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As filed with the Securities and Exchange Commission on May 19, 2011

Registration Statement No. 333-173266

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

PRE-EFFECTIVE AMENDMENT NO. 1 TO
FORM S-3
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

MARSHALL EDWARDS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**51-0407811**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

11975 El Camino Real, Suite 101
San Diego, California 92130
(858) 792-6300
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Marshall Edwards, Inc.
11975 El Camino Real, Suite 101
San Diego, California 92130
(858) 792-6300
(Name, address, including zip code, and telephone number, including area code of agent for service)

with copies to:

Daniel P. Gold **President & Chief Executive Officer** **Marshall Edwards, Inc.** **11975 El Camino Real, Suite 101** **San Diego, California 92130** **(858) 792-6300**	**Steven A. Navarro, Esq.** **Morgan, Lewis & Bockius LLP** **101 Park Avenue** **New York, New York 10178** **(212) 309-6000**

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☒

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one:)

Large accelerated filer ☐		Accelerated filer ☐
Non-accelerated filer ☐	(Do not check if a smaller reporting company)	Smaller reporting company ☒

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information contained in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus it not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer and sale is not permitted.

SUBJECT TO COMPLETION, DATED MAY 19, 2011

PROSPECTUS

$50,000,000

MARSHALL EDWARDS, INC.

Common Stock
Preferred Stock
Warrants

We may offer our common stock, preferred stock and warrants to purchase our common stock or preferred stock. Our common stock is listed on the Nasdaq Capital Market under the symbol “MSHL”.

We may offer these securities at prices and on terms to be set forth in one or more supplements to this prospectus. These securities may be offered directly, through agents on our behalf or through underwriters or dealers.

Our common stock is traded on the Nasdaq Capital Market under the symbol “MSHL.” On May 18, 2011, the closing price of our common stock on the Nasdaq Capital Market was $1.35 per share.

As of May 18, 2011, the aggregate market value of our outstanding common stock held by non-affiliates was approximately $6,619,184, based on 8,881,089 shares of outstanding common stock, of which approximately 5,620,407 shares were held by affiliates, and a price of $2.03 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on March 28, 2011. As of the date of this prospectus, we have offered or sold $1,874,970 of securities pursuant to General Instruction I.B.6. of Form S-3 during the prior 12 calendar month period that ends on, and includes, the date of this prospectus.

An investment in our securities involves significant risks. You should carefully consider the risk factors beginning on page 4 of this prospectus before investing in our securities.

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

The date of this prospectus is , 2011.

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ABOUT THIS PROSPECTUS

Unless we have indicated otherwise, references in this prospectus to “Marshall Edwards,” “we,” “us” and “our” or similar terms are to Marshall Edwards, Inc., a Delaware corporation, and its consolidated subsidiary, Marshall Edwards Pty Limited. References in this prospectus to “Novogen” refer to Novogen Limited and its consolidated subsidiaries, other than Marshall Edwards, Inc. and its subsidiary. References in this prospectus to “FDA” refer to the United States Food and Drug Administration.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration statement. This prospectus provides you with a general description of the securities we may offer. We will describe the specific terms of those securities, as necessary, in supplements that we attach to this prospectus for each offering. Each supplement will also contain specific information about the terms of the offering it describes. The supplements may also add to, update or change information contained in this prospectus. In addition, as we describe in the sections entitled “Incorporation of Certain Information by Reference” and “Where You Can Find More Information,” we have filed and plan to continue to file other documents with the SEC that contain information about us. Before you decide whether to invest in our securities, you should read this prospectus, the supplement that further describes the offering of those securities and the information we otherwise file with the SEC.

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities being offered under this prospectus. You should read the registration statement and the accompanying exhibits for further information. The registration statement and exhibits can be read and are available to the public over the Internet at the SEC’s website at http://www.sec.gov.

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus. If any person does make a statement that differs from what is in this prospectus, you should not rely on it. This prospectus is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any state in which the offer or sale is not permitted. The information in this prospectus is accurate as of its date, but the information may change after that date. You should not assume that the information in this prospectus is accurate as of any date after its date.

SUMMARY

The Company

We are Marshall Edwards, a development stage oncology company incorporated in December 2000 as a wholly-owned subsidiary of Novogen Limited ("Novogen"). Our common stock is listed on the Nasdaq Capital Market under the symbol "MSHL". As of May 18, 2011, Novogen owned approximately 59% of the outstanding shares of our common stock.

Our business purpose is the development of drugs for the treatment of cancer. We are currently focused on the clinical development of our two lead isoflavone-based drug candidates which we acquired in the Isoflavone Transaction (as defined below) on May 9, 2011, and prior to the consummation of such transaction had licensed from a subsidiary of Novogen. Upon consummation of the Isoflavone Transaction, these license agreements, and our other agreements with Novogen, were terminated.

We believe that our existing cash balances, which were approximately $4.9 million as of March 31, 2011, together with the net proceeds from our private placement of common stock and warrants, as described in our Current Report on Form 8-K filed with the SEC on May 16, 2011, which was consummated on May 18, 2011, will be sufficient to fund our operations until early 2012. Changes in our research and development plans or other changes affecting our operating expenses may affect actual future use of existing cash resources. In any event, however, we will need additional financing to fund our operations in the future including the continued development of our two lead drug candidates. We intend to pursue one or more capital raising transactions to further develop our drug candidates.

Clinical Product Development Programs

Program 1: NADH Oxidase Inhibitors

Our first and most advanced program is a family of compounds that includes Phenoxodiol, a first-generation compound that has been well tolerated in more than 400 patients, and a next-generation compound called NV-143. NV-143 in particular has demonstrated robust anti-tumor activity in pre-clinical studies.

First Generation: Phenoxodiol

Phenoxodiol has been administered to more than 400 patients via oral or intravenous routes and appears to be well tolerated with low toxicity. In June 2010, we unblinded the results of our randomized OVATURE trial of orally administered Phenoxodiol in combination with platinum-based chemotherapy in women with recurrent ovarian cancer. The trial was closed in April 2009 with 142 out of a planned 340 patients enrolled. The final analysis determined that the trial did not show a statistically significant improvement in either its primary (progression-free survival) or secondary (overall survival) endpoints. In this trial, less than 1% of patients (one out of 142) achieved a clinical response in either arm, suggesting that in this patient population, Phenoxodiol does not overcome platinum-resistance when administered orally.

