GB SCIENCES INC

FORM 10-Q
(Quarterly Report)

Filed 11/20/23 for the Period Ending 09/30/23

Address	6450 CAMERON STREET #110A
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Telephone	(844) 843-2569
CIK	0001165320
Symbol	GBLX
SIC Code	1311 - Crude Petroleum and Natural Gas
Industry	Biotechnology & Medical Research
Sector	Healthcare
Fiscal Year	03/31

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

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2023

☐ TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number: **000-55462**

GB SCIENCES, INC.
(Exact name of registrant as specified in its charter)

Nevada	**59-3733133**
(State or other Jurisdiction of Incorporation or organization)	(IRS Employer I.D. No.)

9205 W. Russell Road, Suite 240
Las Vegas, Nevada 89148
Phone: (866) 721-0297
(Address and telephone number of principal executive offices)

N/A
(Former name, former address and former fiscal year, if changed since last report**)**

Securities registered pursuant to Section 12(b) of the Act:

Title of each Class	Trading Symbol(s)	Name of exchange on which registered
None	N/A	N/A

Indicate by check mark whether registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

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

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☒ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Act). ☐ Yes ☒ No

There were 402,737,695 shares of common stock, par value $0.0001 per share, outstanding as of November 20, 2023.

GB SCIENCES, INC.

FORM 10-Q

FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2023

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PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements (Unaudited)

GB SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	As of September 30, 2023 (unaudited)	As of March 31, 2023
CURRENT ASSETS:		
Cash and cash equivalents	$ 104,530	$ 109,912
Prepaid expenses and other current assets	129,655	199,592
TOTAL CURRENT ASSETS	234,185	309,504
Intangible assets, net of accumulated amortization and impairment of $2,432,492 and $2,390,297 at September 30, 2023 and March 31, 2023, respectively	-	42,819
TOTAL ASSETS	$ 234,185	$ 352,323
CURRENT LIABILITIES:		
Accounts payable	$ 1,870,888	$ 1,861,829
Accounts payable related party	120,911	120,911
Accrued interest	399,796	346,806
Accrued liabilities	75,628	75,628
Notes and convertible notes payable and line of credit, net of unamortized discount of $10,674 and $0 at September 30, 2023 and March 31, 2023, respectively	1,426,633	935,000
Convertible notes payable, net of unamortized discount of $0 and $41,230 as of September 30, 2023 and March 31, 2023, respectively	-	461,077
Income taxes payable	958,455	958,455
TOTAL CURRENT LIABILITIES	4,852,311	4,759,706
Convertible notes payable, non-current	75,000	-
TOTAL LIABILITIES	4,927,311	4,759,706
Commitments and contingencies (Note 5)		
STOCKHOLDERS' (DEFICIT):		
Common Stock, $0.0001 par value, 950,000,000 shares authorized, 402,737,695 and 381,872,561 outstanding at September 30, 2023 and March 31, 2023, respectively	40,388	38,187
Additional paid-in capital	104,679,155	104,259,745
Accumulated deficit	(109,412,669)	(108,705,315)
TOTAL STOCKHOLDERS' DEFICIT	(4,693,126)	(4,407,383)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 234,185	$ 352,323

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

GB SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	For the Three Months Ended September 30,		For the Six Months Ended September 30,	
	2023	**2022**	**2023**	**2022**
Sales revenue	$ -	$ -	$ -	$ -
Cost of goods sold	-	-	-	-
Gross profit	-	-	-	-
General and administrative expenses	551,491	275,839	816,614	735,357
LOSS FROM OPERATIONS	(551,491)	(275,839)	(816,614)	(735,357)
OTHER INCOME/(EXPENSE)				
Interest expense	(42,742)	(37,218)	(83,546)	(75,789)
Other income (Collection on note receivable – Note 7)	160,000	-	235,000	-
Loss on impairment of capitalized patent and trademark costs	-	-	(42,194)	-
Total other (expense) income	117,258	(37,218)	109,260	(75,789)
LOSS BEFORE INCOME TAXES	(434,233)	(313,057)	(707,354)	(811,146)
Income tax expense	-	-	-	-
NET LOSS	$ (434,233)	$ (313,057)	$ (707,354)	$ (811,146)
Deemed dividend	$ (269,218)	$ -	$ (269,218)	$ -
Net loss attributable to common holders	$ (703,451)	$ (313,057)	$ (976,572)	$ (811,146)
Net loss per common share – basic and diluted	$ (0.00)	$ (0.00)	$ (0.00)	$ (0.00)
Weighted average common shares outstanding - basic and diluted	395,738,723	346,269,298	388,843,528	336,062,449

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

GB SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Six Months Ended September 30,	
	2023	**2022**
OPERATING ACTIVITIES:		
Net loss	$ (707,354)	$ (811,146)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	624	40,492
Stock-based compensation	219,168	13,000
Collection of notes receivable	(235,000)	-
Amortization of debt discount and beneficial conversion feature	30,556	30,548
Loss on impairment of capitalized patent and trademark costs	42,194	-
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	69,937	(126,794)
Accounts payable	9,060	(102,254)
Accrued expenses	-	7,444
Accrued interest	52,990	41,146
Net cash used in operating activities	(517,825)	(907,564)
INVESTING ACTIVITIES:		
Acquisition of intangible assets	-	(30,320)
Collection of notes receivable	235,000	-
Net cash provided by/(used in) investing activities	235,000	(30,320)
FINANCING ACTIVITIES:		
Gross proceeds from warrant exercises	220,196	-
Proceeds from issuing convertible note	75,000	-
Gross proceeds from issuing common stock	-	1,595,000
Brokerage fees for exercise of warrants	(17,753)	(207,350)
Principal payment on notes and convertible notes payable	-	(25,905)
Net cash provided by financing activities	277,443	1,361,745
Net change in cash and cash equivalents	(5,382)	423,861
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	**109,912**	**233,893**
CASH AND CASH EQUIVALENTS AT END OF PERIOD	**$ 104,530**	**$ 657,754**

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

GB SCIENCES, INC. AND SUBSIDIARIES
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION
(unaudited)

	Six Months Ended September 30,	
	2023	**2022**
Cash paid for interest	$ -	$ -
Cash paid for income tax	$ -	$ -
Non-cash investing and financing transactions:		
Accrued patent drafting and filing costs capitalized in intangible assets	$ 7,700	$ 27,069
Compensation warrants issued to brokers in private placement	$ -	$ 145,150
Deemed dividend	$ 269,218	$ -

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

GB SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' (DEFICIT)
For the Three Months Ended September 30, 2023 and 2022
(unaudited)

	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Total
Balance at June 30, 2022	329,205,891	$ 32,921	$ 102,879,579	$ (105,078,211)	$ (2,165,711)
Stock issued for cash, net of offering costs	49,000,033	4,900	1,274,000	-	1,278,900
Share based compensation expense	-	-	6,500	-	6,500
Net loss	-	-	-	(313,057)	(313,057)
Balance at September 30, 2022	378,205,894	$ 37,821	$ 104,160,079	$ (105,391,268)	$ (1,193,368)

