# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

|         | FORM 10  | )-K   |
|---------|--|---|
| (Mark   | One)   |   |
| [√]     | ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF T   | THE SECURITIES EXCHANGE ACT OF 1934   |
|         | For the fiscal year ended De   | ecember 31, 2009  |
|         | or   |   |
| []      | TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  | OF THE SECURITIES EXCHANGE ACT OF 1934  |
|         | For the transition period from   | to  |
|         | Commission file number   | ber <u>0-15888</u>  |
|         | IGENE Biotechnology,   | Inc.  |
|         | (Exact Name of Registrant as S   |   |
|         | Maryland   | 52-1230461  |
| (State  | or other jurisdiction of incorporation or organization)  | (I.R.S. Employer Identification No.)  |
| 9       | 110 Red Branch Road, Columbia, Maryland  | 21045   |
|         | (Address of principal executive offices)   | (Zip Code)  |
|         | (410) 997-25   |   |
|         | (Registrant's telephone number   | er, including area code)  |
|         | Securities registered pursuant to Section  | 12(b) of the Act:   |
|         | Title of Each Class None Name of E   | ach Exchange on Which Registered None   |
|         | Securities registered pursuant to Section  | 12(g) of the Act:   |
|         | Common Stock (par value \$6 (Title of class)   | 0.01 per share)   |
| Securit | Indicate by check mark if the registrant is a well-kn ties Act.  | own seasoned issuer, as defined in Rule 405 of the [ ] Yes [ $\sqrt{\ }$ ] No |
| Act.    | Indicate by check mark if the registrant is not required   | to file reports pursuant to Section 13 or 15(d) of the [ ] Yes [ $$ ] No      |
|         | Indicate by check mark whether the registrant (1) has of the Securities Exchange Act of 1934 during the precant was required to file such reports), and (2) has been su  | eding 12 months (or for such shorter period that the                          |
|         |  | [√] Yes [ ] No  |
| 229.40  | Indicate by check mark if disclosure of delinquent (5) is not contained herein, and will not be contained, to the contained herein, and will not be contained, to the contained herein, and will not be contained, to the contained herein, and will not be contained. |   |

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

or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form

10-K. [ ]

| Large Accelerated Filer           | [ ]                  | Accelerated Filer                   | [ ]                              |
|-----------------------------------|----------------------|-------------------------------------|----------------------------------|
| Non-Accelerated Filer             | []                   | Smaller reporting company           | $[\sqrt{\ }]$                    |
| Indicate by check mark whether th | e registrant is a sh | ell company (as defined in Rule 12b | 0-2 of the Act). [ ] Yes $[]$ No |

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed year end \$3,191,027 as of March 26, 2010.

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date. As of March 26, 2010 there were 1,560,404,297 shares of the issuer's common stock outstanding.

## CAUTIONARY STATEMENT FOR PURPOSES OF "SAFE HARBOR PROVISIONS" OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995:

EXCEPT FOR HISTORICAL FACTS, ALL MATTERS DISCUSSED IN THIS REPORT, WHICH ARE FORWARD-LOOKING, INVOLVE A HIGH DEGREE OF RISK AND UNCERTAINTY. CERTAIN STATEMENTS IN THIS REPORT SET FORTH MANAGEMENT'S INTENTIONS, PLANS, BELIEFS, EXPECTATIONS OR PREDICTIONS OF THE FUTURE BASED ON CURRENT FACTS AND ANALYSES. WHEN WE USE THE WORDS "BELIEVE," "EXPECT," "ANTICIPATE," "ESTIMATE," "TARGET," "INTEND" OR SIMILAR EXPRESSIONS, WE INTEND TO IDENTIFY FORWARD-LOOKING STATEMENTS. YOU SHOULD NOT PLACE UNDUE RELIANCE ON THESE FORWARD-LOOKING STATEMENTS, WHICH SPEAK ONLY AS OF THE DATE OF THIS REPORT. ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THOSE INDICATED IN SUCH STATEMENTS, DUE TO A VARIETY OF FACTORS, RISKS AND UNCERTAINTIES INCLUDING, BUT NOT LIMITED TO, COMPETITIVE PRESSURES FROM OTHER COMPANIES AND WITHIN THE BIOTECH INDUSTRY, ECONOMIC CONDITIONS IN THE COMPANY'S PRIMARY MARKETS, EXCHANGE RATE FLUCTUATIONS, REDUCED PRODUCT DEMAND, INCREASED COMPETITION, INABILITY TO PRODUCE REQUIRED CAPACITY, UNAVAILABILITY OF FINANCING, GOVERNMENT ACTION, WEATHER CONDITIONS AND OTHER UNCERTAINTIES. INCLUDING THOSE DETAILED IN "RISK FACTORS" THAT ARE INCLUDED FROM TIME TO TIME IN THE COMPANY'S SECURITIES AND EXCHANGE COMMISSION FILINGS. IF ONE OR MORE OF THESE RISKS OR UNCERTAINTIES MATERIALIZE, OR IF THE UNDERLYING ASSUMPTIONS PROVE INCORRECT, OUR ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THOSE EXPECTED OR PROJECTED. WE ASSUME NO OBLIGATION TO UPDATE ANY FORWARD-LOOKING STATEMENTS IN ORDER TO REFLECT ANY EVENT OR CIRCUMSTANCE THAT MAY ARISE AFTER THE DATE OF THIS REPORT, OTHER THAN AS MAY BE REQUIRED BY APPLICABLE LAW OR REGULATION.

## PART I

#### ITEM 1. BUSINESS

## General

IGENE Biotechnology, Inc. ("Igene" or the "Company") was incorporated in the State of Maryland on October 27, 1981, to develop, produce and market value-added specialty biochemical products. Igene is a supplier of natural astaxanthin, an essential nutrient in different feed applications and a source of pigment for coloring farmed salmon species. Igene's natural astaxanthin product is marketed as AstaXin® and is made from yeast, and used as a source of pigment for coloring farmed salmonids. Igene is also venturing to supply astaxanthin as a nutraceutical ingredient. Igene is focused on research and development in the areas of fermentation technology, nutrition and health and the marketing of products and applications worldwide.

Igene has devoted its resources to the development of proprietary processes to convert selected agricultural raw materials or feedstocks into commercially useful and cost effective products for the food, feed, flavor and agrochemical industries. In developing these processes and products, Igene has relied on the expertise and skills of its in-house scientific staff and, for special projects, various consultants.

In 2000, Igene formed a wholly-owned subsidiary in Chile, Igene Chile Comercial, Ltda. The subsidiary has a sales and customer service office in Puerto Varas, Chile, and a product warehouse in Puerto Montt, Chile.

In an effort to develop a dependable source of production, on March 19, 2003, Tate & Lyle PLC ("Tate") and Igene announced a 50:50 joint venture to produce AstaXin® for the aquaculture industry, which we refer to as the "Joint Venture." Production utilized Tate's fermentation capability together with the unique technology developed by Igene. Part of Tate's existing citric acid facility located in Selby, England, was modified to include the production of this product. Tate's investment of approximately \$24,600,000 included certain of its facility assets that were used in citric acid production. Igene's contribution to the Joint Venture, including its intellectual property and its subsidiary in Chile, was valued by the parties as approximately equal to Tate's contribution. For accounting purposes, Igene's contribution was valued at zero.

On October 31, 2007, Igene and Tate entered into a Separation Agreement pursuant to which the Joint Venture was terminated. As part of the Separation Agreement, Igene sold to Tate its 50% interest in the Joint Venture and the Joint Venture sold to Igene its intellectual property, inventory and certain assets and lab equipment utilized by the Joint Venture as well as Igene's subsidiary in Chile. The purchase price paid by Tate to Igene for its 50% interest in the Joint Venture was 50% of the Joint Venture's net working capital. The purchase price paid by Igene for the inventory was an amount equal to 50% of the Joint Venture's net working capital, the assumption of various liabilities and the current market price of the inventory, less specified amounts. In addition, Igene agreed to pay to Tate an amount equal to 5% of Igene's gross revenues from the sale of astaxanthin up to a maximum of \$5,000,000. Tate agreed for a period of five years not to engage in the astaxanthin business.

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed a joint venture, Naturxan LLC ("Naturxan") to manufacture and sell astaxanthin and derivative products throughout the world. Both the Company and ADM have a 50% ownership interest in Naturxan and have equal representation on the Board of Managers of Naturxan.

## **Government Regulation**

The manufacturing and marketing of most of the products Igene has developed are, and will likely continue to be, subject to regulation by various governmental agencies in the United States, including the Food and Drug Administration ("FDA"), the Department of Agriculture ("USDA"), the Environmental Protection Agency ("EPA"), and comparable agencies in other countries. Igene, as a matter of policy, requires that its products conform to current Good Manufacturing Practices ("GMPs") (as defined under the Federal Food, Drug and Cosmetic Act and the rules and regulations thereunder) and Igene believes all of its products so conform. The extent of any adverse governmental regulation that might arise from future administrative or legislative action, including rules and regulations pertaining to the process of GRAS (Generally Recognized as Safe) affirmations, cannot be predicted.

In a notice published in the Federal Register on July 6, 2000, the FDA announced the amendment of its color additive regulations to provide for the safe use of Phaffia yeast, such as that in Igene's product, AstaXin®, as a color additive in aquaculture feeds. This ruling, which became effective August 8, 2000, allows Igene to market AstaXin® for aquaculture feeds and fish produced in, or imported into, the United States. This ruling is available to the public in the Federal Register. Igene has also previously obtained approval for AstaXin® from the Canadian Food Inspection Agency ("CFIA"). Additional foreign approval applications for AstaXin® have been granted in the European Union.

In July 2000, Igene also obtained clearance from the FDA to market AstaXin® as a human dietary supplement in the United States. Scientific literature indicates that natural astaxanthin, such as that in Igene's product, AstaXin®, may offer health benefits for humans due to its antioxidant properties. The FDA notification and Igene's submissions are available to the public from the FDA. Comparable agencies in the European Union and other foreign countries may have their own additional registration procedures. No additional applications for approval of AstaXin® as a human nutritional supplement have yet been submitted.

Igene has not incurred and does not anticipate any material environmental compliance costs.

## **Research and Development**

As of December 31, 2009, Igene had expended approximately \$20,770,000 on research and development since its inception on October 27, 1981. Sales of astaxanthin (through Igene and its two joint ventures) resulted in revenues of \$61,000,000 as of December 31, 2009, \$39,500,000 of which were realized through joint ventures. For the year ended December 31, 2009, \$4,000,000 of this revenue was recorded on the books of Igene. Igene will continue to incur research and development costs in connection with improvements in its existing processes and products, but it does not anticipate development of new processes and products in 2010.

Research and development expenditures for each of the last two years are as follows:

2009 \$ 1,851,118 2008 \$ 1,655,908 Igene's research and development activities have resulted in the development of processes to produce the product AstaXin® hereinafter discussed.

#### **Commercial Products**

#### **AstaXin®**

AstaXin® is Igene's registered trademark for its dried yeast product made from a proprietary strain of yeast developed by Igene. AstaXin® is a natural source of astaxanthin, a pigment which imparts the characteristic red color to the flesh of salmon, trout, prawns and certain other types of fish and shellfish. In the ocean, salmon and trout obtain astaxanthin from krill and other planktonic crustaceans in their diet. A krill and crustacean diet would be prohibitively expensive for farm-raised salmonids. Without the addition of astaxanthin, the flesh of such fish is a pale, off-white color, which is less appealing to consumers expecting the characteristic "salmon-colored" fish. Fish feeding trials in Europe, Asia, and North and South America have demonstrated the efficacy of AstaXin® in pigmenting fish. Igene derived revenue during 2009 from sales of AstaXin®, the majority of which were to fish producers in the aquaculture industry in the European Union, Japan, Chile and Canada, and marketing efforts for AstaXin® are global. Marketing efforts are through Igene and Naturxan personnel to both farmers and feed manufacturers.

Based on studies of worldwide production of farm raised salmon, Igene believes the market for astaxanthin as a color additive in salmon feed exceeds 184 metric tons of AstaXin®. A single competitor, who produces a chemically synthesized product, presently controls more than 80% of the world market for astaxanthin as a pigment for aquaculture.

During 2001, Igene began investigating other possible commercial uses of astaxanthin, including its application as a human nutritional supplement. Igene has formulated natural astaxanthin as a super-antioxidant, AstaXin®, for the North American dietary supplement market. Antioxidants are one of the largest product categories in the health and nutrition industry. Attempts to pursue this business have only been minimal in the past and will intensify in 2010.

## **Patents and Trademarks**

It is Igene's policy to protect its intellectual property rights by a variety of means, including applying for patents and trademarks in the United States and in other countries. Igene also relies upon trade secrets and improvements, unpatented proprietary know-how and continuing technological innovation to develop and maintain its competitive position. Igene places restrictions in its agreements with third parties with respect to the use and disclosure of any of its proprietary technology. Igene also has internal nondisclosure safeguards, including confidentiality agreements with employees and consultants.

All patents and trademarks are carefully reviewed and those with no foreseeable commercial value are abandoned to eliminate costly maintenance fees. Patents and trademarks on technology and products with recognized commercial value, and which Igene is currently maintaining, including those for AstaXin®, have various remaining lives ranging from 1 to 22 years.

## Competition

Competitors in the biotechnology field in the United States and elsewhere are numerous and include major chemical, pharmaceutical and food companies, as well as specialized biotechnology companies. Competition can be expected to increase as small biotechnology companies continue to be purchased by major multinational corporations with substantial resources. Competition is also expected to increase with the introduction of more diverse products developed by biotechnology firms, increasing research cooperation among academic institutions and large corporations, and continued government funding of research and development activities in the biotechnology field, both in the United States and overseas. Unlike the majority of biotechnology companies, which are developing products principally for the pharmaceutical industry, Igene has focused its own activities on the development of proprietary products for use in the aquaculture and nutritional supplement industries. In the future, however, competitors may offer products, that, by reason of price, or efficacy, or more substantial resources for technology advances, may be superior to Igene's existing or future products.

A single large pharmaceutical company presently dominates the market for astaxanthin pigment for aquaculture in which Igene's product, AstaXin®, is presently marketed and sold. Igene believes that AstaXin®, which is made from yeast, will compete with this dominant producer and other producers whose products are chemically synthesized, based on its use of natural ingredients. As consumers and producers of fish become more aware of other alternatives, Igene believes that they will desire natural ingredients, such as those in AstaXin®.

Several companies are also known to be developing and marketing other natural astaxanthin products. Some of these companies' products are made from algae, while others are made from yeast. Igene believes that AstaXin® will compete with other companies' astaxanthin products which are made from algae, due to what we believe are Igene's higher production capacity and lower production costs, but can provide no assurances in that regard. Igene also believes that AstaXin® will compete with other companies' astaxanthin products which are also made from yeast due to Igene's proprietary process to disrupt yeast cell walls, which, as studies have shown, makes AstaXin® more readily absorbed by fish.