In a comparable Phase II clinical trial of intravenously administered Phenoxodiol in combination with platinum-based chemotherapy in patients with similar disease characteristics and prior treatment regimens to those enrolled in the OVATURE study, a clinical response was observed in 30% of patients (six out of 20).

Pharmacokinetic studies suggest that significantly higher levels of active drug are measured when isoflavone compounds are administered intravenously versus the oral route. As a result of these findings, we intend to pursue the clinical development of our next-generation compounds using an intravenous formulation.

Next Generation: NV-143

NV-143 is the primary metabolite of Triphendiol, a second-generation derivative of Phenoxodiol. Pre-clinical studies show that NV-143 demonstrates enhanced anti-tumor activity against a broad range of tumor cell lines when used alone or in combination with platinum-based chemotherapy when compared to both Phenoxodiol and Triphendiol.

As a result, NV-143 has been selected as the lead product candidate for this program. We are completing drug manufacturing and non-clinical safety studies of NV-143 and expect to initiate a Phase I safety trial during the third quarter of 2011, followed immediately thereafter by randomized Phase II studies in combination with chemotherapy.

Program 2: Mitochondrial Inhibitors

Our second program is a family of compounds that includes NV-128, a first-generation compound that has shown activity against a broad range of cancer cell lines, and a next-generation compound called NV-344 that appears to be more active than NV-128 in pre-clinical studies.

First Generation: NV-128

NV-128 is an investigational cancer compound which has been shown in pre-clinical laboratory studies to promote cancer cell death by targeting the specific protein regulatory pathway (i.e., AKT-mTOR pathway) in cancer cells that have become resistant to many drugs used to kill cancer cells. Structurally, NV-128 is an analogue of Phenoxodiol, but in contrast uses different molecular mechanisms to promote the death of cancer cells.

In September 2009, we released data demonstrating that the efficacy of NV-128 in animal xenograft models is achieved without apparent toxicity. NV-128 is a novel mitochondrial inhibitor, capable of inhibiting both mTORC1 and mTORC2 protein regulatory pathways which are suggested to be central to the aberrant proliferative capacity of both mature cancer cells and cancer stem cells. Laboratory data in mice bearing human ovarian cancer xenografts demonstrated that NV-128 may have greater safety than some other mTOR inhibitors. Additional data released reported that NV-128 was judged to be without cardiac toxicity in laboratory studies.

NV-128 has shown activity in pre-clinical models against a broad range of cancers, including KRAS-mutant, Tarceva-resistant non-small cell lung cancer cell lines. Results from an ongoing study conducted in collaboration with Dr. Gil Mor, an oncologist at the Yale School of Medicine, demonstrate that NV-128 is active against all chemotherapy-resistant ovarian tumor cells tested to date.

In November 2010, Dr. Ayesha Alvero from the Department of Obstetrics, Gynecology, and Reproductive Sciences at the Yale School of Medicine presented data from a pre-clinical study of NV-128 demonstrating its ability to induce mitochondrial instability, ultimately leading to cell death in chemotherapy-resistant ovarian cancer stem cells. The data were reported at the 1st World Congress on Targeting Mitochondria in Berlin. In April 2011, Dr. Alvero presented an abstract highlighting our mitochondrial inhibitor program at the American Association for Cancer Research Annual Meeting in Orlando.

Next Generation: NV-344

We have identified a potential natural metabolite of NV-128 in a compound we call NV-344. In preliminary studies, NV-344 has demonstrated more activity against a panel of human tumor cell lines as compared to NV-128. We are in the process of finalizing our lead identification studies for this program, after which we plan to conduct the necessary animal toxicity studies to initiate a Phase I trial during the second half of 2011.

Corporate Information

Our principal executive offices are located at 11975 El Camino Real, Suite 101, San Diego, California, 92130, and our phone number is (858) 792-6300.

RISK FACTORS

Any investment in our securities involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus and any accompanying prospectus supplement, you should carefully consider the important factors set forth under the heading "Risk Factors" starting on page 24 of our Annual Report on Form 10-K for the fiscal year ended June 30, 2010, as well as in our subsequent annual reports on Form 10-K and in other reports we file with the SEC from time to time, and incorporated herein by reference before investing in our securities. For further details, see the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

Any of the risk factors set forth below or referred to above could significantly and negatively affect our business, results of operations or financial condition, which may lower the trading price of our common stock. The risks referred to above are not the only ones that may exist. Additional risks not currently known by us or that we deem immaterial may also impair our business operations. You may lose all or a part of your investment.

Our stockholders may not realize a benefit from the Isoflavone Transaction commensurate with the ownership dilution they will experience in connection with the Isoflavone Transaction.

On May 9, 2011, we completed the acquisition of certain assets used in or generated under or in connection with the discovery, development, manufacture and marketing of intellectual property and products based on the field of isoflavonoid technology and on compounds known as isoflavones, including those related to the drug candidates Phenoxodiol, Triphendiol, NV 143 and NV-128 (the "Isoflavone -related Assets"), from Novogen in accordance with the terms of the Asset Purchase Agreement, dated as of December 21, 2010, between us, Novogen and Novogen Research Pty Limited. The acquisition of the Isoflavone-related Assets and the other transactions contemplated by the Asset Purchase Agreement are referred to in this prospectus as the "Isoflavone Transaction."