	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Total
Balance at June 30, 2023	381,872,561	$ 38,187	$ 104,259,745	$ (108,978,436)	$ (4,680,504)
Repurchase of common shares	(1,150,000)	-	-	-	-
Exercise of warrants	22,015,134	2,201	217,995	-	220,196
Brokerage fees on exercise of warrants	-	-	(17,753)	-	(17,753)
Share-based compensation expense	-	-	219,168	-	219,168
Warrant reinstatement and repricing	-	-	269,218	-	269,218
Deemed dividend	-	-	(269,218)	-	(269,218)
Net loss	-	-	-	(434,233)	(434,233)
Balance at September 30, 2023	402,737,695	$ 40,388	$ 104,679,155	$ (109,412,669)	$ (4,693,126)

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

GB SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' (DEFICIT)
For the Six Months Ended September 30, 2023 and 2022
(unaudited)

	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Total
Balance at March 31, 2022	325,037,557	$ 32,504	$ 102,764,746	$ (104,580,122)	$ (1,782,872)
Stock issued for cash, net of offering costs	53,168,337	5,317	1,382,333	-	1,387,650
Share based compensation expense	-	-	13,000	-	13,000
Net loss	-	-	-	(811,146)	(811,146)
Balance at September 30, 2022	378,205,894	$ 37,821	$ 104,160,079	$ (105,391,268)	$ (1,193,368)

	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Total
Balance at March 31, 2023	381,872,561	$ 38,187	$ 104,259,745	$ (108,705,315)	$ (4,407,383)
Repurchase of common shares	(1,150,000)	-	-	-	-
Exercise of warrants	22,015,134	2,201	217,995	-	220,196
Brokerage fees on exercise of warrants	-	-	(17,753)	-	(17,753)
Share-based compensation expense	-	-	219,168	-	219,168
Warrant reinstatement and repricing	-	-	269,218	-	269,218
Deemed dividend	-	-	(269,218)	-	(269,218)
Net loss	-	-	-	(707,354)	(707,354)
Balance at September 30, 2023	402,737,695	$ 40,388	$ 104,679,155	$ (109,412,669)	$ (4,693,126)

The accompanying unaudited condensed notes are an integral part of these unaudited consolidated financial statements

Note 1 – **Background and Significant Accounting Policies**

GB Sciences, Inc. ("the Company", "GB Sciences", "we", "us", or "our") is a plant-inspired, biopharmaceutical research and development company creating patented, disease-targeted formulations of cannabis- and other plant-inspired therapeutic mixtures for the prescription drug market through its wholly owned Canadian subsidiary, GbS Global Biopharma, Inc. ("GBSGB").

Through GBSGB, the Company is engaged in the research and development of plant-inspired medicines, with virtual operations in North America and Europe. GBSGB's assets include a portfolio of intellectual property containing both proprietary plant-inspired formulations and our AI-enabled drug discovery platform, as well as critical research contracts and key supplier arrangements. The Company's intellectual property portfolio, which is held by GBSGB, contains six U.S. and ten foreign patents issued, two US and three foreign patents allowed, as well as 18 U.S. and 55 foreign patent-pending applications.

On February 3, 2023, GB Sciences' first foreign patent protecting its proprietary cannabinoid-based formulations for Parkinson's disease was issued in China. China is an increasingly important pharmaceutical market with cultural acceptance of plant-based formulations, which is a good fit for GB Sciences' drug candidates. The global market for treatments of Parkinson's disease is projected to grow to $8.8 billion by the year 2026, and new therapies to address Parkinson's disease symptoms are greatly needed. GB Sciences' first foreign patent also confirms that the Company's intellectual property strategy can work globally and validates both our plant-inspired drug discovery process and intellectual property strategy, which involves defining and protecting Minimum Essential Mixtures. GBLX/GBSGB starts its drug discovery process with plant-based therapies that are working anecdotally or in traditional medical systems, then the Company systematically reduces the number of compounds to reveal Minimum Essential Mixtures. The Company's novel Minimum Essential Mixtures retain the increased efficacy of whole plant medicines, but they are easier to manufacture with precision at scale like single ingredient drugs. These Minimum Essential Mixtures are a viable alternative to standard single ingredient drugs or traditional whole plant medicines. As previously mentioned, the Chinese Patent was issued for GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Parkinson's disease on February 3, 2023. On April 25, 2023, the Japanese patent was issued for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. On June 28th of 2023, GbS received a Notice of Allowance for its Israeli patent application for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. On July 7th, GbS received a Notice of Allowance for its European patent application for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. Additionally, on August 19th, 2023, GbS received a Notice of Allowance for an additional US Patent for GbS' Cannabinoid-Containing Complex Mixtures with refined formulations to be used in the treatment of Parkinson's disease.

Several more of GBLX/GBSGB's foreign and US patents for plant-based treatments of serious disorders were allowed in different countries, expanding our patent protections as follows. On February 10, 2023, the Japanese (JP) Patent was issued, protecting GBLX/GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). MCAS is a severe immunological condition in which mast cells inappropriately and excessively release inflammatory mediators, resulting in a range of severe chronic hyperinflammatory symptoms and life-threatening anaphylaxis attacks. On March 2, 2023, the Israeli (IL) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On March 30, 2023, the Australian (AU) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On April 24, 2023, GBLX/GBSGB received the Notice of Allowance for its Hong Kong (HK) Patent for our Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. On September 27, 2023, the European Patent was issued protecting GBLX/GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of MCAS.

On September 7th of 2023, the Australian patent was issued for GBLX/GBSGB's Myrcene-Containing Complex Mixtures (MCCM) for use in the treatment of pain related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. On March 9, 2023, the Notice of Allowance was received for the Company's U.S. Patent Application No. 16/878,295. This Notice of Allowance protects the use of the Company's Myrcene-Containing Complex Mixtures in the treatment of cardiac hypertrophy, overactive bladder, and refractory chronic cough, which expands the medical conditions protected by the patent.

GBSGB's intellectual property covers a range of over 65 medical conditions, from which five drug development programs are in the preclinical stage of drug development including our formulations for Parkinson's disease ("PD"), chronic pain, COVID-related cytokine release syndrome, depression/anxiety, and cardiovascular therapeutic programs. The Company's primary focus is on preparing its lead program for the treatment of the motor symptoms of Parkinson's disease for a first-in-human clinical trial. Depending on the results of ongoing preclinical studies, the Company intends to move forward with clinical trials for its chronic pain and COVID-related cytokine release syndrome therapies after PD. The Company's formulations for chronic pain, anxiety, and depression are currently in preclinical animal studies with researchers at the National Research Council Canada. The Company also recently received positive preclinical proof-of-concept data supporting its complex mixtures for the treatment of Cytokine Release Syndrome related to COVID-19, and its lead candidates will be optimized based on late-stage preclinical studies at Michigan State University. Proof-of-concept studies in animals that support our heart disease formulations have been successfully completed at the University of Hawaii. The Company runs a lean drug development program through GBSGB and takes effort to minimize expenses, including personnel, overhead, and fixed capital expenses through strategic partnerships with Universities and Contract Research Organizations ("CROs"). Our productive research and development network includes distinguished universities, hospitals, and Contract Research Organizations.