Igene is also beginning to explore the possible use of AstaXin® as a human nutritional supplement. This market is attractive because of potentially higher profit margins. Other companies are known to also be developing and marketing astaxanthin products for the human nutritional supplement market. Igene cannot yet predict how competitive it would be in this market.

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed a joint venture, Naturxan LLC ("Naturxan") to manufacture and sell astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in Naturxan and has equal representation on the Board of Managers of Naturxan. It is hoped that Igene's technology joined with ADM manufacturing will improve their joint position in the market.

## Sources and Availability of Raw Materials

Raw materials used in the manufacture of AstaXin® consist principally of agricultural commodities widely available in world markets from many suppliers, which may be used interchangeably. We do not anticipate significant price fluctuations or changes in availability in these raw materials in the near future, but can provide no assurances in that regard.

#### **Employees**

At December 31, 2009, Igene had eighteen full-time employees, five of which are in administration and/or marketing, and thirteen of which are engaged in research, process development and support of manufacturing activities. Fifteen employees are based in the U.S. and three are based in Chile. Igene also utilizes various consultants on an as-needed or short-term basis.

None of Igene's employees are represented by a labor union and Igene has experienced no work stoppages. Igene believes its relations with its employees are satisfactory.

#### ITEM 1A. RISK FACTORS

Igene is a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and is not required to provide the information required under this item.

## ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

#### ITEM 2. PROPERTIES

Igene leases approximately 8,500 square feet of space in the Oakland Ridge Industrial Park located at 9110 Red Branch Road, Columbia, Maryland. Igene occupies the premises under a lease extension which expires on January 31, 2011. The approximate current annual rent is \$125,000. Approximately 2,000 square feet is used for executive and administrative offices and approximately 2,500 square feet is used for research and development activities. The remaining 4,000 square feet of space is used for Igene's intermediate-stage or scale-up pilot plant facility.

Igene leases approximately 220 square feet of office space in Puerto Varas, Chile to conduct marketing and technical support activities by its full-time technical representatives. This lease renews annually in December of

each year unless terminated by prior notice. Igene also leases warehouse space on a month-to-month basis as needed for product storage.

Igene currently owns or leases sufficient equipment and facilities for its research operations and all of this equipment is in satisfactory condition and is adequately insured. There are no current plans for improvement of this property. When Igene's product inventory increases, additional warehouse space is leased on a month-to-month basis.

## ITEM 3. LEGAL PROCEEDINGS

There are no material pending legal proceedings to which Igene is a party or to which any of Igene's properties are subject; nor are there material proceedings known to be contemplated by any governmental authority; nor are there material proceedings known to Igene, pending or contemplated, in which any of Igene's directors, officers, affiliates or any principal security holders, or any associate of any of the foregoing, is a party or has an interest adverse to us.

#### **PART II**

## ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

#### Common Stock

Commencing on or about June 12, 1989, Igene's common stock began quotation on the over-the-counter market on a limited basis and is quoted on Pink Sheets. The following table shows, by calendar quarter, the range of representative bid prices for Igene's common stock for 2009 and 2008.

|       | Calendar Quarter | <u>High</u> | Low       |
|-------|------------------|-------------|-----------|
|       |                  |             |           |
| 2009: | First Quarter    | \$ 0.0150   | \$ 0.0050 |
|       | Second Quarter   | \$ 0.0140   | \$ 0.0050 |
|       | Third Quarter    | \$ 0.0250   | \$ 0.0066 |
|       | Fourth Quarter   | \$ 0.0106   | \$ 0.0031 |
| 2008: | First Quarter    | \$ 0.0180   | \$ 0.0130 |
| 2000. | -                | \$ 0.0150   | \$ 0.0060 |
|       | Second Quarter   |             |           |
|       | Third Quarter    | \$ 0.0130   | \$ 0.0060 |
|       | Fourth Quarter   | \$ 0.0120   | \$ 0.0020 |

Igene obtained the above information through Pink Sheets, LLC, a national quotation bureau. Such quotations reflect inter-dealer prices, without retail mark-up, mark-down, or commission, and may not represent actual transactions. The above quotations do not reflect the "asking price" quotations of the stock.

The approximate number of record holders of Igene's common stock as of March 16, 2010, was 250. As of March 16, 2010, the high bid and low offer prices for the common stock, as shown on Pink Sheets were \$0.0134 and \$0.010, respectively.

## **Dividend Policy**

When and if funds are legally available for such payment under statutory restrictions, Igene may pay annual cumulative dividends on the preferred stock of \$0.64 per share on an annual basis. During 1988, Igene declared and paid a cash dividend of \$0.16 per share on its preferred stock. In December 1988, Igene suspended payment of the quarterly dividend of \$0.16 per share of preferred stock. No dividends on preferred stock have been declared or paid since 1988. Any resumption of dividend payments on preferred stock would require significant improvement in cash flow. Preferred stock dividends are payable when and if declared by Igene's board. Unpaid dividends accumulate for future payment or addition to the liquidation preference and redemption price of the preferred stock. As of December 31, 2009, total dividends in arrears on Igene's preferred stock equaled \$151,422 (or \$13.60 per share) on Igene's Series A Preferred Stock and are included in the carrying value of the Series A Preferred Stock.

Dividends on common stock are currently barred by the preferential rights of holders of preferred stock. Igene has paid no cash dividends on its common stock in the past and does not intend to declare or pay any dividends on its common stock in the foreseeable future.

#### 8% Notes

Pursuant to the terms of an Indenture dated as of March 31, 1998, as amended (the "Indenture") between Igene and American Stock Transfer & Trust Company, as Trustee (the "Trustee"), Igene issued and sold \$5,000,000 of its 8% notes (the "8% Notes"). Concurrently with the issuance of the 8% Notes, Igene issued, pursuant to a Warrant Agreement by and between Igene and American Stock Transfer & Trust Company (the "Warrant Agent") dated as of March 31, 1998, as amended (the "Warrant Agreement"), 50,000,000 warrants to purchase shares of Igene common stock for \$0.10 per share expiring March 31, 2008. The warrant purchase price under the Warrant Agreement was reduced to \$0.075 per share, and the maturity date of the 8% Notes was extended to March 31, 2006, by an amendment dated March 18, 2003, and approved by the requisite number of holders of the securities.

On March 28, 2006, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2009, and reduced the warrant price under the Warrant Agreement from \$0.075 to \$0.056 per share.

On October 23, 2008, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2019. The warrants under the Warrant Agreement expired as of March 31, 2008.

On December 3, 2008, Igene completed an offering to exchange 145,600 of our shares of common stock, par value \$0.01 per share, for each \$1,000 principal amount of the 8% Notes outstanding and accrued interest thereon. As of that date, \$4,759,767 of 8% Notes principal were outstanding, with \$4,064,450 accrued interest thereon. Of these notes, \$4,436,515 of notes principal with \$3,788,419 of interest were exchanged for 645,956,606 shares of Igene common stock at a price of \$0.005 per share. As a result, an addition to additional paid in capital of \$4,995,151 was recorded on the retirement, pursuant to accounting literature for related party debt forgiveness.

## **Securities Authorized for Issuance Under Equity Incentive Plans**

#### Equity Compensation Plan Information as of December 31, 2009

| Plan category  | Number of securities to<br>be issued upon exercise<br>of outstanding options,<br>warrants and rights | Weighted-average<br>exercise price of<br>outstanding options,<br>warrants and rights | Number of securities<br>remaining available for<br>future issuance under<br>equity compensation<br>plans (excluding<br>securities reflected in<br>column (a)) |
|--|--|--|---|
|  | (a)  | (b)  | (c)   |
| Equity compensation plans approved by security holders (1) |  |  | 300,000,000   |
| Equity compensation plans not approved by security holders |  |  |   |
| TOTAL  |  | \$0.00   | 300,000,000   |

(1) Includes Igene's 2001 Stock Incentive Plan, which succeeded Igene's 1997 Stock Option Plan, which succeeded Igene's 1986 Stock Option Plan.

## **Sales of Unregistered Securities**

On June 16, 2009, the Board of Directors of Igene approved a repurchase of all outstanding employee stock options and warrants. It was agreed to repurchase 51,425,000 options and warrants, using 41,900,456 shares of restricted stock. Holders of options and warrants were contacted and agreements were reached. On July 16, 2009, shares were issued and options and warrants were cancelled.

On November 28, 2008, Igene commenced offerings to exchange shares of its common stock for its publicly and privately held debt. On December 3, 2008, a total of 645,956,606 shares of Igene common stock were exchanged for \$4,436,515 in aggregate principal amount of Igene's publicly held 8% notes and \$3,788,419 in related accrued interest. An additional 762,210,163 shares of Igene common stock were issued in exchange for \$5,618,090 in aggregate principal amount of Igene's privately held notes and debentures, \$3,073,015 of related interest, and 126,729,316 associated warrants, summarized as follows:

- On December 18, 66,371,244 shares of Igene's common stock were issued in consideration of \$762,000 in aggregate principal amount of 5% convertible debentures and \$67,641 of related accrued interest.
- On December 18, 528,578,590 shares of Igene's common stock were issued in consideration of \$3,814,212 in aggregate principal amount of 8% convertible debentures, \$2,204,106 of related accrued interest and associated warrants to purchase 66,427,650 shares of common stock.
- On December 18, 147,451,719 shares of Igene's common stock were issued in consideration of \$1,041,878 in aggregate principal amount of variable rate notes and \$801,269 of related accrued interest. In addition, related warrants to purchase 60,301,666 shares of common stock were exchanged for 19,808,610 shares of Igene's common stock.

#### ITEM 6. SELECTED FINANCIAL DATA

Igene is a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and is not required to provide the information required under this item.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Certain statements in this report set forth management's intentions, plans, beliefs, expectations or predictions of the future based on current facts and analyses. Actual results may differ materially from those indicated in such statements, due to a variety of factors including competitive pressures from other companies and within the biotech industry, economic conditions in Igene's primary markets, exchange rate fluctuations, reduced product demand, increased competition, unavailability of production capacity, unavailability of financing, government action, weather conditions and other uncertainties, including those detailed in any "Risk Factors" that may be included from time to time in Igene's Securities and Exchange Commission (the "SEC") filings.

## **Results of Operations**

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed Naturxan, for the purpose of manufacturing and selling astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in Naturxan and has equal representation on the Board of Managers of Naturxan.

## Sales and other revenue

Igene recorded sales in the amounts of \$3,957,903 and \$7,644,477, respectively, for 2009 and 2008, a decrease of \$3,686,574 or 48%. Sales had been limited in past years due to insufficient production quantity and have been limited in the current period as Igene has completed selling the inventory remaining from the joint venture with Tate

& Lyle. On January 8, 2009, Igene entered into an agreement with ADM pursuant to which the Company and ADM formed a joint venture to manufacture and sell astaxanthin. All product manufactured through the joint Venture is being recorded as part of Naturxan. Management believes that this will provide saleable product that will allow Igene to be competitive in the market place and allow for increased sales in the future, though no assurances can be provided in this matter. All future sales of product will be recorded through the Naturxan joint venture.

#### Cost of sales and gross profit

Igene recorded cost of sales in the amounts of \$2,942,340 and \$6,395,062, respectively, for 2009 and 2008, a decrease of \$3,452,722 or 54%. This resulted in a gross profit of \$1,015,563, or 26% for the year ended December 31, 2009 and gross profit of \$1,249,415, or 16% for the year ended December 31, 2008. The gross profit is mainly attributable to the discount in which the product was purchased at the conclusion of the joint venture with Tate & Lyle. On January 8, 2009, Igene entered into an agreement with ADM pursuant to which the Company and ADM formed a joint venture to manufacture and sell astaxanthin. All product manufactured through the joint Venture is being recorded as part of Naturxan. Management believes that this will provide saleable product that will allow Igene to be competitive in the market place and allow for increased sales in the future, though no assurances can be provided in this matter. All future sales of product will be recorded through the Naturxan joint venture.

## **Loss from Joint Venture**

For the year ended December 31, 2009, Igene recorded a loss from Naturxan of \$1,094,502. On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed a joint venture (the "Naturxan") to manufacture and sell astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in Naturxan and has equal representation on the Board of Managers of Naturxan.

On October 31, 2007, Igene terminated its relationship with Tate & Lyle. Igene maintained the saleable inventory after the termination of the relationship. Igene sold the existing inventory in order to maintain its relationship with customers and used these funds to cover expenses. Naturxan began selling product in the Third quarter of 2009 and preparation for full scale production of product continues. For 2009, revenues from sales of product were \$4,653,810. Cost of sales for the period was \$4,103,028 resulting in a gross profit of \$550,782 or 12%. Expenses recorded by Naturxan were \$2,739,786 resulting in a net loss of \$2,189,004 for the year ended December 31, 2009. Igene's 50% interest resulted in the \$1,094,502 loss recorded. Management believes that Naturxan will provide saleable product that will allow Igene to be competitive in the market place and allow for increased sales in the future, though no assurances can be provided in this matter.

#### **Expenses reimbursed by Joint Venture**

On January 8, 2009, Igene entered into an agreement with ADM pursuant to which the Company and ADM formed a joint venture to manufacture and sell astaxanthin. Management believes that this venture should provide cash flow from operations, though there can be no assurance in this matter. As part of the ADM Joint Venture Agreement, a portion of expenses incurred by Igene related to production, research and development, those related to the marketing of AstaXin®, as well as those expenses related to general and administrative functions of the Joint Venture are considered expenses of the Joint Venture and are therefore subject to reimbursement by Naturxan. For the year ended December 31, 2009, such reimbursements totaled \$2,086,166. The expenses included the \$1,800,852 of research and development expenses, \$139,238 of marketing expenses, and \$146,076 of general and administrative expenses.

As part of the Joint Venture Agreement with ADM, expenses incurred by Igene related to production, research and development, as well as those related to the marketing of AstaXin(R), and some of the general and administrative expenses, were considered expenses of the Joint Venture and therefore were reimbursed by the Joint Venture.

## Marketing and selling expenses

Marketing and selling expenses for 2009 were \$387,916, a decrease of \$343,178, or 47%, from the marketing and selling expenses of \$731,094 for 2008. With the creation of Naturxan, responsibility for the marketing and selling function is being assumed by the Joint Venture. It is expected that marketing and selling expenses will fluctuate as

activities continue to maintain customer base through the period of transition in which the development of production continues. However, no assurances can be made with regard to a new source of production or the maintenance of the customer base. Expenses are expected to be funded by Naturxan and cash flows from operations, to the extent available for such purposes. During 2009, Naturxan reimbursed \$160,070 of the foregoing marketing expenses.