If we are unable to realize the expected strategic and financial benefits from the Isoflavone Transaction, our stockholders may experience substantial dilution of their ownership interest upon the conversion of the Series A Convertible Preferred Stock, which may be converted at any time and from time to time without the payment of any additional consideration, without receiving any commensurate benefit. As of May 18, 2011, Novogen beneficially owned approximately 59% of our outstanding shares of common stock and, upon consummation of the Isoflavone Transaction, acquired 1,000 shares of our Series A Convertible Preferred Stock which is initially convertible into 4,827,000 shares of our common stock, which would increase Novogen's ownership percentage to over 73%. In addition, upon our achievement of certain development milestones relating to the Isoflavone-related Assets, the aggregate number of shares into which the Series A Convertible Preferred Stock may be converted would increase to 9,654,000, which would potentially increase Novogen's ownership percentage to over 80%, absent the issuance of any other shares of our common stock. Although in the Asset Purchase Agreement Novogen made certain representations and warranties regarding its intellectual property rights in respect of the Isoflavone-related Assets, its indemnification obligations in respect of these representations and warranties are limited and are payable solely by the forfeiture of our securities issued as consideration in the Isoflavone Transaction and expire on June 30, 2011, and may not be sufficient to compensate us for the loss of any such intellectual property rights acquired in the Isoflavone Transaction.

Although we intend to use the net proceeds from any offering made pursuant to this prospectus, together with other available funds, to progress our clinical trial programs and for other general corporate purposes, our management will have broad discretion over the use of the net proceeds from any offering, and you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

We have not specifically identified the precise amounts we will spend on our clinical trial programs or for other purposes or the timing of these expenditures. The amounts actually expended may vary significantly depending upon numerous factors, including the amount and timing of the proceeds from any offering pursuant

to this prospectus, the progress of our clinical trials and other product development activities. In addition, expenditures may also depend on the establishment of new collaborative arrangements with other partners, the availability of other financing and other factors. Accordingly, you will be relying on the judgment of our management with regard to the use of any net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that any proceeds will be invested in a way that does not yield a favorable, or any, return for our company.

Final approval by regulatory authorities of our drug candidates for commercial use may be delayed, limited or prevented, any of which would adversely affect our ability to generate operating revenues.

We will not generate any operating revenue until we successfully commercialize one of our drug candidates. Currently, we have drug candidates at different stages of development and each will need to successfully complete a number of tests and obtain regulatory approval before potential commercialization.

In particular, any of the following factors may serve to delay, limit or prevent the final approval by regulatory authorities of our drug candidates for commercial use:

- NV-143 and NV-128 (or their analogues) are in the early stages of clinical development, and we will need to conduct significant clinical testing to prove safety and efficacy before applications for marketing can be filed with the FDA, or with the regulatory authorities of other countries;
- data obtained from pre-clinical and clinical tests can be interpreted in different ways, which could delay, limit or prevent regulatory approval;
- development and testing of product formulation, including identification of suitable excipients, or chemical additives intended to facilitate delivery of our drug candidates;
- it may take us many years to complete the testing of its drug candidates, and failure can occur at any stage of this process; and
- negative or inconclusive results or adverse medical events during a clinical trial could cause us to delay or terminate our development efforts.

The successful development of any of these drug candidates is uncertain and accordingly we may never commercialize any of these drug candidates or generate revenue.

We have a limited operating history and are likely to incur operating losses for the foreseeable future.

You should consider our prospects in light of the risks and difficulties frequently encountered by early stage and developmental companies. Although we were incorporated in December 2000, we have only been in operation since May 2002. We have incurred net losses of $75,946,000 since our inception through March 31, 2011, including net losses of $7,896,000, $11,180,000 and $12,410,000 for the years ended June 30, 2010, 2009 and 2008, respectively. We anticipate that we will incur operating losses and negative operating cash flow for the foreseeable future. We have not yet commercialized any drug candidates and cannot be sure that we will ever be able to do so, or that we may ever become profitable.

We have limited existing financial resources and will need substantial additional funds to progress the clinical trial program for NV-143 or NV-128 (or their analogues) beyond their early stages and to develop new in-licensed compounds purchased from Novogen in the Isoflavone Transaction. The actual amount of funds we will need will be determined by a number of factors, some of which are beyond our control.

We have limited cash resources and liquidity. We will need substantial additional funds to progress the clinical trial program for NV-143 or NV-128 (or their analogues) and to develop any additional compounds. The factors which will determine the actual amount of funds that we will need to progress the clinical trial programs for NV-143 and NV-128 (or their analogues) may include the following:

- the number of sites included in the trials;

- the length of time required to enroll suitable patients;
- the number of patients who participate in the trials and the rate that they are recruited;
- the number of treatment cycles patients complete while they are enrolled in the trials; and
- the efficacy and safety profile of the product.

If we are unable to obtain additional funds on favorable terms we may be required to cease or reduce our operations. Also, if we raise more funds by selling additional securities, the ownership interests of holders of our securities will be diluted.

The uncertain financial markets may negatively impact our liquidity and our ability to continue our planned future clinical trials program, by precluding us from raising funds through equity issuances on terms favorable to us or at all.

We have traditionally raised capital through the sale of equity securities to investors and intend to seek additional capital, in a significant amount compared to our current market capitalization, through one or more equity transactions. Following the events of September 2008, the financial services industry, credit markets and capital markets experienced a period of unprecedented turmoil and volatility. We may have difficulty raising the capital necessary to finance our business operations through the sale of equity securities on terms favorable to us or at all or through other types of financing. In order to obtain the additional funding necessary to conduct our business, we may need to rely on collaboration and /or licensing opportunities. We cannot assure you that we will be able to raise the funds necessary or find appropriate collaboration or licensing opportunities to fund our future business plan.

As our majority stockholder, Novogen has the ability to determine the outcome of matters submitted to our stockholders for approval, and Novogen's interests may conflict with ours or our other stockholders' interests.

As of May 18, 2011, Novogen beneficially owned approximately 59% of our outstanding shares of common stock. Upon consummation of the Isoflavone Transaction, Novogen acquired 1,000 shares of our Series A Convertible Preferred Stock that is initially convertible into 4,827,000 shares of our common stock, which, if entirely converted into common stock, would increase Novogen's ownership percentage to over 73%. In addition, upon our achievement of certain development milestones relating to the Isoflavone-related Assets, the aggregate number of shares into which the Series A Convertible Preferred Stock may be converted would increase to 9,654,000, which would potentially increase Novogen's ownership percentage to over 80%, absent the issuance of any other shares of our common stock. As a result, Novogen will have the ability to effectively determine the outcome of all matters submitted to our stockholders for approval, including the election and removal of directors and any merger, consolidation or sale of all or substantially all of our assets.