Basis of Presentation

The accompanying unaudited interim condensed consolidated financial statements of GB Sciences, Inc. have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") for interim financial information and with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Operating results for the periods presented are not necessarily indicative of the results that may be expected for the year ending March 31, 2024. The balance sheet at March 31, 2023 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. The unaudited interim condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and footnotes thereto included in the Company's annual report on Form 10-K for the year ended March 31, 2023.

Principles of Consolidation

We prepare our consolidated financial statements in accordance with generally accepted accounting principles (GAAP) for the United States of America. Our consolidated financial statements include all operating divisions and majority-owned subsidiaries, reported as a single operating segment, for which we maintain controlling interests. Intercompany accounts and transactions have been eliminated in consolidation. All subsidiaries were wholly owned by the Company for the periods presented.

Use of Estimates

The preparation of the consolidated 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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. The Company regularly evaluates estimates and assumptions related to allowances for doubtful accounts, inventory valuation and standard cost allocations, valuation of initial right-of-use assets and corresponding lease liabilities, valuation of beneficial conversion features in convertible debt, valuation of the assets and liabilities of discontinued operations, stock-based compensation expense, purchased intangible asset valuations, deferred income tax asset valuation allowances, uncertain tax positions, litigation, other loss contingencies, and impairment of long lived assets. These estimates and assumptions are based on current facts, historical experience and various other factors that the Company believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of costs and expenses that are not readily apparent from other sources. The actual results the Company experiences may differ materially and adversely from these estimates.

Reclassifications

For the period ending March 31, 2023, the Company reclassified certain convertible notes totaling $461,077 from notes and convertible notes payable and line of credit to convertible notes payable.

Indefinite and Definite-Lived Intangible Assets

Capitalized costs related to our indefinite-lived intangible assets consisted primarily of the value of our patents pending and includes the costs paid to draft and file patent applications. Upon issuance of the patents, the indefinite-lived intangible assets will have finite lives. Intangible assets also historically included the acquisition cost of a cannabis production license with an indefinite life.

We historically amortized our finite-lived intangible assets, which consisted of granted patents, over their estimated useful lives using the straight-line method, and we periodically evaluate the remaining useful lives of our finite-lived intangible assets to determine whether events or circumstances warrant a revision to the remaining period of amortization.

We review all of our intangible assets for impairment indicators throughout the year. Impairment testing for indefinite-lived intangible assets is performed at least annually and we perform testing for definite-lived intangible assets whenever impairment indicators are present. If we determine that the fair value is less than the carrying value of these assets during testing, we record impairment losses equal to the difference between the carrying value of the asset and the fair market value of the asset.

For the six months ended September 30, 2023, we recorded a loss on impairment related to the capitalized biotech license costs of $42,194. In fiscal 2023, we recorded a loss on impairment related to the capitalized patent costs of $2,374,621. The Company recorded an impairment of it's capitalized patent costs based on the relevant facts and circumstances that existed as of March 31, 2023 in accordance with ASC 350-30-35.

At September 30, 2023, the Company had six patents that have been granted in the United States, including two licensed patents and four patents assigned to the Company's subsidiary, GBS Global Biopharma, Inc. The patents owned by the Company expire between January 2038 and May 2039. Amortization expense for the six months ended September 30, 2023 and 2022, was $624 and $40,492, respectively.

There were 10 United States patent applications that are pending as of September 30, 2023, and the corresponding patent assets are treated as indefinite-lived intangible assets. There were 35 international patents pending at September 30, 2023. The carrying amount of the indefinite-lived patent assets was $0 at September 30, 2023.

Beneficial Conversion Feature of Convertible Notes Payable

The Company accounts for convertible notes payable in accordance with the guidelines established by the Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC") Topic 470-20, *Debt with Conversion and Other Options* and Emerging Issues Task Force ("EITF") 00-27, "*Application of Issue No. 98-5 to Certain Convertible Instruments*". A beneficial conversion feature ("BCF") exists on the date a convertible note is issued when the fair value of the underlying common stock to which the note is convertible into is in excess of the remaining unallocated proceeds of the note after first considering the allocation of a portion of the note proceeds to the fair value of any attached equity instruments, if any related equity instruments were granted with the debt. In accordance with this guidance, the BCF of a convertible note is measured by allocating a portion of the note's proceeds to the warrants, if applicable, and as a reduction of the carrying amount of the convertible note equal to the intrinsic value of the conversion feature, both of which are credited to additional paid-in-capital. The Company calculates the fair value of warrants issued with the convertible notes using the Black-Scholes valuation model and uses the same assumptions for valuing any employee options in accordance with ASC Topic 718 *Compensation – Stock Compensation*. The only difference is that the contractual life of the warrants is used.

The value of the proceeds received from a convertible note is then allocated between the conversion features and warrants on a relative fair value basis. The allocated fair value is recorded in the financial statements as a debt discount (premium) from the face amount of the note and such discount is amortized over the expected term of the convertible note (or to the conversion date of the note, if sooner) and is charged to interest expense.

Revenue Recognition

The FASB issued Accounting Standards Codification ("ASC") 606 as guidance on the recognition of revenue from contracts with customers. Revenue recognition depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance also requires disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The guidance permits two methods of adoption: retrospectively to each prior reporting period presented, or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the cumulative catch-up transition method). The Company adopted the guidance on April 1, 2018 and applied the cumulative catch-up transition method.

The Company's only material revenue source was part of discontinued operations prior to the sale of the Nevada Subsidiaries (Note 8), and was derived from sales of distinct physical goods. Under ASC 606, the Company is required to separately identify each performance obligation resulting from its contracts from customers, which may be a good or a service. A contract may contain one or more performance obligations. All of the Company's contracts with customers contained only a single performance obligation, the delivery of distinct physical goods. Because fulfillment of the company's performance obligation to the customer under ASC 606 results in the same timing of revenue recognition as under the previous guidance (i.e. revenue is recognized upon delivery of physical goods), the Company did not record any material adjustment to report the cumulative effect of initial application of the guidance.

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in financial statements or tax returns. Deferred tax items are reflected at the enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. Due to the uncertainty regarding the success of future operations, management has valued the deferred tax asset allowance at 100% of the related deferred tax assets.

Because the Company previously operated in the State-licensed cannabis industry through its now-deconsolidated Nevada Subsidiaries, gross profits from those subsidiaries was subject to the limitations of Internal Revenue Code Section 280E ("280E") for U.S. income tax purposes. Under 280E, the Company was allowed to deduct expenses that were directly related to the production of its products, i.e. cost of goods sold, but was allowed no further deductions for ordinary and necessary business expenses from its gross profit. The Company believes that the deductions disallowed include the deduction of net operating loss carryforwards ("NOLs"). The unused NOLs will continue to carry forward and may be used by the Company to offset future taxable income that is not subject to the limitations of 280E.

Loss per Share

The Company's basic loss per share has been calculated using the weighted average number of common shares outstanding during the period. The Company had 183,656,554 and 172,235,838 potentially dilutive common shares, related to convertible debt, warrants, and stock options, at September 30, 2023 and September 30, 2022, respectively; however, those shares were not included in the computation of diluted net loss per share for the three and six months ended September 30, 2023 and 2022, as their inclusion would have been antidilutive.

