

GENETIC TECHNOLOGIES LTD

Form 424B5

November 16, 2012

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Registration No. 333-184766**

PROSPECTUS SUPPLEMENT

(to the prospectus dated November 5, 2012)

GENETIC TECHNOLOGIES LIMITED

70,500,000 Ordinary Shares represented by 2,350,000 American Depositary Shares

This prospectus supplement relates to the offer and sale of up to an aggregate of 70,500,000 ordinary shares, represented by 2,350,000 American Depositary Shares, or ADSs, from time to time through our sales agent, Cowen and Company, LLC, or Cowen. Each ADS represents thirty ordinary shares. The ADSs are evidenced by American Depositary Receipts, or ADRs. The sales, if any, will be made pursuant to a Sales Agreement entered into between us and Cowen, providing for at-the-market issuance from time to time.

Our ADSs are listed on the NASDAQ Capital Market under the symbol "GENE" and our ordinary shares are listed on the Australian Securities Exchange under the symbol "GTG". On November 14, 2012, the last sale price of our ADRs on the NASDAQ Capital Market was \$3.18 per ADR and of our ordinary shares on the Australian Securities Exchange was A\$0.105 per share. The aggregate market value of our outstanding voting and non-voting common equity held by non-affiliates on November 14, 2012 was approximately \$35.7 million. We have not issued any securities pursuant to Instruction I.B.5 of Form F-3 during the 12 calendar month period that ends on and includes the date hereof.

Sales of our ADSs under this prospectus supplement and the accompanying prospectus may be made in method deemed to be "at-the-market" equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made directly on or through The NASDAQ Capital Market, the existing trading market for our ADSs, on any other existing trading market for the ADSs or to or through a market maker, or in privately negotiated transactions, subject to our prior approval. Cowen will act as sales agent using its commercially reasonable efforts consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

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Cowen will be entitled to compensation at a fixed commission rate equal to 3% of the gross sales price per ADS sold. In connection with the sale of ADSs on our behalf, Cowen will be deemed to be an "underwriter" within the meaning of the Securities Act of 1933, as amended, and the compensation of Cowen may be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to the sales agent against certain liabilities, including liabilities under the Securities Act of 1933.

Investing in the ADSs involves a high degree of risk. Before buying any securities, you should carefully consider the risk factors described in "Risk Factors" beginning on page S-6 of this prospectus supplement.

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

Cowen and Company

The date of this prospectus supplement is November 16, 2012

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Unless expressly stated otherwise, all references in this prospectus supplement and the accompanying prospectus to "GTG", "we," "us," "our," or similar references mean Genetic Technologies Limited and its subsidiaries, unless otherwise indicated.

All references to "U.S. dollars" or "US\$" in this supplement and the accompanying prospectus are to U.S. dollars, and all references to "Australian dollars" or "A\$" are to the currency of Australia.

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of our ADSs and supplements information contained in the accompanying prospectus and the documents incorporated by reference into the accompanying prospectus. The second part is the accompanying prospectus, which gives more general information about us and the securities that we may offer from time to time under our shelf registration statement. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, the information in this prospectus supplement shall control.

You should read this document together with additional information described under the headings "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" in this prospectus supplement. We have not authorized any dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any related free writing prospectus. You should not rely upon any information or representation not contained or incorporated by reference in this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may authorize to be provided to you. This prospectus supplement, the accompanying prospectus and any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy ADSs, nor does this prospectus supplement, the accompanying prospectus and any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy ADSs in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus and any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus supplement, the accompanying prospectus and any related free writing prospectus is delivered or ADS is sold on a later date.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

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FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated in it by reference contain forward-looking statements that involve risks and uncertainties. Forward-looking statements relate to future events or our future financial performance and include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, industry environment, potential growth opportunities, the progress and timing of our clinical trials or product candidate development programs, the effect of existing and future regulations and the effects of competition. These statements are based on our current expectations, beliefs and assumptions, and on information currently available to our management. In some cases, you can identify forward-looking statements by the use of words such as "anticipate", "expect", "intend", "plan", "seek", "may", "will", "should", "could", "would", "believe", "estimate", "project", "predict", "potential", "continue", or the negative of such terms or similar expressions. These forward-looking statements are only predictions and involve known and unknown risks, uncertainties and other factors which may cause our actual results, levels of activities, performance and other factors to be materially different from those anticipated in such forward-looking statements. Factors that might cause such differences include the risks discussed in "Risk Factors."

This list of risk factors is not exclusive and other risks and uncertainties may cause actual results to differ materially from those in forward-looking statements. You should consider these factors and the other cautionary statements made in this prospectus supplement, the accompanying prospectus or the documents we incorporate by reference in this prospectus supplement as being applicable to all related forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus or the documents incorporated by reference. We caution investors not to place significant reliance on the forward-looking statements contained herein. These statements, like all statements in this prospectus supplement, speak only as of the date hereof (unless another date is indicated) and we undertake no obligation to update or revise the statements.

Any statements in this prospectus supplement that relate to the Company's expectations are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995 (PSLRA). The PSLRA implemented several significant substantive changes affecting certain cases brought under the federal securities laws, including changes related to pleading, discovery, liability, class representation and awards fees. Since this information may involve risks and uncertainties and are subject to change at any time, the Company's actual results may differ materially from expected results. Additional risks associated with Genetic Technologies' business can be found in its periodic filings with the SEC.

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PROSPECTS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. The summary may not contain all the information that you should consider before investing in the ADS. You should read the entire prospectus supplement and the accompanying prospectus carefully, including "Risk Factors" contained in this prospectus supplement and the documents incorporated by reference in the accompanying prospectus, before making an investment decision. This prospectus supplement may add to, update or change information in the accompanying prospectus.

Genetic Technologies Limited

We are a biotechnology company based in Melbourne, Australia. The principal activity of the Company is the provision of genetic testing services. The Company also conducts the global out-licensing of its intellectual property relating to "non-coding" DNA and supports two late-stage research and development projects. During the 2011 financial year, the Company's U.S. subsidiary, Phenogen Sciences Inc., established a sales and distribution operation based in Charlotte, North Carolina from which our BREVAGen breast cancer risk test was launched into the U.S. marketplace.

Corporate Information

Our registered office, headquarters and laboratory is located at 60-66 Hanover Street, Fitzroy, Victoria, 3065, Australia and our telephone number is +61 3 8412 7000. The offices of our U.S. subsidiary, Phenogen Sciences Inc., are located at 9115 Harris Corners Parkway, Suite 320, Charlotte, North Carolina, 28269 U.S.A. The telephone number for the Phenogen Sciences office is (877) 992 7382. Our website address is www.gtglabs.com. The information in our website is not incorporated by reference into this prospectus supplement and should not be considered as part of this prospectus supplement.

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The Offering

Securities offered	70,500,000 ordinary shares represented by 2,350,000 ADSs
The ADSs	Each ADS represents thirty ordinary shares, no par value. The offered ADSs are evidenced by ADRs.
Depository	The Bank of New York Mellon
Manner of Offering	"At-the-market" offering that may be made from time to time through our agent, Cowen. See "Plan of Distribution" on page S-17
Ordinary Shares outstanding as of November 14, 2012	474,971,819 ordinary shares, representing 15,832,394 ADS.
Use of proceeds	We intend to use the net proceeds from the sale of Securities for general working capital purposes, including the expansion of our U.S. operations, and the possible acquisition of other complimentary technologies and tests
NASDAQ Capital Market symbol:	"GENE"
Risk Factors	This investment involves a high degree of risk. See "Risk Factors" beginning on page S-6 of this prospectus supplement as well as the other information included in or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of risks you should consider carefully before making an investment decision.

Unless otherwise stated, all information contained in this prospectus supplement reflects the assumed public offering price of \$3.18 per ADS, which was the last reported sale price of an ADS representing our ordinary shares on the NASDAQ Capital Market on November 14, 2012.

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RISK FACTORS

Before making an investment decision, you should carefully consider the risks described in this prospectus supplement, together with all of the other information incorporated by reference into this prospectus supplement and the accompanying prospectus. The following risks are presented as of the date of this prospectus supplement and we expect that these will be updated from time to time in our periodic reports filed with the Securities and Exchange Commission, which will be incorporated herein by reference. Please refer to these subsequent reports for additional information relating to the risks associated with investing in our ADSs. Our business, financial condition or 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 part or all of your investment.

Risks Related to the Offering

We will have broad discretion in how we use the proceeds, and we may use the proceeds in ways in which you and other shareholders may disagree.

Our management will use its discretion to direct the use of the net proceeds from this offering. We intend to use the net proceeds from this offering for general working capital purposes, including the expansion of our U.S. operations, and the possible acquisition of other complimentary technologies and tests. Our management's judgments may not result in positive returns on your investment and you will not have the opportunity to evaluate the economic, financial or other information upon which our management bases its decisions.

You will experience immediate and substantial dilution in the net tangible book value per share of the ADSs you purchase.

Since the assumed price per share of our ADSs being offered is substantially higher than the net tangible book value per share of our ADSs, you will suffer substantial dilution in the net tangible book value of the ADSs you purchase in this offering. Based on an assumed offering price of A\$0.105 per share or \$3.18 per ADS, the last reported sale price of our ADS representing ordinary shares on November 14, 2012, if you purchase ADSs in this offering, you will suffer immediate and substantial dilution of approximately A\$0.068 per share (\$1.96 per ADS) in the net tangible book value of the ADSs. See the section entitled "Dilution" on page S-16 of this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase ADSs in this offering.

Risks Related to Our Business

Our stock price is volatile and can fluctuate significantly based on events not in our control and general industry conditions. As a result, the value of your investment may decline significantly.

The biotechnology sector can be particularly vulnerable to abrupt changes in investor sentiment. Stock prices of companies in the biotechnology industry, including ours, can swing dramatically, with little relationship to operating performance. Our stock price may be affected by a number of factors including, but not limited to:

product development events;

the outcome of litigation;

decisions relating to intellectual property rights;

the entrance of competitive products or technologies into our markets;

new medical discoveries;

the establishment of strategic partnerships and alliances;

changes in reimbursement policies or other practices related to the pharmaceutical industry; or

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other industry and market changes or trends.

Since our listing on the Australian Securities Exchange in August 2000, the price of our Ordinary Shares has ranged from a low of \$0.02 to a high of \$1.05 per share. Further fluctuations are likely to occur due to events which are not within our control and general market conditions affecting the biotechnology sector or the stock market generally.

In addition, low trading volume may increase the volatility of the price of our ADSs. A thin trading market could cause the price of our ADSs to fluctuate significantly more than the stock market as a whole. For example, trades involving a relatively small number of our ADSs may have a greater impact on the trading price for our ADSs than would be the case if the trading volume were higher.

The following chart illustrates the fluctuation in the price of our shares (in Australian dollars) over the last five years:

The fact that we do not expect to pay cash dividends may lead to decreased prices for our stock.

We have never paid a cash dividend on our Ordinary Shares and we do not anticipate paying a cash dividend in the foreseeable future. We intend to retain future cash earnings, if any, for reinvestment in the development and expansion of our business. Whether we pay cash dividends in the future will be at the discretion of our Board of directors and may be dependent on our financial condition, results of operations, capital requirements and any other factors our Board of directors decides is relevant. As a result, an investor may only recognize an economic gain on an investment in our stock from an appreciation in the price of our stock.

You may have difficulty in effecting service of legal process and enforcing judgments against us and our Management.