Novogen will have the ability to effectively control our management and affairs. Novogen's interests may not always be the same as those of our other stockholders. In addition, this concentration of ownership may harm the market price of our securities by:

- delaying, deferring or preventing a change in control;
- impeding a merger, consolidation, takeover or other business combination involving us;
- discouraging a potential acquirer from making a tender, offer or otherwise attempting to obtain control of us; or
- selling us to a third party.

Risks Related to Our Common Stock

The trading price of the shares of our common stock has been and may continue to be highly volatile and could decline in value and we may incur significant costs from class action litigation.

The trading price of our common stock could be highly volatile in response to various factors, many of which are beyond our control, including:

- developments concerning drug candidates NV-143 and NV-128 and their analogues;
- announcements of technological innovations by us or our competitors;
- new products introduced or announced by us or our competitors;
- changes in financial estimates by securities analysts;
- actual or anticipated variations in operating results;
- expiration or termination of licenses, research contracts or other collaboration agreements;
- conditions or trends in the regulatory climate and the biotechnology, pharmaceutical and genomics industries;
- instability in the stock market as a result of current global events;
- changes in the market valuations of similar companies;
- the liquidity of any market for our securities; and
- additional sales by us or Novogen of shares of our common stock.

In addition, equity markets in general, and the market for biotechnology and life sciences companies in particular, have experienced substantial price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of companies traded in those markets. In addition, changes in economic conditions in the U.S., Europe or globally, particularly in the context of current global events, could impact upon our ability to grow profitably. Adverse economic changes are outside our control and may result in material adverse impacts on our business or our results of operations. These broad market and industry factors may materially affect the market price of shares of our common stock, regardless of our development and operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been instituted against that company. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources.

We cannot assure you that we will be able to obtain financing sufficient to meet our future capital and operating needs.

We cannot assure you that the net proceeds from any offerings of securities pursuant to this prospectus will be sufficient to meet our expected capital and operating needs to commercialize our drug candidates. We expect to have to attempt to sell additional shares of common stock, and securities exercisable or convertible into shares of our common stock, in the future to satisfy our capital and operating needs. If we sell shares in the future, the prices at which we sell these future shares will vary, and these variations may be significant. Purchasers of the shares we sell pursuant to future offerings, as well as our existing stockholders, will experience significant dilution if we sell these future shares at prices significantly below the price at which previous shareholders invested.

Pursuant to the terms of the Amended and Restated Securities Purchase Agreement ("Amended and Restated Securities Purchase Agreement"), dated May 16, 2011, between us and certain accredited investors (the "Purchasers"), we have agreed not to offer or sell any of our or our subsidiaries' equity securities, including securities that are convertible or exchangeable for our common stock, or to file any new registration statement,

other than as required by the registration rights agreement between us and the Purchasers, until the earlier of (i) June 18, 2012 and (ii) 90 days after the registration of all of the securities we have agreed to register pursuant to the registration rights agreement. The foregoing restrictions on securities issuances do not apply to certain permitted issuances, including the issuance of up to $4,000,000 of common stock and warrants to purchase common stock between the later to occur of 120 days after the closing date under the Amended and Restated Securities Purchase Agreement and the date on which all of the common stock issued pursuant to the Amended and Restated Securities Purchase Agreement has been registered under the Securities Act.

Future sales of our common stock, including upon conversion of our outstanding Series A Convertible Preferred Stock and exercise of our outstanding series A and series B warrants, may depress the market price of our common stock and cause stockholders to experience dilution.

The market price of our common stock could decline as a result of sales of substantial amounts of our common stock in the public market, including upon conversion of the Series A Convertible Preferred Stock or exercise of outstanding warrants. On May 18, 2011, pursuant to the Amended and Restated Securities Purchase Agreement, we issued 835,217 shares of common stock together with series A and series B warrants initially exercisable for an aggregate amount of approximately 2.8 million shares of common stock, which amount could increase to a maximum of approximately 4.4 million shares of common stock upon the occurrence of certain events. Also pursuant to the Amended and Restated Securities Purchase Agreement, we agreed to issue certain additional shares of our common stock, up to a maximum amount of approximately 2.3 million shares, to the extent the trading price of our common stock is below certain levels on specified dates. We intend to seek additional capital through one or more additional equity transactions in 2011; however, such transactions will be subject to market conditions and there can be no assurance any such transaction will be completed.

Because we do not intend to pay, and have not paid, any cash dividends on our shares of common stock, our stockholders will not be able to receive a return on their shares unless the value of our common stock appreciates and they sell their shares.

We have never paid or declared any cash dividends on our common stock, and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. Therefore, our stockholders will not be able to receive a return on their investment unless the value of our common stock appreciates and they sell their shares.

Our common stock may be delisted from Nasdaq.

During 2010, we received deficiency notices from Nasdaq regarding non-compliance with the minimum stockholders equity and the minimum Market Value of Publicly Held Shares in accordance with Nasdaq Listing Standards for the Nasdaq Global Market. On March 7, 2011, a Nasdaq Hearing Panel granted us until May 16, 2011 to evidence compliance with the stockholders equity and minimum Market Value of Publicly Held Shares requirement. On March 23, 2011, we received a positive response from the Nasdaq Listing Qualifications Staff indicating that our request for a transfer and continued listing on the Nasdaq Capital Market had been granted. Our common stock began trading on the Nasdaq Capital Market effective with the open of business on March 16, 2011.

In addition, under Nasdaq rules, companies listed on the Nasdaq Capital Market are required to maintain a share price of at least $1.00 per share and if the share price declines below $1.00 for a period of 30 consecutive business days, then the listed company would have 180 days to regain compliance with the $1.00 per share minimum. In the event that our share price declines below $1.00, we may be required to take action, such as a reverse stock split, in order to comply with the Nasdaq rules that may be in effect at the time.