Recent Accounting Pronouncements

Standards Recently Adopted

In May 2021, the FASB issued ASU No. 2021-04, Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options. This guidance clarifies and reduces diversity in an issuer's accounting for modifications or exchanges of freestanding equity-classified written call options due to a lack of explicit guidance in the FASB Codification. The ASU 2021-04 is effective for The Company's fiscal year beginning April 1, 2022. The Company adopted the standard on April 1, 2022 and it did not have a material impact on its financial statements.

On June 16, 2016, the FASB issued ASU No. 2016-13, Measurement of Credit Losses on Financial Instruments. The standard requires the use of an "expected loss" model on certain types of financial instruments. The standard also amends the impairment model for available-for-sale debt securities and requires estimated credit losses to be recorded as allowances instead of reductions to amortized cost of the securities. The amendments in this ASU are effective for the Company's fiscal year beginning April 1, 2023. The Company adopted the standard effective April 1, 2023 and it did not have a material impact on its financial statements.

In June 2020, the FASB issued ASU No. 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity. The guidance simplifies the current guidance for convertible instruments and the derivatives scope exception for contracts in an entity's own equity. Additionally, the amendments affect the diluted EPS calculation for instruments that may be settled in cash or shares and for convertible instruments. This ASU will be effective for the Company's fiscal year beginning April 1, 2023. Early adoption is permitted. The amendments in this update must be applied on either full retrospective basis or modified retrospective basis through a cumulative-effect adjustment to retained earnings/(deficit) in the period of adoption. The Company adopted the standard effective April 1, 2023 and it did not have a material impact on its financial statements.

Standards Not Yet Adopted

All other newly issued accounting pronouncements have been deemed either immaterial or not applicable.

Note 2 – **Going Concern**

The Company's unaudited condensed consolidated financial statements have been prepared assuming the Company will continue as a going concern. The Company has sustained net losses since inception, which have caused an accumulated deficit of $109,412,669 at September 30, 2023. The Company had a working capital deficit of $4,618,126 at September 30, 2023, compared to a deficit of $4,450,202 at March 31, 2023. In addition, the Company has consumed cash in its operating activities of $517,825 for the six months ended September 30, 2023, compared to $907,564 used in operating activities for the six months ended September 30, 2022.

Management has been able, thus far, to finance the losses through debt financing, a public offering, private placements and obtaining operating funds from stockholders. The Company is continuing to seek sources of financing. There are no assurances that the Company will be successful in achieving its goals.

In view of these conditions, the Company's ability to continue as a going concern is dependent upon its ability to obtain additional financing or capital sources, to meet its financing requirements, and ultimately to achieve profitable operations. Management believes that its current and future plans provide an opportunity to continue as a going concern. The accompanying financial statements do not include any adjustments relating to the recoverability and classification of recorded assets, or the amounts and classification of liabilities that may be necessary in the event the Company is unable to continue as a going concern.

Note 3 – Notes and Convertible Notes Payable and Line of Credit

At September 30, 2023, notes with a carrying amount of $1,501,633 were included in short term and long term notes and convertible notes payable, net of unamortized discounts of $10,674. Interest expense related to the notes was $83,546 for the six months ended September 30, 2023, which includes $30,150 from amortization of the note discounts.

As of September 30, 2023 and March 31, 2023 the following notes payable were recorded in the Company's consolidated balance sheets:

	As of September 30, 2023		
	Face Value	Discount	Carrying Value
% Note Payable dated October 23, 2017 (as amended)	55,307	-	55,307
6% Convertible promissory notes payable	$ 560,000	$ -	$ 560,000
6% Convertible notes payable due January 18, 2022	325,000	-	325,000
6% Convertible note payable due July 1, 2022	50,000	-	50,000
6% Convertible promissory notes payable due September 30, 2023	197,000	-	197,000
6% Convertible note payable due December 31, 2023	250,000	(10,674)	239,326
Total short-term notes and convertible notes payable	$ 1,437,307	$ (10,674)	$ 1,426,633
6% Convertible note payable due June 30, 2026	25,000	-	25,000
6% Convertible note payable due July 10, 2026	50,000	-	50,000
Total notes and convertible notes payable	$ 1,512,307	$ (10,674)	$ 1,501,633

	As of March 31, 2023		
	Face Value	Discount	Carrying Value
6% Convertible promissory notes payable	$ 560,000	$ -	$ 560,000
6% Convertible notes payable due January 18, 2022	325,000	-	325,000
6% Convertible note payable due July 1, 2022	50,000	-	50,000
6% Convertible promissory notes payable due September 30, 2023	197,000	(9,475)	187,525
6% Convertible note payable due December 31, 2023	250,000	(31,755)	218,245
0% Note Payable dated October 23, 2017 (as amended)	55,307	-	55,307
Total short-term notes and convertible notes payable	$ 1,437,307	$ (41,230)	$ 1,396,077

0% Note Payable dated October 23, 2017

On October 23, 2017, the Company amended the existing Nevada Medical Marijuana Production License Agreement ("Amended Production License Agreement"). Per the terms of the Amended Production License Agreement, GB Sciences purchased the remaining percentage of the production license resulting in 100% ownership of the license. GB Sciences also received 100% ownership of the cultivation license included in the original Nevada Medical Marijuana Production License Agreement. In exchange, GB Sciences made one-time payment of $500,000 and issued a 0% Promissory Note in the amount of $700,000 payable in equal monthly payments over a three-year period commencing on January 1, 2018. The present value of the note was $521,067 on the date of its issuance based on an imputed interest rate of 20.3% and the Company recorded a discount on notes payable of $178,933 related to the difference between the face value and present value of the note.

On August 10, 2020, the Company entered into the Membership Interest Purchase Agreement ("Nopah MIPA") for the sale of its interest in GB Sciences Nopah, LLC. The Nopah sale was closed December 31, 2021 after successful transfer of the Nevada Medical Marijuana Cultivation Facility Registration Certificate on December 14, 2021. At close, the principal balance of the note was reduced from $369,445 to $190,272 and accounts payable totaling $74,647 to an affiliate of the purchaser were extinguished.

On March 4, 2022, the Company entered into the Second Promissory Note Modification Agreement, which reduced the total outstanding balance of principal and interest from $201,532 (at the time of the agreement) to $179,127 and modified the terms of the note to provide that the Company would make an immediate payment of $75,000, with $5,000 monthly payments thereafter until the note is repaid in full. The modification also provided that the note would bear interest at 8.0% per annum. The Company made a $75,000 payment pursuant to the terms of the modification on March 4, 2022. This note is currently in default.

We evaluated the modification under the guidance in ASC 470-50 and determined that the modification represents an extinguishment because the change in the fair value of the note exceeded 10% of the carrying value of the note immediately prior to the modification. As a result, the Company recorded a gain on extinguishment for the year ended March 31, 2022, of $22,405 equal to the change in the carrying value of the note resulting from the modification.

At September 30, 2023, the outstanding balance of the note was $55,307, and accrued interest was $2,456. The company made no payments during the six months ended September 30, 2023.