We are a public company limited by shares, registered and operating under the Australian *Corporations Act 2001*. The majority of our directors and officers named in this Prospectus Supplement reside outside the U.S. Substantially all, or a substantial portion of, the assets of those persons are also located outside the U.S. As a result, it may not be possible to affect service on such persons in the U.S. or to enforce, in foreign courts, judgments against such persons obtained in U.S. courts and predicated on the civil liability provisions of the federal securities laws of the U.S. Furthermore, substantially all of our directly-owned assets are located outside the U.S., and, as such, any judgment obtained in the U.S. against us may not be collectible within the U.S. There is doubt as to the enforceability in the Commonwealth of Australia, in original actions or in actions for enforcement of judgments of U.S.

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courts, of civil liabilities predicated solely upon federal or state securities laws of the U.S., especially in the case of enforcement of judgments of U.S. courts where the defendant has not been properly served in Australia.

Because we are not necessarily required to provide you with the same information as an issuer of securities based in the United States, you may not be afforded the same protection or information you would have if you had invested in a public corporation based in the United States.

We are exempt from certain provisions of the Securities Exchange Act of 1934, as amended, commonly referred to as the Exchange Act, that are applicable to U.S. public companies, including (i) the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q or current reports on Form 8-K; (ii) the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act; and (iii) the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time. The exempt provisions would be available to you if you had invested in a U.S. corporation.

However, in line with the Australian Securities Exchange regulations, we disclose our financial results on a semi-annual basis which are required to have a limited review semi-annually and to be fully audited annually. The information, which may have an effect on our stock price on the Australian Securities Exchange, will also be disclosed to the Australian Securities Exchange and the Securities Exchange Commission. Other relevant information pertaining to our Company will also be disclosed in line with the Australian Securities Exchange regulations and information dissemination requirements for listed companies. We will provide our semi-annual results and other material information that we make public in Australia in the U.S. under the cover of an SEC Form 6-K. Nevertheless, you may not be afforded the same protection or information, which would be made available to you, were you investing in a United States public corporation because the requirements of a Form 10-Q and Form 8-K are not applicable to us.

If significant liquidity does not eventuate for our ADSs on NASDAQ, your ability to resell your ADSs could be negatively affected because there would be limited buyers for your interests.

Historically, there was virtually no trading in our ADSs through the pink sheets after the establishment of our Level I ADR Program. However, subsequent to the Level II listing of our ADSs on the NASDAQ Global Market on September 2, 2005, the trading volumes of our ADSs have increased. The Company subsequently transferred the listing of its ADSs to the NASDAQ Capital Market effective as from June 30, 2010. An active trading market for the ADSs, however, may not be maintained in the future. If an active trading market is not maintained, the liquidity and trading prices of the ADSs could be negatively affected.

In certain circumstances, holders of ADRs may have limited rights relative to holders of Ordinary Shares.

The rights of holders of ADSs with respect to the voting of Ordinary Shares and the right to receive certain distributions may be limited in certain respects by the deposit agreement entered into by us and The Bank of New York Mellon. For example, although ADS holders are entitled under the deposit agreement, subject to any applicable provisions of Australian law and of our Constitution, to instruct the depositary as to the exercise of the voting rights pertaining to the Ordinary Shares represented by the American Depositary Shares, and the depositary has agreed that it will try, as far as practical, to vote the Ordinary Shares so represented in accordance with such instructions, ADS holders may not receive notices sent by the depositary in time to ensure that the depositary will vote the Ordinary Shares. This means that, from a practical point of view, the holders of ADRs may not be able to exercise their right to vote. In addition, under the deposit agreement, the depositary has the right to restrict distributions to holders of the ADSs in the event that it is unlawful or impractical to make such distributions. We have no obligation to take any action to permit distributions to holders of our

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American Depositary Receipts, or ADRs. As a result, holders of ADRs may not receive distributions made by us.

Our Company has a history of incurring losses.

The business now called Genetic Technologies Limited was founded in 1989. Up until the year ended June 30, 2011, we have incurred operating losses in every year of our existence. We incurred net losses of \$5,446,089 for year ended June 30, 2008, net losses of \$7,841,073 for year ended June 30, 2009, net losses of \$9,343,766 for year ended June 30, 2010, a net profit of \$910,002 for year ended June 30, 2011 and net losses of \$5,287,523 for year ended June 30, 2012. As of June 30, 2012, we have accumulated losses of \$72,751,549 and the extent of any future losses and whether or not the Company can generate profits remains uncertain.

Risks Related to our Industry

Our sales cycle is typically lengthy.

The sales cycle for our testing products and license generation is typically lengthy. As a result, we may expend substantial funds and management effort with no assurance of successfully selling our products or services or granting new licenses. Our ability to obtain customers for our genetic testing services depends significantly on the perception that our services can help accelerate efforts in genomics. The sales cycle is typically lengthy. Our sales effort requires the effective demonstration of the benefits of our services to, and significant training of, many different departments within a potential customer. In addition, we sometimes are required to negotiate agreements containing terms unique to each customer. With respect to license generation, it is common for negotiations with licensees to take many months before a license is eventually granted. Our business could also be adversely affected if we expend money without any return.

If our competitors develop superior products, our operations and financial condition could be affected.

We are currently subject to limited competition from biotechnology and diagnostic companies, academic and research institutions and government or other publicly-funded agencies that are pursuing products and services which are substantially similar to our genetic testing services, or which otherwise address the needs of our customers and potential customers. Our competitors in the testing market include private and public sector enterprises located in Australia, the U.S. and elsewhere. Many of the organizations competing with us have greater experience in the areas of finance, research and development, manufacturing, marketing, sales, distribution, technical and regulatory matters than we do. In addition, many current and potential competitors have greater name / brand recognition and more extensive collaborative relationships. However, because of our patents, we have virtually no competition in the licensing area.

Our competitive position in the genetic testing area is based upon, amongst other things, our ability to:

create and maintain scientifically-advanced technology and offer proprietary products and services;

attract and retain qualified personnel;

obtain patent or other protection for our products and services;

obtain required government approvals and other accreditations on a timely basis; and

successfully market our products and services.

If we are not successful in meeting these goals, our business could be adversely affected. Similarly, our competitors may succeed in developing technologies, products or services that are more effective

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than any that we are developing or that would render our technology and services obsolete, noncompetitive or uneconomical.

We rely heavily upon our patents and proprietary technology and any future claims that our patents are invalid could seriously affect our licensing business and adversely affect our revenues and our financial condition.

We rely upon our portfolio of patent rights, patent applications and exclusive licenses to patents and patent applications relating to genetic technologies. We expect to aggressively patent and protect our proprietary technologies. However, we cannot be certain that any additional patents will be issued to us as a result of our domestic or foreign patent applications or that any of our patents will withstand challenges by others. Patents issued to, or licensed by, us may be infringed or third parties may independently develop the same or similar technologies. Similarly, our patents may not provide us with meaningful protection from competitors, including those who may pursue patents which may prevent, limit or interfere with our products or will require licensing and the payment of significant fees or royalties by us to such third parties in order to enable us to conduct our business. We may sue or be sued by third parties regarding our patents and other intellectual property rights. These suits are often costly and would divert valuable funds and technical resources from our operations and cause distraction to our Management.

We have important relationships with external parties over whom we have limited control.

We have relationships with academic consultants and other advisers who are not employed by us. Accordingly, we have limited control over their activities and can expect only limited amounts of their time to be dedicated to our activities. These persons may have consulting, employment or advisory arrangements with other entities that may conflict with or compete with their obligations to us. Our consultants typically sign agreements that provide for confidentiality of our proprietary information and results of studies. However, in connection with every relationship, we may not be able to maintain the confidentiality of our technology, the dissemination of which could hurt our competitive position and results of operations. To the extent that our scientific consultants develop inventions or processes independently that may be applicable to our proposed products, disputes may arise as to the ownership of the proprietary rights to such information, and we may not win those disputes.

If we are unable to protect our proprietary assets, we may not be able to commercialize products or services.

Our commercial success partially depends on our ability to obtain patent protection for many aspects of our business, including the products, methods and services we develop. Patents issued to us may not provide us with substantial protection or be commercially beneficial to us. The issuance of a patent is not conclusive as to its validity or its enforceability. In addition, our patent applications or those we have licensed, may not result in issued patents. If our patent applications do not result in issued patents, our competitors may obtain rights to commercialize our discoveries which could harm our competitive position. We also may apply for patent protection on novel genetic variations in known genes and their uses, as well as novel uses for previously identified genetic variations discovered by third parties. In the latter cases, we may need a license from the holder of the patent with respect to such genetic variations in order to make, use or sell any related products. We may not be able to acquire such licenses on terms acceptable to us, if at all.

Certain parties are attempting to rapidly identify and characterize genes and genetic variations through the use of sequencing and other technologies. To the extent that any patents are issued to other parties on such partial or full-length genes or genetic variations or uses for such genes or genetic variations, the risk increases that the sale of products or services developed by us or our collaborators may give rise to claims of patent infringement against us. Others may have filed and, in the future, are likely to file patent applications covering many genetic variations and their uses. Any such patent applications may have priority over our patent applications and could further require us to obtain rights

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to previously issued patents covering genetic variations. Any license that we may require under any such patent may not be made available to us on commercially acceptable terms, if at all.

We may be sued for infringing on the intellectual property rights of others. We could also become involved in interference proceedings in the United States Patent and Trademark Office to determine the relative priority of our patents or patent applications and those of the other parties involved in the interference proceeding. Intellectual property proceedings are costly, and could affect our results of operations. These proceedings can also divert the attention of managerial and technical personnel. If we do not prevail in any intellectual property proceeding, in addition to any damages we might have to pay, we could be required to stop the infringing activity, or obtain a license to or design around the intellectual property in question. In interference proceedings, our patent rights could be invalidated and the scope of our patents could be limited. If we are unable to obtain licenses to intellectual property rights that we need to conduct our business, or are unable to design around any third party patent, we may be unable to sell some of our products, which will result in reduced revenue.

We have in the past and may in the future become a party to litigation involving patents and intellectual property rights. We have previously commenced litigation against a number of parties to protect our rights pertaining to our intellectual property. We may in the future receive claims of infringement of intellectual property rights from other parties. If we do not prevail in any future legal proceedings, we may be required to pay significant monetary damages. In addition, we could also be prevented from using certain processes or prevented from selling certain configurations of our products or services that were found to be within the scope of the patent claims. In the event we did not prevail in any future proceeding, we would either have to obtain licenses from the other party, avoid certain product configurations or modify some of our products, services and processes to design around the patents. Licenses could be costly or unavailable on commercially reasonable terms. Designing around patents or focusing efforts on different configurations could be time consuming, and we may have to remove some of our products or services from the market while we were completing redesigns. Accordingly, if we are unable to settle future intellectual property disputes through licensing or similar arrangements, or if any such future disputes are determined adversely to us, our ability to market and sell our products and services could be harmed. This would in turn reduce demands for our services and harm our financial condition and results of operations.

In addition, in order to protect or enforce our patent rights or to protect our ability to operate our business, we may need to initiate other patent litigation against third parties. These lawsuits could be expensive, take significant time to resolve, and could divert Management's attention from other business concerns. These lawsuits could result in the invalidation or limitation in the scope of our patents or forfeiture of the rights associated with our patents. We may not prevail in any such proceedings and a court may find damages or award other remedies in favor of our opposing party in any of these suits. During the course of any future proceedings, there may be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. Securities analysts or investors may perceive these announcements to be negative, which could cause the market price of our stock to decline.

We may be subject to professional liability suits and our insurance may not be sufficient to cover damages. If this occurs, our business and financial condition may be adversely affected.