#### Research, development and pilot plant expenses

Research, development and pilot plant expenses for 2009 and 2008 were \$1,851,118 and \$1,655,908, respectively, reflecting an increase of \$195,210 or 12%. This increase is partially attributable to expenses related to the development of the joint venture with ADM and expenses related to support increasing the efficiency of the manufacturing process through experimentation in Igene's pilot plant, undertaken in an attempt to develop higher yielding strains of yeast and other improvements in Igene's AstaXin® technology. Igene has undertaken such initiatives with the goal to reduce costs for salable product marketed by Naturxan; however, no assurances can be made in that regard. Expenses are expected to be funded by Naturxan and cash flows from operations, to the extent available for such purposes. During the year ended December 31, 2009, \$1,753,675 of the research and development expenses was reimbursed by Naturxan.

#### **General and administrative expenses**

General and administrative expenses for 2009 decreased by \$212,641, or 20%, from 2008 (to \$838,062 from \$1,050,703). These costs are expected to remain at this reduce amount. Igene works to reduce overhead costs and spend funds on research and development efforts. A portion of this cost is expected to be covered by Naturxan as reimbursement for the overhead expenses incurred on the part of Naturxan operations. The majority of these expenses will need to be funded by cash flows from operations, to the extent available for such purposes. \$146,076 of the 2009 general and administrative cost was reimbursed by Naturxan.

#### **Interest expense (net of interest income)**

Interest expense for 2009 and 2008 was \$97,520 and \$2,028,460, respectively, a decrease of \$1,930,940 or 95%. This interest expense was composed of interest on Igene's long term financing from its directors and other stockholders and interest on Igene's subordinated and convertible debentures, as well as amortization of discount on Igene's notes and debentures of \$10,276 for 2009 and \$1,294,680 for 2008. The reduction in this expense is due to the recapitalization undertaken by Igene during the fourth quarter of 2008, and the conversion of the majority of the Igene debt into an equity position (see Note 3).

## Additional paid in capital adjustment from termination of debt

On November 28, 2008, Igene commenced offerings to exchange shares of its common stock for its publicly and privately held debt. On December 3, 2008, a total of 645,956,606 shares of Igene common stock were exchanged for \$4,436,515 in aggregate principal amount of Igene's publicly held 8% notes and \$3,788,419 in related accrued interest. An additional 762,210,163 shares of Igene common stock were issued in exchange for \$5,618,090 in aggregate principal amount of Igene's privately held notes and debentures, \$3,073,015 of related interest, and 126,729,316 associated warrants, summarized as follows:

- On December 18, 66,371,244 shares of Igene's common stock were issued in consideration of \$762,000 in aggregate principal amount of 5% convertible debentures and \$67,641 of related accrued interest.
- On December 18, 528,578,590 shares of Igene's common stock were issued in consideration of \$3,814,212 in aggregate principal amount of 8% convertible debentures, \$2,204,106 of related accrued interest and associated warrants to purchase 66,427,650 shares of common stock.
- On December 18, 147,451,719 shares of Igene's common stock were issued in consideration of \$1,041,878 in aggregate principal amount of variable rate notes and \$801,269 of related accrued interest. In addition, related warrants to purchase 60,301,666 shares of common stock were exchanged for 19,808,610 shares of Igene's common stock.

As this was a transaction with a related party, Igene recorded additional paid in capital as a result of the termination of this private debt in the amount of \$3,654,595. This plus the gain on the public notes of \$4,995,151 resulted in a total of \$8,649,746 in connection with the exchanges, which was recorded as an addition to additional paid in capital, pursuant to accounting literature for related party debt forgiveness.

#### Other income

Igene had other income in 2009 of \$1,026,642. Of this amount, \$1,025,741 is a one-time occurrence related to a liability recorded in a prior period related to the termination of the joint venture with Tate & Lyle. On February 26, 2009, Igene signed a settlement agreement of past obligations and made a final payment to Tate & Lyle in the amount of \$714,227. At the termination of the joint venture, Igene recorded liabilities of \$890,000 for payments of past payables of the joint venture as well as \$51,000 for costs related to collection of receivables of the joint venture. The expense was recorded when it was thought Igene could be liable for it, but with the exception of the \$5,000,000 liability related to future revenue (see Note 2), Igene has settled its debt to Tate & Lyle.

## Net loss and basic and diluted net loss per common share

As a result of the foregoing results of operations, Igene reported comprehensive loss of \$64,708 for 2009 and comprehensive loss of \$4,008,720 for 2008. This resulted in a net loss of \$0.00 per basic and diluted common share for 2009 based on a weighted average of common stock outstanding of 1,537,789,530. For 2008, this resulted in a net loss of \$0.02 per basic common share, based on a weighted average of common stock outstanding of 187,037,119. The increase in outstanding shares resulted mainly from the shares related to the recapitalization undertaken by Igene during the fourth quarter of 2008, and the conversion of the majority of the Igene debt into an equity position (see Note 3).

#### **Financial Position**

During 2009 and 2008, the following also affected Igene's financial position:

- During 2009, decreases in accounts receivable of \$1,043,838 and decreases in inventory of \$2,398,520 were sources of cash. This allowed for decreases in accounts payable of \$2,384,050.
- During 2008, decreases in accounts receivable of \$1,673,117 and decreases in inventory of \$5,661,257 were sources of cash. This allowed for decreases in accounts payable of \$4,326,565.

Since December 1988, as part of an overall effort to contain costs and conserve working capital, Igene suspended payment of the quarterly dividend on its preferred stock. Resumption of the dividend will require significant improvements in cash flow. Unpaid dividends cumulate for future payment or addition to the liquidation preference or redemption value of the preferred stock. As of December 31, 2009, total dividends in arrears on Igene's Series A preferred stock equaled \$151,422 (or \$13.60 per share) and are included in the carrying value of the preferred stock.

## **Liquidity and Capital Resources**

Historically, Igene has been funded primarily by equity contributions and loans from directors and stockholders. As of December 31, 2009, Igene had working capital of \$2,099,781, and cash and cash equivalents of \$1,295,222.

Cash used by operating activities in 2009 was \$97,049 as compared to cash provided of \$705,610 in 2008.

Cash used by investing activities in 2009 was \$171,779 as compared to \$226,166 used by investing activities in 2008.

There was no cash provided by or used in financing activities during 2008 or 2009.

Over the next twelve months, Igene believes it will need additional working capital. Part of this funding is expected to be received from sales of AstaXin®. On January 8, 2009, Igene entered into an agreement with ADM pursuant to which the Company and ADM formed a joint venture to manufacture and sell astaxanthin. Management believes that this venture should provide cash flow from operations. However, there can be no assurance that projected cash from sales, or additional funding, will be sufficient for Igene to fund its continued operations.

Igene does not believe that inflation had a significant impact on its operations during 2009 and 2008.

## **Off-Balance Sheet Arrangements**

Igene has no off-balance sheet arrangements that are reasonably likely to have a current or future effect on its financial position, revenues, results of operations, liquidity or capital expenditures.

## **Critical Accounting Policies**

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires management to make judgments, assumptions and estimates that affect the amounts reported in our financial statements and accompanying notes. Actual results could differ materially from those estimates. The following are critical accounting policies important to our financial condition and results of operations presented in the financial statements and require management to make judgments and estimates that are inherently uncertain:

The inventories are stated at the lower of cost or market. Cost is determined using a weighted-average approach, which approximates the first-in first-out method. If the cost of the inventories exceeds their expected market value, provisions are recorded for the difference between the cost and the market value. Inventories consist of currently marketed products.

Revenue from product sales are recognized when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed and determinable, and collectability is reasonably assured. Allowances are established for estimated uncollectible amounts, product returns and discounts.

The Joint Venture is accounted for under the equity method of accounting as Igene has a 50% ownership interest.

Igene will not recognize the loss of the Joint Venture beyond the investment and advances to the Joint Venture.

The Company reviews intellectual property periodically for impairment and an impairment charge is recorded in the periods in which the recorded carrying value is more than its estimated fair value. The goodwill impairment test is performed annually, or more frequently, in the case of other events that indicate a potential impairment. Evaluation of possible impairment is based on the Company's ability to recover the asset from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If the expected undiscounted pre-tax cash flows are less than the carrying amount of such asset, an impairment loss is recognized for the difference between the estimated fair value and carrying amount of the asset.

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Igene is a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and is not required to provide the information required under this item.

#### ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements follow Part III of this Annual Report on Form 10-K and are hereby incorporated by reference.

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

#### ITEM 9A. CONTROLS AND PROCEDURES

## **Evaluation of Disclosure Controls and Procedures**

We carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act). Based upon that evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered in this report, our disclosure controls and procedures were not effective to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the required time periods and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all error or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. To address the material weaknesses, we performed additional analysis and other post-closing procedures in an effort to ensure our consolidated financial statements included in this annual report have been prepared in accordance with GAAP. Accordingly, management believes that the financial statements included in this report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

## Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2009. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. Our management has identified the following material weaknesses.

- 1. As of December 31, 2009, we did not maintain effective controls over the control environment. Specifically, we have not formally adopted a written code of business conduct and ethics that governs the Company's employees, officers and directors. Additionally, we have not developed and effectively communicated to our employees our accounting policies and procedures. This has resulted in inconsistent practices. Further, the Board of Directors does not currently have any independent members and no director qualifies as an independent audit committee financial expert as defined in Item 407(d)(5)(ii) of Regulation S-K. Since these entity level programs have a pervasive effect across the organization, management has determined that these circumstances constitute a material weakness.
- 2. As of December 31, 2009, we did not maintain effective controls over financial statement disclosure. Specifically, controls were not designed and in place to ensure that all disclosures required were originally addressed in our financial statements. Accordingly, management has determined that this control deficiency constitutes a material weakness.
- 3. As of December 31, 2009, we did not maintain effective controls over equity transactions. Specifically, controls were not designed and in place to ensure that equity transactions were properly reflected. Accordingly, management has determined that this control deficiency constitutes a material weakness.

Because of these material weaknesses, management has concluded that the Company did not maintain effective internal control over financial reporting as of December 31, 2009, based on the criteria established in "Internal Control-Integrated Framework" issued by the COSO.

## **Changes in Internal Control Over Financial Reporting**

No change in the Company's internal control over financial reporting occurred during the quarter ended December 31, 2009, that materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. This annual report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

#### ITEM 9B. OTHER INFORMATION

Pursuant to the terms of an Indenture dated as of March 31, 1998, as amended (the "Indenture") between the Company and American Stock Transfer & Trust Company, as Trustee (the "Trustee"), the Company issued and sold \$5,000,000 of its 8% notes (the "8% Notes"). Concurrently with the issuance of the 8% Notes, the Company issued, pursuant to a Warrant Agreement by and between the Company and American Stock Transfer & Trust Company, as warrant agent (the "Warrant Agent") dated as of March 31, 1998, as amended (the "Warrant Agreement"), 50,000,000 warrants to purchase shares of the Company's common stock for \$0.10 per share. The warrant purchase price under the Warrant Agreement was reduced to \$0.075 per share, and the maturity date of the 8% Notes extended to March 31, 2006, by an amendment to the Indenture and Warrant Agreement dated March 18, 2003 and approved by the requisite number of holders of the 8% Notes. The warrant purchase price was further reduced to \$0.56 per share, and the maturity date of the 8% Notes was further extended to March 31, 2009 by a second amendment to the Indenture and Warrant Agreement dated March 28, 2006 and approved by the requisite number of holders of the 8% Notes.

On October 23, 2008, the Company, Trustee and Warrant Agent entered into a Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates (the "Third Amendment") that extended the maturity date of the 8% Notes to March 31, 2019.

The Third Amendment was approved by more than two-thirds in principal amount of the holders of 8% Notes effective November 4, 2008, in accordance with Section 6.07 and Section 9.02 of the Indenture.

The description of the Third Amendment is qualified in its entirety by reference to the full text of such amendment, a copy of which is filed as Exhibit 4.5 hereto and is incorporated herein by reference.

#### **PART III**

## ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The names, ages, periods of service as a director, principal occupations, business experience and election of our directors are set forth in the Information Statement on Schedule 14C, filed with the Commission on November 24, 2009 in the section entitled "Directors," which information is incorporated herein by reference.

## Section 16(a) Beneficial Ownership Reporting Compliance

Based solely on a review of the Section 16(a) reports filed with the SEC and written representations provided to Igene by its officers and directors, and holders of more than ten percent of any class of Igene's registered securities, Igene believes that during fiscal year 2009, (i) one delinquent Form 4 was filed by Stephen Hiu resulting in two transactions being untimely reported, (ii) three delinquent Form 4s were filed by Thomas L. Kempner resulting in 18 transactions being untimely reported, (iii) two delinquent Form 4s were filed by Michael Kimelman resulting in 11 transactions being untimely reported and (iv) one delinquent Form 4 was filed by Patrick Monahan resulting in two transactions being untimely reported.

## **Code of Ethics**

Due to the size of Igene and its current operations, Igene has not adopted a code of ethics for its principal executive and financial officers. Igene's board of directors will revisit this issue in the future to determine if adoption of a code of ethics is appropriate. In the meantime, Igene's management intends to promote honest and ethical conduct, full and fair disclosure in its reports to the SEC, and compliance with applicable governmental laws and regulations.

#### **Corporate Governance**

The Audit Committee of the Board of Directors is comprised of one member: Michael G. Kimelman. Mr. Kimelman is an audit committee financial expert as defined in Item 407(d)(5)(ii) of Regulation S-K. Under the Nasdaq Marketplace Rules, in addition to satisfying the independent director requirements under Rule 4200 of such rules, audit committee members must also meet the criteria for independence set forth in Rule 10A-3(b)(1) under the Exchange Act (subject to the exemptions provided in Rule 10A-3(c)): they must not accept any consulting, advisory, or other compensatory fee from the Company other than for board service, and they must not be an affiliated person of the Company. Mr. Kimelman is not considered independent under the audit committee standards of the Nasdaq Marketplace Rules.

## ITEM 11. EXECUTIVE COMPENSATION

The following tables show the compensation paid or accrued by Igene to each of the three officers (the "named executive officers").

## **Summary Compensation Table**

| Name and<br>Principal Position | Year | Salary (\$)(1) | Stoc | k Awards (\$) | Co | l Other ompensation (2) | Te | otal (\$) |
|--------------------------------|------|----------------|------|---------------|----|-------------------------|----|-----------|
| Stephen Hiu                    | 2009 | \$ 177,060     | \$   | 0             | \$ | 15,555                  | \$ | 192,615   |
| President                      | 2008 | 163,575        |      | 0             |    | 11,189                  |    | 174,764   |
|                                | 2007 | 153,886        |      | 0             |    | 6,396                   |    | 160,282   |

| Name and<br>Principal Position       | Year | <b>Salary</b> (\$)(1) | Stock Awards (\$) | Compensation (\$)(2) | <u>Total (\$)</u> |
|--------------------------------------|------|-----------------------|-------------------|----------------------|-------------------|
| Patrick Monahan<br>Vice President,   | 2009 | 154,790               | 0                 | 14,155               | 168,945           |
| Secretary and                        | 2008 | 140,773               | 0                 | 10,225               | 150,998           |
| Director of                          | •    | 127.011               | 10.000 (2)        | <b>7</b> 0 60        | 4.50.000          |
| Manufacturing                        | 2007 | 137,914               | 10,000 (3)        | 5,968                | 153,882           |
| Edward Weisberger<br>Chief Financial | 2009 | 156,752               | 0                 | 14,704               | 171,456           |
| Officer                              | 2008 | 145,973               | 0                 | 9,473                | 155,446           |
|                                      | 2007 | 132,793               | 0                 | 5,712                | 138,505           |

All Othon

- (1) Gross salary of the named executive officers listed.
- (2) Includes annual taxable compensation for health insurance premium and employer match of 401(k).
- (3) Includes issuance of 1,000,000 shares of Igene common stock at \$0.01 per share value based on current stock price in addition to restriction and blockage discounts.