8% Line of Credit dated July 24, 2020

On July 24, 2020, the Company entered into the Loan Agreement, 8% Secured Promissory Note, and Security Agreement (together, the "July 24 Note") with AJE Management, LLC, which established a revolving loan of up to $500,000 that the Company may draw on from time to time. The loan was collateralized by the Teco Facility, subject to the pre-existing lien held by CSW Ventures, L.P. in connection with the 8% Senior Secured Convertible Promissory Note dated February 28, 2019. Contemporaneously with the Loan Agreement, the Company and AJE Management entered into the Amendment to the Membership Interest Purchase Agreement with AJE Management. The amendment provides that any balances outstanding under the July 24 Note at the time of the close of the sale of the Teco Facility would be forgiven in exchange for a reduction to the $4,000,000 note receivable that the Company will receive as consideration for the sale of the Teco Facility. The reduction to the note receivable would be equal to 3 times the balance outstanding under the July 24 Note on the date of the close of the sale of the Teco Facility. The balance outstanding under the note plus accrued interest were permitted to be repaid at any time prior to the close of the sale of the Teco facility.

On December 29, 2020, the Company entered into the Omnibus Amendment with the purchaser of the Teco Facility. The Omnibus Amendment reduced the amount of the note receivable that the Company was to receive from the sale of the Teco Facility by $975,000 (three times $325,000 in advances made under the July 24 Note) to $3,025,000. Any advances made to the Company under the July 24 Note in excess of $325,000 were to reduce the amount of cash received upon close of the sale of Teco one-for-one, i.e., such advances would be considered advance payments of the $4,000,000 cash purchase price. No interest would accrue after November 30, 2020. The Company also agreed that it would not repay the balances outstanding under the July 24 Note prior to the closing of the Teco sale. As a result of the Omnibus Amendment, the Company accrued a modification expense of $650,000 during the year ended March 31, 2021. Prior to December 31, 2021, the Company received $50,000 in additional advances above $325,000 during the fiscal year ended March 31, 2021, bringing the total balance to $1,025,000, and accrued interest was $12,510. Upon close of the Teco sale on December 31, 2021, the note and accrued interest balances were forgiven and the Company has no further obligations related to the line of credit.

March 2017 and July 2017 Convertible Note Offerings

In March 2017, the Company entered into a Placement Agent's Agreement with a third-party brokerage firm to offer units consisting of a $1,000 6% promissory note convertible into 4,000 shares of the Company's common stock at $0.25 per share and 4,000 warrants to purchase shares of the Company's' common stock at an exercise price of $0.60 per share for the period of three years. Between March 2017 and May 2017, the Company issued short-term Promissory Notes ("Notes") to various holders with combined face value of $2,000,000. The Notes are payable within three years of issuance and are convertible into 8,000,000 shares of the Company's common stock. The Company also issued 8,000,000 common stock warrants to the Noteholders. The warrants are exercisable at any time and from time to time before maturity at the option of the holder. Each warrant gives the Noteholder the right to purchase one share of common stock of the Company at an exercise price of $0.60 per share for a period of three years. The Company recorded an aggregate discount on convertible notes of $1,933,693, which included $904,690 related to the relative fair value of beneficial conversion features and $1,029,003 for the relative fair value of the warrants issued with each note. The fair value of warrants was derived using the Black-Scholes valuation model.

In July 2017, the Company entered into a Placement Agent's Agreement with a third-party brokerage firm to offer units consisting of a $1,000 6% promissory note convertible into 4,000 shares of the Company's common stock at $0.25 per share and 4,000 warrants to purchase shares of the Company's' common stock at an exercise price of $0.65 per share for the period of three years. Between July 2017 and December 2017, the Company issued short-term Promissory Notes ("Notes") to various holders with combined face value of $7,201,000. The Notes are payable within three years of issuance and are convertible into 28,804,000 shares of the Company's common stock. The Company also issued 28,804,000 common stock warrants to the Note holders. The warrants are exercisable at any time and from time to time before maturity at the option of the holder. Each warrant gives the Noteholder the right to purchase one share of common stock of the Company at an exercise price of $0.60 per share for a period of three years. The Company recorded an aggregate discount on convertible notes of $7,092,796, which included $3,142,605 related to the relative fair value of beneficial conversion features and $3,950,191 for the relative fair value of the warrants issued with each note. The fair value of warrants was derived using the Black-Scholes valuation model.

All notes from the March and July 2017 offerings have passed their maturity dates. During the year ended March 31, 2022, the Company agreed to extensions with the holders of a total of $197,000 of the $1,257,000 that remained outstanding at the time. For the $197,000 of extended notes, the Company agreed to reduce the conversion price to $0.10 per share and issued a total of 788,000 additional warrants to the holders of the notes with a term of three years and an exercise price of $0.10 per share. In exchange, the maturity date of the notes was extended to September 30, 2023. As of the date of this filing, this note is still outstanding and is currently in default. Using the Black-Scholes model, the Company valued the warrants at $13,396 and the change in the fair value of the conversion feature at $33,490. Because the change in the fair value of the conversion feature exceeded 10% of the carrying amount of the notes, the Company accounted for the modification of the notes as an extinguishment and recorded a discount on the new convertible notes of $46,886 related to the fair value of the new warrants issued and the change in the fair value of the conversion feature. The Company recorded interest expense of $15,402 on the extended notes during the six months ended September 30, 2023, of which $9,475 represented amortization of the note discounts. Accrued interest on the $197,000 extended notes is $73,899 and the remaining unamortized discount was $0 at September 30, 2023.

Three convertible notes totaling $1,060,000 were held by the same investor and in default. On January 20, 2022, the Company repaid $500,000 of the principal balances owed to the investor, and one convertible note in the amount of $560,000 remains outstanding plus accrued interest totaling $218,231. The Company intends to negotiate the terms of an extension of the remaining note and accrued interest with the note holder. The notes do not provide for a default penalty or penalty interest rate. Interest expense for the outstanding note was $22,461 for the six months ended September 30, 2023, and no unamortized discount at September 30, 2023.

December 2020 $625,000 6% Convertible Notes

On December 18, 2020, the Company began an offering of 6.0% convertible notes for the purpose of funding a pre-clinical study of the Company's patent-pending Cannabinoid-Containing Complex Mixtures for the treatment of Cytokine Release Syndromes, including Acute Respiratory Distress Syndrome, in COVID-19 patients. The Company pledged the related intellectual property as security for the notes. The notes are convertible at a rate of $0.05 per share at the lender's request. The Company previously issued $625,000 in convertible notes under the offering to three investors. $375,000 of the notes mature between January 31, 2021 and July 1, 2022, and $250,000 mature in December 2023. Payment of accrued interest and principal is due at maturity. The Company received cash of $543,750, net of brokerage fees, and recorded discounts on the convertible notes totaling $81,250 related to the issuance costs. Notes totaling $425,000 were issued with in-the-money conversion features, and the Company recorded beneficial conversion feature discounts totaling $347,000 on the related notes. During the year ended March 31, 2022, the Company received an additional $50,000 related to the note offering and recorded a discount on convertible notes payable of $6,500 related to issuance costs.

During the six months ended September 30, 2023, the Company received an additional $25,000 and $50,000 related to the note offering with maturity dates of June 29, 2026 and July 10, 2026, respectively, and recorded no discount or beneficial conversion features. During the six months ended September 30, 2023, the Company recorded interest expense of $43,272 on the December 2020 $700,000 6% Convertible Notes, of which $21,080 represented amortization of the note discounts. Accrued interest on these notes is $105,230 and the remaining unamortized discount was $10,674 at September 30, 2023.