Our business exposes us to potential liability risks that are inherent in the testing, manufacturing, marketing and sale of genetic tests. The use of our products and product candidates, whether for clinical trials or commercial sale, may expose us to professional liability claims and possible adverse publicity. We may be subject to claims resulting from incorrect results of analysis of genetic variations or other screening tests performed using our services. Litigation of such claims could be costly. We could expend significant funds during any litigation proceeding brought against us. Further, if a court were to require us to pay damages to a plaintiff, the amount of such damages could significantly harm

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our financial condition. Although we have public and product liability insurance coverage under broadform liability and professional indemnity policies, for an aggregate amount of \$60,000,000, the level or breadth of our coverage may not be adequate to fully cover potential liability claims. To date we have not been subject to any claims, or ultimately liability, in excess of the amount of our coverage. In addition, we may not be able to obtain additional professional liability coverage in the future at an acceptable cost. A successful claim or series of claims brought against us in excess of our insurance coverage and the effect of professional liability litigation upon the reputation and marketability of our technology and products, together with the diversion of the attention of key personnel, could negatively affect our business.

We use potentially hazardous materials, chemicals and patient samples in our business and any disputes relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development, production and service activities involve the controlled use of hazardous laboratory materials and chemicals, including small quantities of acid and alcohol, and patient tissue and blood samples. We do not knowingly deal with infectious samples. We, our collaborators and service providers are subject to stringent Australian federal, state and local laws and regulations governing occupational health and safety standards, including those governing the use, storage, handling and disposal of these materials and certain waste products. However, we could be liable for accidental contamination or discharge or any resultant injury from hazardous materials, and conveyance, processing, and storage of and data on patient samples. If we, our collaborators or service providers fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. Further, future changes to environmental health and safety laws could cause us to incur additional expense or restrict our operations. We have never had a reportable serious injury through the date of this Prospectus Supplement.

In addition, our collaborators and service providers may be working with these types of hazardous materials, including hazardous chemicals, in connection with our collaborations. In the event of a lawsuit or investigation, we could be held responsible for any injury caused to persons or property by exposure to, or release of, these patient samples that may contain viruses and hazardous materials. The cost of this liability could exceed our resources. While we maintain broadform liability insurance coverage for these risks, in the amount of up to \$40,000,000, the level or breadth of our coverage may not be adequate to fully cover potential liability claims. To date, we have not been subject to claims, or ultimately liability, in excess of the amount of our coverage. Our broadform insurance coverage also covers us against losses arising from an interruption of our business activities as a result of the mishandling of such materials. We also maintain workers' compensation insurance, which is mandatory in Australia, covering all of our workers in the event of injury.

We depend on the collaborative efforts of our academic and corporate partners for research, development and commercialization of some of our products. A breach by our partners of their obligations, or the termination of the relationship, could deprive us of valuable resources and require additional investment of time and money.

Our strategy for research, development and commercialization of some of our products has historically involved entering into various arrangements with academic and corporate partners and others. As a result, our strategy depends, in part, upon the success of these outside parties in performing their responsibilities. Our collaborators may also be our competitors. We cannot necessarily control the amount and timing of resources that our collaborators devote to performing their contractual obligations and we have no certainty that these parties will perform their obligations as expected or that any revenue will be derived from these arrangements.

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If our collaborators breach or terminate their agreement with us or otherwise fail to conduct their collaborative activities in a timely manner, the development or commercialization of the product candidate or research program under such collaborative arrangement may be delayed. If that is the case, we may be required to undertake unforeseen additional responsibilities or to devote unforeseen additional funds or other resources to such development or commercialization, or such development or commercialization could be terminated. The termination or cancellation of collaborative arrangements could adversely affect our financial condition, intellectual property position and general operations. In addition, disagreements between collaborators and us could lead to delays in the collaborative research, development, or commercialization of certain products or could require or result in formal legal process or arbitration for resolution. These consequences could be time-consuming and expensive and could have material adverse effects on us.

Other than our contractual rights under our license agreements, we may be limited in our ability to convince our licensees to fulfill their obligations. If our licensees fail to act promptly and effectively, or if a dispute arises, it could have a material adverse effect on our results of operations and the price of our Ordinary Shares and ADSs.

We rely upon scientific, technical and clinical data supplied by academic and corporate collaborators, licensors, licensees, independent contractors and others in the evaluation and development of potential therapeutic methods. There may be errors or omissions in this data that would materially adversely affect the development of these methods.

We may seek additional collaborative arrangements to develop and commercialize our products in the future. We may not be able to negotiate acceptable arrangements in the future and, if negotiated, we have no certainty that they will be on favorable terms or if they will be successful. In addition, our partners may pursue alternative technologies independently or in collaboration with others as a means of developing treatments for the diseases targeted by their collaborative programs with us. If any of these events occurs, the progress of the Company could be adversely affected and our results of operations and financial condition could suffer.

Problems associated with international business operations could affect our ability to license our technology and our results of operations.

We seek to license our intellectual property and to market our growing range of other products and services on a global scale, including in countries that are considered to provide significantly less protection to intellectual property than the United States and Australia. In addition, a number of other risks are inherent in international transactions and commerce, including political and economic instability, foreign currency exchange fluctuations and changes in tax laws.

Government regulation of genetic research or testing may adversely affect the demand for our services and impair our business and operations.

Apart from accreditation requirements, we are generally not subject to regulation. The United States Food and Drug Administration may consider BREVAGen to be a medical device subject to FDA regulation even if the agency views the test as a "laboratory developed test" performed exclusively by our laboratory in Australia. Even though LDTs may be viewed as medical devices, the FDA has generally exercised its enforcement discretion and not directly regulated LDTs, especially those posing a low risk to patients. Recently, though, the FDA has begun taking a more aggressive enforcement posture especially with respect those LDTs marketed directly to consumers. If the FDA implements these changes and modifies its enforcement discretion policy or if the agency declines to view BREVAGen as a LDT, then the FDA may require the Company to obtain either an approval or a so-called 510(k) clearance, or at the very least, register as an establishment with the FDA even if no premarketing review is required. No matter which route is selected by the FDA for products such as BREVAGen, once the FDA acts, the Company will be subject to FDA jurisdiction including

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inspections. Premarket review, if required by the agency, can be expensive, time consuming and uncertain. From time to time, federal, state and/or local governments adopt regulations relating to the conduct of genetic research and genetic testing. In future, these regulations could limit or restrict genetic research activities as well as genetic testing for research or clinical purposes. In addition, if such regulations are adopted, these regulations may be inconsistent with, or in conflict with, regulations adopted by other government bodies. Regulations relating to genetic research activities could adversely affect our ability to conduct our research and development activities. Regulations restricting genetic testing could adversely affect our ability to market and sell our products and services. Accordingly, any regulations of this nature could increase the costs of our operations or restrict our ability to conduct our testing business and might adversely affect our operations and financial condition.

Review of U.S. reimbursement system may adversely impact our business.

The coding and reimbursement system and structure applicable to Molecular Pathology tests in the United States is currently under review by the Centers for Medicare and Medicaid Services and the American Medical Association. The eventual outcome of this review may affect how some, or all, molecular diagnostic tests are reimbursed in the United States as well as their level of reimbursement. Any future changes, once implemented, may affect the reimbursement levels which the Company receives for its BREVAGen test.

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USE OF PROCEEDS

Assuming the sale of all of the 2,350,000 ADS at a price of \$3.18 per ADS (being the closing price per ADS on the NASDAQ on November 14, 2012), we would receive net proceeds of approximately \$7,028,500 from this offering after deducting sales agent commissions of 3% of the gross proceeds and estimated offering expenses payable by us of approximately \$220,310. Except as described in any free writing prospectus that we may authorize to be provided to you, we currently intend to use the net proceeds from this offering, if any, primarily for general working capital purposes, including the expansion of our U.S. operations, and the possible acquisition of other complimentary technologies and tests.

We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds from this offering. Pending application of the net proceeds as described above, we expect to invest the net proceeds in highly liquid investments.

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Our net tangible book value as of June 30, 2012 was approximately A\$13.0 million, or A\$0.028 per ordinary share. Net tangible book value per share represents the amount of our total tangible assets less total liabilities divided by the total number of ordinary shares outstanding.

After giving effect to the sale by us of 70,500,000 ordinary shares represented by the ADSs offered pursuant to this prospectus supplement at an assumed public offering price (being the last reported sale price on November 14, 2012) of A\$0.105 per share, or \$3.18 per ADS, and after deducting estimated commissions and other estimated offering expenses, our net tangible book value at June 30, 2012 would have been approximately A\$19.9 million, or A\$0.037 per ordinary share (\$1.09 per ADS). This represents an immediate increase in net tangible book value of A\$0.009 per ordinary share to the then existing shareholders and an immediate dilution of A\$0.068 per share to new investors.

The following table illustrates the net tangible book value dilution per share to shareholders after the issuance of ordinary shares under this prospectus supplement dated November 16, 2012:

Assumed offering price per ordinary share	A\$	0.105
Net tangible book value per ordinary share as of June 30, 2012	A\$	0.028
Increase per ordinary share attributable to new investors	A\$	0.009
Pro forma net tangible book value per ordinary share after this offering	A\$	0.037
Net tangible book value dilution per ordinary share to new investors	A\$	0.068

This discussion of dilution, and the table quantifying it, assumes no exercise of any outstanding options over our ordinary shares.

The table above assumes that the ordinary shares underlying the ADSs sold in this offering, if any, will be sold at a price of A\$0.105 per ordinary share. To the extent that the actual price at which the ordinary shares will be sold varies, so will the net tangible book value dilution per ordinary share applicable to new investors.

OPTIONS

We introduced a Staff Share Plan on November 30, 2001. On November 19, 2008, the shareholders of the Company approved the introduction of a new Employee Option Plan. Collectively, these Plans establish the eligibility of our employees and those of any subsidiaries, and of consultants and independent contractors to a participating company who are declared by the Board to be eligible, to participate. Broadly speaking, the respective Plans permit us, at the discretion of the Board, to issue traditional options (with an exercise price). The Plans conform with the IFSA Executive Share and Option Scheme Guidelines and, where participation is to be made available to staff who reside outside Australia, there may have to be modifications to the terms of grant to meet or better comply with local laws or practice.

As of the date of this Prospectus supplement, there were three executives and 20 employees who have been granted options under the Plans. Options issued under the Plan carry no rights to dividends and no voting rights.

Options issued and outstanding under the Plans as of the date of this prospect supplement:

ASX code	Quantity	Exercise price	Expiry date
GTGAI	1,000,000	\$ 0.045	May 8, 2015
GTGAK	2,000,000	\$ 0.12	February 20, 2017
GTGAM	1,000,000	\$ 0.20	July 31, 2016
GTGAO	2,650,000	\$ 0.14	August 29, 2017
GTGAW	2,875,000	\$ 0.19	March 31, 2016
GTGAW	300,000	\$ 0.19	May 31, 2013

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PLAN OF DISTRIBUTION

We have entered into a Sales Agreement with Cowen and Company, LLC, or Cowen, under which we may sell ADSs, each representing thirty ordinary shares, for up to an aggregate of 70,500,000 ordinary shares (or 2,350,000 ADSs), from time to time through Cowen, as our agent for the offer and sale of the ADSs in at-the-market issuances from time to time. The aggregate offering price for the ordinary shares represented by ADSs may not exceed the aggregate amount that can be sold under the registration statement of which this prospectus supplement forms a part, which amount, as of the date of this prospectus supplement, is US\$25 million. The ADSs are evidenced by ADRs.

Cowen may sell the ADSs by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 under the Securities Act of 1933 as amended, or the Securities Act, including without limitation sales made directly on The NASDAQ Capital Market, on any other existing trading market for the ADSs or to or through a market maker. Cowen may also sell the ADSs in negotiated transactions, subject to our prior approval.

Each time that we wish to issue and sell ADSs under the sales agreement, we will provide Cowen with a placement notice describing the number of ADSs to be issued, the time period during which sales are requested to be made, any limitation on the number of ADSs that may be sold in any one day and any minimum price below which sales may not be made.