If we are not able to comply with the listing standards of the Nasdaq Capital Market, our common stock will be delisted from Nasdaq and an associated decrease in liquidity in the market for our common stock will occur.

In addition, if the market price of our common stock remains below $5.00 per share, under stock exchange rules, our stockholders will not be able to use such shares as collateral for borrowing in margin accounts. Further, certain institutional investors are restricted from investing in shares priced below $5.00. This inability to use shares of our common stock as collateral and the inability of certain institutional investors to invest in our shares may depress demand and lead to sales of such shares creating downward pressure on and increased volatility in the market price of our common stock.

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this prospectus and in the documents incorporated by reference herein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in "Risk Factors" and elsewhere in this prospectus and the documents incorporated by reference herein, including, among other things:

- expected benefits from the Isoflavone Transaction may not be fully realized within the expected time frames or at all;
- the risk that the isoflavone-related assets will not be integrated successfully with our business or such integration may be more difficult, time-consuming or costly than expected;
- inability to obtain required additional financing or financing on acceptable terms, or at all, which may cause us to delay, scale-back or eliminate plans related to development of our drug candidates;
- we are in an early stage of pre-clinical studies for our next generation product candidates on which the Company's development plans are based; pre-clinical studies by their nature typically have a high level of risk of failure, and may not produce successful results;
- inability to maintain or enter into, and dependence upon, collaboration or contractual arrangements necessary for the clinical development of NV-143 and NV-128 or their analogues;
- failure to successfully commercialize product candidates;
- costs and delays in the clinical development program and/or receipt of FDA or other required governmental approvals, or the failure to obtain such approvals, for product candidates;
- uncertainties in clinical trial results;
- inability to maintain or enter into, and the risks resulting from dependence upon, collaboration or contractual arrangements necessary for the development, manufacture, commercialization, marketing, sales and distribution of any products;
- inability to control the costs of manufacturing products;
- competition and competitive factors;
- inability to protect patents or proprietary rights and obtain necessary rights to third party patents and intellectual property to operate our respective businesses;
- inability to operate without infringing the patents and proprietary rights of others;
- costs stemming from defense against third party intellectual property infringement claims;
- general economic conditions;
- the failure of any products to gain market acceptance;
- technological changes;
- government regulation generally and the receipt of the regulatory approvals;
- changes in industry practice; and
- one-time events.

These risks are not exhaustive. Other sections of this prospectus and the documents incorporated by reference herein include additional factors which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

SECURITIES OFFERED BY THIS PROSPECTUS

Using this prospectus, we may offer from time to time, in one or more series, together or separately, at prices and terms to be determined at the time of offering:

- shares of common stock, $0.00000002 par value;
- shares of preferred stock, $0.01 par value; and
- warrants to purchase shares of common stock or preferred stock.

The shares of preferred stock may be convertible into or exchangeable for shares of our common stock or preferred stock issued by us.

See “Description of Securities” for a description of the terms of the common stock, preferred stock and warrants.

USE OF PROCEEDS

Although we expect to use a substantial portion of the net proceeds from the sale of securities under this prospectus for general corporate purposes, including to progress our clinical trial programs, we have not allocated these net proceeds for specific purposes. If, as of the date of any prospectus supplement, we have identified any additional use for the net proceeds, we will describe them in the prospectus supplement. The amount of securities offered from time to time pursuant to this prospectus and any prospectus supplement, and the precise amount of the net proceeds we will receive from the sale of such securities, as well as the timing of receipt of those proceeds, will depend upon our funding requirements. If we elect at the time of an issuance of securities to make different or more specific uses of the proceeds than as set forth herein, we will describe those uses in the applicable prospectus supplement.

RATIOS OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

We incurred net losses and did not have any fixed charges for the nine months ended March 31, 2011 other than insignificant charges related to a premises rental agreement. There were no fixed charges for the years ended June 30, 2010, 2009, 2008, 2007 and 2006. We also did not have any shares of preferred stock outstanding during these periods.

PLAN OF DISTRIBUTION

We may sell the securities included in this prospectus (i) through agents, (ii) through underwriters, (iii) through dealers, (iv) directly to a limited number of purchasers or to a single purchaser, or (v) through a combination of any such methods of sale.

The distribution of the securities may be effected from time to time in one or more transactions, including block transactions and transactions on the Nasdaq Capital Market or any other organized market where the securities may be traded:

- at a fixed price or at final prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Offers to purchase securities may be solicited directly by us, or by agents designated by us, from time to time. Any such agent, which may be deemed to be an underwriter as that term is defined in the Securities Act, as amended, involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the applicable prospectus supplement.

If an underwriter is, or underwriters are, utilized in the offer and sale of securities in respect of which this prospectus and the accompanying prospectus supplement are delivered, we will execute an underwriting agreement with such underwriter(s) for the sale to it or them and the name(s) of the underwriter(s) and the terms of the transaction, including any underwriting discounts and other items constituting compensation of the underwriters and dealers, if any, will be set forth in such prospectus supplement, which will be used by the underwriter(s) to make resales of the securities in respect of which this prospectus and such prospectus supplement are delivered to the public. The securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. The name of the dealer and the terms of the transaction will be identified in the applicable prospectus supplement.

If an agent is used in an offering of securities being offered by this prospectus, the agent will be named, and the terms of the agency will be described, in the applicable prospectus supplement relating to the offering. Unless otherwise indicated in the prospectus supplement, an agent will act on a best efforts basis for the period of its appointment.

If indicated in the applicable prospectus supplement, we will authorize underwriters or their other agents to solicit offers by certain institutional investors to purchase securities from us pursuant to contracts providing for payment and delivery at a future date. Institutional investors with which these contracts may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. In all cases, these purchasers must be approved by us. The obligations of any purchaser under any of these contracts will not be subject to any conditions except that (a) the purchase of the securities must not at the time of delivery be prohibited under the laws of any jurisdiction to which that purchaser is subject, and (b) if the securities are also being sold to underwriters, we must have sold to these underwriters the securities not subject to delayed delivery. Underwriters and other agents will not have any responsibility in respect of the validity or performance of these contracts.

