other regulatory agencies. Later discovery of previously unknown problems with defibrotide or its manufacture, or failure to comply with regulatory requirements, may result in:

- restrictions on defibrotide or manufacturing processes;
- withdrawal of defibrotide from the market;
- voluntary or mandatory recalls;
- fines;
- suspension of regulatory approvals;
- product seizures; or
- injunctions or the imposition of civil or criminal penalties.

If we are slow to adapt, or unable to adapt, to changes in existing regulatory requirements or adoption of new regulatory requirements or policies, we may lose marketing approval for defibrotide when and if defibrotide is

approved.

Our manufacturing facility and the manufacturing facility of Patheon S.p.A., whom we have contracted to fill and finish defibrotide, are subject to continuing regulation by Italian authorities and are subject to inspection and regulation by the FDA and EMEA. These authorities could force us to stop manufacturing our products if they determine that we or Patheon are not complying with applicable regulations or require us to complete further costly alterations to our facilities.

We manufacture certain active pharmaceutical ingredients at our manufacturing facility in Italy. In addition, we have hired Patheon S.p.A. to process defibrotide into the finished drug at Patheon's manufacturing facility. These facilities are subject to continuing regulation by the Italian Health Authority and other Italian regulatory authorities with respect to manufacturing defibrotide. The facilities are also subject to inspection and regulation by the FDA and EMEA with respect to manufacturing our product candidates for investigational use. Also, part of the process for obtaining approval from the FDA and EMEA for defibrotide is approval by those authorities of these manufacturing facilities in compliance with current good manufacturing practices. After receiving initial approval, if any, the FDA or EMEA will continue to inspect our manufacturing facilities, including inspecting them unannounced, to confirm whether we and Patheon are complying with good manufacturing practices.

These regulators may require us to stop manufacturing our products and may deny us approval to manufacture our product candidates if they determine that we or Patheon are not complying with applicable regulations. In addition, these regulators may require us to complete costly alterations to our facilities.

We expect to rely upon a sole processor, Patheon S.p.A., to fill and finish defibrotide into marketable formulations, and we may not be able to quickly replace Patheon if it is unable to perform these services.

If Patheon does not or is not able to perform these services for any reason, it may take us time to find a replacement processor. Such a delay could potentially put us in breach of our contractual obligations into which we may enter, violate local laws requiring us to deliver the product to those in need, and impact our revenues.

We may have difficulty obtaining raw material for defibrotide.

Defibrotide is based on pig intestines. If our current sources of pig intestines develop safety problems or other issues that impact our supply of pig intestines, we may not be able to find alternative suppliers in a timely fashion. In that case, we would have to slow or cease our manufacture of defibrotide.

If our third-party clinical trial vendors fail to comply with strict regulations, the clinical trials for defibrotide may be delayed or unsuccessful.

We do not have the personnel capacity to conduct or manage all of the clinical trials that may be necessary for the development of defibrotide. We have relied on third parties to assist us in managing, monitoring and conducting our clinical trials. In addition, we have entered into an agreement with MDS Pharma Services (U.S.) Inc. (now INC Research Inc.) to perform clinical research services in connection with clinical trials conducted in the United States and agreements with KKS-UKT, GmbH (now CenTrial, GmbH) and MDS Pharma Services S.p.A. (now Inc Research S.r.l.) to provide such services for our clinical trials in Europe. If these third parties fail to comply with applicable regulations or do not adequately fulfill their obligations under the terms of our agreements with them, we may not be able to enter into alternative arrangements without undue delay or additional expenditures and, therefore, the clinical trials for defibrotide may be delayed or unsuccessful.

Furthermore, the FDA can be expected to inspect some or all of the clinical sites participating in our clinical trials, or our third party vendors' sites, to determine if our clinical trials are being conducted according to good clinical practices. If the FDA determines that these clinical sites or our third-party vendors are not in compliance with applicable regulations, we may be required to delay, repeat or terminate the clinical trials. Any delay, repetition or termination of our clinical trials could materially harm our business.

We are currently dependent on third parties to market and distribute defibrotide in finished dosage form, and we may continue to be dependent on third parties to market and distribute defibrotide.

Our internal ability to handle the marketing and distribution functions for defibrotide is limited and we do not expect to develop the capability to market and distribute defibrotide. Our long-term strategy includes either developing marketing and distribution capacities internally or entering into alliances with third parties to assist in the marketing and distribution of defibrotide. We have entered into an agreement with Sigma-Tau Pharmaceuticals, Inc. to market defibrotide to treat and prevent VOD in North America, Central America and South America and we may need to develop these capabilities internally or enter into similar agreements to market and distribute defibrotide to prevent VOD outside the Americas. We face, and will continue to face, intense competition from other companies for collaborative arrangements with pharmaceutical and biotechnology companies, for establishing relationships with academic and research institutions, for attracting investigators and sites capable of conducting our clinical trials, and for licenses of proprietary technology. Moreover, these arrangements are complex to negotiate and time-consuming to document. Our future profitability will depend in large part on our ability to enter into effective marketing agreements

and our product revenues will depend on those marketers' efforts, which may not be successful.

If we are unable to attract and retain qualified personnel and key relationships, we may be unable to successfully develop and commercialize defibrotide or otherwise manage our business effectively.

We are highly dependent on our senior management, whose services are critical to the successful implementation of research and development and manufacturing and regulatory strategies, and our ability to maintain relationships with qualified researchers. If we lose their services or the services of one or more of the other members of our senior management or other key researcher, our ability to successfully commercialize defibrotide or otherwise manage our business effectively could be seriously harmed.