Upon receipt of a placement notice from us, and subject to the terms and conditions of the sales agreement, Cowen has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such ADSs up to the amount specified on such terms. Unless otherwise specified, the settlement between us and Cowen of our ADSs will occur on the third trading day following the date on which the sale was made. The obligation of Cowen under the sales agreement to sell our ADSs pursuant to a placement notice is subject to a number of conditions. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Cowen a commission equal to 3.00% of the gross proceeds of the sales price of all ADSs sold through it as sales agent under the sales agreement. Because there is no minimum offering amount required as a condition to closing this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We estimate that the total expenses for the offering, excluding compensation payable to Cowen under the terms of the sales agreement, will be approximately \$220,310.

In connection with the sale of our ADSs contemplated in this prospectus supplement, Cowen is an "underwriter" within the meaning of the Securities Act, and the compensation paid to Cowen may be deemed to be underwriting commissions or discounts. We have agreed to indemnify Cowen against certain civil liabilities, including liabilities under the Securities Act of 1933. We have also agreed to reimburse Cowen for certain other specified expenses not to exceed \$75,000.

Sales of our ADSs as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and Cowen may agree upon.

The offering of our ADSs pursuant to the sales agreement will terminate on the earliest of (1) the sale of all of the ordinary shares subject to the sales agreement, or (2) termination of the sales agreement by us or Cowen. We may terminate the sales agreement at any time in our sole discretion upon ten days prior notice. Cowen may terminate the sales agreement at any time in its sole discretion upon ten days prior notice. Cowen may terminate the sales agreement at any time in certain circumstances, including the occurrence of a material adverse change that, in the sales agent's judgment, may make it impracticable or inadvisable to market or sell our ADSs or a suspension or limitation of trading of our ADSs on The NASDAQ Capital Market.

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This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement was filed with the SEC as an exhibit to a report filed under the Securities Exchange Act of 1934, or the Exchange Act, and incorporated by reference in this prospectus supplement.

Cowen has no relationship with us other than its current role as a sales agent for our current at-the-market offerings of ADSs. Cowen and its affiliates may in the future provide various investment banking and other financial services for us, for which services they may in the future receive customary fees.

LEGAL MATTERS

Greenberg Traurig LLP, New York, New York, will be passing upon matters of United States law for us with respect to securities offered by this prospectus supplement. The validity of the ordinary shares represented by ADSs offered in this offering will be passed upon for us by Middletons, Melbourne, Australia, our Australian counsel. Cowen is being represented in connection with this offering by LeClairRyan, A Professional Corporation, Newark, New Jersey.

EXPERTS

The financial statements incorporated in this prospectus supplement by reference to the Annual Report on Form 20-F for the year ended June 30, 2012 have been so incorporated in reliance on the report of PricewaterhouseCoopers, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is a part of a registration statement on Form F-3 that we filed on November 5, 2012, with the SEC under the Securities Act of 1933. We refer you to this registration statement, for further information about us and the securities offered hereby.

We file annual and periodic reports and other information with the SEC (Commission File Number 0-51504). These filings contain important information that does not appear in this prospectus supplement or the accompanying prospectus. For further information about us, you may read and copy these filings at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549-0102. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330, and may obtain copies of our filings from the public reference room by calling (202) 551-8090. Our SEC filings are also available on the SEC Internet site at <http://www.sec.gov>, which contains periodic reports and other information regarding issuers that file electronically. In addition, we make available, without charge, through our website, www.gtglabs.com, electronic copies of various filings with the SEC, including copies of our Annual Report on Form 20-F. The information on our website is not and should not be considered part of this prospectus supplement and is not incorporated into this prospectus supplement by reference.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to other documents which we have filed or will file with the SEC. We are incorporating by reference in this prospectus supplement the documents listed below and all amendments or supplements we may file to such documents, as well as any future filings we may make with the SEC on Form 20-F under the Exchange

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Act, before the time that all of the securities offered by this prospectus supplement have been sold or de-registered.

Our Annual Report on Form 20-F for the fiscal year ended June 30, 2012 and any amendments thereto;

In addition, we may incorporate by reference into this prospectus supplement our reports on Form 6-K filed after the date of this prospectus supplement (and before the time that all of the securities offered by this prospectus supplement have been sold or de-registered) if we identify in the report that it is being incorporated by reference in this prospectus supplement.

Certain statements in and portions of this prospectus supplement update and replace information in the above listed documents incorporated by reference. Likewise, statements in or portions of a future document incorporated by reference in this prospectus supplement may update and replace statements in and portions of this prospectus supplement or the above listed documents.

We will provide you without charge, upon your written or oral request, a copy of any of the documents incorporated by reference in this prospectus supplement, other than exhibits to such documents which are not specifically incorporated by reference into such documents. Please direct your written or telephone requests to Genetic Technologies Limited, 60-66 Hanover Street, Fitzroy, Victoria 3065 Australia, Attention: Company Secretary, telephone +61 3 8412 7000. You may also obtain information about us by visiting our website at <http://www.gtglabs.com>. The information in our website is not incorporated by reference into this prospectus supplement and should not be considered as part of this prospectus supplement.

We are an Australian company and are a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act. As a result, (1) our proxy solicitations are not subject to the disclosure and procedural requirements of Regulation 14A under the Exchange Act, (2) transactions in our equity securities by our officers and directors are exempt from Section 16 of the Exchange Act, and (3) we are not required under the Exchange Act to file periodic reports and financial statements as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act. We make all required filings with the SEC electronically, and these filings are available over the Internet at the SEC's website at <http://www.sec.gov>.

PROSPECTUS

Genetic Technologies Limited
\$25,000,000

Ordinary Shares Represented by American Depositary Shares

We may offer the securities described in this prospectus from time to time in amounts, at prices and on terms to be determined at or prior to the time of the offering. We refer to the Ordinary Shares represented by American Depositary Shares as the "Securities". This prospectus describes the general manner in which our Securities may be offered using this Prospectus. We will provide specific terms and offering prices of these Securities in supplements to this Prospectus. You should read this Prospectus and the accompanying prospectus supplements carefully before you invest in our Securities.

We may offer the Securities through underwriting syndicates managed or co-managed by one or more underwriters or dealers, through agents or directly to investors, on a continuous or delayed basis. The prospectus supplement for each offering of Securities will describe in detail the plan of distribution for that offering. For general information about the distribution of Securities offered, you should refer to the section entitled "Plan of Distribution." The net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our American Depositary Shares ("ADSs") are listed on the NASDAQ Capital Market under the symbol "GENE" and our Ordinary Shares are listed on the Australian Securities Exchange under the symbol "GTG". On November 2, 2012, the last sale price of our common stock on the NASDAQ Capital Market was \$3.34 per share and on the Australian Securities Exchange was A\$0.11 per share.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 9.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is November 5, 2012.

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No dealer, salesperson or other person has been authorized to give any information or to make any representations other than those contained or incorporated by reference in this prospectus or any accompanying prospectus supplement in connection with the offer made by this prospectus or any accompanying prospectus supplement and, if given or made, such information or representations must not be relied upon as having been authorized by Genetic Technologies Limited. Neither the delivery of this Prospectus or any accompanying prospectus supplement nor any sale made hereunder and thereunder shall under any circumstances create an implication that there has been no change in the affairs of Genetic Technologies Limited since the date hereof. This Prospectus or any accompanying prospectus supplement does not constitute an offer or solicitation by anyone in any state in which such offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

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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, we may, from time to time, sell the Securities described in this Prospectus in one or more offerings up to a dollar amount of \$25,000,000.

This Prospectus provides you with a general description of the Securities that we may offer. Each time we sell Securities, we will provide a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this Prospectus, and may also contain information about any material federal income tax considerations relating to the securities covered by the prospectus supplement. You should read both this Prospectus and any prospectus supplement, together with additional information described below under the heading "Where You Can Find More Information," before purchasing any of our Securities. This Prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the Securities, you should refer to the registration statement, including the exhibits. You may read the registration statement and the other reports we file with the SEC at the SEC's website or at the SEC's offices described under the heading "Where You Can Find Additional Information."

To the extent there is a conflict between the information contained in this Prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date for example, a document incorporated by reference in this Prospectus or any prospectus supplement the statement in the document having the later date modifies or supersedes the earlier statement.

The information in this Prospectus is accurate as of the date on the front cover. You should not assume that the information contained in this Prospectus is accurate as of any other date.

Unless the context otherwise requires, in this prospectus, "GTG," "Company," "we," "us" and "our" refer to Genetic Technologies Limited. References to "U.S. dollars," "USD" or "\$" are to the lawful currency of the United States and references to "AUD" or "A\$" are to the lawful currency of Australia.

This Prospectus contains translations to certain Australian dollar amounts into U.S. dollars at specified rates solely for the convenience of the reader. Unless otherwise specified, all translations from Australian dollars to U.S. dollars in this prospectus were made at the average interbank rate as of October 26, 2012, which was A\$1.00 to US\$1.0358. We make no representation that the Australian dollar or U.S. dollar amounts referred to in this prospectus could have been or could be converted into U.S. dollars or Australian dollars, as the case may be, at any particular rate or at all.

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FORWARD-LOOKING STATEMENTS

Cautionary Note Regarding Forward-Looking Statements

This prospectus and the documents incorporated in it by reference contain forward-looking statements that involve risks and uncertainties. Forward-looking statements relate to future events or our future financial performance and include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, industry environment, potential growth opportunities, the progress and timing of our clinical trials or product candidate development programs, the effect of existing and future regulations and the effects of competition. These statements are based on our current expectations, beliefs and assumptions, and on information currently available to our management. In some cases, you can identify forward-looking statements by the use of words such as "anticipate", "expect", "intend", "plan", "seek", "may", "will", "should", "could", "would", "believe", "estimate", "project", "predict", "potential", "continue", or the negative of such terms or similar expressions. These forward-looking statements are only predictions and involve known and unknown risks, uncertainties and other factors which may cause our actual results, levels of activities, performance and other factors to be materially different from those anticipated in such forward-looking statements. Factors that might cause such differences include the risks discussed in "Risk Factors."

This list of risk factors is not exclusive and other risks and uncertainties may cause actual results to differ materially from those in forward-looking statements. You should consider these factors and the other cautionary statements made in this Prospectus, any prospectus supplement or the documents we incorporate by reference in this Prospectus as being applicable to all related forward-looking statements wherever they appear in this Prospectus, any prospectus supplement or the documents incorporated by reference. We caution investors not to place significant reliance on the forward-looking statements contained herein. These statements, like all statements in this prospectus, speak only as of the date hereof (unless another date is indicated) and we undertake no obligation to update or revise the statements.

Any statements in this Prospectus that relate to the Company's expectations are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act. The Private Securities Litigation Reform Act of 1995 (PSLRA) implemented several significant substantive changes affecting certain cases brought under the federal securities laws, including changes related to pleading, discovery, liability, class representation and awards fees. Since this information may involve risks and uncertainties and are subject to change at any time, the Company's actual results may differ materially from expected results. Additional risks associated with Genetic Technologies' business can be found in its periodic filings with the SEC.

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ABOUT GENETIC TECHNOLOGIES LIMITED

We are a biotechnology company based in Melbourne, Australia. The principal activity of the Company is the provision of genetic testing services. The Company also conducts the global out-licensing of its intellectual property relating to "non-coding" DNA and supports two late-stage research and development projects. During the 2011 financial year, the Company's U.S. subsidiary, Phenogen Sciences Inc., established a sales and distribution operation based in Charlotte, North Carolina from which our BREVAGen breast cancer risk test was launched into the U.S. marketplace.