Certain of the underwriters, dealers or agents utilized by us in any offering hereby may be customers of, including borrowers from, engage in transactions with, and perform services for us or one or more of our affiliates in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled, under agreements which may be entered into with us, to indemnification against certain civil liabilities, including liabilities under the Securities Act of 1933, as amended.

Until the distribution of the securities is completed, rules of the SEC may limit the ability of the underwriters and certain selling group members, if any, to bid for and purchase the securities. As an exception to these rules, the representatives of the underwriters, if any, are permitted to engage in certain transactions that stabilize the price of the securities. Such transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities.

If underwriters create a short position in the securities in connection with the offering thereof (in other words, if they sell more securities than are set forth on the cover page of the applicable prospectus supplement), the representatives of such underwriters may reduce that short position by purchasing securities in the open market. Any such representatives also may elect to reduce any short position by exercising all or part of any over-allotment option described in the applicable prospectus supplement.

Any such representatives also may impose a penalty bid on certain underwriters and selling group members. This means that if the representatives purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of the securities, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those shares as part of the offering thereof.

In general, purchases of a security for the purpose of stabilization or to reduce a syndicate short position could cause the price of the security to be higher than it might otherwise be in the absence of such purchases. The imposition of a penalty bid might have an effect on the price of a security to the extent that it was to discourage resales of the security by purchasers in the offering.

Neither we nor any of the underwriters, if any, makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the securities. In addition, neither we nor any of the underwriters, if any, makes any representation that the representatives of the underwriters, if any, will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering. The securities offered by this prospectus may or may not be listed on a national securities exchange or a foreign securities exchange. We cannot give any assurances that there will be a market for any of the securities offered by this prospectus and any prospectus supplement.

We will bear costs relating to all of the securities being registered under this prospectus, other than underwriters' discounts and commissions. In compliance with the guidelines of the Financial Services Regulatory Authority, Inc., or FINRA, the maximum compensation to be received by a FINRA member or independent broker-dealer may not exceed 8% of the offering proceeds. It is anticipated that the maximum compensation to be received in any particular offering of securities will be less than this amount.

DESCRIPTION OF SECURITIES

Securities We May Offer Under this Prospectus

Common Stock

For a description of our common stock, please see our Registration Statement on Form 8-A filed with the SEC on November 26, 2003, and any further amendment or report filed thereafter for the purpose of updating such description.

Preferred Stock

The material terms of any series of preferred stock that we offer through a prospectus supplement will be described in that prospectus supplement. Our board of directors is authorized to provide for the issuance of blank check preferred stock in one or more series with designations as may be stated in the resolution or resolutions providing for the issue of such preferred shares. At the time that any series of our preferred stock is authorized, our board of directors will fix the dividend rights, any conversion rights, any voting rights, redemption provisions, liquidation preferences and any other rights, preferences, privileges and restrictions of that series, as well as the number of shares constituting that series and their designation. Our board of directors could, without stockholder approval, cause us to issue preferred stock which has voting, conversion and other rights that could adversely affect the holders of our common stock or make it more difficult to effect a change in control. Our preferred stock could be used to dilute the share ownership of persons seeking to obtain control of us and thereby hinder a possible takeover attempt which, if our stockholders were offered a premium over the market value of their shares, might be viewed as being beneficial to our stockholders. In addition, our preferred stock could be issued with voting, conversion and other rights and preferences which would adversely affect the voting power and other rights of holders of our common stock.

Warrants

We may issue warrants to purchase our common stock or preferred stock. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies, in which the price of such warrants will be payable;
- the securities purchasable upon exercise of such warrants;
- the price at which and the currency or currencies, in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;

- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States Federal income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

Description of Share Capital

As of May 18, 2011, we had 8,881,089 shares of common stock outstanding. In addition, we have 1,000 shares of Series A Convertible Preferred Stock outstanding, which are initially convertible into an aggregate of 4,827,000 shares of our common stock, which conversion ratio may increase upon our achievement of certain development milestones. For a description of our Series A Convertible Preferred Stock, please see our Current Report on Form 8-K/A filed with SEC on May 13, 2011.

As of May 18 2011, there were outstanding warrants to purchase 248,003 shares of our common stock at exercise prices from $21.70 to $36.00 per share, which expire at various dates in calendar years 2012 and 2013, and options to purchase 418,585 shares of common stock at exercise prices from $0.77 to $6.30 per share, which expire at various dates in calendar years 2014 and 2015, and pursuant to the Amended and Restated Securities Purchase Agreement, on May 18, 2011, we also issued two series of warrants initially exercisable for up to approximately 2.8 million shares of common stock, subject to increase upon the occurrence of certain events. For a description of the terms of these warrants, please see our Current Report on Form 8-K filed with the SEC on May 16, 2011.

LEGAL MATTERS

The validity of the securities described herein will be passed upon for us by Morgan, Lewis & Bockius LLP.

EXPERTS

The financial statements as of June 30, 2010 and 2009, and for each of the three years in the period ended June 30, 2010, incorporated by reference into this prospectus have been so incorporated in reliance on the report of BDO Audit (NSW-VIC) Pty Ltd, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus and any accompanying prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus is an important part of this prospectus. Any statement in a document we incorporate by reference into this prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus, any accompanying prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus or any accompanying prospectus supplement modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus or any accompanying prospectus supplement, as applicable, except as modified or superseded.

We incorporate by reference into this prospectus the information contained in the documents listed below, which is considered to be a part of this prospectus:

- our Annual Report on Form 10-K for the fiscal year ended June 30, 2010, as amended by the Form 10-K/A filed on October 28, 2010;
- our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2010, as amended by the Form 10-Q/A filed on February 7, 2011; our Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2010, filed on February 11, 2011; and our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2011, filed on May 16, 2011;
- our Current Reports on Form 8-K filed with the SEC on July 20, 2010, August 11, 2010, September 8, 2010 (excluding those portions furnished and not filed), November 19, 2010, December 22, 2010, January 19, 2011, January 27, 2011, February 7, 2011, March 18, 2011, April 18, 2011, May 2, 2011, May 11, 2011 (as amended by the Current Report on Form 8-K/A filed on May 13, 2011) and May 16, 2011; and
- the description of our common stock contained in the Registration Statement on Form 8-A filed on November 26, 2003, and any further amendment or report filed thereafter for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering; provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K we may subsequently file.