Replacing key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of specific skills and experience required to develop, gain regulatory approval of and commercialize defibrotide successfully. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these additional key personnel. In addition, under Italian law, we cannot incentivize such key employees with certain forms of equity grants, such as restricted stock awards, which could further limit our ability to retain and hire key personnel.

In addition, we may need to hire additional personnel and add corporate functions that we currently do not have. Our ability to manage our operations and growth will require us to continue to improve our operational, financial and management controls and reporting system and procedures, or contract with third parties to provide these capabilities for us.

All of our manufacturing capability is located in one facility that is vulnerable to natural disasters, telecommunication and information system failures, terrorism and similar problems, and we are not insured for losses caused by all of these incidents.

We conduct all of our manufacturing operations in one facility located in Villa Guardia, near Como, Italy. This facility could be damaged by fire, floods, earthquake, power loss, telecommunication and information system failures, terrorism or similar events. Our insurance covers losses to our facility, including the buildings, machinery, electronic equipment and goods, for approximately €15 million, but does not insure against all of the losses listed above, including terrorism and some types of flooding. Although we believe that our insurance coverage is adequate for our current and proposed operations, there can be no guarantee that it will adequately compensate us for any losses that may occur. We are not insured for business interruption and we have no replacement manufacturing facility readily available.

We have sold Prociclide and Noravid (two formulations of defibrotide) in Italy to treat vascular disease with risk of thrombosis, which may affect the pricing of defibrotide in Europe for the prevention or treatment of VOD.

Until December 31, 2008, through our distribution agreement with Crinos S.p.A., we sold Prociclide and Noravid (both forms of defibrotide) in Italy to treat vascular disease with risk of thrombosis. While we have stopped selling Prociclide and Noravid for this treatment in Italy, if defibrotide is approved for sale in Europe to treat and prevent VOD, or both, we may need to also obtain approval from regulators as to what price we can charge for these uses of defibrotide. The regulators may impose an artificially low cap on defibrotide based on the relatively low price-point of Prociclide and Noravid previously sold in Italy for the treatment of vascular disease with risk of thrombosis.

Sirton, who is our affiliate, owes us a receivable that we may not be able to collect.

At September 30, 2010, Sirton owed us a receivable of €1.05 million and we owed Sirton a payable of €0.21 million. Sirton has been unable to make timely payments on the outstanding receivables. Currently, Sirton is evaluating its strategic options in order to avoid bankruptcy, which raises additional concerns on our ability to collect the outstanding receivables. We may never be able to collect the net receivable due to us from Sirton.

The Court of Como, by decree issued on June 28, 2010 and published on July 1, 2010 has admitted Sirton to a composition with creditors ("concordato preventivo"). A hearing held on November 8, 2010 the composition was not approved because the majority of creditors had not yet voted on the proposal; however, we understand that the required majority has since voted on the proposal and the composition was approved. We have been informed that a hearing has been scheduled for January 26, 2011 at the Court of Como to ratify the approval of the composition. We understand that the proposal is to pay secured creditors in full while unsecured creditors will be paid partially based on the realization of the assets. We believe based on preliminary guidance given by the Court that unsecured creditors may be satisfied between 13.76% and 18.50% of the amounts owed.

We still rely upon Sirton Pharmaceuticals S.p.A. for various services, and we may not be able to quickly replace these services if it becomes bankrupt or otherwise unavailable.

Historically, FinSirton and Sirton provided the Company with a number of business services such as purchasing, logistics, quality assurance, quality control, analytical assistance for research and development, and regulatory services, as well as office space, personnel, administrative services, information technology systems and accounting services. Although the Company has substantially reduced the functions and activities provided by FinSirton and Sirton, the Company still depends on Sirton for certain infrastructure costs and quality control. These service agreements have recurring one-year terms that may be terminated by either party upon written notice to the other party at least one month prior to the expiration of the term.

If Sirton were to become bankrupt or otherwise cease providing these services, we may not be able to replace these services in a timely manner. Such a delay could impact revenue being generated from our compassionate use programs.

Our industry is highly competitive and subject to rapid technological changes. As a result, we may be unable to compete successfully or to develop innovative products, which could harm our business.

Our industry is highly competitive and subject to significant and rapid technological change as researchers learn more about diseases and develop new technologies and treatments. Incidence of VOD may decrease with new technologies and conditioning regimens, which will negatively impact our sales opportunities. While we are unaware of any other products or product candidates that treat or prevent VOD, we believe that other companies have products or are currently developing products to treat some of the same disorders and diseases that defibrotide is designed to treat. These companies include Genzyme Corp., Millennium Pharmaceuticals, Inc., Otsuka Pharmaceutical Co., Ltd., Eisai Co., Ltd., and Celgene Corp.

Many of these competitors have substantially greater research and development capabilities and experience, and greater manufacturing, marketing and financial resources than we do. In addition, these companies' products and product candidates are in more advanced stages of development than ours or have been approved for sale by the FDA and other regulatory agencies. As a result, these companies may be able to develop their product candidates and establish their product in the market before we can. Their products may also prove to be more effective, safer or less costly than defibrotide, which could hurt our ability to recognize any significant revenues.

In May 2003, the FDA designated defibrotide as an orphan drug to treat severe VOD, and in January 2007, the FDA designated defibrotide as an orphan drug to prevent VOD. If the FDA approves the New Drug Applications that we intend to file before approving a New Drug Application filed by anyone else for these uses of defibrotide, the orphan drug status will provide us with limited market exclusivity for seven years from the date of the FDA's approval of our New Drug Application. However, a marketing authorization to another applicant may be granted for the same product if we give our consent to the second applicant, we are unable to supply sufficient quantities of defibrotide, or the second applicant can establish in its application that its product is safer, more effective or otherwise clinically superior to our product. In that case, our product would not have market exclusivity. Additionally, while we are not aware of any other company researching defibrotide for these uses, if another company does develop defibrotide for these uses, there is no guarantee that the FDA will approve our New Drug Application before approving the other company's defibrotide product for these uses, in which case the first product approved would have market exclusivity and our products would not be eligible for approval until that exclusivity expires.