There are no employment agreements or arrangements, written or unwritten, for any of the executive officers.

## **Outstanding Equity Awards at Fiscal Year-End**

The following table sets forth information concerning the outstanding equity awards of each of the named executive officers as of December 31, 2008. All options reflected on the table were repurchased for restricted shares during 2009 and balances were zero as of December 31, 2009.

|                   | •               | ons Option Exercise | Option Expiration |
|-------------------|-----------------|---------------------|-------------------|
| Name              | (#) Exercisable | Price (\$/Share)    | Date              |
| Stephen Hiu       | 2,000,000       | 0.05                | 01/19/2010        |
|                   | 45,000          | 0.065               | 01/02/2011        |
|                   | 4,800,000       | 0.025               | 08/13/2012        |
|                   | 5,000,000       | 0.10                | 06/25/2014        |
| Patrick Monahan   | 1,317,500       | 0.05                | 01/19/2010        |
|                   | 2,900,000       | 0.025               | 08/13/2012        |
|                   | 2,000,000       | 0.10                | 06/25/2014        |
| Edward Weisberger | 2,500,000       | 0.05                | 12/01/2011        |
| -                 | 500,000         | 0.10                | 06/25/2014        |
|                   | 1,500,000       | 0.027               | 12/09/2015        |

## **Retirement Plans**

Effective February 1, 2004, Igene discontinued use of the Simple Retirement Plan and began use of a 401(k) savings/retirement plan, or 401(k) Plan. The 401(k) Plan permits Igene's eligible employees to defer annual compensation, subject to limitations imposed by the Internal Revenue Code. All employees that have been employed for six months are eligible for the plan. The plan permits elective contributions by Igene's eligible

employees based under the Internal Revenue Code, which are immediately vested and non-forfeitable upon contribution to the 401(k) Plan. Effective January 1, 2004, Igene made an elective contribution, subject to limitations, of 4% of each eligible employee's compensation for each year. For 2008 that amount was increased to 5%. Igene's contributions to the plan for 2009 and 2008 were \$47,081 and \$42,657, respectively, which is expensed in the statement of operations.

#### Life Insurance Plans

Igene provides life insurance benefits to its employees that in the event of an employee's death would pay to the employee's beneficiary two times the employee's annual salary, up to \$150,000.

#### Severance Benefit

In cases where a termination of employment is initiated by Igene for economic reasons (e.g. reduction in force, reorganization or position elimination), it is Igene's policy that the terminated employee will receive one week of severance at base pay for each year of service, up to a maximum of 12 weeks.

## **Compensation of Directors**

None of Igene's directors were compensated for their services during fiscal 2009. Directors Hiu and Monahan received compensation in their capacities as officers of Igene, as reported in the Summary Compensation Table above.

## **Stock Option Plans**

Igene currently maintains one stock incentive plan. Igene's 2001 Stock Incentive Plan (the "Plan") succeeded Igene's 1997 Stock Option Plan, which succeeded Igene's 1986 Stock Option Plan, as amended. The Plan was approved by Igene's stockholders on June 12, 2001, and authorized for issuance restricted stock and options to purchase up to 55,000,000 shares of common stock. The number of shares authorized for incentive awards was increased on November 3, 2008, to 300,000,000.

The purpose of the Plan is to further the long-term stability and financial success of Igene by attracting and retaining employees and consultants through the use of stock-based incentives, and to provide non-employee members of the Board of Directors with an additional incentive to promote the success of Igene. It is believed that ownership of Igene common stock will stimulate the efforts of those employees, consultants and non-employee directors upon whose judgment and interests Igene is and will be largely dependent upon the successful conduct of its business. It is also believed that incentive awards granted to employees under this Plan will strengthen their desire to remain employed with Igene and will further the identification of employees' interests with those of Igene.

Options are exercisable at such rates and times as may be fixed by the committee. Options also become exercisable in full upon (i) the holder's retirement on or after his 65<sup>th</sup> birthday, (ii) the disability or death of the holder, or (iii) under other circumstances as determined by the compensation committee. Options generally terminate on the tenth business day following cessation of service as an employee, director, consultant or independent contractor.

Options may be exercised by payment in full of the option price in cash or by check, or by delivery of previouslyowned shares of common stock having a total fair market value on the date of exercise equal to the option price, or by such other methods as permitted by the committee.

The Plan contains anti-dilution provisions in the event of certain corporate transactions.

The Board of Directors may at any time withdraw from, or amend, the Plan and any options not heretofore granted. Stockholder approval is required to (i) increase the number of shares issuable under the Plan, (ii) increase the number of options which may be granted to any individual during a year, (iii) or change the class of persons to whom options may be granted. No options shall be granted under the Plan after April 30, 2011.

No options to acquire shares of common stock were outstanding under the Plan as of December 31, 2009.

## ITEM 11. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth information as of March 9, 2010, with respect to beneficial ownership of shares of Igene's outstanding common stock by (i) each person known to Igene to own or beneficially own more than five percent of its common stock or preferred stock, (ii) each director of Igene, and (iii) each named executive officer, and (iv) all directors and executive officers as a group. On March 9, 2010, there were 1,560,426,565 shares of common stock issued and outstanding. Shares of common stock subject to options or warrants currently exercisable or exercisable within 60 days of February 18, 2010, are deemed outstanding for computing the share ownership and percentage of the person holding such options and warrants, but are not deemed outstanding for computing the percentage of any other person. Unless otherwise noted, each beneficial owner listed on the table below has sole voting and investment power with respect to his or her shares beneficially owned. No shares of preferred stock are beneficially owned by the persons listed below.

|  | Comme                      | on Stock    |
|--|----------------------------|-------------|
| Name and Address   | Number of Shares           | Percent (%) |
| Directors and officers   |                            |             |
| Stephen F. Hiu<br>9110 Red Branch Road<br>Columbia, MD 21045       | 11,526,633 <sup>1</sup>    | 0.74        |
| Thomas L. Kempner<br>61 Broadway<br>New York, NY 10006             | 543,901,561 <sup>2</sup>   | 34.84       |
| Michael G. Kimelman<br>100 Park Avenue<br>New York, NY 10017       | 146,069,174 <sup>3</sup>   | 9.10        |
| Sidney R. Knafel<br>810 Seventh Avenue<br>New York, NY 10019       | 532,711,201 <sup>4</sup>   | 34.12       |
| Patrick F. Monahan<br>9110 Red Branch Road<br>Columbia, MD 21045   | 7,637,200 <sup>5</sup>     | 0.49        |
| Edward J. Weisberger<br>9110 Red Branch Road<br>Columbia, MD 21045 | 4,049,697 <sup>6</sup>     | 0.26        |
| All Directors and Officers as a Group (6 persons)                  | 1,241,895,466 <sup>7</sup> | 79.55       |
| <u>Others</u>  |                            |             |
| Sheila Baird<br>100 Park Avenue<br>New York, NY 10017              | 111,559,750 <sup>8</sup>   | 7.15        |

- 1. Includes 11,526,633 shares held directly or indirectly by Dr. Hiu.
- 2. Includes 268,895,202 shares held directly or indirectly by Mr. Kempner. Also includes (i) 263,800,317 shares held by a trust under which Mr. Kempner is one of two trustees and the sole beneficiary and (ii) 11,206,042 shares held by trusts under which Mr. Kempner is one of two trustees and is a one-third beneficiary. Mr. Kempner shares voting and investment power with respect to the shares listed in (i)-(ii) above.

- 3. Includes 142,069,174 shares held directly or indirectly by Mr. Kimelman.
- 4. Includes 532,711,201 shares held directly or indirectly by Mr. Knafel.
- 5. Includes 7,637,200 shares held directly or indirectly by Mr. Monahan.
- 6. Includes 4,049,697 shares held directly by Mr. Weisberger.
- 7. Includes 1,241,895,466 shares of common stock.
- 8. Includes 111,559,750 shares held directly or indirectly by Ms. Baird.

## **Equity Incentive Plans**

The information set forth under the caption "Securities Authorized for Issuance Under Equity Incentive Plans" under Item 5 of this Annual Report on Form 10-K is hereby incorporated by reference.

## ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

## **Certain Relationships and Related Transactions**

On June 16, 2009, the Board of Directors of Igene approved a repurchase of all outstanding employee stock options and warrants. It was agreed to repurchase 51,425,000 options and warrants, using 41,900,456 shares of restricted stock. Holders of options and warrants were contacted and agreements were reached. On July 16, 2009, shares were issued and options and warrants were cancelled.

On November 28, 2008, Igene commenced offerings to exchange shares of its common stock for its publicly and privately held debt. Much of Igene's indebtedness was held by current and former directors. The related party transactions in connection with the exchange offerings are described below:

- As a result of this transaction, 33,185,622 shares of Igene's common stock were issued to each of Thomas Kempner and Sidney Knafel, directors of the Company, in exchange for the 5% convertible debenture in the principal amount of \$381,000 and \$33,820 in related interest, held by each of them.
- As a result of this transaction, 152,729,546 shares of Igene's common stock were issued to each of Thomas Kempner and Sidney Knafel, directors of the Company, in exchange for the 8% convertible debenture in the principal amount of \$1,107,106 and \$655,170 in related interest and warrants, held by each of them.
- As a result of this transaction, 279,625,624 shares of Igene's common stock were issued to Thomas Kempner and 276,004,622 shares of Igene's common stock were issued to Sidney Knafel, directors of the Company, in exchange for their 8% notes and accrued interest.
- As a result of this transaction, 51,070,264 shares of Igene's common stock were issued to Thomas Kempner and 43,324,547 shares of Igene's common stock were issued to Sidney Knafel, directors of the Company, in exchange for their variable rate demand notes and accrued interest.

In order to provide the Company with working capital as the inventory received from the termination of the joint venture with Tate & Lyle PLC is sold and the receivables are collected, on December 12, 2007, the Company issued and sold an aggregate principal amount of \$300,000 in 8.5% secured notes, \$150,000 to each of Thomas Kempner and Sidney Knafel. These notes are secured by the accounts receivable of the Company. As of December 31, 2009 these notes have accrued \$31,875 of interest, and no payments have been made.

On October 15, 2007, Mr. Monahan, the Company's Vice President, Secretary and Director of Manufacturing, was issued 1,000,000 shares of the Company's common stock, valued at \$21,000, in connection with his employment

with, and services to, the Company. The shares of common stock were issued pursuant to the exemption from registration provided under Section 4(2) of the Securities Act of 1933, as amended.

In order to provide the Company with sufficient funds to settle the litigation with the holders of the convertible notes issued by the Company in 2001, on February 15, 2007, the Company issued and sold an aggregate principal amount of \$762,000 in 5% convertible debentures, \$381,000 to each of Thomas Kempner and Sidney Knafel, directors of the Company. These debentures are convertible into shares of the Company's common stock at \$0.02 per share based on the offer made to the original debenture holders as the market price of the Company's common shares as of February 26, 2007. As reported above, these debentures in the aggregate principal amount of \$762,000, and the related interest in the aggregate amount of \$67,641, were converted into 66,371,244 shares of Igene's common stock in connection with the exchange offerings.

## **Director Independence**

Since Igene is not a listed company, it has determined to apply rule 4200(a)(15) of the Nasdaq Marketplace Rules to determine independence of its directors. Based on such rule, Igene has determined that none of its directors are deemed to be independent and that, accordingly, the sole member of its audit committee, Michael G. Kimelman, is not independent.

## ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

#### REGISTERED PUBLIC ACCOUNTANTS

The accounting firm of M&K CPAS, PLLC ("M&K") audited the financial statements of the Company for the fiscal years 2009 and 2008. M&K has advised the Company that neither the accounting firm nor any of its members or associates has any direct financial interest in or any connection with the Company other than as independent public auditors.

#### **AUDIT FEES AND SERVICES**

The following table shows the aggregate fees paid or accrued by the Company for the audit and other services provided by M&K for fiscal years 2009 and 2008:

|                             | FY 2009 |        | FY 2008 |        |  |
|-----------------------------|---------|--------|---------|--------|--|
| Audit Fees                  | \$      | 70,000 | \$      | 85,000 |  |
| Audit-Related Fees Tax Fees |         | 0      |         | 1,500  |  |
| All Other Fees              | _       |        |         |        |  |
| TOTAL                       | \$      | 70,000 | \$      | 86,500 |  |

Audit services provided by M&K for fiscal years 2009 and 2008 consisted of the audit of the consolidated financial statements and quarterly reviews of financial statements. "Tax Fees" include charges primarily related to tax return preparation and tax consulting services.

In 2003, the SEC adopted a rule pursuant to the Sarbanes-Oxley Act of 2002 that, except with respect to certain de minimis services discussed below, requires audit committee pre-approval of audit and non-audit services provided by the Company's independent auditors. The audit committee reviews and pre-approves audit and non-audit services of the independent auditors in conformity with the requirements of Sarbanes-Oxley. All of the 2009 and 2008 services described above were pre-approved by the audit committee pursuant to this SEC rule.

## ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Exhibits filed herewith or incorporated by reference herein are set forth in the following table prepared in accordance with Item 601 of Regulations S-K.

| EXHIBIT<br>NO. | DESCRIPTION   |
|----------------|---|
| 3.1            | Articles of Incorporation of the Registrant, as amended as of November 17, 1997, constituting Exhibit 3.1 to the Registration Statement No. 333-41581 on Form SB-2 filed with the SEC on December 5, 1997, are hereby incorporated by reference.  |
| 3.2            | Articles of Amendment to Articles of Incorporation of the Registrant, constituting Exhibit 3.1(b) to the Registration Statement No. 333-76616 on Form S-8 filed with the SEC on January 11, 2002, are hereby incorporated by reference.   |
| 3.3            | By-Laws of the Registrant, constituting Exhibit 3.2 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, are hereby incorporated by reference.  |
| 4.1            | Form of Variable Rate Convertible Subordinated Debenture Due 2002 (Class A), constituting Exhibit 4.4 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, is hereby incorporated by reference.   |
| 4.2            | Form of Indenture by and between the Registrant and American Stock Transfer and Trust Company, as Trustee, dated as of March 31, 1998, constituting Exhibit 4.2 to the Registration Statement No. 333-41581 on Form SB-2/A filed with the SEC on January 23, 1998, is hereby incorporated by reference.   |
| 4.3            | First Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of March 18, 2003, constituting Exhibit 10.11 to the Quarterly Report on Form 10-QSB filed with the SEC on May 14, 2003, is hereby incorporated by reference.               |
| 4.4            | Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of March 28, 2006, constituting Exhibit 4.5 to the Annual Report on Form 10-KSB filed with the SEC on April 13, 2006, is hereby incorporated by reference.                 |
| 4.5            | Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of October 23, 2008.*   |
| 10.1           | Form of Conversion and Exchange Agreement used in May 1988 in connection with the conversion and exchange by certain holders of shares of preferred stock for common stock and Warrants, constituting Exhibit 10.19 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, is hereby incorporated by reference. |
| 10.2           | Preferred Stockholders' Waiver Agreement dated May 5, 1988, constituting Exhibit 10.3 to the Registration Statement No. 33-23266 on Form S-1 filed with the SEC on July 22, 1988, is hereby incorporated by reference.  |
| 10.3           | Form of Agreement between the Registrant and Certain Investors in Preferred Stock dated September 30, 1987, constituting Exhibit 10.4 to the Registration Statement No. 33-23266 on Form S-1/A, is hereby incorporated by reference.  |
| 10.4           | Agreement of Lease between Columbia Warehouse Limited Partnership and the Registrant effective December 15, 1995, constituting Exhibit 10.13 to the Annual Report on Form 10-KSB filed with the SEC on April 12, 1996, is hereby incorporated by reference.   |
| 10.5           | First Amendment to Lease between the Registrant and Red Branch Center, LLC made September 13, 2000, constituting Exhibit 10.8 to the Annual Report on Form 10-KSB filed with the SEC on April 2, 2001, is hereby incorporated by reference.   |

| 10.6 | Separation Agreement between the Registrant and Tate & Lyle Fermentation Products Ltd. dated as of October 31, 2007, constituting Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 6, 2007, is hereby incorporated by reference.  |
|------|--|
| 10.7 | Limited Liability Company Agreement dated as of January 8, 2009 between Archer-Daniels-Midland Company and the Registrant, constituting Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on January 21, 2009, is hereby incorporated by reference. [Portions of this exhibit have been omitted pursuant to a request for confidential treatment.] |
| 21.1 | Subsidiaries*  |
| 31.1 | Rule 13a-14(a) or 15d-14(a) Certification of the Registrant's principal executive officer.*  |
| 31.2 | Rule 13a-14(a) or 15d-14(a) Certification of the Registrant's principal financial officer.*  |
| 32.1 | Rule 13a-14(b) or 15d-14(b) Certification of the Registrant's principal executive officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Rule 906 of the Sarbanes-Oxley   |

Rule 13a-14(b) or 15d-14(b) Certification of the Registrant's principal financial officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Rule 906 of the Sarbanes-Oxley Act of 2002.\*

Act of 2002.\*

<sup>\*</sup>Filed herewith

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors IGENE Biotechnology, Inc. Columbia, Maryland

We have audited the accompanying consolidated balance sheets of IGENE Biotechnology, Inc. as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' deficiency and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of IGENE Biotechnology, Inc. as of December 31, 2009 and 2008, and the results of its operations and cash flows for the periods described above in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 13 to the financial statements, the Company has suffered recurring losses from operations which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters also are described in Note 13. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ M&K CPAS, PLLC

M&K CPAS, PLLC

www.mkacpas.com Houston, Texas

March 31, 2010

## IGENE Biotechnology, Inc. and Subsidiary Consolidated Balance Sheets

## December 31,

|  | 2009                | 2008         |
|--|---------------------|--------------|
| ASSETS   |                     |              |
| CURRENT ASSETS   |                     |              |
| Cash and cash equivalents  | \$ 1,295,222        | \$ 1,488,011 |
| Accounts receivable  | 1,929               | 1,045,767    |
| Inventory  | ,<br>               | 2,398,520    |
| Due from Naturxan – related party                                  | 2,318,085           |              |
| Prepaid expenses and other current assets                          | 44,452              | 23,702       |
| TOTAL CURRENT ASSETS   | 3,659,688           | 4,956,000    |
| Property and equipment, net  | 852,894             | 831,838      |
| 5 year non-compete, net  | 92,386              | 123,181      |
| Intellectual property  | 149,670             | 149,670      |
| Other assets   | 5,125               | 5,125        |
| TOTAL ASSETS   | <u>\$ 4,759,763</u> | \$ 6,065,814 |
| LIABILITIES AND STOCKHOLDERS' DEFICIENCY                           |                     |              |
| CURRENT LIABILITIES  |                     |              |
| Accounts payable and accrued expenses                              | \$ 465,405          | \$ 2,849,455 |
| Guarantee in debt of Naturxan – related party                      | 1,094,502           |              |
| TOTAL CURRENT LIABILITIES  | 1,559,907           | 2,849,455    |
| LONG-TERM DEBT   |                     |              |
| Notes payable, net   | 363,874             | 353,598      |
| Contingent liability on joint venture separation                   | 5,000,000           | 5,000,000    |
| Accrued interest   | 338,059             | 307,247      |
| REDEEMABLE PREFERRED STOCK   |                     |              |
| Carrying amount of redeemable preferred stock, 8% cumulative,      |                     |              |
| convertible, voting, series A, \$0.01 par value per share.         |                     |              |
| Stated value \$21.60 and \$20.96, respectively per share.          |                     |              |
| Authorized 1,312,500 shares; issued and outstanding 11,134 shares. | 240.404             | 222 255      |
| Redemption amount \$240,494 and \$233,377, respectively.           | <u>240,494</u>      | 233,377      |
| TOTAL LIABILITIES  | 7,502,334           | 8,743,677    |
| COMMITMENTS AND CONTINGENCIES                                      |                     |              |
| STOCKHOLDERS' DEFICIENCY   |                     |              |
| Common stock \$0.01 par value per share. Authorized                |                     |              |
| 3,000,000,000 shares; issued and outstanding 1,560,404,297         |                     |              |
| and 1,518,503,841 shares respectively                              | 15,604,043          | 15,185,038   |
| Additional paid-in capital   | 34,466,644          | 34,885,649   |
| Accumulated deficit  | (52,871,514)        | (52,730,767) |
| Accumulated other comprehensive income (loss)                      | <u>58,256</u>       | (17,783)     |
| TOTAL STOCKHOLDERS' DEFICIENCY                                     | (2,742,571)         | (2,677,863)  |
| TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIENCY                     | \$ 4,759,763        | \$ 6,065,814 |

## IGENE Biotechnology, Inc. and Subsidiary Consolidated Statements of Operations

## December 31,

|  | 2009                | 2008                  |
|--|---------------------|-----------------------|
| REVENUE  |                     |                       |
| Sales  | \$ 3,957,903        | \$ 7,644,477          |
| Cost of sales  | 2,942,340           | 6,395,062             |
| GROSS PROFIT   | 1,015,563           | 1,249,415             |
| LOSS OF JOINT VENTURE  | (1,094,502)         |                       |
| OPERATING EXPENSES   |                     |                       |
| Marketing and selling  | 387,916             | 731,094               |
| Research, development and pilot plant                                      | 1,851,118           | 1,655,908             |
| General and administrative   | 838,062             | 1,050,703             |
| Less expenses reimbursed by Joint Venture                                  | (2,086,166)         |                       |
| TOTAL OPERATING EXPENSES   | 990,930             | 3,437,705             |
| OPERATING (LOSS)   | (1,069,869)         | (2,188,290)           |
| OTHER INCOME   | 1,026,642           | 225,813               |
| INTEREST EXPENSE (including amortization of debt                           |                     |                       |
| discount of \$10,276 for 2009, and \$1,294,680 for 2008)                   | (97,520)            | (2,028,460)           |
| NET (LOSS)   | \$ (140,747)        | \$ (3,990,937)        |
| OTHER COMPREHENSIVE INCOME (LOSS)  |                     |                       |
| OTHER COMPREHENSIVE INCOME (LOSS) Foreign exchange translation gain (loss) | 76,039              | (17,783)              |
| TOTAL GOLDDINGNELOGG   | φ (64. <b>5</b> 00) | ¢ (4.000.700)         |
| TOTAL COMPREHENSIVE LOSS   | <u>\$ (64,708)</u>  | <u>\$ (4,008,720)</u> |
| NET (LOSS) PER COMMON SHARE BASIC AND FULLY DILUTED                        | 9 \$ 0.00           | \$ (0.02)             |
|  |                     |                       |
| WEIGHTED AVERAGE SHARES OUTSTANDING  | 1,537,789,530       | <u>187,037,119</u>    |

## IGENE Biotechnology, Inc. and Subsidiary Consolidated Statements of Stockholders' Deficiency Years ended December 31, 2009 and 2008

|   | Common # Shares | 1 Stock Amount | Additional<br>Paid-in<br>Capital | Accumulated Deficit | Other<br>Comprehensive<br><u>Income (Loss)</u> | Total Stockholders' Deficiency |
|---|-----------------|----------------|----------------------------------|---------------------|--|--------------------------------|
| Balance at December 31, 2007            | 110,337,072     | \$ 1,103,371   | \$33,276,687                     | \$(48,739,830)      | \$   | <u>\$(14,359,772)</u>          |
| Exchange of debt for equity             | 645,956,606     | 6,459,566      | 1,765,419                        |                     |  | 8,224,985                      |
| Exchange of debt for equity             | 762,210,163     | 7,622,101      | (156,457)                        |                     |  | 7,465,644                      |
| Loss due to currency translation        |                 |                |                                  |                     | (17,783)                                       | (17,783)                       |
| Net loss for 2008                       |                 |                |                                  | (3,990,937)         |  | (3,990,937)                    |
| Balance at December 31, 2008            | 1,518,503,841   | \$15,185,038   | \$34,885,649                     | \$(52,730,767)      | \$ (17,783)                                    | \$ (2,677,863)                 |
| Exchange of employee options for equity | 41,900,456      | 419,005        | (419,005)                        |                     |  |                                |
| Gain due to currency translation        |                 |                |                                  |                     | 76,039   | 76,039                         |
| Net loss for 2009                       |                 |                |                                  | (140,747)           |  | (140,747)                      |
| Balance at December 31, 2009            | 1,560,404,297   | \$15,604,043   | \$34,466,644                     | \$(52,871,514)      | \$ 58,256                                      | \$ (2,742,571)                 |

## IGENE Biotechnology, Inc. and Subsidiary Consolidated Statements of Cash Flows

December 31,

|  |           | 2009                   |           | 2008                   |
|--|-----------|------------------------|-----------|------------------------|
| CASH FLOWS FROM OPERATING ACTIVITIES   |           |                        |           |                        |
| Net (loss)   | \$        | (140,747)              | \$        | (3,990,937)            |
| Adjustments to reconcile net loss to net   |           |                        |           |                        |
| cash provided by operating activities:   |           |                        |           |                        |
| Amortization of debt discount  |           | 10,276                 |           | 1,294,680              |
| Depreciation   |           | 150,723                |           | 107,821                |
| Loss of joint venture  |           | 1,094,502              |           |                        |
| Gain on forgiveness of debt  |           | (1,025,741)            |           |                        |
| Advances to joint venture  |           | (2,318,085)            |           |                        |
| Amortizations of customer contracts and non-compete  |           | 30,795                 |           | 264,454                |
| Increase in preferred stock for cumulative dividend  |           |                        |           |                        |
| classified as interest   |           | 7,117                  |           | 7,134                  |
| Decrease (increase) in:  |           |                        |           |                        |
| Accounts receivable  |           | 1,043,838              |           | 1,673,117              |
| Inventory  |           | 2,398,520              |           | 5,661,257              |
| Prepaid expenses and other assets  |           | (20,750)               |           | 14,649                 |
| Increase (decrease) in:  |           |                        |           |                        |
| Accounts payable and other accrued expenses  |           | (1,327,497)            |           | (4,326,565)            |
| NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES   |           | (97,049)               | _         | 705,610                |
| CASH FLOWS FROM INVESTING ACTIVITIES  Cash used for purchase of property and equipment  NET CASH USED IN INVESTING ACTIVITIES        |           | (171,779)<br>(171,779) | _         | (226,166)<br>(226,166) |
| CASH FLOWS FROM FINANCING ACTIVITIES   |           |                        |           |                        |
| NET CASH PROVIDED BY FINANCING ACTIVITIES  |           |                        |           |                        |
| GAIN (LOSS) DUE TO CURRENCY TRANSLATION  |           | 76,039                 |           | (17,783)               |
| NET DECREASE IN CASH AND CASH EQUIVALENTS  |           | 192,789                |           | 461,661                |
| CASH AND CASH EQUIVALENTS - BEGINNING OF THE YEAR  |           | 1,488,011              | _         | 1,026,350              |
| CASH AND CASH EQUIVALENTS - END OF THE YEAR  | <u>\$</u> | 1,295,222              | <u>\$</u> | 1,488,011              |
| SUPPLEMENTARY DISCLOSURE AND CASH FLOW INFORMATION Cash paid during the year for interest Cash paid during the year for income taxes | \$        |                        | \$        |                        |
| NON-CASH TRANSACTIONS  Exchange of debt for common stock Exchange of options for common stock  | \$<br>\$  | 419,005                | \$<br>\$  | 15,690,630             |

## (1) Summary of Significant Accounting Policies

#### **Nature of Operations**

Igene Biotechnology, Inc. ("Igene") was incorporated under the laws of the State of Maryland on October 27, 1981, as "Industrial Genetics, Inc." Igene changed its name to "IGI Biotechnology, Inc." on August 17, 1983, and to "Igene Biotechnology, Inc." on April 14, 1986. Igene is located in Columbia, Maryland, has an operational subsidiary in Chile, and through February 2003, had a subsidiary in Norway. Igene was formed to develop, produce and market value-added specialty biochemical products. Igene is a supplier of natural astaxanthin, an essential nutrient in different feed applications and a source of pigment for coloring farmed salmon species. Igene is also venturing to supply astaxanthin as a nutraceutical ingredient. Igene is focused on fermentation technology, pharmacology, nutrition and health in its marketing of products and applications worldwide.

Igene has devoted its resources to the development of proprietary processes to convert selected agricultural raw materials or feedstocks into commercially useful and cost effective products for the food, feed, flavor and agrochemical industries. In developing these processes and products, Igene has relied on the expertise and skills of its in-house scientific staff and, for special projects, various consultants.