Note 4 – Capital Transactions

Six Months Ended September 30, 2023

Warrants

During the six months ended September 30, 2023, the Company extended the expiration date and temporarily repriced 92,657,209 unexpired investor warrants effective of September 1, 2023. In addition, the Company reinstated 23,006,492 previously expired warrants exercisable at $0.01 per share and recognized $72,729 as a deemed dividend related to the reissuance of these warrants. The Company temporarily repriced to an exercise price of $0.01 for 90 days and recognized $196,489 as a deemed dividend related to the repricing of these warrants. The total value recorded was $269,218, in accordance with ASC 470, this amount was recorded through additional paid in capital and retained earnings as a deemed dividend.

During the six months ended September 30, 2023, 3,490,834 expiring warrants were extended with an original exercise price of $0.10, 4,295,500 expiring warrants were extended with an original exercise price of $0.60, and 300,000 expiring warrants were extended with an original exercise price of $0.04.

During the six months ended September 30, 2023, the Company accepted the exercise of 22,015,134 warrants at $0.01 per share of common stock, for gross cash proceeds of $220,196, and recorded brokerage fees of $17,753.

Presented below is a summary of the Company's warrant activity for the six months ended September 30, 2023:

	Warrants Outstanding	
	Number of Shares	Exercise Price
Outstanding at March 31, 2023	122,758,677	
Warrants issued (including reinstated)	23,006,492	$0.01
Warrants exercised	(22,015,134)	$0.01
Warrants expired/cancelled	(8,086,334)	$0.04 - $0.60
Outstanding at September 30, 2023	115,663,701	

Employee Option Grants

During the six months ended September 30, 2023, the Company granted 23,000,000 options to purchase Company's common stock at an exercise price of $0.01 per share. Of the 23,000,000 new option grants, 15,000,000 were issued to employees as share-based compensation expense of $142,936, and 8,000,000 were issued to non-employees as share-based compensation expense of $76,232. The total grants valued at $219,168 were recorded through Additional Paid-In-Capital. During the six months ended September 30, 2023, option grants totaling 1,150,000 with an exercise price of $0.05, were forfeited.

A summary of employee option activity, as of March 31, 2023 and September 30, 2023, and changes during the six months ended September 30, 2023, is presented below:

Employee options	Options	Weighted Average Exercise Price $	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value ($)
Outstanding at March 31, 2023	17,733,334	$ 0.11	4.80	$ -
Fully vested and expected to vest at March 31, 2023	17,733,334	$ 0.11		
Exercisable at March 31, 2023	15,566,668	$ 0.12		
Granted	15,000,000	$ 0.01		
Exercised	-			
Forfeited	(1,150,000)	$ 0.05		
Outstanding at September 30, 2023	31,583,334	$ 0.07	6.88	$ -
Fully vested and expected to vest at September 30, 2023	31,583,334	$ 0.07		
Exercisable at September 30, 2023	31,583,334	$ 0.07		

The table below sets forth nonemployee option activity, as of March 31, 2023 and September 30, 2023, and changes during the six months ended September 30, 2023:

Nonemployee options	Options	Weighted Average Exercise Price $	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value ($)
Outstanding at March 31, 2023	6,483,000	$ 0.13	6.31	$ -
Fully vested and expected to vest at March 31, 2023	6,483,000	$ 0.13		
Exercisable at March 31, 2023	6,483,000	$ 0.13		
Granted	8,000,000	$ 0.01		
Exercised	-			
Forfeited	-			
Outstanding at September 30, 2023	14,483,000	$ 0.06	8.09	$ -
Fully vested and expected to vest at September 30, 2023	14,483,000	$ 0.06		
Exercisable at September 30, 2023	14,483,000	$ 0.06		

Year Ended March 31, 2023

Sale of Common Stock and Warrants

On May 9, 2022 the Company entered into a Placement Agent's Agreement with its brokers for the private placement of up to $565,000 in units at a price of $0.03 per unit. For each unit purchased, the investor will receive one share of the Company's common stock and one warrant to purchase one share of the Company's common stock at a price of $0.10 for a period of five years. On September 9, 2022, the Company entered into the Amendment to the Placement Agent's Agreement which extended the placement to November 30, 2022 and increased the amount to $2,000,000, all other terms remaining the same. During the year ended March 31, 2023, the Company received $1,483,350 under the private placement, net of brokerage fees of $221,650, and issued 56,835,004 shares of its common stock and 56,835,004 warrants to purchase one share of the Company's common stock at $0.10 for five years.

As the result of the units sold to date under the private placement, the Company will issue its brokers 5,416,834 compensation warrants to purchase one share of the Company's common stock at $0.03 per share for a period of five years. The Company valued the compensation warrants at $0.0273 or $147,879 using the Black-Scholes model.

Employee Option Grant

On *August 25, 2022,* the Board of Directors approved a commitment to grant options to a total of *seven* persons which include the officers and directors of the Company, who will be instrumental in obtaining an up-listing of the common shares of the Company onto the NASDAQ Stock Market. The Options will be granted to the employees on the effective date of the up-listing (the "Effective Date"), and will equal options sufficient to purchase 13% of the issued and outstanding common shares of the Company on a fully diluted basis, as of the Effective Date. The exercise price of *one* Option will equal 80% of the value of *one* share of common stock on the Effective Date. The options will be accounted for once the performance condition (the up-listing) is probable.

Note 5 – **Commitments and Contingencies**

On April 11, 2022, the Company was served notice of a lawsuit filed in the Eighth Judicial District Court in Clark County, Nevada by an individual who alleges he was shot by a security guard at the Teco Facility in May of 2020. The alleged incident occurred after the claimant broke into the Teco Facility during closing hours. GB Sciences, Inc. and its former subsidiaries GB Sciences Nevada, LLC and GB Sciences Las Vegas, LLC, along with the security provider, Protective Force International, Inc., were named as defendants in the lawsuit. The Company holds a certificate of insurance with the insurer for Protective force International and believes it may have coverage under that policy in the event the Company is found liable for damages, however, the Company denies any liability and intends to vigorously defend the lawsuit. We are unable to make any determination at this time as to the likelihood or amount of damages.

From time to time, the Company may become involved in certain legal proceedings and claims which arise in the ordinary course of business. In management's opinion, based on consultations with outside counsel, the results of any of these ordinary course matters, individually and in the aggregate, are not expected to have a material effect on our results of operations, financial condition, or cash flows. As more information becomes available, if management should determine that an unfavorable outcome is probable on such a claim and that the amount of such probable loss that it will incur on that claim is reasonably estimable, the Company would record a reserve for the claim in question. If and when the Company records such a reserve, it could be material and could adversely impact its results of operations, financial condition, and cash flows.

Note 6 – **Related Party Transactions**

As of September 30, 2023, $108,816 has been recorded in accounts payable related party, due to an entity controlled by a family member of Mr. John Poss, Chief Executive Officer of the Company.

As of September 30, 2023, $12,095 has been recorded in accounts payable related party, due to Dr. Andrea Small Howard, President and Director, related to amounts owed for expenses incurred in connection with the business operations of the Company.