In July 2004, EMEA designated defibrotide as an orphan medicinal product to both treat and prevent VOD. If the European regulators grant us a marketing authorization for those uses of defibrotide, we will have limited market exclusivity for those uses for ten years after the date of the approval. However, a marketing authorization may be granted to another applicant for the same product if we give our consent to the second applicant, we are unable to

supply sufficient quantities of defibrotide, or the second applicant can establish in its application that its product is safer, more effective or otherwise clinically superior to our product. In that case, our product would not have market exclusivity.

If we are unable to adequately protect our intellectual property, our ability to compete could be impaired.

Our long-term success largely depends on our ability to create and market competitive products and to protect those creations. Our pending patent applications, or those we may file in the future, may not result in patents being issued. Until a patent is issued, the claims covered by the patent may be narrowed or removed entirely and, therefore, we may not obtain adequate patent protection. As a result, we may face unanticipated competition, or conclude that without patent rights the risk of bringing products to the market is too great, thus adversely affecting our operating results.

Because of the extensive time required for the development, testing and regulatory review of a product candidate, it is possible that before defibrotide can be approved for sale and commercialized, our relevant patent rights may expire or remain in force for only a short period following commercialization. We have been issued a patent in the U.S. and several other countries which covers the method for determining the biological activity of defibrotide. This patent expires in 2022 in most countries. We believe this to be an important patent because the analytical release of a biological product like defibrotide is a key step in confirming the purity and biological activity of the final product. There may be no opportunities to extend this patent and thereby extend exclusivity related to FDA and EMEA, in which case we could face increased competition for defibrotide. Patent expiration could adversely affect our ability to protect future product development and, consequently, our operating results and financial position. In addition, generic innovators may be able to circumvent this patent and design a novel analytical method for determining the biological activity of defibrotide. In this case, a generic defibrotide could potentially be on the market once the relevant protections offered by our orphan designations end.

We also rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. We intend to eventually license or sell our products in China, South Korea and other countries which do not have the same level of protection of intellectual property rights that exists in the United States and Europe. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

Risks Related to Ownership of the American Depositary Shares

Our ADSs have generally had low trading volume, and its public trading price has been volatile.

Between our initial public offering on June 21, 2005 and September 30, 2010, the closing price of our American Depositary Shares, or ADSs, have fluctuated between $.33 and $24.40 per share, with an average daily trading volume for the nine-month period ended September 30, 2010 of approximately 136,164 ADSs. The market may experience significant price and volume fluctuations that are often unrelated to the operating performance of individual companies.

In addition to general market volatility, many factors may have a significant adverse effect on the market price of our ADSs, including:

- announcements of decisions made by regulators;
- announcements of improvements, new commercial products, failures of products, or progress toward commercialization by our competitors or peers;
- influence and control by our commercial partner and significant shareholder, Sigma-Tau Finanziaria S.p.A.;
- developments concerning proprietary rights, including patent and litigation matters;
- publicity regarding actual or potential results with respect to product candidates under development by us or by our competitors;
- regulatory developments; and

- fluctuation in our financial results.

We may not remain listed on the Nasdaq Global Market.

Between our public offering and May 2006, our ADSs were listed on the American Stock Exchange. Since May 2006, our ADSs have been listed on the Nasdaq Global Market. The Nasdaq Global Market sets forth various requirements that we must meet in order for our ADSs to continue to be listed on the Nasdaq Global Market. Violations of the continued listing requirements include:

- if the closing bid price of our ADSs drops below $1.00 for a period of 30 consecutive trading days;
- if our stockholders' equity falls below $10 million; or;
- if we fail to maintain a market value of publicly held securities of at least $5 million for 30 consecutive trading days.

If we violate any of these continued listing requirements, our ADSs could be delisted from the Nasdaq Global Market. The delisting of our ADSs could have negative results, including the potential loss of confidence by suppliers and employees, the loss of institutional investor interest, and fewer business development opportunities.

As of September 30, 2010, our stockholders' equity was $16.2 million (€11.9 million). If we fail to meet the stockholders' equity or fail to meet the minimum bid price and minimum market value requirements, we may be delisted from the Nasdaq Global Market.

Our largest shareholders exercise significant control over us, which may make it more difficult for you to elect or replace directors or management and approve or reject mergers and other important corporate events, including obtaining potential financing.

Our largest shareholder, FinSirton S.p.A., owned approximately 24% of our outstanding ordinary shares at September 30, 2010. Dr. Laura Ferro, who is our former Chief Executive Officer and President and a current member of our board of directors, together with members of her family controls FinSirton. Even if FinSirton were to sell 1,500,000 ordinary shares being registered pursuant to this registration statement, FinSirton would still own approximately 14% of the outstanding ordinary shares at September 30, 2010.

In addition, Sigma-Tau Finanziaria S.p.A., along with its affiliates, owned approximately 18% of our outstanding ordinary shares at September 30, 2010. Marco Codella, who is the chief financial officer of Sigma-Tau Finanziaria, serves as a member of our board of directors. Moreover, we have licensed our rights in defibrotide to treat and prevent VOD to Sigma-Tau Pharmaceuticals, Inc., a wholly owned subsidiary of Sigma-Tau Finanziaria.