Genetic testing industry background

The Human Genome Project announced (in April 2003) the completion of the first draft of the entire sequence of the human genome. The biotechnology industry has since worked to build upon the vast amount of knowledge generated by that program in order to develop a better understanding of the genetic basis of human health and disease. Increasingly, genetics is being shown to play a key role in the diagnosis and treatment of many diseases in humans, as well as diseases in animals and plants. This increasing understanding of genetics is providing new information for understanding such predisposing or causative factors in many diseases.

A major focus in science is now the identification and analysis of genetic variations and disease-associated genes within the genome. These genetic variations, or polymorphisms, in the DNA sequences vary between individuals. The most common genetic variations are Single Nucleotide Polymorphisms, or SNPs, which are merely a difference in a single nucleotide. The first draft of the human genome identified over 1.4 million SNPs that can be useful as positional signposts for disease-associated DNA sequences in a gene or as markers to map genes along a chromosome. A significant number of these SNPs (perhaps more than 97%) are now known to be non-coding.

A genome is an organism's complete set of DNA and the study of that DNA is called genomics. Genomes vary in size, with bacteria displaying the smallest known genome at 600,000 DNA base pairs, while human and mouse genomes have over 3 billion. The DNA of the human genome is organized into 24 distinct chromosomes that contain from 50 million to 250 million base pairs on each chromosome. The DNA on each chromosome contains genes that are specific sequences that encode proteins that actually perform the work within a cell and also make up the cell itself. Surprisingly, only about 2% to 5% of the human genome is organized into coding DNA, with the remainder being considered to be non-coding DNA. The global patent portfolio on which our out-licensing activities is based is centered on proprietary methods for utilizing the valuable information contained within these non-coding regions.

Almost 99.9% of an individual's genome is identical to that of every other individual's genome. However, even slight variations in sequence can drastically change how a gene functions. Variations can lead to harmless changes, such as blue eyes instead of brown, or to major diseases such as cancer, cystic fibrosis, or cardiovascular disease. Genetic variations can also be responsible for many of the differences in the ways individuals respond to drug therapies. As a result of this knowledge, routine analysis of SNPs and other genetic variations is expected to play an increasingly important role in the discovery and development of new drugs, as well as in a variety of diagnostic therapeutic and other medical and life science applications. Industry sources estimate there are millions of genetic variations in the human genome, creating demand for products and technologies that can quickly and accurately detect and analyze these variations. It is thought that the medicine of the future will be dispensed to a patient based on his or her own specific DNA variations. This type of "personalized medicine" will require sophisticated genetic tests to determine the genetic composition of an individual, and it is now recognized that such genetic make-up depends not only on the form of the coding DNA, but also the form of the associated non-coding DNA.

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Genetic tests

Most genes come in many different forms, called alleles. One or more allele may be associated with a particular disease state. Genetic testing involves the direct examination of an individual's DNA for a DNA marker associated with the allele of interest. The determination of the particular alleles an individual has within his or her DNA is called genotyping.

The most commonly tested marker of a particular allele is a SNP. As much as 98% of the human genome is considered to be non-coding DNA, the majority of the identified 1.4 million SNPs are also located in non-coding regions of DNA. We believe that a license to our proprietary methods of analyzing non-coding regions of DNA will be absolutely necessary for many of the genetic tests of the future. Similarly, tests for genetic abnormalities or mutations may involve not just individual SNPs, but also groups of SNPs or even larger sequences of DNA, and such abnormal sequences large or small may be located either in the coding region alone, or in the non-coding region alone, or in both the coding and non-coding regions of the gene (or genes) under examination. Clearly, the variations within genes that may be responsible for a disease are now known to be much more complicated than was previously understood, and the role of non-coding DNA is now being found to be highly relevant in a growing number of diseases. This similarly applies to genetic disorders in animals and plants. Accordingly, in future, more and more genetic testing will look not only at coding variations, but also at the non-coding variations within a particular gene.

Background and history of the Company's genetic testing business

(1) Paternity testing. In the early 1990's, GeneType AG established a small service testing laboratory in Melbourne, Australia, initially to show-case its non-coding inventions, but also to generate revenue to help support and fund its ambitious research programs in those early days. Following the acquisition of several other small DNA testing laboratories in Australia, GeneType AG consolidated its genetic testing business such that the Company is now the largest provider of paternity and related testing services in Australia. Further, our service testing laboratory in Fitzroy (an inner suburb of Melbourne, Victoria) is the leading non-Government genetic testing service provider in Australia. We now have extensive experience in providing DNA-based individuality testing for the resolution of disputed paternity, the determination of familial relationships for immigration purposes and for forensic analysis.

The most common type of DNA testing is paternity testing where we determine the father of a given child. In order to perform this test we take a sample from the mother, alleged father and child. The test can also be performed without the mother's sample but this makes the analysis somewhat more complex and the price for the test increases accordingly. We also provide a wide range of other related tests to establish identity using similar technology.

Over time, we have gained a reputation as a leading genetic testing laboratory, and progressively, we have received specimens for testing from other countries, most of which are located in the Asia-Pacific region. In addition, we have received requests to perform tests outside of the area of human paternity which has led to the expansion of our testing services, as summarized below.

(2) Medical testing. The strategic alliance with Myriad Genetics Inc. delivered to the Company exclusive rights in Australia and New Zealand to perform DNA testing for susceptibility to a range of cancers. In April 2003, we established our cancer susceptibility testing facility within our Australian laboratory. In June 2003, this facility was granted provisional accreditation by the National Association of Testing Authorities, Australia ("NATA"). This important area of testing has since gained momentum, with the addition of new equipment and new employees joining the Company.

In November 2003, the Company joined the world-wide genetic testing network GENDIA as the sole reference laboratory for the network in Australia and New Zealand. GENDIA consists of more

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than 50 laboratories from around the world, each contributing expertise in their respective disciplines to create a network capable of providing more than 2,000 different genetic tests. This has provided the Company with the ability to offer comprehensive testing services to its customer base in the Asia-Pacific region as well as increasing our exposure to other markets.

In November 2004, the Company announced a strategic alliance with Australian biotechnology company Bionomics Limited for the commercialization of the diagnostic genetic test for the condition Severe Myoclonic Epilepsy in Infancy. This test was the first to expand the Company's human molecular diagnostics focus beyond cancer susceptibility testing. In July 2006, we further cemented our position as Australia's leading independent provider of complex genetic testing services with NATA granting further accreditation of our Melbourne laboratory to provide a wide range of complex genetic tests. We committed to providing the gold standard in testing technology, with superior turn-around times and a substantially more cost efficient service. Attainment of the further accreditation by NATA in the area of complex gene sequencing testing services has enabled various government funded genetics services to utilize the Company's testing service to improve patient care.

Having established an excellent laboratory service with significant excess capacity, the Company announced in July 2008 that a commercial decision had been made to enforce the rights granted to it under an exclusive license from Myriad to perform diagnostic testing of the BRCA1 and BRCA2 genes in Australia and New Zealand. However, following the removal of five Directors from the Board at the Company's Annual General Meeting on November 19, 2008, the new Board undertook a formal review of the Company's decision to enforce its BRCA testing rights and subsequently resolved to immediately revert to its original decision to allow other public laboratories in Australia to freely perform BRCA testing.

In October 2009, a new strategic direction was established to focus efforts in creating a portfolio of tests that would be aimed at assisting medical clinicians with cancer management. This would comprise tests that were created by the Company and in-licensed from third parties which would then be marketed by Genetic Technologies in the Asia-Pacific region. In November 2009, distribution agreements were executed with Trimgen and Rosetta Genomics of the U.S. to acquire distribution rights for their tests across Oceania. In addition to the current test portfolio, GTG began introducing itself to the global oncology market via regular attendance at international medical conferences and direct to market selling activities. An additional agreement to acquire local distribution rights from Response Genetics of the U.S. was then executed by the Company in January 2010.

In December 2009, Genetic Technologies negotiated an exclusive option to investigate the purchase of various assets from Perlegen Sciences, Inc. of Mountain View, California which included a breast cancer non-familial risk assessment test, BREVAGen . Those assets were subsequently purchased by the Company in April 2010. Work then began on validating the test in GTG's Australian laboratory as well as initiating the process for obtaining CLIA certification which would enable the Company to undertake the testing of samples received from the U.S. market. By July 2010, a new U.S. subsidiary named Phenogen Sciences Inc. had been incorporated by the Company in Delaware to market and distribute the BREVAGen test across mainland U.S.A.

In April 2011, the Company announced that it had gained certification of its Australian laboratory under the U.S. Clinical Laboratories Improvements Amendments, as regulated by the Centers for Medicare and Medicaid in Baltimore, Maryland. This certification, which enables the Company to accept and test samples from U.S. residents, was the culmination of preparations required for the U.S. launch of the Company's BREVAGen test which occurred in June 2011. Phenogen Sciences has since established an office in Charlotte, North Carolina and employed a number of key personnel, including an experienced local sales force which has since grown to ten, who service territories located in 49 of the 50 U.S. States (excluding New York, for which further approvals are required and are currently being sought).

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(3) Forensic testing. Recognizing the increasing use of DNA analysis in forensics and the demand this would place on existing government laboratories, in February 2004, the Company successfully gained forensics accreditation from the National Association of Testing Authorities, Australia ("NATA"). We were the first non-government laboratory in Australia to be awarded this accreditation. Since then, we have developed a highly efficient and technologically advanced forensics laboratory. This capability was substantially advanced by our recent non-coding licensing deal with Applera Corporation under which we secured equipment and supplies essential to conducting forensics analysis. Together with these resources and our experience in DNA analysis, the Company is becoming a major provider of DNA analysis services to the Australian forensics community.

In April 2006, we announced that we had been awarded a contract to supply the New South Wales (N.S.W.) Police Force with DNA analysis services, under which we provided services for an initial trial period of three months. Following this successful trial, we executed a three year contract with the NSW Police Force in January 2008 for DNA analysis services for their volume crime samples, such as burglary and motor vehicle theft. This contract represented a major breakthrough for the Company and was the first time in Australia that any Police Force had awarded a long-term contract to outsource the testing of their crime samples. The initial term of the contract with the NSW Police Force ended in January 2011. The contract has since been extended to January 2013. The feedback regarding the contracted work to date has been wholly positive and the turnaround time targets stipulated in the current contract have been well exceeded.

We believe that a significant opportunity exists for the Company to assist other policing authorities to expeditiously process DNA samples and discussions have been held with two other State-based Police forces to investigate how GTG's forensic capability could be utilized in their operations. In addition, forensics work is being gained through the private legal market.

(4) Animal testing. In May 2003, we acquired the assets of Genetic Science Services to expand the range of tests we can offer to include relevant genetic testing in animals for example, progeny testing in horses, dogs, deer, sexing in birds, and animal disease identification and susceptibility testing for a range of animals, including exotic and zoo animals. This acquisition also allowed the Company to support research projects involving other animals.

In addition to NATA accreditation for complex genetic analysis mentioned above, in 2006 GTG also received NATA accreditation for the provision of canine forensic analysis services. We are the only laboratory in Australia to receive such accreditation. This accreditation ensures that we will continue to be the laboratory of choice for all canine forensic analysis, especially where prosecutions are initiated for dog attacks. In the state of Victoria alone, there are in excess of 7,000 dog incidents reported annually. This accreditation, together with the recent announcement of a genetic test to determine the breed of dogs, places the Company in a strong position to provide genetic analysis services to local councils around Australia. During 2008, the Company launched its Dog Attack Pack, a forensic tool enabling local government officers to collect samples from dog attacks and BITSA, a breed identification test that uses DNA analysis to provide a history of a dog's breed.

In September 2009, GTG again won a tender for being the exclusive provider of genetic services to Greyhounds Australasia. At this time, the Company's animals business was re-launched through a website www.animalnetwork.com.au which provides information on genetic tests, a database of breeder dog results supplied from GTG tests, services and the ability to order tests online.