Note 7 – **Sale of Membership Interests in Nevada Subsidiaries**

On March 24, 2020, the Company entered into the Membership Interest Purchase Agreement ("Teco MIPA") with AJE Management, LLC. Pursuant to the Teco MIPA, the Company agreed to sell 100% of its membership interests in GB Sciences Nevada, LLC, and GB Sciences Las Vegas, LLC (the "Teco Subsidiaries") for approximately $8 million, which amount includes a cash payment at closing, the extinguishment and/or repayments of certain liabilities owed to the purchaser and affiliates of the purchaser, and an 8% promissory note.

On August 10, 2020, the Company entered into the Membership Interest Purchase Agreement ("Nopah MIPA") and Promissory Note Modification Agreement with 483 Management, LLC. Pursuant to the Nopah MIPA, the Company agreed to sell its 100% membership interest in GB Sciences Nopah, LLC ("Nopah"), which holds a Nevada medical marijuana cultivation certificate. As consideration, the Company would receive $312,315 in consideration in the form of a $237,668 reduction to the outstanding principal and accrued interest balances of the 0% Note payable dated October 23, 2017 (Note 3), and extinguishment of accounts payable of $74,647, which were owed to an affiliate of the purchaser.

The closing of the Teco and Nopah sales was contingent upon the successful transfer of the Nevada cultivation and production licenses. On December 14, 2021, the Company received approval from the Nevada Cannabis Compliance Board for the transfer of cannabis cultivation and extraction licenses held by its subsidiaries GB Sciences Nevada, LLC, GB Sciences Las Vegas, LLC, and GB Sciences Nopah, LLC (the "Nevada Subsidiaries"). Consequently, all conditions to closing the sales of the 100% membership interests in the Nevada Subsidiaries were satisfied, and the transactions formally closed on December 31, 2021. After the closing date, the Company retains no ownership interest in the Nevada Subsidiaries.

Note Receivable from Sale of Teco Subsidiaries

The $3,025,000 note receivable from the sale of the Teco Subsidiaries is payable as quarterly, interest only payments of $60,500 for the first year, followed by seven quarterly payments of interest and principal of $201,774 beginning March 31, 2023, with a final payment of principal and interest totaling $2,014,225 on December 31, 2024.

The note contains a provision that allows payments of principal and interest due prior to the maturity date to be postponed to the next quarterly payment date if cash flow from the operations of the facility is insufficient to cover the amount of the payment. Several days prior to the first interest payment due date of April 1, 2022, AJE Management, LLC notified the Company that it would be postponing the payment of interest of $60,500 due on April 1, 2022 due to insufficient cash flow to make the payment. AJE Management, LLC was also unable to make the interest payment due July 1, 2022 due to insufficient cash flow. As a result, the Company reevaluated the factors relating to the collectability of the note and recorded a valuation allowance in the amount of $3,025,000 at March 31, 2022, equal to the full balance of the note, as there is substantial uncertainty around the collectability of the note, and we are unable to make an appropriate estimate of the amount of payments, if any, the Company will ultimately receive.

During the six months ended September 30, 2023, the Company received $235,000 on this Note Receivable and recorded the amount in Other Income on the Statement of Operations.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis contains "forward-looking statements," as defined in the United States Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terminology such as "may", "will", "should", "could", "expects", "plans", "intends", "anticipates", believes", "estimates", "predicts" or "continue", which list is not meant to be all-inclusive, and other such negative terms and comparable technology. These forward-looking statements, include, without limitation, statements about market opportunity, strategies, competition, expected activities and expenditures as we pursue business our plan, and the adequacy of available cash reserves. Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Actual results may differ materially from the predictions discussed in these forward-looking statements. The economic environment within which we operate could materially affect actual results. Additional factors that could materially affect these forward-looking statements and/or predictions include among other things:

(i) product demand, market and customer acceptance of any or all of the Company's products, equipment and other goods,
(ii) ability to obtain financing to expand its operations,
(iii) ability to attract and retain qualified personnel,
(iv) the results, cost and timing of our preclinical studies and clinical trials, including any delays to such clinical trials relating to enrollment or site initiation, as well as the number of required trials for regulatory approval and the criteria for success in such trials,
(v) our dependence on third parties in the conduct of our preclinical studies and clinical trials,
(vi) legal and regulatory developments in the United States and foreign countries, including any actions or advice that may affect the design, initiation, timing, continuation, progress or outcome of clinical trials or result in the need for additional clinical trials,
(vii) the results of our preclinical studies and earlier clinical trials of our product candidates may not be predictive of future results and we may not have favorable results in our ongoing or planned clinical trials,
(viii) the difficulties and expenses associated with obtaining and maintaining regulatory approval of our product candidates, and the indication and labeling under any such approval,
(ix) our plans and ability to develop and commercialize our product candidates,
(x) successful development of our commercialization capabilities, including sales and marketing capabilities, whether alone or with potential future collaborators,
(xi) the size and growth of the potential markets for our product candidates, the rate and degree of market acceptance of our product candidates and our ability to serve those markets,
(xii) the success of competing therapies and products that are or become available,
(xiii) our ability to limit our exposure under product liability lawsuits, shareholder class action lawsuits or other litigation,
(xiv) our ability to obtain and maintain intellectual property protection for our product candidates,
(xv) our ability to obtain and maintain third-party manufacturing for our product candidates on commercially reasonable terms,
(xvi) delays, interruptions or failures in the manufacture and supply of our product candidates,
(xvii) the performance of third parties upon which we depend, including third-party contract research organizations, or CROs, contract manufacturing organizations, or CMOs, contractor laboratories and independent contractors,
(xviii) the timing and outcome of current and future legal proceedings,
(xix) our ability to maintain proper functionality and security of our internal computer and information systems and prevent or avoid cyberattacks, malicious intrusion, breakdown, destruction, loss of data privacy or other significant disruption,
(xx) the adequacy of capital reserves and liquidity including, but not limited to, access to additional borrowing capacity,
(xxi) the extent to which health epidemics and other outbreaks of communicable diseases, including the ongoing COVID-19 pandemic, could disrupt our operations or materially and adversely affect our business and financial conditions, and
(xxii) general industry and market conditions and growth rates, unexpected natural disasters, and other factors, which we have little or no control: and any other factors discussed in the Company's filings with the Securities and Exchange Commission ("SEC").

The Company does not undertake any obligation to update forward-looking statements to reflect events or circumstances occurring after the date of this report.

The following discussion highlights the Company's results of operations and the principal factors that have affected our financial condition, as well as our liquidity and capital resources for the periods described and provides information that management believes is relevant for an assessment and understanding of the statements of financial condition and results of operations presented herein. The following discussion and analysis is based on the Company's unaudited financial statements contained in this Quarterly Report, which we have prepared in accordance with United States generally accepted accounting principles. You should read this discussion and analysis together with such financial statements and the related notes thereto.

Overview

GB Sciences, Inc. (“the Company”, “GB Sciences”, “we”, “us”, or “our”) is a plant-inspired, biopharmaceutical research and development company creating patented, disease-targeted formulations of cannabis- and other plant-inspired therapeutic mixtures for the prescription drug market through its wholly owned Canadian subsidiary, GbS Global Biopharma, Inc. (“GBSGB”).