Both FinSirton and Sigma-Tau Finanziaria may substantially control the outcome of all matters requiring approval by our shareholders, including the election of directors and the approval of mergers or other important corporate events. They may exercise this ability in a manner that advances their best interests and not necessarily yours. Also, the concentration of our beneficial ownership may have the effect of delaying, deterring or preventing a change in our control, or may discourage bids for the ADSs or our ordinary shares at a premium over the market price of the ADSs. The significant concentration of share ownership may adversely affect the trading price of the ADSs due to investors' perception that conflicts of interest may exist or arise.

As discussed in our risk factor entitled "Our shareholders can prevent us from executing a financing by alleging that our board of directors acted with serious irregularities when approving such financing, because the terms of such financing could harm our company," both FinSirton and Sigma-Tau Finanziaria own enough of our ordinary shares to bring legal action against our board of directors and may be able to prevent us from completing an important corporate event, such as a financing. In addition, under Italian law, directors are not required to recuse themselves from any discussion even if a conflict of interest exists. Accordingly, directors that are affiliated with our shareholders may be present for certain discussions that involve or impact the shareholders to which such directors are affiliated.

If a significant number of ADSs are sold into the market, the market price of the ADSs could significantly decline, even if our business is doing well.

Our outstanding ordinary shares, ordinary shares issuable upon exercise of warrants and ordinary shares issuable upon exercise of options are not subject to lock-up agreements. We have filed registration statements registering the resale of most of our outstanding ordinary shares and related ADSs and all of our ordinary shares and related ADSs issuable upon exercise of our outstanding warrants and options. Such registration and ultimate sale of the securities in the markets may adversely affect the market for the ADSs.

You may not have the same voting rights as the holders of our ordinary shares and may not receive voting materials in time to be able to exercise your right to vote.

Except as described in our annual report on Form 20-F for the year ended December 31, 2009 and in the deposit agreement for the ADSs with our depositary, The Bank of New York Mellon, holders of the ADSs will not be able to exercise voting rights attaching to the ordinary shares evidenced by the ADSs on an individual basis. Holders of the ADSs will have the right to instruct the depositary as their representative to exercise the rights attached to the ordinary shares represented by the ADSs. You may not receive voting materials in time to instruct the depositary to vote, and it is possible that you, or persons who hold their ADSs through brokers, dealers or other third parties, will not have the opportunity to exercise a right to vote.

You may not be able to participate in rights offerings and may experience dilution of your holdings as a result.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. Under our deposit agreement for the ADSs with our depositary, the depositary will not offer those rights to ADS holders unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the Securities Act of 1933, as amended, or exempt from registration under the Securities Act with respect to all holders of ADSs. We are under no obligation to file a registration statement with respect to any such rights or underlying securities or to endeavor to cause such a registration statement to be declared effective. In addition, we may not be able to take advantage of any exemptions from registration under the Securities Act. Accordingly, holders of our ADSs may be unable to participate in our rights offerings and may experience dilution in their holdings as a result.

You may be subject to limitations on transfer of your ADSs.

Your ADSs represented by the ADRs are transferable on the books of the depositary. However, the depositary may close its transfer books at any time or from time to time when it deems expedient in connection with the performance of its duties. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any time if we or the depositary deem it advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

Risks Relating to Being an Italian Corporation

The process of seeking to raise additional funds is cumbersome, subject to the verification of an Italian notary public in compliance with our bylaws and applicable law, and may require prior approval of our shareholders at an extraordinary shareholders' meeting.

We are incorporated under the laws of the Republic of Italy. The principal laws and regulations that apply to our operations, those of Italy and the European Union, are different from those of the United States. In order to issue new equity or debt securities convertible into equity, with some exceptions, we must increase our authorized capital. In order to do so, our board of directors must meet and resolve to recommend to our shareholders that they approve an amendment to our bylaws to increase our capital. The majority of our outstanding shares must then approve that amendment to our bylaws at an extraordinary meeting duly called. These meetings take time to call and it is very difficult to get a majority of all outstanding shares to vote in favor of the proposed resolution. In addition, an Italian notary public must verify the compliance of the capital increase with our bylaws and applicable Italian law. Further, in general, under Italian law, our existing shareholders and any holders of convertible securities (except in specific cases) have preemptive rights to acquire any such shares pro-rated on their percentage interest in our company and on the same terms as approved for such capital increase. Also, our shareholders can authorize the board of directors to increase our capital, but the board may exercise such power for only five years. If the board does not approve a capital increase by the end of those five years, the powers delegated to the Board expire, and our board and shareholders

would need to meet again to authorize a new capital increase.

Italian law provides, with respect to shareholders' resolutions approving a capital increase, that, in the event of absence of the minutes of the meeting, impossibility or illegality of the resolution, any interested person may, for a period of 180 days following the filing of the shareholders' resolution with the competent Register of Companies, challenge such resolution. If a shareholders' meeting was not called to approve the capital increase, the relevant resolution should be considered invalid and, any interested person may challenge the capital increase for a period of 90 days following the approval of the financial statements referring to the year during which the shareholders' resolution has been, also partially, executed. In addition, once our shareholders authorize a capital increase, all those authorized shares that have been subscribed need to be entirely paid-up before the shareholders may authorize a new capital increase. These restrictions could limit our ability to issue new equity or convertible debt securities on a timely basis.

Our shareholders can prevent us from executing a financing by alleging that our board of directors acted with serious irregularities when approving such financing, because the terms of such financing could harm our company.

On August 12, 2008, Sigma-Tau Finanziaria S.p.A., together with one of its affiliates, filed a claim in the Court of Como claiming that our board of directors acted with serious irregularities in violation of their duties as directors when approving a potential financing, because such financing could harm the company. On August 18, 2008, the Court of Como issued a temporary order preventing us from moving forward with a potential financing. While this claim was later dismissed for lack of damages, it did, nonetheless, prevent the directors from implementing the potential financing. Any shareholder or group of shareholders constituting at least 10% of our outstanding ordinary shares could bring a similar action on a future board resolution regarding a financing or other important corporate action, and an Italian court could prevent the transaction from moving forward by issuing an order to that effect.