Statements made in this prospectus or any accompanying prospectus supplement or in any document incorporated by reference in this prospectus or any accompanying prospectus supplement as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Marshall Edwards, Inc.
11975 El Camino Real, Suite 101
San Diego, California 92130
Te: (858) 792-6300
Attn: Investor Relations

Copies of these filings are also available, without charge, through the “Investors” section of our website (www. marshalledwardsinc.com) as soon as reasonably practicable after they are filed electronically with the SEC. The information contained on our website is not a part of this prospectus.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC’s website at *http://www.sec.gov*. The SEC’s website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the estimated costs and expenses, other than sales commissions or discounts, payable by the registrant in connection with the offering of the securities being registered. All of the amounts shown are estimates and are based on a hypothetical $5,000,000 offering of the registrant's common stock covered by this prospectus.

SEC registration fee	$ 0*
Printing and engraving fees	2,000
Legal fees	25,000
Accounting fees	10,000
Miscellaneous	2,000
Total	$39,000

* Pursuant to Rule 415(a)(6), the registration fee previously paid in connection with respect to $50,000,000 of securities remaining unsold under our prior registration statement on Form S-3 (File No. 333-149807) will continue to apply to such unsold securities; as a result, no additional registration fee is payable in connection with the securities registered pursuant to this registration statement.

Item 15. Indemnification of Directors and Officers

Our Restated Certificate of Incorporation, as amended, provides that we will indemnify our directors and officers to the full extent permitted by the Delaware General Corporation Law, or DGCL. Section 145 of the DGCL provides that the extent to which a corporation may indemnify its directors and officers depends on the nature of the action giving rise to the indemnification right. In actions not on behalf of the corporation, directors and officers may be indemnified for acts taken in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation. In actions on behalf of the corporation, directors and officers may be indemnified for acts taken in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation, except for acts as to which the director or officer is adjudged liable to the corporation, unless the relevant court determines that indemnification is appropriate despite such liability. Section 145 of the DGCL also permits a corporation to (i) reimburse present or former directors or officers for their defense expenses to the extent they are successful on the merits or otherwise and (ii) advance defense expenses upon receipt of an undertaking to repay the corporation if it is determined that payment of such expenses is unwarranted.

To supplement the general indemnification right contained in our Restated Certificate of Incorporation, our Amended and Restated By-Laws provide for the specific indemnification rights permitted by Section 145 (as described above). Our Amended and Restated By-Laws also permit us to purchase Directors & Officers insurance, but no director or officer has a right to require this.

In addition to the indemnification rights described above, our Restated Certificate of Incorporation, as amended, eliminates any monetary liability of directors to us or our stockholders for breaches of fiduciary duty except for (i) breaches of the duty of loyalty, (ii) acts or omissions in bad faith, (iii) improper dividends or share redemptions and (iv) transactions from which the director derives an improper personal benefit.

Item 16. Exhibits

See Exhibit Index following signature page.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, *however*, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b)) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(a) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(b) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is a part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is a part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(ii) If the registration is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statement relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, California, on this 19th day of May, 2011.

MARSHALL EDWARDS, INC.

By: /s/ Daniel P. Gold
Name: Daniel P. Gold
Title: Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints Daniel P. Gold and Thomas M. Zech, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file, any and all amendments to this registration statement, including any and all post-effective amendments and amendments thereto and any other registration statement relating to the same offering as this registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or either of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this amendment to the registration statement has been signed by the following persons in the capacities indicated below on May 19, 2011.

Signature	Title
/s/ Daniel P. Gold Daniel P. Gold	Chief Executive Officer, President and Director (Principal Executive Officer)
/s/ Thomas M. Zech Thomas M. Zech	Chief Financial Officer (Principal Financial and Accounting Officer)
* Bryan R.G. Williams	Chairman of Board of Directors
/s/ William D. Rueckert William D. Rueckert	Director
* Christine A. White	Director
* Leah R. Cann	Director

*By: /s/ Daniel P. Gold
Daniel P. Gold
Attorney-in-fact

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description
1.1	Form of Underwriting Agreement**
3.1	Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Registrant's Registration Statement on Form S-1 filed on September 25, 2003 (Reg. No. 333-109129)).
3.2	Certificate of Amendment to the Restated Certificate of Incorporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on April 26, 2010).
3.3	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on July 30, 2007).
3.4	Certificate of Designation of Preferred Stock **
4.1	Specimen Common Stock Certificate **
4.2	Specimen Preferred Stock Certificate **
4.3	Specimen Warrant Certificate **
4.4	Form of Warrant **
4.5	Form of Warrant Agreement **
5.1	Form of Opinion of Morgan, Lewis & Bockius LLP *
12.1	Statement re Computation of Ratios *
23.1	Consent of Morgan Lewis & Bockius LLP (included as Exhibit 5.1)
23.2	Consent of BDO Audit (NSW-VIC) Pty Limited*
24.1	Power of Attorney (included on signature page)

* Filed herewith.

** To be filed by amendment.

Exhibit 5.1

[Letterhead of Morgan, Lewis & Bockius LLP]

May 19, 2011

Marshall Edwards, Inc.
11975 El Camino Real, Suite 101
San Diego, California 92130

Re: Marshall Edwards, Inc. — Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Marshall Edwards, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act") relating to the proposed offer and sale by the Company, from time to time, as set forth in the prospectus (the "Prospectus") contained in the Registration Statement and as shall be set forth in one or more supplements to the Prospectus (each, a "Prospectus Supplement") of up to $50,000,000 of the Company's common stock, par value $0.00000002 per share (the "Common Stock"), preferred stock, in one or more classes or series (the "Preferred Stock"), and warrants to purchase the Common Stock and Preferred Stock (the "Warrants," and collectively with the Common Stock and the Preferred Stock, the "Securities").