By late 2009, the new strategy for GTG of focusing on genetic health started to impact the way resources would be used in the animals business. This change in strategic direction meant that many ad-hoc and small / infrequent volume animal tests were eliminated from the animal testing portfolio. A decision to focus solely on canine genetic tests meant an increase in establishing relationship with new channel partners. In the Veterinary market, Gribbles was appointed as the Company's exclusive distribution partner for Australia and New Zealand. In the animal welfare area, our relationship with

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Lort Smith Animal Hospital continued and additional relationships established with the Animal Welfare Leagues in New South Wales and South Australia and the New Zealand Kennel Club. Outside the main cities, distribution agreements were set up with ART in Rockhampton, Queensland.

Out-licensing of the Company's "non-coding" technology

On August 29, 2000, the Company completed the acquisition of GeneType AG, a Swiss private company which had been incorporated in Zug, Switzerland on February 13, 1989 to exploit the commercialization of the hypothesis that the non-coding region of the human HLA gene complex of chromosome 6 is a valuable and highly ordered reservoir of useful genetic information, largely overlooked by the rest of the world at that time. This hypothesis that the non-coding or "junk" regions of DNA were in reality not "junk", but a valuable and highly ordered reservoir of useful genetic information, resulted in the Company successfully filing, and subsequently being granted, important patents in a number of countries around the world which now form the basis of the Company's global out-licensing activities and which have resulted in the granting of more than 60 licenses, generating fees of approximately \$70 million since 2002.

The Company is currently licensing its non-coding patents in the United States, Europe and elsewhere. This strategy was initiated in late 2000, soon after GeneType AG and its non-coding patents were acquired by the Company. Initially, we made contact with many companies in the United States and elsewhere, bringing the patents to their attention and indicating how they might benefit from a license to the Company's non-coding patents. The plan was to grant a number of licenses focusing primarily on the up-front fee component, and then to progressively build recurring annuity or royalty component of subsequent licenses. When we identified companies that appeared to be infringing our patents, while also indicating they would not take a license, we put them on formal notice under our patent insurance policy. Overall, the strategy has unfolded as planned.

In recent years, this strategy had evolved further with the appointment of Colorado-based law firm Sheridan Ross PC as our "assertion" partner. With their assistance, the Company has now filed a number of patent infringement suits in the U.S. against more than 25 separate parties with settlement and license agreements having since been executed with a number of these parties. As of the date of this Prospectus, negotiations continue with a number of the remaining parties.

Our late-stage research projects

Up until April 2012, Genetic Technologies supported two research programs ("RareCollect " and "ImmunAid "), details of which have been provided in our Form 20-F as of June 30, 2012. In previous years, other projects, which have since been terminated, have also been supported by the Company. Some projects have arisen from new inventions made by the Company while some have been made by others who have approached the Company seeking collaboration and support for their activities.

As of the date of this Prospectus, the Company is still supporting the RareCollect project. However, on April 12, 2012, the Company's former subsidiary, ImmunAid Pty. Ltd., which manages the ImmunAid project, was deconsolidated from the Group following a successful fundraising of \$1,000,000 by that company. As a result, the ImmunAid project is no longer managed or supported by the Group. Following the raising of the new equity by ImmunAid Pty. Ltd., the Company's remaining 45.5% interest in that company was revalued to \$4,546,951 in the Company's balance sheet as of June 30, 2012.

In March 2001, the Company began to develop and commercialize patents relating to the recovery of fetal cells circulating in the peripheral blood of a pregnant woman. This project is known as "RareCollect ". The Company believes that RareCollect offers a unique opportunity to successfully penetrate the \$2 billion global prenatal testing market, with the potential for market launch within three to five years. By offering a safe sampling and processing methodology that provides sufficient

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fetal material for subsequent analysis, it has the potential to displace currently available invasive diagnostic procedures. Amniocentesis and chorionic villus sampling represent an estimated \$1 billion market per annum in the U.S. alone. A non-invasive and safe alternative to amniocentesis / CVS could replace and even expand (to lower risk pregnancies) this market.

A comprehensive memorandum detailing technical aspects of the technology and the commercial potential of the project has been compiled, as has a virtual data room containing a full data package on the project. As detailed above, a number of international parties who operate in the RareCollect space have now been identified with a view to partnering the project by way of out-license or co-development arrangement on acceptable commercial terms.

Corporate information

Genetic Technologies Limited was incorporated on January 5, 1987 as Concord Mining NL in Western Australia. On August 13, 1991, we changed our name to Consolidated Victorian Gold Mines NL to better reflect the operations of the Company at the time. On December 2, 1991, we again changed our name to Consolidated Victorian Mines NL. On March 5, 1995, we again changed our name to Duketon Goldfields NL. On October 15, 1995, we changed our status from a "No Liability" company to a company limited by shares and the name became Duketon Goldfields Limited. On August 29, 2000, we changed our name to Genetic Technologies Limited, which is the current name of the Company.

On August 29, 2000, Duketon Goldfields Limited received shareholder approval to change its activities from a mining company to a biotechnology and genetics company on the acquisition of all the issued capital of GeneType AG of Switzerland. Following the acquisition of GeneType AG, we focused on the development and commercialization of genetic concepts primarily related to our intron sequence patents and genomic mapping patents and the establishment of its fee for service genetic testing business.

We are jointly listed on the NASDAQ Capital Market under the ticker "GENE" and on the Australian Securities Exchange under the symbol "GTG". Our Australian Company Number (ACN) is 009 212 328. Our Australian Business Number (ABN) is 17 009 212 328. We currently employ approximately 56 employees and we operate pursuant to our constitution, the Australian *Corporations Act 2001*, the Listing Rules of the Australian Securities Exchange, the Marketplace Rules of NASDAQ and, where applicable, local, state and federal legislation in the countries in which we operate.

Our registered office, headquarters and laboratory are all located at 60-66 Hanover Street, Fitzroy, Victoria, 3065 Australia. Our telephone number is +61 3 8412 7000. Our website address is www.gtglabs.com. The offices of our U.S. subsidiary, Phenogen Sciences Inc., are located at 9115 Harris Corners Parkway, Suite 320, Charlotte, North Carolina, 28269 U.S.A. The telephone number for the Phenogen Sciences office is +1 877 992 7382. Information on our websites and websites linked to them do not constitute part of this Prospectus.

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RISK FACTORS

You should be aware that there are various risks to an investment in our Securities, including those described below. You should carefully consider these risk factors, together with all of the other information included and incorporated by reference in this prospectus, before you decide to invest in our Securities.

If any of the following risks, or other risks not presently known to us or that we currently believe to not be significant, develop into actual events, then our business, financial condition, results of operations or prospects could be materially adversely affected. If that happens, the market price of our ordinary shares could decline, and you may lose all or part of your investment.

RISKS RELATED TO OUR BUSINESS

Our stock price is volatile and can fluctuate significantly based on events not in our control and general industry conditions. As a result, the value of your investment may decline significantly.

The biotechnology sector can be particularly vulnerable to abrupt changes in investor sentiment. Stock prices of companies in the biotechnology industry, including ours, can swing dramatically, with little relationship to operating performance. Our stock price may be affected by a number of factors including, but not limited to:

product development events;

the outcome of litigation;

decisions relating to intellectual property rights;

the entrance of competitive products or technologies into our markets;

new medical discoveries;

the establishment of strategic partnerships and alliances;

changes in reimbursement policies or other practices related to the pharmaceutical industry; or

other industry and market changes or trends.

Since our listing on the Australian Securities Exchange in August 2000, the price of our Ordinary Shares has ranged from a low of \$0.02 to a high of \$1.05 per share. Further fluctuations are likely to occur due to events which are not within our control and general market conditions affecting the biotechnology sector or the stock market generally.

In addition, low trading volume may increase the volatility of the price of our ADSs. A thin trading market could cause the price of our ADSs to fluctuate significantly more than the stock market as a whole. For example, trades involving a relatively small number of our ADSs may have a greater impact on the trading price for our ADSs than would be the case if the trading volume were higher.

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The following chart illustrates the fluctuation in the price of our shares (in Australian dollars) over the last five years:

The fact that we do not expect to pay cash dividends may lead to decreased prices for our stock.

We have never paid a cash dividend on our Ordinary Shares and we do not anticipate paying a cash dividend in the foreseeable future. We intend to retain future cash earnings, if any, for reinvestment in the development and expansion of our business. Whether we pay cash dividends in the future will be at the discretion of our Board of directors and may be dependent on our financial condition, results of operations, capital requirements and any other factors our Board of directors decides is relevant. As a result, an investor may only recognize an economic gain on an investment in our stock from an appreciation in the price of our stock.

You may have difficulty in effecting service of legal process and enforcing judgments against us and our Management.

We are a public company limited by shares, registered and operating under the Australian *Corporations Act 2001*. The majority of our directors and officers named in this Annual Report reside outside the U.S. Substantially all, or a substantial portion of, the assets of those persons are also located outside the U.S. As a result, it may not be possible to affect service on such persons in the U.S. or to enforce, in foreign courts, judgments against such persons obtained in U.S. courts and predicated on the civil liability provisions of the federal securities laws of the U.S. Furthermore, substantially all of our directly-owned assets are located outside the U.S., and, as such, any judgment obtained in the U.S. against us may not be collectible within the U.S. There is doubt as to the enforceability in the Commonwealth of Australia, in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated solely upon federal or state securities laws of the U.S., especially in the case of enforcement of judgments of U.S. courts where the defendant has not been properly served in Australia.

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Because we are not necessarily required to provide you with the same information as an issuer of securities based in the United States, you may not be afforded the same protection or information you would have if you had invested in a public corporation based in the United States.

We are exempt from certain provisions of the Securities Exchange Act of 1934, as amended, commonly referred to as the Exchange Act, that are applicable to U.S. public companies, including (i) the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q or current reports on Form 8-K; (ii) the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act; and (iii) the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time. The exempt provisions would be available to you if you had invested in a U.S. corporation.

However, in line with the Australian Securities Exchange regulations, we disclose our financial results on a semi-annual basis which are required to have a limited review semi-annually and to be fully audited annually. The information, which may have an effect on our stock price on the Australian Securities Exchange, will also be disclosed to the Australian Securities Exchange and the Securities Exchange Commission. Other relevant information pertaining to our Company will also be disclosed in line with the Australian Securities Exchange regulations and information dissemination requirements for listed companies. We will provide our semi-annual results and other material information that we make public in Australia in the U.S. under the cover of an SEC Form 6-K. Nevertheless, you may not be afforded the same protection or information, which would be made available to you, were you investing in a United States public corporation because the requirements of a Form 10-Q and Form 8-K are not applicable to us.

If significant liquidity does not eventuate for our ADSs on NASDAQ, your ability to resell your ADSs could be negatively affected because there would be limited buyers for your interests.

Historically, there was virtually no trading in our ADSs through the pink sheets after the establishment of our Level I ADR Program. However, subsequent to the Level II listing of our ADSs on the NASDAQ Global Market on September 2, 2005, the trading volumes of our ADSs have increased. The Company subsequently transferred the listing of its ADSs to the NASDAQ Capital Market effective as from June 30, 2010. An active trading market for the ADSs, however, may not be maintained in the future. If an active trading market is not maintained, the liquidity and trading prices of the ADSs could be negatively affected.

In certain circumstances, holders of ADRs may have limited rights relative to holders of Ordinary Shares.