We are restricted under Italian law as to the amount of debt securities that we may issue relative to our equity.

Italian law provides that we may not issue debt securities for an amount exceeding twice the amount of our capital, of our legal reserve and of any other disposable reserves appearing on our latest Italian GAAP balance sheet approved by our shareholders. The legal reserve is a reserve to which we allocate 5% of our Italian GAAP net income each year until it equals at least 20% of our capital. One of the other reserves that we maintain on our balance sheet is a "share premium reserve," meaning amounts paid for our ordinary shares in excess of the amount of such ordinary shares that is allocated to the capital. At September 30, 2010, the sum of our capital, of our capital legal reserves and other reserves on our unaudited Italian GAAP balance sheet was €31.8 million. If we issue debt securities in the future, until such debt securities are repaid in full, we may not voluntarily reduce our capital or allocate our reserves (such as by declaring dividends) if it results in the aggregate of the capital and reserves being less than half of the outstanding amount of the debt. If our equity is reduced by losses or otherwise such that the amount of the outstanding debt securities is more than twice the amount of our equity, some legal scholars are of the opinion that the ratio must be restored by a recapitalization of our company. If our equity is reduced, we could recapitalize by issuing new shares or having our shareholders contribute additional capital to our company, although there can be no assurance that we would be able to find purchasers for new shares or that any of our current shareholders would be willing to contribute additional capital.

If we suffer losses that reduce our capital to less than €120 thousand, we would need to recapitalize, change our form of entity or be liquidated.

Italian law requires us to reduce our shareholders' equity and, in particular, our capital to reflect on-going losses, in certain cases of losses exceeding 1/3 of the capital of the Company. We are also required to maintain a minimum capital of €120 thousand. At September 30, 2010, our unaudited Italian GAAP capital was approximately €14.9 million. If we suffer losses from operations that reduce our capital to less than €120 thousand, then either we must increase our capital (which we could do by issuing new shares or having our shareholders contribute additional capital to our company) to at least €120 thousand or convert the form of our company into an S.r.l., which has a lower capital requirement of €10 thousand. If we did not take these steps, our company could be liquidated.

We apply our losses from operations against our legal reserves and capital. If our capital is reduced for more than one-third as a result of losses, our board of directors must call a shareholders' meeting as soon as possible. The shareholders should take appropriate measures, which may include, inter alia, either the reduction of the legal reserves and capital by the amount of the remaining losses, or the carrying out of the losses forward for up to one year. If the shareholders vote to elect to carry the losses forward up to one year, and at the end of the year, the losses are still more than one-third of the amount of the capital, then we must reduce our capital by the amount of the losses.

Due to the differences between Italian and U.S. law, the depositary (on your behalf) may have fewer rights as a shareholder than you would if you were a shareholder of a U.S. company.

We are incorporated under the laws of the Republic of Italy. As a result, the rights and obligations of our shareholders are governed by Italian law and our bylaws, and are in some ways different from those that apply to U.S. corporations. Some of these differences may result in the depositary (on your behalf) having fewer rights as a shareholder than you would if you were a shareholder of a U.S. corporation. We have presented a detailed comparison of the Italian laws applicable to our company against Delaware law in "Item 10, Additional Information, Comparison of Italian and Delaware Corporate Law," of our most recently filed annual report on Form 20-F. We compared the Italian laws applicable to our company against Delaware law because Delaware is the most common state of incorporation for U.S. public companies.

Italian labor laws could impair our flexibility to restructure our business.

In Italy, our employees are protected by various laws giving them, through local and central works councils, rights of consultation with respect to specific matters regarding their employers' business and operations, including the downsizing or closure of facilities and employee terminations. In particular, the following laws are worth mentioning: (i) Law no. 604/1966, regulating the individual dismissals; (ii) Law no. 223/1991, concerning the collective dismissal procedure; (iii) Law no. 428/1990 as amended by legislative decree no. 18/2001, providing for the information and consultation procedure in case of transfer of the undertaking or part thereof and (iv) Legislative decree no. 25/2007, introducing a general right to information and consultation for employees. These laws and the collective bargaining agreements to which we are subject could impair our flexibility if we need to restructure our business.

WARNING REGARDING FORWARD-LOOKING STATEMENTS

This prospectus may contain forward-looking statements that involve substantial risks and uncertainties regarding future events or our future performance. When used in this prospectus, the words "anticipate," "believe," "estimate," "may," "intent," "continue," "will," "plan," "intend," and "expect" and similar expressions identify forward-looking statements. should read statements that contain these words carefully because they discuss our future expectations contain projections of our future results of operations or of our financial condition or state other "forward-looking" information. We believe that it is important to communicate our future expectations to our investors. Although we believe that our expectations reflected in any forward-looking statements are reasonable, these expectations may not be achieved. The factors listed in the section captioned "Risk Factors," as well as any cautionary language included in this prospectus or incorporated by reference, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our ordinary shares or ADSs, you should be aware that the occurrence of the events described in the "Risk Factors" section and elsewhere in this prospectus could have a material adverse effect on our business, performance, operating results and financial condition. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements set forth in this prospectus. Except as required by federal securities laws, we are under no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell and seeking offers to buy our ordinary shares only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our ordinary shares.