In an effort to develop a dependable source of production, on March 19, 2003, Tate & Lyle PLC ("Tate") and Igene announced a 50:50 joint venture (the "Joint Venture") to produce AstaXin® for the aquaculture industry. Production utilized Tate's fermentation capability together with the unique technology developed by Igene. Part of Tate's existing Selby, England citric acid facility was modified to include the production of 1,500 tons per annum of astaxanthin.

On October 31, 2007, Igene and Tate entered into a Separation Agreement pursuant to which the Joint Venture was terminated. As part of the Separation Agreement, Igene sold to Tate its 50% interest in the Joint Venture and the Joint Venture sold to Igene its intellectual property, inventory and certain assets and lab equipment utilized by the Joint Venture as well as Igene's subsidiary in Chile. The purchase price paid by Tate to Igene for its 50% interest in the Joint Venture was 50% of the Joint Venture's net working capital. The purchase price paid by Igene for the inventory was an amount equal to 50% of the Joint Venture's net working capital, the assumption of various liabilities and the current market price of the inventory, less specified amounts. In addition, Igene agreed to pay to Tate an amount equal to 5% of Igene's gross revenues from the sale of astaxanthin up to a maximum of \$5,000,000. Tate agreed for a period of five years not to engage in the astaxanthin business.

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed a joint venture ("Naturxan") to manufacture and sell astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in Naturxan and has equal representation on the Board of Managers of Naturxan.

## **Principles of Consolidation**

The accounts of our other wholly-owned subsidiary, Igene Chile, are included in the consolidation of these financial statements. All significant intercompany accounts and transactions have been eliminated in consolidation.

## Cash and Cash Equivalents

Igene considers cash equivalents to be short-term, highly liquid investments that have original maturities of less than 90 days. These include interest bearing money market accounts. There were no cash equivalents as of December 31, 2009 or 2008.

## **Accounts Receivable**

Accounts receivable are stated at the amount management expects to collect from the outstanding balances. Management provides for probable uncollectible amounts through a charge to earnings and a credit to a valuation allowance based upon its assessment of the current collection status of individual accounts. Delinquent amounts that are outstanding after management has conducted reasonable collection efforts are written off through a charge to the valuation allowance and a credit to accounts receivable. Management has determined no allowance was necessary as of December 31, 2009 or 2008.

#### **Research and Development Costs**

For financial reporting purposes, research, development and pilot plant scale-up costs are charged to expense as incurred, consistent with current accounting literature.

## **Property and Equipment**

Property and equipment are stated at cost less accumulated depreciation and amortization computed using the straight-line method. Premises and equipment are depreciated over the useful lives of the assets, which generally range from three to seven years for furniture, fixtures and equipment, three to five years for computer software and hardware. Leasehold improvements are amortized over the terms of the respective leases or the estimated useful lives of the improvements, whichever is shorter. The cost of major renewals and betterments are capitalized, while the costs of ordinary maintenance and repairs are expensed as incurred.

## **Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

## **Foreign Currency Translation and Transactions**

Since the day-to-day operations of Igene's foreign subsidiary in Chile are dependent on the economic environment of the parent's currency, the financial position and results of operations of Igene's foreign subsidiary are determined using Igene's reporting currency (U.S. dollars) as the functional currency. All exchange gains and losses from remeasurement of monetary assets and liabilities that are not denominated in U.S. dollars are recognized currently in other comprehensive income. All transactional gains and losses are part of income or loss from operations pursuant to current accounting literature.

#### **Fair Value of Financial Instruments**

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable, and short-term debt approximate fair value because of the relatively short maturity of these instruments. Management believes the carrying amount of long-term debt approximates fair value because of similar current rates at which Igene could borrow funds with consistent remaining maturities.

## **Accounting for Stock-Based Compensation**

Stock issued to employees is recorded at the fair value of the shares granted based upon the closing market price of Igene's stock at the measurement date and recognized as compensation expense over the applicable requisite service period. Warrants granted to non-employees are recorded at the estimated fair value of the warrants granted using the Black-Scholes pricing model and recognized as general and administrative expense over the applicable requisite service period.

#### **Credit Risk**

Igene does not require collateral from its customers with respect to accounts receivable but performs periodic credit evaluations of such customers' financial conditions. Igene determines any required allowance by considering a number of factors including lengths of time accounts receivable are past due and previous loss history. Igene provides reserves for accounts receivable when they become uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts.

Igene's cash may exceed FDIC protection levels at different points throughout the year; management believes the risk associated with this possible exposure is minimal. Igene has exceeded FDIC protection limits at December 31, 2009 and 2008.

## **Long-Lived Assets**

The Company reviews goodwill and certain intangible assets periodically for impairment and an impairment charge is recorded in the periods in which the recorded carrying value of goodwill and certain intangibles is more than its estimated fair value. The goodwill impairment test is performed annually, or more frequently, in the case of other events that indicate a potential impairment.

The Company reviews the recoverability of its long-lived assets when events or changes in circumstances occur that indicate that the carrying value of the asset may not be recoverable. Evaluation of possible impairment is based on the Company's ability to recover the asset from the expected future pre-tax cash flows (undiscounted and without interest charges) of the related operations. If the expected undiscounted pre-tax cash flows are less than the carrying amount of such asset, an impairment loss is recognized for the difference between the estimated fair value and carrying amount of the asset. Igene performed an impairment test on its acquired tangible and intangible assets at December 31, 2009 and 2008 and determined no impairment was necessary.

## **Inventories**

Inventories consist of finished goods, and are stated based on the valuation received at the close of the separation of the Joint Venture and are at the lower of cost or market. Inventory is tracked by specific lot number.

#### **Income Taxes**

Igene utilizes the asset and liability method in accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for operating loss and tax credit carry forwards and for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the results of operations in the period that includes the enactment date. A valuation allowance

is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not that the value of such assets will be realized.

## **Revenue Recognition**

Igene's revenue recognition policy is consistent with the criteria set forth in Staff Accounting Bulletin (SAB) 104, "Revenue Recognition in Financial Statements," for determining when revenue is realized or realizable and earned. In accordance with the requirements of SAB 104, the Company recognizes revenue when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the seller's price is fixed or determinable, and (4) collectability is reasonably assured.

## **Intangible Assets**

Intangible assets with estimable useful lives are amortized over respective estimated useful lives, and reviewed for impairment in accordance with current accounting literature. Igene has recorded values for customer contracts, intellectual property and a non-compete contract received as part of the separation from Tate & Lyle. These values are based on the independent valuation received at the close of the venture. As this valuation was received after December 31, 2007, and deemed to be accurate as of that date, no amortization was taken for 2007, and has been taken in 2008 and 2009.

Customer contracts are for a term of one year and the value was amortized over 2008. The non-compete contract is for a term of five years and will be amortized over the life of the contract. The original value of the contract was \$153,977 at December 31, 2007, of which \$30,796 was amortized during 2008 and 2009. Intellectual property will be tested annually for impairment, and any impaired value shall be written-off. The intellectual property represents the technology used in the production of astaxanthin as this asset is currently creating revenue in excess of its value. Management has determined its life is currently indefinite. At December 31, 2009 the value was recorded at \$149,670. It was determined based on future revenue expectations that this was not impaired.

## **New Accounting Pronouncements**

On January 1, 2009, the Company adopted a new accounting standard issued by the FASB related to accounting for business combinations using the acquisition method of accounting (previously referred to as the purchase method). Among the significant changes, this standard requires a redefining of the measurement date of a business combination, expensing direct transaction costs as incurred, capitalizing inprocess research and development costs as an intangible asset and recording a liability for contingent consideration at the measurement date with subsequent re-measurements recorded in the results of operations. This standard also requires costs for business restructuring and exit activities related to the acquired company to be included in the post-combination financial results of operations and also provides new guidance for the recognition and measurement of contingent assets and liabilities in a business combination. In addition, this standard requires several new disclosures, including the reasons for the business combination, the factors that contribute to the recognition of goodwill, the amount of acquisition related third-party expenses incurred, the nature and amount of contingent consideration, and a discussion of pre-existing relationships between the parties The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

On January 1, 2009, the Company adopted a new accounting standard issued by the FASB that establishes accounting and reporting standards for noncontrolling interests in a subsidiary in consolidated financial statements, including deconsolidation of a subsidiary. This standard requires entities to record the acquisition of noncontrolling interests in subsidiaries initially at fair value The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

On January 1, 2009, the Company adopted a new accounting standard issued by the FASB related to the disclosure of derivative instruments and hedging activities. This standard expanded the disclosure requirements about an entity's derivative financial instruments and hedging activities, including qualitative disclosures about objectives and strategies for using derivatives, quantitative disclosures about fair value amounts of and gains and losses on derivative instruments, and disclosures about credit-risk-related contingent features in derivative instruments. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

Effective June 30, 2009, the Company adopted a newly issued accounting standard related to accounting for and disclosure of subsequent events in its consolidated financial statements. This standard provides the authoritative guidance for subsequent events that was previously addressed only in United States auditing standards. This standard establishes general accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued and requires the Company to disclose the date through which it has evaluated subsequent events and whether that was the date the financial statements were issued or available to be issued. This standard does not apply to subsequent events or transactions that are within the scope of other applicable GAAP that provide different guidance on the accounting treatment for subsequent events or transactions. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In June 2009, the FASB issued an amendment to the accounting standards related to the consolidation of variable interest entities ("VIE"). This standard provides a new approach for determining which entity should consolidate a VIE, how and when to reconsider the consolidation or deconsolidation of a VIE and requires disclosures about an entity's significant judgments and assumptions used in its decision to consolidate or not consolidate a VIE. Under this standard, the new consolidation model is a more qualitative assessment of power and economics that considers which entity has the power to direct the activities that "most significantly impact" the VIE's economic performance and has the obligation to absorb losses or the right to receive benefits that could be potentially significant to the VIE. This standard is effective for the Company as of January 1, 2010 and the Company does not expect the impact of its adoption to be material to its consolidated financial statements.

In October 2009, the FASB issued an amendment to the accounting standards related to the accounting for revenue in arrangements with multiple deliverables including how the arrangement consideration is allocated among delivered and undelivered items of the arrangement. Among the amendments, this standard eliminates the use of the residual method for allocating arrangement consideration and requires an entity to allocate the overall consideration to each deliverable based on an estimated selling price of each individual deliverable in the arrangement in the absence of having vendor-specific objective evidence or other third party evidence of fair value of the undelivered items. This standard also provides further guidance on how to determine a separate unit of accounting in a multiple-deliverable revenue arrangement and expands the disclosure requirements about the judgments made in applying the estimated selling price method and how those judgments affect the timing or amount of revenue recognition. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In October 2009, the FASB issued an amendment to the accounting standards related to certain revenue arrangements that include software elements. This standard clarifies the existing accounting guidance such that tangible products that contain both software and non-software components that function together to deliver the product's essential functionality, shall be excluded from the scope of the software revenue recognition accounting standards. Accordingly, sales of these products may fall within the scope of other revenue recognition accounting standards or may now be within the scope of this standard and may require an allocation of the arrangement consideration for each element of the arrangement. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In January 2010, the FASB issued an amendment to the accounting standards related to the disclosures about an entity's use of fair value measurements. Among these amendments, entities will be required to provide enhanced disclosures about transfers into and out of the Level 1(fair value determined based on quoted prices in active markets for identical assets and liabilities) and Level 2 (fair value determined based on significant other observable inputs) classifications, provide separate disclosures about purchases, sales, issuances and settlements relating to the tabular reconciliation of beginning and ending balances of the Level 3 (fair value determined based on significant unobservable inputs) classification and provide greater disaggregation for each class of assets and liabilities that use fair value measurements. Except for the detailed Level 3 roll-forward disclosures, the new standard is effective for the Company for interim and annual reporting periods beginning after December 31, 2009. The requirement to provide detailed disclosures about the purchases, sales, issuances and settlements in the roll-forward activity for Level 3 fair value measurements is effective for the Company for interim and annual reporting periods beginning after December 31, 2010. The Company does not expect that the adoption of this new standard will have a material impact to its consolidated financial statements.

## (2) Non-Cash Investing and Financing Activities

On June 16, 2009, the Board of Directors of Igene approved a repurchase of all outstanding employee stock options and warrants. It was agreed to repurchase 51,425,000 options and warrants, using 41,900,456 shares of restricted stock. Holders of options and warrants were contacted and agreements were reached. On July 16, 2009, shares were issued and options and warrants were cancelled.

During November of 2008, Igene commenced the process of offering to exchange common stock to holders of Igene notes, debentures and warrants. The exchanges that occurred resulted in recording of additional paid in capital, pursuant to current accounting literature for related party debt forgiveness, on the termination of the debt in the amount of \$8,649,796. The details are as follows:

Pursuant to the terms of an Indenture dated as of March 31, 1998, as amended (the "Indenture") between Igene and American Stock Transfer & Trust Company, as Trustee (the "Trustee"), Igene issued and sold \$5,000,000 of its 8% notes (the "8% Notes"). Concurrently with the issuance of the 8% Notes, Igene issued, pursuant to a Warrant Agreement by and between Igene and American Stock Transfer & Trust Company (the "Warrant Agent") dated as of March 31, 1998, as amended (the "Warrant Agreement"), 50,000,000 warrants to purchase shares of Igene common stock for \$0.10 per share expiring March 31, 2008. The warrant purchase price under the Warrant Agreement was reduced to \$0.075 per share, and the maturity date of the 8% Notes was extended to March 31, 2006, by an amendment dated March 18, 2003, and approved by the requisite number of holders of the securities.

On March 28, 2006, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2009, and reduced the warrant price under the Warrant Agreement from \$0.075 to \$0.056 per share.

On October 23, 2008, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2019. The warrants under the Warrant Agreement expired as of March 31, 2008.

On December 3, 2008, Igene completed an offering to exchange 145,600 of our shares of common stock, par value \$0.01 per share, for each \$1,000 principal amount of the 8% Notes outstanding and accrued interest thereon. As of that date, \$4,759,767 of 8% Notes principal were outstanding, with \$4,064,450 accrued interest thereon. Of these notes, \$4,436,515 of notes principal with \$3,788,419 of interest were exchanged for 645,956,606 shares of Igene common stock at a price of \$0.005 per share. As a result, additional paid in

capital was recorded for the gain of \$4,995,151 on the retirement, pursuant to current accounting literature for related party debt forgiveness.

On November 28, 2008, Igene commenced an offering to exchange shares of its common stock to holders of its privately held debt and associated warrants. Much of this indebtedness was held by current and past directors and consisted of the following:

The funds to settle the ProBio litigation were provided by Igene's directors. On February 15, 2007, Igene issued and sold \$762,000 in aggregate principal amount of 5% convertible debentures, 50% each to two directors of Igene. These debentures were convertible into shares of Igene's common stock at \$0.02 per share. At the time of the exchange the accrued interest on this debt was \$67,641. All debt and interest under the 5% convertible debentures were exchanged for 66,371,244 shares of common stock.