The rights of holders of ADSs with respect to the voting of Ordinary Shares and the right to receive certain distributions may be limited in certain respects by the deposit agreement entered into by us and The Bank of New York Mellon. For example, although ADS holders are entitled under the deposit agreement, subject to any applicable provisions of Australian law and of our Constitution, to instruct the depositary as to the exercise of the voting rights pertaining to the Ordinary Shares represented by the American Depositary Shares, and the depositary has agreed that it will try, as far as practical, to vote the Ordinary Shares so represented in accordance with such instructions, ADS holders may not receive notices sent by the depositary in time to ensure that the depositary will vote the Ordinary Shares. This means that, from a practical point of view, the holders of ADRs may not be able to exercise their right to vote. In addition, under the deposit agreement, the depositary has the right to restrict distributions to holders of the ADSs in the event that it is unlawful or impractical to make such distributions. We have no obligation to take any action to permit distributions to holders of our ADRs. As a result, holders of ADRs may not receive distributions made by us.

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Our Company has a history of incurring losses.

The business now called Genetic Technologies Limited was founded in 1989. Up until the year ended June 30, 2011, we have incurred operating losses in every year of our existence. We incurred net losses of \$5,446,089 for year ended June 30, 2008, net losses of \$7,841,073 for year ended June 30, 2009, net losses of \$9,343,766 for year ended June 30, 2010, a net profit of \$910,002 for year ended June 30, 2011 and net losses of \$5,287,523 for year ended June 30, 2012. As of June 30, 2012, we have accumulated losses of \$72,751,549 and the extent of any future losses and whether or not the Company can generate profits remains uncertain.

Risks Related to our Industry

Our sales cycle is typically lengthy.

The sales cycle for our testing products and license generation is typically lengthy. As a result, we may expend substantial funds and management effort with no assurance of successfully selling our products or services or granting new licenses. Our ability to obtain customers for our genetic testing services depends significantly on the perception that our services can help accelerate efforts in genomics. The sales cycle is typically lengthy. Our sales effort requires the effective demonstration of the benefits of our services to, and significant training of, many different departments within a potential customer. In addition, we sometimes are required to negotiate agreements containing terms unique to each customer. With respect to license generation, it is common for negotiations with licensees to take many months before a license is eventually granted. Our business could also be adversely affected if we expend money without any return.

If our competitors develop superior products, our operations and financial condition could be affected.

We are currently subject to limited competition from biotechnology and diagnostic companies, academic and research institutions and government or other publicly-funded agencies that are pursuing products and services which are substantially similar to our genetic testing services, or which otherwise address the needs of our customers and potential customers. Our competitors in the testing market include private and public sector enterprises located in Australia, the U.S. and elsewhere. Many of the organizations competing with us have greater experience in the areas of finance, research and development, manufacturing, marketing, sales, distribution, technical and regulatory matters than we do. In addition, many current and potential competitors have greater name / brand recognition and more extensive collaborative relationships. However, because of our patents, we have virtually no competition in the licensing area.

Our competitive position in the genetic testing area is based upon, amongst other things, our ability to:

create and maintain scientifically-advanced technology and offer proprietary products and services;

attract and retain qualified personnel;

obtain patent or other protection for our products and services;

obtain required government approvals and other accreditations on a timely basis; and

successfully market our products and services.

If we are not successful in meeting these goals, our business could be adversely affected. Similarly, our competitors may succeed in developing technologies, products or services that are more effective

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than any that we are developing or that would render our technology and services obsolete, noncompetitive or uneconomical.

We rely heavily upon our patents and proprietary technology and any future claims that our patents are invalid could seriously affect our licensing business and adversely affect our revenues and our financial condition.

We rely upon our portfolio of patent rights, patent applications and exclusive licenses to patents and patent applications relating to genetic technologies. We expect to aggressively patent and protect our proprietary technologies. However, we cannot be certain that any additional patents will be issued to us as a result of our domestic or foreign patent applications or that any of our patents will withstand challenges by others. Patents issued to, or licensed by, us may be infringed or third parties may independently develop the same or similar technologies. Similarly, our patents may not provide us with meaningful protection from competitors, including those who may pursue patents which may prevent, limit or interfere with our products or will require licensing and the payment of significant fees or royalties by us to such third parties in order to enable us to conduct our business. We may sue or be sued by third parties regarding our patents and other intellectual property rights. These suits are often costly and would divert valuable funds and technical resources from our operations and cause distraction to Management.

We have important relationships with external parties over whom we have limited control.

We have relationships with academic consultants and other advisers who are not employed by us. Accordingly, we have limited control over their activities and can expect only limited amounts of their time to be dedicated to our activities. These persons may have consulting, employment or advisory arrangements with other entities that may conflict with or compete with their obligations to us. Our consultants typically sign agreements that provide for confidentiality of our proprietary information and results of studies. However, in connection with every relationship, we may not be able to maintain the confidentiality of our technology, the dissemination of which could hurt our competitive position and results of operations. To the extent that our scientific consultants develop inventions or processes independently that may be applicable to our proposed products, disputes may arise as to the ownership of the proprietary rights to such information, and we may not win those disputes.

If we are unable to protect our proprietary assets, we may not be able to commercialize products or services.

Our commercial success partially depends on our ability to obtain patent protection for many aspects of our business, including the products, methods and services we develop. Patents issued to us may not provide us with substantial protection or be commercially beneficial to us. The issuance of a patent is not conclusive as to its validity or its enforceability. In addition, our patent applications or those we have licensed, may not result in issued patents. If our patent applications do not result in issued patents, our competitors may obtain rights to commercialize our discoveries which could harm our competitive position. We also may apply for patent protection on novel genetic variations in known genes and their uses, as well as novel uses for previously identified genetic variations discovered by third parties. In the latter cases, we may need a license from the holder of the patent with respect to such genetic variations in order to make, use or sell any related products. We may not be able to acquire such licenses on terms acceptable to us, if at all.

Certain parties are attempting to rapidly identify and characterize genes and genetic variations through the use of sequencing and other technologies. To the extent that any patents are issued to other parties on such partial or full-length genes or genetic variations or uses for such genes or genetic variations, the risk increases that the sale of products or services developed by us or our collaborators may give rise to claims of patent infringement against us. Others may have filed and, in the future, are

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likely to file patent applications covering many genetic variations and their uses. Any such patent applications may have priority over our patent applications and could further require us to obtain rights to previously issued patents covering genetic variations. Any license that we may require under any such patent may not be made available to us on commercially acceptable terms, if at all.

We may be sued for infringing on the intellectual property rights of others. We could also become involved in interference proceedings in the United States Patent and Trademark Office to determine the relative priority of our patents or patent applications and those of the other parties involved in the interference proceeding. Intellectual property proceedings are costly, and could affect our results of operations. These proceedings can also divert the attention of managerial and technical personnel. If we do not prevail in any intellectual property proceeding, in addition to any damages we might have to pay, we could be required to stop the infringing activity, or obtain a license to or design around the intellectual property in question. In interference proceedings, our patent rights could be invalidated and the scope of our patents could be limited. If we are unable to obtain licenses to intellectual property rights that we need to conduct our business, or are unable to design around any third party patent, we may be unable to sell some of our products, which will result in reduced revenue.

We have in the past and may in the future become a party to litigation involving patents and intellectual property rights. We have previously commenced litigation against a number of parties to protect our rights pertaining to our intellectual property. We may in the future receive claims of infringement of intellectual property rights from other parties. If we do not prevail in any future legal proceedings, we may be required to pay significant monetary damages. In addition, we could also be prevented from using certain processes or prevented from selling certain configurations of our products or services that were found to be within the scope of the patent claims. In the event we did not prevail in any future proceeding, we would either have to obtain licenses from the other party, avoid certain product configurations or modify some of our products, services and processes to design around the patents. Licenses could be costly or unavailable on commercially reasonable terms. Designing around patents or focusing efforts on different configurations could be time consuming, and we may have to remove some of our products or services from the market while we were completing redesigns. Accordingly, if we are unable to settle future intellectual property disputes through licensing or similar arrangements, or if any such future disputes are determined adversely to us, our ability to market and sell our products and services could be harmed. This would in turn reduce demands for our services and harm our financial condition and results of operations.

In addition, in order to protect or enforce our patent rights or to protect our ability to operate our business, we may need to initiate other patent litigation against third parties. These lawsuits could be expensive, take significant time to resolve, and could divert Management's attention from other business concerns. These lawsuits could result in the invalidation or limitation in the scope of our patents or forfeiture of the rights associated with our patents. We may not prevail in any such proceedings and a court may find damages or award other remedies in favor of our opposing party in any of these suits. During the course of any future proceedings, there may be public announcements of the results of hearings, motions and other interim proceedings or developments in the litigation. Securities analysts or investors may perceive these announcements to be negative, which could cause the market price of our stock to decline.

We may be subject to professional liability suits and our insurance may not be sufficient to cover damages. If this occurs, our business and financial condition may be adversely affected.

Our business exposes us to potential liability risks that are inherent in the testing, manufacturing, marketing and sale of genetic tests. The use of our products and product candidates, whether for clinical trials or commercial sale, may expose us to professional liability claims and possible adverse publicity. We may be subject to claims resulting from incorrect results of analysis of genetic variations or other screening tests performed using our services. Litigation of such claims could be costly. We

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could expend significant funds during any litigation proceeding brought against us. Further, if a court were to require us to pay damages to a plaintiff, the amount of such damages could significantly harm our financial condition. Although we have public and product liability insurance coverage under broadform liability and professional indemnity policies, for an aggregate amount of \$60,000,000, the level or breadth of our coverage may not be adequate to fully cover potential liability claims. To date we have not been subject to any claims, or ultimately liability, in excess of the amount of our coverage. In addition, we may not be able to obtain additional professional liability coverage in the future at an acceptable cost. A successful claim or series of claims brought against us in excess of our insurance coverage and the effect of professional liability litigation upon the reputation and marketability of our technology and products, together with the diversion of the attention of key personnel, could negatively affect our business.

We use potentially hazardous materials, chemicals and patient samples in our business and any disputes relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development, production and service activities involve the controlled use of hazardous laboratory materials and chemicals, including small quantities of acid and alcohol, and patient tissue and blood samples. We do not knowingly deal with infectious samples. We, our collaborators and service providers are subject to stringent Australian federal, state and local laws and regulations governing occupational health and safety standards, including those governing the use, storage, handling and disposal of these materials and certain waste products. However, we could be liable for accidental contamination or discharge or any resultant injury from hazardous materials, and conveyance, processing, and storage of and data on patient samples. If we, our collaborators or service providers fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. Further, future changes to environmental health and safety laws could cause us to incur additional expense or restrict our operations. We have never had a reportable serious injury through the date of this Annual Report.

In addition, our collaborators and service providers may be working with these types of hazardous materials, including hazardous chemicals, in connection with our collaborations. In the event of a lawsuit or investigation, we could be held responsible for any injury caused to persons or property by exposure to, or release of, these patient samples that may contain viruses and hazardous materials. The cost of this liability could exceed our resources. While we maintain broadform liability insurance coverage for these risks, in the amount of up to \$40,000,000, the level or breadth of our coverage may not be adequate to fully cover potential liability claims. To date, we have not been subject to claims, or ultimately liability, in excess of the amount of our coverage. Our broadform insurance coverage also covers us against losses arising from an interruption of our business activities as a result of the mishandling of such materials. We also maintain workers' compensation insurance, which is mandatory in Australia, covering all of our workers in the event of injury.

We depend on the collaborative efforts of our academic and corporate partners for research, development and commercialization of some of our products. A breach by our partners of their obligations, or the termination of the relationship, could deprive us of valuable resources and require additional investment of time and money.

Our strategy for research, development and commercialization of some of our products has historically involved entering into various arrangements with academic and corporate partners and others. As a result, our strategy depends, in part, upon the success of these outside parties in performing their responsibilities. Our collaborators may also be our competitors. We cannot necessarily control the amount and timing of resources that our collaborators devote to performing their

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contractual obligations and we have no certainty that these parties will perform their obligations as expected or that any revenue will be derived from these arrangements.