CAPITALIZATION AND INDEBTEDNESS

The following table summarizes our capitalization and indebtedness as of September 30, 2010 on an actual basis. There were no securities issued after September 30, 2010 and before January 13, 2011. You should read the following table in conjunction with our financial statements and related notes from our annual report on Form 20-F and other reports on Form 6-K incorporated by reference into this prospectus. Euro amounts are translated into U.S. dollars using the Noon Buying Rate for the Euro on September 30, 2010, of U.S. $1.3601 per Euro.

	As of September 30, 2010 (unaudited)	As of September 30, 2010 (unaudited)
	(in thousands, except share and per share data)	
Indebtedness:		
Mortgage loans secured by real property	€ 2,000	$ 2,720
Equipment loans	810	1,102
Financing loans	335	456
Capital lease obligation	108	147
Other	173	235
Less current maturities	1,278	1,738
Shareholders' Equity:		
Share capital, (no par value, 18,302,617 shares authorized; 14,956,317 shares issued and outstanding)	108,141	147,083
Accumulated deficit	(96,192)	130,831
Total Security holders' Equity	11,949	16,252
Total Capitalization	€ 14,097	$ 19,174

REASONS FOR THE OFFER AND USE OF PROCEEDS

FinSirton is the founder of our Company and has held 3,750,000 ordinary shares from 2004 until 2010. At September 30, 2010, FinSirton held 3,650,000 ordinary shares. We understand that FinSirton wishes to resell 1,500,000 shares being registered hereunder, for among other purposes, to pay down its loan with Intesa San Paolo S.p.A. entered into on June 12, 2007, whereby FinSirton has pledged an aggregate of 3,000,000 ordinary shares to secure repayment of such loan.

We will not receive any proceeds from the sale by the selling security holder of the securities offered in this prospectus. FinSirton will reimburse us for the expenses incurred for the offering. We expect that the selling security holder, FinSirton, will sell its ADSs as described under "Plan of Distribution."

DETERMINATION OF OFFERING PRICE

The selling security holder may offer and sell their ADSs on the Nasdaq Global Market System at prevailing market prices. The selling security holder may also offer and sell their ADSs in privately negotiated transactions at prices other than the market price.

PRICE HISTORY

Our ADSs are listed on Nasdaq under the symbol "GENT." Neither our ordinary shares nor our ADSs are listed on a securities exchange outside the United States. The Bank of New York Mellon is our depositary for the ADSs. Each ADS represents one ordinary share.

Trading in our ADSs on the Nasdaq Global Market commenced on May 16, 2006. Prior to this date, our ADSs were traded on the American Stock Exchange, beginning June 16, 2005 and ending on May 15, 2006, the date we de-listed. The following table sets forth, for each of the periods indicated, the high and low closing prices per ADS as reported by the American Stock Exchange and Nasdaq, as applicable.

	Price Range of ADSs	
	High	Low
2005 (beginning June 16, 2005)	$ 9.10	$ 6.92
2006	$ 22.74	$ 7.85
2007	$ 24.40	$ 13.51
2008		
First Quarter	$ 13.98	$ 6.36
Second Quarter	$ 7.60	$ 3.41
Third Quarter	$ 4.29	$ 1.62
Fourth quarter	$ 1.73	$ 0.44
Full Year	$ 13.98	$ 0.44
2009		
First Quarter	$ 0.90	$ 0.33
Second Quarter	$ 1.91	$ 0.58
Third Quarter	$ 3.87	$ 1.36
Fourth Quarter	$ 2.75	$ 1.89
Full Year	$ 3.87	$ 0.33
Month Ended		
June 30, 2010	$ 5.01	$ 4.13
July 31, 2010	$ 4.40	$ 3.93
August 31, 2010	$ 5.00	$ 3.82
September 30, 2010	$ 7.19	$ 4.96
October 31, 2010	$ 7.20	$ 6.30
November 30, 2010	$ 6.35	$ 5.54
December 31, 2010	$ 7.01	$ 5.27
January 31, 2011 (through January 13, 2011)	$ 8.14	$ 6.88

The closing price of the ADSs on Nasdaq on January 13, 2011 was 8.09.

Sources: American Stock Exchange and the Nasdaq Stock Market.

SELLING SECURITY HOLDER

Our ADSs to which this prospectus relates are being registered for resale by the selling security holder, FinSirton S.p.A.

The selling security holder may resell all, a portion or none of such ADSs from time to time. The table below sets forth the selling security holder, based upon information available to us as of January 13, 2011, the number and percentage of ordinary shares exercisable into ADSs beneficially owned before this offering, the number of ADSs registered for resale by this prospectus and the number and percent of ADSs that will be beneficially owned immediately after this offering assuming the sale of all of the registered ADSs.

Beneficial ownership and percentage ownership are determined in accordance with the rules of the SEC. ADSs or ordinary shares underlying our convertible securities that are exercisable within 60 days from January 13, 2011 are deemed outstanding for computing the amount and percentage owned by the person or group holding such convertible securities, but are not deemed outstanding for computing the percentage owned by any other person or group.

	ADSs Beneficially Owned Before The Offering		ADSs Offered	ADSs Beneficially Owned After The Offering	
Holder	ADSs	Percent		ADSs	Percent
FinSirton S.p.A. (1)	3,650,000	24%	1,500,000	2,150,000	14%

(1) Address is Piazza XX Settembre 2, 22079 Villa Guardia (Como), Italy. Dr. Laura Ferro, our former Chief Executive Officer and President and a current member on the Company's board of directors, may be deemed to share voting or dispositive control with FinSirton over the ordinary shares in Gentium that FinSirton beneficially owns. Dr. Ferro disclaims beneficial ownership of such shares. FinSirton entered into a loan agreement with Intesa San Paolo S.p.A. on June 12, 2007, and in connection therewith, pledged 700,000 and 2,300,000 ordinary shares in our company to IntesaSanpaolo S.p.A. to secure repayment of such loan.