Igene issued \$3,814,212 of 8% convertible debentures between March 2001 and July 2002. The debt had accrued \$2,204,106 of interest at the time of the exchange. Also, 66,427,650 warrants were issued in connection with the 8% convertible debentures. All of the debt and interest, as well as all of the warrants, were exchanged for 528,578,590 shares of Igene common stock.

Beginning November 16, 1995, and continuing through May 8, 1997, Igene issued promissory notes to certain directors for aggregate consideration of \$1,082,500. These notes specified that at any time prior to repayment the holder had the right to convert the notes to common stock of Igene at prices ranging from \$0.05 per share to \$0.135 per share, based on the market price of common shares at the respective issue dates. The notes were convertible in total into 23,421,273 shares of common stock. At the time of the exchange the debt had accrued interest in the amount of \$832,485. Of the amount outstanding, holders of \$1,041,878 of debt with \$801,269 of accrued interest agreed to exchange their holdings for 147,451,719 shares of Igene common stock. As part of this debt Igene had 60,541,666 warrants outstanding to purchase Igene common stock. 60,301,666 of these warrants were additionally settled in exchange for 19,808,610 shares of Igene common stock.

In total, 762,210,163 shares of Igene common stock were issued in exchange for \$5,618,090 of notes and debentures, \$3,073,015 of related interest, and 126,729,316 related warrants.

During 2009 and 2008, Igene recorded dividends in arrears on its 8% Redeemable Preferred Stock, Series A at \$0.64 per share aggregating \$7,117 and \$7,134, respectively, on such preferred stock, which has been removed from paid-in capital and included in the carrying value of the redeemable preferred stock (see also note 9).

## (3) Concentration of Credit Risk

Igene is potentially subject to the effects of a concentration of credit risk in accounts receivable. The accounts receivable is substantially composed of receivables from two customers, with one of the customers maintaining 58% of the December 31, 2008 receivables balance and a second customer maintaining 39% of the December 31, 2008 receivables balance. Because of the volume of business transacted with these two customers by Igene, Igene's ability to collect its receivables from these customers could adversely affect its business. In order to minimize risk, Igene strictly evaluates the companies to which it extends credit and all prices are denominated in U.S. dollars so as to minimize currency fluctuation risk. Losses due to credit risks in accounts receivable are expected to be immaterial. There were no concentrations of credit risk at December 31, 2009.

## (4) **Property and Equipment**

Property and equipment are stated at cost and are summarized as follows:

|                                    | 2009              | 2008              |
|------------------------------------|-------------------|-------------------|
| Laboratory equipment and fixtures  | \$ 218,878        | \$ 184,744        |
| Idle equipment                     | 866,881           | 793,921           |
| Pilot plant equipment and fixtures | 229,275           | 169,170           |
| Office furniture and fixtures      | 49,501            | 44,920            |
|                                    | 1,393,118         | 1,192,755         |
| Less accumulated depreciation      | (511,641)         | (360,917)         |
|                                    | <u>\$ 852,894</u> | <u>\$ 831,838</u> |

#### (5) Investment in Joint Venture

Igene has recorded a gain of \$1,025,741. This is a one-time occurrence related to a liability recorded in a prior period related to the termination of the joint venture with Tate & Lyle. On February 26, 2009, Igene signed a settlement agreement of past obligations and made a final payment to Tate & Lyle in the amount of \$714,227. At the termination of the joint venture, Igene recorded liabilities of \$890,000 for payments of past payables of the joint venture as well as \$51,000 for costs related to collection of receivables of the joint venture. The expense was recorded when it was thought Igene could be liable for it, but with the exception of the \$5,000,000 liability related to future revenue, Igene has settled its debt to Tate & Lyle.

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed a joint venture (the "ADM JV") to manufacture and sell astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in the ADM JV and has equal representation on the Board of Managers of the ADM JV

ADM has provided a working line of credit to the ADM JV bearing interest at the rate of 4% in excess of the one year LIBOR. As part of the ADM JV agreement both Igene and ADM agreed to provide a Guarantee for 50% of the indebtedness of the new venture Naturxan, LLC, up to \$1,612,500. The \$1,828,444 due from Naturxan is for services provided by Igene to the ADM JV. These fees are payable within 30 days of the receipt of the invoice. Unpaid invoices will accrue interest at the six month LIBOR.

Currently the joint venture is in the process of developing the manufacturing process. Management expects dependable production in 2010. As of the end of the 2009, Igene has not made an investment in the ADM JV.

## (6) Convertible Debentures

On November 28, 2008, Igene commenced an offering to exchange shares of its common stock for its privately held debt and warrants. Much of this liability was held by current and past directors and consisted of the following:

The funds to settle the ProBio litigation were provided by Igene's directors. On February 15, 2007, Igene issued and sold \$762,000 in aggregate principal amount of 5% convertible debentures, 50% each to two directors of Igene. These debentures were convertible into shares of Igene's common stock at \$0.02 per share. At the time of the exchange, the accrued interest on this debt was \$67,641. All debt and interest under the 5% convertible debentures were exchanged for 66,371,244 shares of common stock.

Igene issued \$3,814,212 of 8% convertible debentures between March 2001 and July 2002. The debt had accrued \$2,204,106 of interest at the time of the exchange. Also, 66,427,650 warrants were issued in connection with the 8% convertible debentures. All of the debt and interest, as well as all of the warrants, under the 8% convertible debentures were exchanged for 528,578,590 shares of Igene common stock.

Beginning November 16, 1995, and continuing through May 8, 1997, Igene issued promissory notes to certain directors for aggregate consideration of \$1,082,500. These notes specified that at any time prior to repayment the holder had the right to convert the notes to common stock of Igene at prices ranging from \$0.05 per share to \$0.135 per share, based on the market price of common shares at the respective issue dates. The notes were convertible in total into 23,421,273 shares of common stock. At the time of the exchange, the debt had accrued interest in the amount of \$832,485. Of the amount outstanding, holders of \$1,041,878 of debt with \$801,269 of accrued interest agreed to exchange their holdings for 147,451,719 shares of Igene common stock. As part of this debt, Igene had 60,541,666 warrants outstanding to purchase Igene common stock. 60,301,666 of these warrants were additionally settled in exchange for 19,808,610 shares of Igene common stock.

In total, 762,210,163 shares of Igene common stock were issued in exchange for \$5,618,090 of notes and debentures, \$3,073,015 of related interest, and 126,729,316 related warrants.

## (7) <u>Notes Payable</u>

Pursuant to the terms of an Indenture dated as of March 31, 1998, as amended (the "Indenture") between Igene and American Stock Transfer & Trust Company, as Trustee (the "Trustee"), Igene issued and sold \$5,000,000 of its 8% notes (the "8% Notes"). Concurrently with the issuance of the 8% Notes, Igene issued, pursuant to a Warrant Agreement by and between Igene and American Stock Transfer & Trust Company (the "Warrant Agent") dated as of March 31, 1998, as amended (the "Warrant Agreement"), 50,000,000 warrants to purchase shares of Igene common stock for \$0.10 per share expiring March 31, 2008. The warrant purchase price under the Warrant Agreement was reduced to \$0.075 per share, and the maturity date of the 8% Notes was extended to March 31, 2006, by an amendment dated March 18, 2003, and approved by the requisite number of holders of the securities.

On March 28, 2006, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2009, and reduced the warrant price under the Warrant Agreement from \$0.075 to \$0.056 per share.

On October 23, 2008, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2019. The warrants under the Warrant Agreement expired as of March 31, 2008.

On December 3, 2008, Igene completed an offering to exchange 145,600 of our shares of common stock, par value \$0.01 per share, for each \$1,000 principal amount of the 8% Notes outstanding and accrued interest thereon. As of that date, \$4,759,767 of 8% Notes principal were outstanding, with \$4,064,450 accrued interest thereon. Of these notes, \$4,436,515 of notes principal with \$3,788,419 of interest were exchanged for 645,956,606 shares of Igene common stock at a price of \$0.005 per share. As a result, additional paid in capital was recorded to recognize the gain of \$4,995,151 on the retirement, pursuant to current accounting literature for related party debt forgiveness.

Combined aggregate amounts of maturities for all notes payable are in 2019.

Notes Payable was summarized as follows as of December 31, 2009:

|  |             | Principal          | Accrued<br>Interest      |
|--|-------------|--------------------|--------------------------|
| Long-term unsecured notes payable, bearing interest at prime, scheduled to mature March 31, 2003, extended to March 31,            |             | Тинстраг           | <br>merest               |
| 2019, convertible into common stock Long-term unsecured notes payable, bearing interest at 8%, scheduled to mature March 31, 2003, | \$          | 40,622             | \$<br>33,971             |
| extended to March 31, 2019   | \$          | 323,252<br>363,874 | \$<br>304,088<br>338,059 |
| Notes Payable was summarized as follows as of December 31  | , 2008:     |                    | Accrued                  |
| Long-term unsecured notes payable, bearing interest  |             | Principal          | <br>Interest             |
| at prime, scheduled to mature March 31, 2003, extended to March 31, 2019, convertible into common stock                            | \$          | 40,622             | \$<br>31,432             |
| Long-term unsecured notes payable, bearing interest at 8%, scheduled to mature March 31, 2003,                                     |             |                    |                          |
| extended to March 31, 2019   |             | 323,252            | <br>275,815              |
| Less unamortized debt discount   | <del></del> | (10,276)           | <br>                     |
|  | \$          | 353,598            | \$<br>307,247            |

## (8) Redeemable Preferred Stock

Each share of redeemable preferred stock is entitled to vote on all matters requiring shareholder approval as one class together with holders of common stock. Each share of redeemable preferred stock is entitled to two votes and each share of common stock is entitled to one vote.

Redeemable preferred stock is convertible at the option of the holder at any time, unless previously redeemed, into shares of Igene's common stock at the rate of two shares of common stock for each share of preferred stock (equivalent to a conversion price of \$4.00 per common share), subject to adjustment under certain conditions.

Shares of redeemable preferred stock are redeemable for cash in whole or in part at the option of Igene at any time at the stated value plus accrued and unpaid dividends to the redemption date. Dividends are cumulative and payable quarterly on January 1, April 1, July 1 and October 1, since January 1, 1988.

Mandatory redemption of Series A preferred stock was to be made in October 2002. As Igene is operating at a negative cash flow and negative earnings, Maryland law does not allow for the redemption of these shares. As such they will remain outstanding and continue to accrue dividends until such time as Igene is able to undertake redemption, though there can be no assurance this will develop. Igene does not expect to be able to redeem the Series A preferred stock unless, after giving effect to such redemption (a) the Company would be able to pay its indebtedness in the usual course of business and (b) the Company's total assets would be greater than the sum of its total liabilities plus the amount that would be needed if the

Company were to be dissolved as of the time of the distribution, to satisfy the preferential rights upon dissolution of stockholders whose preferential rights on dissolution are superior to those receiving the distribution.

In December 1988, as part of an overall effort to contain costs and conserve working capital, Igene suspended payment of the quarterly dividend on its preferred stock. Resumption of the dividend will require significant improvements in cash flow. Unpaid dividends cumulate for future payment or addition to the liquidation preference or redemption value of the preferred stock. As of December 31, 2009, total dividends in arrears on Igene's preferred stock equal \$151,422 (or \$13.60 per share) on Igene's Series A and are included in the carrying value of the redeemable preferred stock. The redemption amount of shares is \$8.00 per share plus the accrued dividends. For the 11,134 shares outstanding this equated to a value of \$240,494 and \$233,377 for the years ended December 31, 2009 and 2008, respectively.

## (9) Stockholders' Equity

## **Options**

In June of 2001, the stockholders approved the 2001 Stock Option Plan (the "2001 Plan"), which succeeds the 1997 Stock Option Plan (the "1997 Plan"), which succeeded Igene's 1986 Stock Option Plan (the "1986 Plan"), as amended. All outstanding, unexercised options granted under the 1997 Plan and the 1986 Plan have expired. The number of shares authorized for issuance under the 2001 Plan was 55,000,000, and amended at the November 2008 stockholders' meeting to 300,000,000.

The following is a summary of options granted and outstanding under the plan as of December 31, 2009 and 2008:

|  | 2009       |           | 2008                           |            |           |                                 |
|--|------------|-----------|--------------------------------|------------|-----------|---------------------------------|
|  |            | A         | eighted<br>Average<br>Exercise |            | A         | Veighted<br>Average<br>Exercise |
|  | Number     |           | Price                          | Number     |           | Price                           |
| Options outstanding and exercisable,                   |            |           |                                |            |           |                                 |
| beginning of year                                      | 40,605,000 | \$        | 0.059                          | 44,845,000 | \$        | 0.059                           |
| Options granted  |            |           |                                |            |           |                                 |
| Options exercised Options forfeited, or withdrawn with |            |           |                                |            |           |                                 |
| consent of holders                                     | 40,605,000 | \$        | 0.059                          |            |           |                                 |
| Options expired  |            |           |                                | 4,240,000  |           | 0.100                           |
| Options outstanding<br>and exercisable,<br>end of year |            | <u>\$</u> |                                | 40,605,000 | <u>\$</u> | 0.059                           |

#### **Common Stock**

At December 31, 2009, 11,000,000 shares of authorized but unissued common stock were reserved for issuance upon the exercise of outstanding warrants, 40,605,000 shares of authorized but unissued common stock were reserved for exercise pursuant to outstanding equity awards under the 2001 Stock Option Plan, 22,268 shares of authorized but unissued common stock were reserved for issuance upon conversion of Igene's outstanding preferred stock, and 656,428 shares of authorized but unissued stock were reserved for issuance upon conversion of outstanding convertible notes.

During November of 2008, Igene commenced offerings to exchange common stock to holders of Igene notes, debentures and warrants. The exchanges that occurred resulted in a gain on the termination of the debt in the amount of \$8,399,925. The details are as follows:

Pursuant to the terms of an Indenture dated as of March 31, 1998, as amended (the "Indenture") between Igene and American Stock Transfer & Trust Company, as Trustee (the "Trustee"), Igene issued and sold \$5,000,000 of its 8% notes (the "8% Notes"). Concurrently with the issuance of the 8% Notes, Igene issued, pursuant to a Warrant Agreement by and between Igene and American Stock Transfer & Trust Company (the "Warrant Agent") dated as of March 31, 1998, as amended (the "Warrant Agreement"), 50,000,000 warrants to purchase shares of Igene common stock for \$0.10 per share expiring March 31, 2008. The warrant purchase price under the Warrant Agreement was reduced to \$0.075 per share, and the maturity date of the 8% Notes was extended to March 31, 2006, by an amendment dated March 18, 2003 and approved by the requisite number of holders of the securities.

On March 28, 2006, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2009, and reduced the warrant price under the Warrant Agreement from \$0.075 to \$0.056 per share.

On October 23, 2008, Igene and American Stock Transfer & Trust Company, in its capacity as Trustee and Warrant Agent, entered into a Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates that extended the maturity date of the 8% Notes to March 31, 2019. The warrants under the Warrant Agreement expired as of March 31, 2008.