Warrants will be issued pursuant to a warrant agreement (the "Warrant Agreement") to be entered into between the Company and a bank or trust company acting as Warrant Agent.

In connection with this opinion letter, we have examined copies of the Registration Statement and originals, or copies certified or otherwise identified to our satisfaction, of the Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), and the Amended and Restated By-Laws (the "By-Laws") of the Company and such other documents, records and other instruments as we have deemed appropriate for purposes of the opinion set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies and the authenticity of the originals of all documents submitted to us as copies.

With respect to our opinion as to the Common Stock, we have assumed that, at the time of issuance and sale, a sufficient number of shares of Common Stock will be authorized and available for issuance and that the consideration for the issuance and sale of the Common Stock (or Preferred Stock convertible into Common Stock or Warrants exercisable for Common Stock) will be in an amount that is not less than the par value of the Common Stock. With respect to our opinion as to the Preferred Stock, we have assumed that (i) prior to any issuance or sale of shares of a class or series of Preferred Stock, an appropriate Certificate of Designations with respect to such class or series of Preferred Stock will have been duly authorized by all necessary corporate action on the part of the Company and filed with the Secretary of State of the State of Delaware and (ii) at the time of issuance and sale, a sufficient number of shares of Preferred Stock are authorized, designated and available for issuance and that the consideration for the issuance and sale of the Preferred Stock (or Warrants exercisable for Preferred Stock) will be in an amount that is not less than the par value of the Preferred Stock. We have also assumed that any Warrants offered under the Registration Statement will be executed in the forms filed as exhibits to the Registration Statement.

Subject to the foregoing and the other matters set forth herein, it is our opinion that:

1. With respect to the Common Stock offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws, (ii) the issuance of the Common Stock has been duly authorized by all necessary corporate action on the part of the Company and (iii) the issuance and sale of the Common Stock do not violate any applicable law, are in conformity with the Company's Certificate of Incorporation and By-Laws, do not result in a default under or breach of any agreement or instrument binding upon the Company, then the Common Stock, when issued and sold as contemplated in the Registration Statement, the Prospectus and the related Prospectus Supplement(s) and in accordance with any applicable duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon conversion of any convertible Preferred Stock, in accordance with its terms, or upon exercise of any Warrant, in accordance with its terms, will be duly authorized, validly issued, fully paid and nonassessable.
2. With respect to the Preferred Stock offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws, (ii) the terms and issuance of the Preferred Stock have been duly authorized by all necessary corporate action on the part of the Company and (iii) the terms of the shares of Preferred Stock and their issuance and sale do not violate any applicable law, are in conformity with the Certificate of Incorporation and By-Laws and do not result in a default under or breach of any agreement or instrument binding upon the Company, then the Preferred Stock, when issued and sold as contemplated in the Registration Statement, the Prospectus and the related Prospectus Supplement(s) and in accordance with any applicable duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon exercise of any Warrant in accordance with its terms, will be duly authorized, validly issued, fully paid and nonassessable.
3. With respect to the Warrants issued under the Warrant Agreement and offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws, (ii) the Warrant Agreement has been duly authorized by the Company and the Warrant Agent by all necessary corporate action, (iii) the Warrant Agreement has been duly executed and delivered by the Company and the Warrant Agent, (iv) the issuance and terms of the Warrants have been duly authorized by the Company by all necessary corporate action and (v) the terms of the Warrants and of their issuance and sale have been duly established in conformity with the Warrant Agreement and as described in the Registration Statement, the Prospectus and the related Prospectus Supplement(s), so as to be in conformity with the Certificate of Incorporation and By-Laws and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company, then the Warrants, when issued and sold in accordance with the Warrant Agreement and a duly authorized, executed and delivered purchase, underwriting or similar agreement, will be valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms, except as enforcement thereof may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on availability of equitable relief, including specific performance.

We assume for purposes of this opinion that (i) the Warrant Agent is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization, (ii) the Warrant Agent is duly qualified to engage in the activities contemplated by the Warrant Agreement, (iii) the Warrant Agent is in compliance, generally and

with respect to acting as a Warrant Agent under the Warrant Agreement, with all applicable laws and regulations, (iv) the Warrant Agent has the requisite organizational and legal power and authority to perform its obligations under the Warrant Agreement and (v) that the Warrant Agreement will be a valid, binding and enforceable obligation of the Warrant Agent.

The foregoing opinions are limited to the federal laws of the United States and the Delaware General Corporation Law. Although the Securities may be issued from time to time on a delayed or continuous basis, the opinions expressed herein are limited to such laws, including rules and regulations promulgated pursuant thereto, as in effect on the date hereof.

This opinion letter is furnished to you in connection with the filing of the Registration Statement and is not to be used, circulated, quoted or otherwise relied upon for any other purpose.

We consent to your filing this opinion letter as an exhibit to the Registration Statement and to the reference to our firm under the caption “Legal Matters” in the prospectus included therein. In giving such opinion, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Securities Act or the rules or regulations of the U.S. Securities and Exchange Commission thereunder.

Very truly yours,

/s/ Morgan, Lewis & Bockius LLP

Morgan, Lewis & Bockius LLP

Exhibit 12.1

Statement re Computation of Ratios

We incurred net losses and did not have any fixed charges for the nine months ended March 31, 2011, other than insignificant charges related to a premises rental agreement. There were no fixed charges for the years ended June 30, 2010, 2009, 2008, 2007 and 2006. We also did not have any shares of preferred stock outstanding during these periods.

Exhibit 23.2

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UNITED STATES OF AMERICA

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Amendment No.1 to Registration Statement of our report dated August 26, 2010, relating to the consolidated financial statements appearing in the Company's Annual Report on Form 10-K for the year ended June 30, 2010.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO

BDO Audit (NSW – VIC) Pty Limited

Sydney, NSW, Australia
May 19, 2011