The information provided above with respect to the selling security holder has been obtained from such selling security holder. Because the selling security holder may sell all or some portion of the ADSs or ordinary shares beneficially owned by them, only an estimate (assuming the selling security holder sells all of the ADSs or ordinary shares offered in this prospectus) can be given as to the number of ADSs or ordinary shares that will be beneficially owned by the selling security holder after this offering, and as to the percentage of all outstanding ADSs or ordinary shares constituted by such ADSs or ordinary shares. In addition, the selling security holder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time or from time to time since the dates on which they provided the information regarding the ADSs or ordinary shares beneficially owned by them, all or a portion of the ADSs or ordinary shares beneficially owned by them in transactions exempt from the registration requirements of the Securities Act.

PLAN OF DISTRIBUTION

The selling security holder and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their ADSs on the Nasdaq Global Market System or any other stock exchange, market or trading facility on which the ADSs are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling security holder may use any one or more of the following methods when selling ADSs:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- public or privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- on the Nasdaq Global Market System (or through facilities of any national securities exchange or US inter-dealer quotation system of a registered national securities association on which the ADSs are then listed, admitted to unlisted trading privileges or included for quotation);
- broker-dealers may agree with the selling security holder to sell a specified number of such ADSs at a stipulated price per ADSs;
- through underwriters, brokers or dealers (who may act as agents or principals) or directly to one or more purchasers;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling security holder may also sell shares under Rule 144 under the Securities Act of 1933, as amended, if available, rather than under this prospectus.

Broker-dealers engaged by the selling security holder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling security holder (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with NASDR Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with NASDR IM-2440.

In connection with the sale of the ADSs or interests therein, the selling security holder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the ADSs in the course of hedging the positions they assume. The selling security holder may also sell the ADSs short and deliver

these securities to close out their short positions, or loan or pledge the ADSs to broker-dealers that in turn may sell these securities. The selling security holder may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of ADSs offered by this prospectus, which ADSs such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling security holder may also pledge ADSs to a broker-dealer or other financial institution which, upon default, they may in turn resell.

In addition to the foregoing methods, the selling security holder may offer their ADSs from time to time in transactions involving principals or brokers not otherwise contemplated above, in a combination of such methods or described above or any other lawful methods. The selling security holder may also transfer, donate or assign their ADSs to lenders, family members and others and each of such persons will be deemed to be a selling security holder for purposes of this prospectus. The selling security holder or their successors in interest may from time to time pledge or grant a security interest in some or all of the ADSs, and if the selling security holder defaults in the performance of their secured obligations, the pledgees or secured parties may offer and sell the ADSs from to time under this prospectus; provided, however, in the event of a pledge or then default on a secured obligation by the selling security holder, in order for the ADSs to be sold under this prospectus, unless permitted by law, we must distribute a prospectus supplement and/or amendment to the registration statement of which this prospectus forms a part amending the list of selling security holders to include the pledgee, secured party or other successors in interest of the selling security holder under this prospectus.

The selling security holder may also sell their ADSs pursuant to Rule 144 under the Securities Act, which permits the limited resale of ADSs purchased in a private placement subject to the satisfaction of certain conditions, including, among other things, the availability of certain current public information concerning the issuer, the resale occurring following the required holding period under Rule 144 and the number of shares being sold during any three-month period not exceeding certain limitations.

Sales through brokers may be made by any method of trading authorized by any stock exchange or market on which the ADSs may be listed or quoted, including block trading in negotiated transactions. Without limiting the foregoing, such brokers may act as dealers by purchasing any or all of the ADSs covered by this prospectus, either as agents for others or as principals for their own accounts, and reselling such ADSs pursuant to this prospectus. The selling security holder may effect such transactions directly, or indirectly through underwriters, broker-dealers or agents acting on their behalf, in effecting sales, broker-dealers or agents engaged by the selling security holder may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling security holder, in amounts to be negotiated immediately prior to the sale (which compensation as to a particular broker-dealer might be in excess of customary commissions for routine market transactions).

The selling security holder and any broker-dealers or agents that are involved in selling the ADSs may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any profits received by the selling security holder or such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the ordinary shares or ADSs for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling security holder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the ordinary shares or ADSs by the selling security holder or any other person.

OFFERING EXPENSES

FinSirton will reimburse us for all costs, expenses and fees in connection with the registration of the ADSs offered by this prospectus. The selling security holders will bear brokerage commissions and similar selling expenses, if any, attributable to the sale of ADSs, as well as any fees and disbursements of counsel to the selling security holders.

The following table sets forth the estimated expenses in connection with the offering described in this registration statement. All amounts are subject to future contingencies other than the SEC registration fee.

Securities and Exchange Commission Registration Fee	$	1,085
Legal Fees and Expenses		50,000
Accounting Fees and Expenses		5,000
Total	$	56,085

EXPERTS

The financial statements of Gentium at December 31, 2009 and 2008 and for each of the three years ended December 31, 2009, appearing and incorporated by reference in this prospectus and in the registration statement of which this prospectus forms a part have been audited by Reconta Ernst & Young S.p.A., an independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

LEGAL MATTERS

The validity of the ordinary shares underlying the ADSs offered hereby have been passed upon for us by Gianni, Origoni, Grippo & Partners, Piazza Belgioioso, 2, 20121 Milan, Italy.

DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

The Bank of New York Mellon serves as the depositary of our ADR program, collects its fees for depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The Bank of New York Mellon is headquartered at One Wall Street, New York, New York, 10286.