On December 3, 2008, Igene completed an offering to exchange 145,600 of our shares of common stock, par value \$0.01 per share, for each \$1,000 principal amount of the 8% Notes outstanding and accrued interest thereon. As of that date, \$4,759,767 of 8% Notes principal were outstanding, with \$4,064,450 accrued interest thereon. Of these notes, \$4,436,515 of notes principal with \$3,788,419 of interest were exchanged for 645,956,606 shares of Igene common stock at a price of \$0.005 per share. As a result, additional paid in capital was recorded to recognize the gain of \$4,995,151 on the retirement, pursuant to current accounting literature for related party debt forgiveness.

On November 28, 2008, Igene commenced an offering to exchange shares of Igene common stock to holders of Igene's privately held debt and the associated warrants. Igene's liabilities consisted of the following:

The funds to settle the ProBio litigation were provided by Igene's directors. On February 15, 2007, Igene issued and sold \$762,000 in aggregate principal amount of 5% convertible debentures, 50% each to two directors of Igene. These debentures were convertible into shares of Igene's common stock at \$0.02 per share. At the time of the exchange the accrued interest on this debt was \$67,641. All debt and interest under the 5% convertible debentures were exchanged for 66,371,244 shares of common stock.

Igene issued \$3,814,212 of 8% convertible debentures between March 2001 and July 2002. The debt had accrued \$2,204,106 of interest at the time of the exchange. Also, 66,427,650 warrants were issued in connection with the 8% convertible debentures. All of the debt and interest, as well as all of the warrants, were exchanged for 528,578,590 shares of Igene common stock.

Beginning November 16, 1995, and continuing through May 8, 1997, Igene issued promissory notes to certain directors for aggregate consideration of \$1,082,500. These notes specified that at any time prior to repayment the holder had the right to convert the notes to common stock of Igene at prices ranging from \$0.05 per share to \$0.135 per share, based on the market price of common shares at the respective issue dates. The notes were convertible in total into 23,421,273 shares of common stock. At the time of the exchange the debt had accrued interest in the amount of \$832,485. Of the amount outstanding holders of \$1,041,878 of debt with \$801,269 of accrued interest agreed to exchange their holdings for 147,451,719 shares of Igene common stock. As part of this debt Igene had 60,541,666 warrants outstanding to purchase Igene common stock. 60,301,666 of these warrants were additionally settled in exchange for 19,808,610 shares of Igene common stock.

In total, 762,210,163 shares of Igene common stock were issued in exchange for \$5,618,090 of notes and debentures, \$3,073,015 of related interest, and 126,729,316 related warrants. Igene recorded additional paid in capital, pursuant to current accounting literature for related party debt forgiveness, to recognize the gain on termination of this private debt in the amount of \$3,832,921. This gain plus the gain on the public notes of \$4,567,004 resulted in the \$8,399,925.

## **Preferred Stock**

As of December 31, 2009 and 2008, respectively, total dividends in arrears on Igene's preferred stock equal \$151,422 (or \$13.60 per share) and \$144,296 (or \$12.96 per share) on Igene's Series A and are included in the carrying value of the redeemable preferred stock.

## (10) Net Loss Per Common Share

Basic net loss per common share for 2009 and 2008 is based on 1,537,789,530 and 187,037,119 weighted average shares, respectively. For purposes of computing net loss per common share, the amount of net loss has been increased by dividends declared and cumulative undeclared dividends in arrears on preferred stock.

Common stock equivalents, including: options, warrants, convertible debt, convertible preferred stock, and exercisable rights have not been included in the computation of earnings per share in 2009 or 2008 because to do so would have been anti-dilutive. Potentially dilutive shares totaled 678,698 and 52,283,696 as of December 31, 2009 and 2008, respectively.

## (11) Commitments

Igene is obligated for office and laboratory facilities and other rentals under operating lease agreements, which expire in 2011. The base annual rents are currently approximately \$103,000, which increase to \$106,000 by the end of the lease term, plus the Company's share of taxes, insurance and other costs. Annual rent expense relating to the leases for the years ended December 31, 2009 and 2008 approximated \$131,520 and \$124,470, respectively. As per current accounting literature, rent expenses will be recorded on a straight line basis.

Future minimum rental payments, in the aggregate and for each of the next two years are as follows:

| Year  | Amount    |
|-------|-----------|
| 2010  | 106,000   |
| 2011  | 9,000     |
|       |           |
| Total | \$115,000 |

## (12) Income Taxes

No income tax benefit or deferred tax asset is reflected in the financial statements for 2009 and 2008, nor are there any uncertain tax provisions. Deferred tax assets are recognized for future deductible temporary difference and tax loss carry forwards if their realization is "more likely than not." Igene had no uncertain tax positions as of December 31, 2009.

At December 31, 2009, Igene has federal and state net operating loss carry-forwards of approximately \$27,690,000 that expire at various dates from 2009 through 2028.

The sources of the deferred tax asset are approximately as follows:

| Net operating loss carry-forward benefit Valuation allowance | \$<br>9,356,000<br>(9,356,000) |
|--|--------------------------------|
| Deferred tax asset, net                                      | \$<br>                         |

# (13) Going Concern

Igene has incurred net losses in each year of its existence, aggregating approximately \$52,800,000 from inception to December 31, 2009 and its liabilities exceeded its assets by approximately \$2,700,000 at that date. These factors indicate that Igene will not be able to continue in existence unless it is able to raise additional capital and attain profitable operations.

On January 8, 2009, Igene entered into an agreement with Archer-Daniels-Midland Company ("ADM") pursuant to which the Company and ADM formed Naturxan to manufacture and sell astaxanthin and derivative products throughout the world. Each of the Company and ADM has a 50% ownership interest in Naturxan and has equal representation on the Board of Managers of the Naturxan. Igene hopes this will provide profitable operations.

## (14) Nature of Risks and Concentrations

Revenue during 2009 and 2008 were derived from sales of the product AstaXin®. The majority of the 2009 and 2008 sales were to fish producers in the aquaculture industry.

The preceding concentrations subject Igene to certain risks. For example, it is considered at least reasonably possible that any particular customer, distributor, product line, or provider of services or facilities could be lost in the near term.

## (15) Retirement Plan

Effective February 1, 2004, Igene discontinued use of its Simple Retirement Plan and began use of a 401K savings/retirement plan, or 401(k) Plan. The 401(k) Plan permits our eligible employees to defer annual compensation, subject to limitations imposed by the Internal Revenue Code. All employees that have been employed for six months are eligible for the plan. The plan permits elective contributions by the Company's eligible employees based under the Internal Revenue Code, which are immediately vested and non-forfeitable upon contribution to the 401(k) Plan. Effective January 1, 2004, Igene made an elective contribution, subject to limitations, of 4% of each eligible employee's compensation for each year. For 2008, the percentage was increased to 5%. Igene's contributions to the plan for 2009 and 2008 were \$47,656 and \$42,657, respectively, which is reflected as an expense in the statement of operations.

## (16) Forgiveness of Debt

Igene has recorded a gain of \$1,025,741. This is a one-time occurrence related to a liability recorded in a prior period related to the termination of the joint venture with Tate & Lyle. On February 26, 2009, Igene signed a settlement agreement of past obligations and made a final payment to Tate & Lyle in the amount of \$714,227. At the termination of the joint venture, Igene recorded liabilities of \$890,000 for payments of past payables of the joint venture as well as \$51,000 for costs related to collection of receivables of the joint venture. The expense was recorded when it was thought Igene could be liable for it, but with the exception of the \$5,000,000 liability related to future revenue (see Note 2), Igene has settled its debt to Tate & Lyle.

## (17) Subsequent Events

Subsequent events have been evaluated by management through March 31, 2010, the date the financial statements were issued and no material subsequent events existed.

# **SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

IGENE Biotechnology, Inc.

(Registrant)

By /S/STEPHEN F. HIU

STEPHEN F. HIU President, Chief Technical Officer and Treasurer

Date March 31, 2010

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| Signature  | <u>Title</u>   | <u>Date</u>    |
|--|--|----------------|
| /S/ STEPHEN F. HIU<br>STEPHEN F. HIU             | Director, President, Chief<br>Technical Officer (principal<br>executive officer) | March 31, 2010 |
| /S/ EDWARD J. WEISBERGER<br>EDWARD J. WEISBERGER | Chief Financial Officer<br>(principal financial and<br>accounting officer)       | March 31, 2010 |
| /S/ THOMAS L. KEMPNER THOMAS L. KEMPNER          | Vice Chairman of the Board of Directors  | March 31, 2010 |
| /S/ MICHAEL G. KIMELMAN MICHAEL G. KIMELMAN      | Chairman of the Board of Directors   | March 31, 2010 |
| /S/ SIDNEY R. KNAFEL<br>SIDNEY R. KNAFEL         | Director   | March 31, 2010 |
| /S/ PATRICK F. MONAHAN PATRICK F. MONAHAN        | Vice President and<br>Director of Manufacturing                                  | March 31, 2010 |

# **EXHIBIT INDEX**

| EXHIBIT<br>NO. | DESCRIPTION   |
|----------------|---|
| 3.1            | Articles of Incorporation of the Registrant, as amended as of November 17, 1997, constituting Exhibit 3.1 to the Registration Statement No. 333-41581 on Form SB-2 filed with the SEC on December 5, 1997, are hereby incorporated by reference.  |
| 3.2            | Articles of Amendment to Articles of Incorporation of the Registrant, constituting Exhibit 3.1(b) to the Registration Statement No. 333-76616 on Form S-8 filed with the SEC on January 11, 2002, are hereby incorporated by reference.   |
| 3.3            | By-Laws of the Registrant, constituting Exhibit 3.2 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, are hereby incorporated by reference.  |
| 4.1            | Form of Variable Rate Convertible Subordinated Debenture Due 2002 (Class A), constituting Exhibit 4.4 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, is hereby incorporated by reference.   |
| 4.2            | Form of Indenture by and between the Registrant and American Stock Transfer and Trust Company, as Trustee, dated as of March 31, 1998, constituting Exhibit 4.2 to the Registration Statement No. 333-41581 on Form SB-2/A filed with the SEC on January 23, 1998, is hereby incorporated by reference.   |
| 4.3            | First Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of March 18, 2003, constituting Exhibit 10.11 to the Quarterly Report on Form 10-QSB filed with the SEC on May 14, 2003, is hereby incorporated by reference.               |
| 4.4            | Second Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of March 28, 2006, constituting Exhibit 4.5 to the Annual Report on Form 10-KSB filed with the SEC on April 13, 2006, is hereby incorporated by reference.                 |
| 4.5            | Third Amendment to Indenture, Securities, Warrant Agreement and Warrant Certificates by and between Registrant and American Stock Transfer and Trust Company dated as of October 23, 2008.*   |
| 10.1           | Form of Conversion and Exchange Agreement used in May 1988 in connection with the conversion and exchange by certain holders of shares of preferred stock for common stock and Warrants, constituting Exhibit 10.19 to the Registration Statement No. 33-5441 on Form S-1 filed with the SEC on May 6, 1986, is hereby incorporated by reference. |
| 10.2           | Preferred Stockholders' Waiver Agreement dated May 5, 1988, constituting Exhibit 10.3 to the Registration Statement No. 33-23266 on Form S-1 filed with the SEC on July 22, 1988, is hereby incorporated by reference.  |
| 10.3           | Form of Agreement between the Registrant and Certain Investors in Preferred Stock dated September 30, 1987, constituting Exhibit 10.4 to the Registration Statement No. 33-23266 on Form S-1/A, is hereby incorporated by reference.  |
| 10.4           | Agreement of Lease between Columbia Warehouse Limited Partnership and the Registrant effective December 15, 1995, constituting Exhibit 10.13 to the Annual Report on Form 10-KSB filed with the SEC on April 12, 1996, is hereby incorporated by reference.   |
| 10.5           | First Amendment to Lease between the Registrant and Red Branch Center, LLC made September 13, 2000, constituting Exhibit 10.8 to the Annual Report on Form 10-KSB filed with the SEC on April 2, 2001, is hereby incorporated by reference.   |
| 10.6           | Separation Agreement between the Registrant and Tate & Lyle Fermentation Products Ltd. dated as of October 31, 2007, constituting Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 6, 2007, is hereby incorporated by reference.   |

| 10.7 | Limited Liability Company Agreement dated as of January 8, 2009 between Archer-Daniels-Midland Company and the Registrant, constituting Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on January 21, 2009, is hereby incorporated by reference. [Portions of this exhibit have been omitted pursuant to a request for confidential treatment.] |
|------|--|
| 21.1 | Subsidiaries*  |
| 31.1 | Rule 13a-14(a) or 15d-14(a) Certification of the Registrant's principal executive officer.*  |
| 31.2 | Rule 13a-14(a) or 15d-14(a) Certification of the Registrant's principal financial officer.*  |
| 32.1 | Rule 13a-14(b) or 15d-14(b) Certification of the Registrant's principal executive officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Rule 906 of the Sarbanes-Oxley Act of 2002.*   |
| 32.2 | Rule 13a-14(b) or 15d-14(b) Certification of the Registrant's principal financial officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Rule 906 of the Sarbanes-Oxley Act of 2002.*   |

<sup>\*</sup>Filed herewith

# **EXHIBIT 21.1**

# SUBSIDIARIES OF IGENE BIOTECHNOLOGY, INC.

The table below sets forth all subsidiaries of Igene Biotechnology, Inc. and the state or other jurisdiction of incorporation or organization of each.

| Subsidiary                   | Jurisdiction of Organization |
|------------------------------|------------------------------|
| Igene Chile Comercial, Ltda  | Chile                        |
| Igene Chile Comercial, Ltda. | Chile                        |

#### **EXHIBIT 31.1**

- I, Stephen F. Hiu, certify that:
- 1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2009 of Igene Biotechnology, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
- a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- d) Disclosed in this report any change in registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2010

/S/ STEPHEN F. HIU

STEPHEN F. HIU

President

(principal executive officer)

#### **EXHIBIT 31.2**

- I, Edward J. Weisberger, certify that:
- 1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2009 of Igene Biotechnology, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
- a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- d) Disclosed in this report any change in the registrant's internal control financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 31, 2010

/S/ EDWARD J. WEISBERGER
EDWARD J. WEISBERGER
Chief Financial Officer
(principal financial officer)

## **EXHIBIT 32.1**

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with Igene Biotechnology, Inc. (the "Company") Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Stephen F. Hiu, President of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 31, 2010 By: /S/ STEPHEN F. HIU

STEPHEN F. HIU
President

(principal executive officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

## CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with Igene Biotechnology, Inc. (the "Company") Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Edward J. Weisberger, Chief Financial Officer of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 31, 2010 By: /S/ EDWARD J. WEISBERGER

EDWARD J. WEISBERGER Chief Financial Officer (principal financial officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.