If our collaborators breach or terminate their agreement with us or otherwise fail to conduct their collaborative activities in a timely manner, the development or commercialization of the product candidate or research program under such collaborative arrangement may be delayed. If that is the case, we may be required to undertake unforeseen additional responsibilities or to devote unforeseen additional funds or other resources to such development or commercialization, or such development or commercialization could be terminated. The termination or cancellation of collaborative arrangements could adversely affect our financial condition, intellectual property position and general operations. In addition, disagreements between collaborators and us could lead to delays in the collaborative research, development, or commercialization of certain products or could require or result in formal legal process or arbitration for resolution. These consequences could be time-consuming and expensive and could have material adverse effects on us.

Other than our contractual rights under our license agreements, we may be limited in our ability to convince our licensees to fulfill their obligations. If our licensees fail to act promptly and effectively, or if a dispute arises, it could have a material adverse effect on our results of operations and the price of our Ordinary Shares and ADSs.

We rely upon scientific, technical and clinical data supplied by academic and corporate collaborators, licensors, licensees, independent contractors and others in the evaluation and development of potential therapeutic methods. There may be errors or omissions in this data that would materially adversely affect the development of these methods.

We may seek additional collaborative arrangements to develop and commercialize our products in the future. We may not be able to negotiate acceptable arrangements in the future and, if negotiated, we have no certainty that they will be on favorable terms or if they will be successful. In addition, our partners may pursue alternative technologies independently or in collaboration with others as a means of developing treatments for the diseases targeted by their collaborative programs with us. If any of these events occurs, the progress of the Company could be adversely affected and our results of operations and financial condition could suffer.

Problems associated with international business operations could affect our ability to license our technology and our results of operations.

We seek to license our intellectual property and to market our growing range of other products and services on a global scale, including in countries that are considered to provide significantly less protection to intellectual property than the United States and Australia. In addition, a number of other risks are inherent in international transactions and commerce, including political and economic instability, foreign currency exchange fluctuations and changes in tax laws.

Government regulation of genetic research or testing may adversely affect the demand for our services and impair our business and operations.

Apart from accreditation requirements, we are generally not subject to regulation. From time to time, federal, state and/or local governments adopt regulations relating to the conduct of genetic research and genetic testing. In future, these regulations could limit or restrict genetic research activities as well as genetic testing for research or clinical purposes. In addition, if such regulations are adopted, these regulations may be inconsistent with, or in conflict with, regulations adopted by other government bodies. Regulations relating to genetic research activities could adversely affect our ability to conduct our research and development activities. Regulations restricting genetic testing could adversely affect our ability to market and sell our products and services. Accordingly, any regulations of this nature could increase the costs of our operations or restrict our ability to conduct our testing business and might adversely affect our operations and financial condition.

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**DESCRIPTION OF SECURITIES WE MAY OFFER
ORDINARY SHARES**

General

The following description of our ordinary shares is only a summary. We encourage you to read our Constitution which is included as an exhibit to this registration statement of which this Prospectus forms a part. We do not have a limit on our authorized share capital and do not recognize the concept of par value under Australian law. As of June 30, 2012, we had a total of 464,771,819 ordinary shares outstanding. Based on a conversion ratio of 30:1, this equated to a total of 15,492,394 American Depositary Shares. As of the date of this Prospectus, these numbers had increased to 474,971,819 ordinary shares, representing 15,832,394 American Depositary Shares. No ordinary shares are held by or on behalf of Genetic Technologies Limited. In the following summary, a "shareholder" is the person registered in our register of members as the holder of the relevant securities.

Our directors and senior management hold a total of 1,971,554 ordinary shares. Certain senior executives also hold 3,400,000 outstanding options to purchase ordinary shares which are exercisable at variable prices ranging from A\$0.045 to A\$0.14 and at various times up to, and including, August 29, 2017.

Our board of directors is in the process of restructuring the Company's long-term incentive scheme to ensure it adequately incentivizes and rewards our senior employees to deliver superior shareholder returns. The introduction of such a scheme may require the prior approval of our shareholders.

We also have employees holding outstanding options to purchase ordinary shares which are exercisable at various dates and for various exercise prices into fully paid ordinary shares. As of October 31, 2012, we had outstanding options to purchase a total of 6,425,000 ordinary shares held by our employees, excluding directors and senior management.

Subject to restrictions on the issue of securities in our Constitution, the *Corporations Act 2001* and the Listing Rules of the Australian Securities Exchange and any other applicable law, we may at any time issue shares and grant options or warrants on any terms, with the rights and restrictions and for the consideration that the board of directors determine.

The rights and restrictions attaching to ordinary shares are derived through a combination of our Constitution, the common law applicable to Australia, the Listing Rules of the Australian Securities Exchange, the *Corporations Act 2001* and other applicable law. A general summary of some of the rights and restrictions attaching to ordinary shares are summarized below. Each ordinary shareholder is entitled to receive notice of and to be present, to vote and to speak at general meetings.

Table of Contents**Changes to Our Share Capital During the Last Five Years**

During the last five years to June 30, 2012, the following changes have been made to our ordinary share capital:

Date	Nature of issue	Number of Ordinary Shares issued / outstanding	Movement in share capital / balance A\$
As of June 30, 2006		362,389,899	70,243,996
	There were no Ordinary Shares issued in 2007		
As of June 30, 2007		362,389,899	70,243,996
	There were no Ordinary Shares issued in 2008		
As of June 30, 2008		362,389,899	70,243,996
July 22, 2008	Acquisition of Frozen Puppies Dot Com Pty. Ltd.	12,254,902	1,041,667
As of June 30, 2009		374,644,801	71,285,663
April 14, 2010	Acquisition of assets from Perlegen Sciences Inc.	29,960,351	1,092,442
As of June 30, 2010		404,605,152	72,378,105
	There were no Ordinary Shares issued in 2011		
As of June 30, 2011		404,605,152	72,378,105
July 27, 2011	Placement of Ordinary Shares as part of capital raising	60,000,000	10,894,537
January 25, 2012	Exercise of 166,667 options @ A\$0.045 each	166,667	7,500
As of June 30, 2012		464,771,819	83,280,142

Dividends

Holders of ordinary shares are entitled to receive such dividends as may be declared by the board of directors. All dividends are declared and paid according to the amounts paid up on the shares in respect of which the dividend is paid. As of the date of this Prospectus, there have been no dividends paid to holders of ordinary shares.

Any dividend unclaimed after a period of twelve years from the date of declaration of such dividend shall be paid to, and held by, the Public Trustee of Victoria. The payment by the board of directors of any unclaimed dividend, interest or other sum payable on or in respect of an ordinary share or a preference share into a separate account shall not constitute us as a trustee in respect thereof.

Constitution

Our constituent document is a Constitution which is similar in nature to the by-laws of a company incorporated under the laws of the U.S. Our Constitution does not provide for or prescribe any specific objects or purposes of the Company. Our Constitution is subject to the terms of the Listing Rules of the Australian Securities Exchange and the *Corporations Act 2001*. Our Constitution may be amended or repealed and replaced by special resolution of shareholders, which is a resolution passed by at least 75% of the votes cast by shareholders entitled to vote on the resolution. A summary of the key terms of our Constitution are set out in Item 10.B of our Annual Report on Form 20-F that was filed with the SEC on October 24, 2012.

Shareholders Meetings

We must hold an annual general meeting within five months of the end of each fiscal year. Our end of fiscal year is currently June 30 each year. At the annual general meeting, shareholders typically consider the annual financial report, directors' report and auditor's report and vote on matters,

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including the election of directors, the appointment of the auditor (if necessary) and fixing the aggregate limit of non-executive directors' remuneration. We may also hold other meetings of shareholders from time to time. The annual general meeting must be held in addition to any other meetings which we may hold.

The board of directors may call and arrange a meeting of shareholders, when and where they decide. The directors must call a meeting of shareholders when requested by shareholders who hold at least 5% of the votes that may be cast at the meeting or at least 100 members who are entitled to vote at the meeting or as otherwise required by the *Corporations Act 2001*. Shareholders with at least 5% of the votes that may be cast at a meeting may also call and hold a general meeting, subject to the notification requirements of the *Corporations Act 2001*.

At least 28 calendar days notice must be given of a meeting of shareholders.

Directors, auditors, shareholders, proxies, and attorneys and representatives of shareholders are entitled to attend general meetings. We may refuse admission to the meeting to anyone (other than a director) in accordance with our Constitution and applicable Australian law. For the purpose of determining who is a shareholder at a particular meeting, the directors will determine that shareholders at a specified time (typically this will be 48 hours before the meeting) are taken to be shareholders at the meeting.

The necessary quorum for a meeting of shareholders is three shareholders entitled to vote.

Unless applicable law or our Constitution requires a special resolution, a resolution of shareholders is passed if more than 50% of the votes cast by shareholders entitled to vote are cast in favor of the resolution. A special resolution is passed if the notice of meeting sets out the intention to propose the special resolution and it is passed by at least 75% of the votes cast by shareholders entitled to vote on the resolution.

A special resolution usually involves more important questions affecting the Company as a whole or the rights of some or all of our shareholders. Special resolutions are required in a variety of circumstances under our Constitution and the *Corporations Act 2001*, including without limitation:

to change our name;

to amend or repeal and replace our Constitution;

to approve the terms of issue of preference shares;

to approve the variation of class rights of any class of shareholders;

to convert one class of shares into another class of shares;

to approve certain buy backs of shares;

to approve a selective capital reduction of our shares;

to approve GTG financially assisting a person to acquire shares in the Company;

to remove and replace our auditor;

to change our company type;

with the leave of an authorized Australian court, to approve our voluntary winding up;

to confer on a liquidator of GTG either a general authority or a particular authority in respect of compensation arrangements of the liquidator; and

to approve an arrangement entered into between a company about to be, or in the course of being, wound up.

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Shareholder Voting Rights

At a general meeting, every shareholder present (in person or by proxy, attorney or representative) and entitled to vote has one vote on a show of hands. Every shareholder present (in person or by proxy, attorney or representative) and entitled to vote has one vote per fully paid ordinary share and that portion of a vote for any partly paid share that the amount paid on the partly paid share bears to the total amounts paid and payable, on a poll. This is subject to any other rights or restrictions which may be attached to any shares. In the case of an equality of votes on a resolution at a meeting (whether on a show of hands or on a poll), the chairman of the meeting has a deciding vote in addition to any vote that the chairman of the meeting has in respect of that resolution.

A poll may be requested by:

the chairman of the meeting;

at least five shareholders entitled to vote at the meeting;

any shareholder or shareholders representing in the aggregate not less than 5% of the total voting rights of all shareholders entitled to vote at the meeting; or

any shareholder or shareholders holding shares conferring a right to vote at the meeting on which there have been paid up sums representing in the aggregate not less than 5% of the total sum paid up on all the shares conferring that right.

The Listing Rules of the Australian Securities Exchange provide that the votes of certain shareholders must be disregarded in certain circumstances. Generally, a shareholder's vote may be disregarded if the person may benefit from the transaction that is the subject of the resolution (subject to certain exceptions, such as where the benefit is received in their capacity as a shareholder in common with other shareholders). Without limitation, a shareholder's vote may be disregarded in respect of:

the issue of shares or options, if the shareholder is entitled to acquire securities under the issue or has acquired securities under the issue (subject to a range of exceptions including in respect of a pro-rata offer made to all shareholders) or is entitled to any other sort of benefit as a result of the issue (for example underwriting commissions);

the amendment of the terms of options, if the shareholder holds the relevant options;

if the shareholder is a director, to approve an increase in the remuneration payable to the directors;