Each ADS represents one ordinary share. Holders of ADSs will not be able to exercise voting rights attaching to the ordinary shares evidenced by the ADSs on an individual basis; rather, holders of ADSs will have the right to instruct the depositary as their representative to exercise the rights attached to the ordinary shares represented by the ADSs. The depositary will mail to all record holders of ADSs a notice containing a summary of all information included in any notice of a shareholders' meeting received by the depositary and will solicit proxies from ADS holders for instructions on how to vote its ordinary shares at our shareholder meetings. Owners of ADSs representing our ordinary shares are subject to additional limitations as to their rights as explained in our risk factors entitled Risks Related to Ownership of the American Depositary Shares "–You may not be able to participate in rights offerings and may experience dilution of your holdings as a result" and "–You may be subject to limitations on transfer of your ADSs."

The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deducting from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

Persons depositing or withdrawing shares must pay:	For:
$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	Issuance of ADSs, including issuances resulting from a distribution of shares or rights; or Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
$0.02 (or less) per ADS	Any cash distribution to ADS holders For depositary services accrued on the last day of each calendar year to the extent no fee was charged for any cash distribution
A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	Distribution of securities distributed to holders of deposited securities which are distributed by the depositary to ADS holders
Registration or transfer fees	Transfer and registration of shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	Cable, telex and facsimile transmissions (when expressly provided in the deposit agreement), or Converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian have to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	As necessary

The deposit arrangement, including the fees listed above, may be amended from time to time by agreement between the Bank of New York Mellon and the Company, and without consent from holders of the ADSs. In addition, both the Company and Bank of New York have the ability to terminate the agreement upon proper notice given to the other party.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference documents we file with the SEC, which means that we can disclose information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and certain later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the following documents:

(i) our Annual Report on Form 20-F for the fiscal year ended December 31, 2009, filed with the SEC on March 31, 2010; and

(ii) all of our Reports on Form 6-K furnished to the SEC between the date of filing of our Annual Report on Form 20-F with the SEC and the date of this prospectus.

All annual reports we file with the SEC pursuant to the Exchange Act on Form 20-F after the date of this prospectus and prior to the termination of the offering shall be deemed to be incorporated by reference into this prospectus and to be part hereof from the date of filing of such documents. We may incorporate by reference any Form 6-K subsequently submitted to the SEC by identifying in such Form that it is being incorporated by reference into this prospectus. Any statement made in this prospectus, a prospectus supplement or a document incorporated by reference in this prospectus or a prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus and any applicable prospectus supplement to the extent that a statement contained in an amendment to the registration statement, any subsequent prospectus supplement or in any other subsequently filed document incorporated by reference herein or therein adds, updates or changes that statement. Any statement so affected will not be deemed, except as so affected, to constitute a part of this prospectus or any applicable prospectus supplement.

We shall undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus has been delivered, upon the written or oral request of any such person to us, a copy of any or all of the information referred to above that have been or may be incorporated into this prospectus by reference, including exhibits that are specifically incorporated by reference to such information. Requests for such copies should be directed to Gentium S.p.A., Piazza XX Settembre 2, Villa Guardia (Como), Italy, Attention: Salvatore Calabrese, Chief Financial Officer and Senior Vice President, Finance, telephone +39-031-385-287.

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information. This prospectus is an offer to sell or to buy only the securities referred to in this prospectus, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or any prospectus supplement is current only as of the date on the front page of those documents. Also, you should not assume that there has been no change in our affairs since the date of this prospectus or any applicable prospectus supplement.

WHERE YOU CAN FIND MORE INFORMATION

We file and submit reports, including annual reports on Form 20-F, and other information with the Securities and Exchange Commission pursuant to the rules and regulations of the SEC that apply to foreign private issuers. You may read and copy any materials filed with the SEC at its Public Reference Room at 100 F Street N.E., Washington, D.C. 20459. You may obtain information on the operation of the Public Reference Room by calling the SEC at l-800-SEC-0330. The registration statement of which this prospectus is a part, and other public filings with the SEC, are also available on the website maintained by the SEC at http://www.sec.gov. Our website is located at www.gentium.it. The information contained on our website is not part of this prospectus.

INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

SERVICE OF PROCESS AND ENFORCEABILITY OF CIVIL LIABILITIES

We are a società per azioni (stock company) organized under the laws of the Republic of Italy. Substantially all of our directors, executive officers, and certain experts named herein, reside in the Republic of Italy. All or a substantial portion of our assets and the assets of such persons are located outside the United States. As a result, it may not be possible for investors to effect service of process within the United States upon us or such persons or to enforce judgments obtained in the United States courts predicated upon the civil liability provisions of the Federal securities laws of the United States against us or such persons in United States courts. We have been advised that (a) enforceability in Italy, in actions for enforcement of final judgments of United States courts, of civil liabilities predicated upon the Federal securities laws of the United States is subject, among other things, to the Italian courts' determination that certain jurisdictional and procedural standards were satisfied in the U.S. proceeding, that the U.S. decision is not contrary to an existing Italian decision, that the matter is not the subject of a concurrent proceeding in Italy, and that enforcement would not violate Italian public policy; and (b) in original actions in Italy to enforce such liabilities, an Italian court would examine the merits of the claim in accordance with Italian substantive law and procedure and not necessarily apply United States substantive law. We have expressly submitted to the nonexclusive jurisdiction of New York State and United States federal courts sitting in The City of New York for the purpose of any suit, action or proceeding arising out of the this public offering. We have appointed CT Corporation System, 111 Eighth Avenue, 13th Floor, New York, New York 10011, as our agent upon whom process may be served in any action.

Gentium S.p.A.

1,500,000 American Depositary Shares

Representing 1,500,000 Ordinary Shares

PROSPECTUS

January 14, 2011