Through GBSGB, the Company is engaged in the research and development of plant-inspired medicines, with virtual operations in North America and Europe. GBSGB’s assets include a portfolio of intellectual property containing both proprietary plant-inspired formulations and our AI-enabled drug discovery platform, as well as critical research contracts and key supplier arrangements. The Company’s intellectual property portfolio, which is held by GBSGB, contains six U.S. and ten foreign patents issued, two US and three foreign patents allowed, as well as 18 U.S. and 55 foreign patent-pending applications.

On February 3, 2023, GB Sciences’ first foreign patent protecting its proprietary cannabinoid-based formulations for Parkinson’s disease was issued in China. China is an increasingly important pharmaceutical market with cultural acceptance of plant-based formulations, which is a good fit for GB Sciences’ drug candidates. The global market for treatments of Parkinson’s disease is projected to grow to $8.8 billion by the year 2026, and new therapies to address Parkinson’s disease symptoms are greatly needed. GB Sciences’ first foreign patent also confirms that the Company’s intellectual property strategy can work globally and validates both our plant-inspired drug discovery process and intellectual property strategy, which involves defining and protecting Minimum Essential Mixtures. GBLX/GBSGB starts its drug discovery process with plant-based therapies that are working anecdotally or in traditional medical systems, then the Company systematically reduces the number of compounds to reveal Minimum Essential Mixtures. The Company’s novel Minimum Essential Mixtures retain the increased efficacy of whole plant medicines, but they are easier to manufacture with precision at scale like single ingredient drugs. These Minimum Essential Mixtures are a viable alternative to standard single ingredient drugs or traditional whole plant medicines. As previously mentioned, the Chinese Patent was issued for GBSGB’s Cannabinoid-Containing Complex Mixtures for the treatment of Parkinson’s disease on February 3, 2023. On April 25, 2023, the Japanese patent was issued for the use of GbS’ Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson’s disease. On June 28th of 2023, GbS received a Notice of Allowance for its Israeli patent application for the use of GbS’ Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson’s disease. On July 7th, GbS received a Notice of Allowance for its European patent application for the use of GbS’ Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson’s disease. Additionally, on August 19th, 2023, GbS received a Notice of Allowance for an additional US Patent for GbS’ Cannabinoid-Containing Complex Mixtures with refined formulations to be used in the treatment of Parkinson’s disease.

Several more of GBLX/GBSGB’s foreign and US patents for plant-based treatments of serious disorders were allowed in different countries, expanding our patent protections as follows. On February 10, 2023, the Japanese (JP) Patent was issued, protecting GBLX/GBSGB’s Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). MCAS is a severe immunological condition in which mast cells inappropriately and excessively release inflammatory mediators, resulting in a range of severe chronic hyperinflammatory symptoms and life-threatening anaphylaxis attacks. On March 2, 2023, the Israeli (IL) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On March 30, 2023, the Australian (AU) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On April 24, 2023, GBLX/GBSGB received the Notice of Allowance for its Hong Kong (HK) Patent for our Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. On September 27, 2023, the European Patent was issued protecting GBLX/GBSGB’s Cannabinoid-Containing Complex Mixtures for the treatment of MCAS.

On September 7th of 2023, the Australian patent was issued for GBLX/GBSGB’s Myrcene-Containing Complex Mixtures (MCCM) for use in the treatment of pain related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. On March 9, 2023, the Notice of Allowance was received for the Company’s U.S. Patent Application No. 16/878,295. This Notice of Allowance protects the use of the Company’s Myrcene-Containing Complex Mixtures in the treatment of cardiac hypertrophy, overactive bladder, and refractory chronic cough, which expands the medical conditions protected by the patent.

GBSGB’s intellectual property covers a range of over 65 medical conditions, from which five drug development programs are in the preclinical stage of drug development including our formulations for Parkinson’s disease ("PD"), chronic pain, COVID-related cytokine release syndrome, depression/anxiety, and cardiovascular therapeutic programs. The Company’s primary focus is on preparing its lead program for the treatment of the motor symptoms of Parkinson's disease for a first-in-human clinical trial. Depending on the results of ongoing preclinical studies, the Company intends to move forward with clinical trials for its chronic pain and COVID-related cytokine release syndrome therapies after PD. The Company’s formulations for chronic pain, anxiety, and depression are currently in preclinical animal studies with researchers at the National Research Council Canada. The Company recently received proof-of-concept data supporting its kava-inspired anxiety formulations. The Company also has positive preclinical proof-of-concept data supporting its complex mixtures for the treatment of Cytokine Release Syndrome, and its lead candidates will be optimized based on late-stage preclinical studies at Michigan State University. Proof-of-concept studies in animals that support our heart disease formulations have been successfully completed at the University of Hawaii. The Company runs a lean drug development program through GBSGB and takes effort to minimize expenses, including personnel, overhead, and fixed capital expenses through strategic partnerships with Universities and Contract Research Organizations (“CROs”). Our productive research and development network includes distinguished universities, hospitals, and Contract Research Organizations.

We were incorporated in the State of Delaware on April 4, 2001, under the name “Flagstick Venture, Inc.” On March 28, 2008, stockholders owning a majority of our outstanding common stock approved changing our then name “Signature Exploration and Production Corp.” as our business model had changed.

On April 4, 2014, we changed our name from Signature Exploration and Production Corporation to Growblox Sciences, Inc. Effective December 12, 2016, the Company amended its Certificate of Corporation pursuant to shareholder approval, and the Company’s name was changed from Growblox Sciences, Inc. to GB Sciences, Inc.

Effective April 8, 2018, Shareholders of the Company approved the change in corporate domicile from the State of Delaware to the State of Nevada and increase in the number of authorized capital shares from 250,000,000 to 400,000,000. Effective August 15, 2019, Shareholders of the Company approved an increase in authorized capital shares from 400,000,000 to 600,000,000. Effective March 09, 2023, Shareholders of the Company approved an increase in authorized capital shares from 600,000,000 to 950,000,000.

Plan of Operation

Drug Discovery and Development of Novel Cannabis- and Other Plant-Inspired Therapies

Through its wholly owned Canadian subsidiary, GBS Global Biopharma, Inc. ("GBSGB"), the Company has conducted ground-breaking research embracing the rational design of plant-inspired medicines led by Dr. Andrea Small-Howard, the Company’s President, Chief Science Officer, and Director. In the early days, Small-Howard and Dr. Helen Turner, Vice President of Innovation and Dean of the Natural Sciences and Mathematics Department at Chaminade University, posited that minimum essential mixtures of plant-based ingredients would provide more targeted and effective treatments for specific disease conditions than either single ingredient or whole plant formulations. They started with cannabis-based drug discovery and developed a rapid screening and assaying system that tested thousands of combinations of cannabinoids and terpenes in vitro against cell-based models of disease. This process identified precise mixtures of cannabinoids and terpenes, many of which contained no THC, to treat categories of disease conditions, including neurological disorders, inflammation, heart disease, metabolic syndrome, and chronic neuropathic pain. More recently, a similar approach has been applied to the discovery and validation of therapies informed by plants described in a variety of Traditional Medical Systems. These rich discovery efforts have yielded new preclinical programs; for example, our anxiety and depression formulations that contain minimum essential mixtures of compounds derived from plants in the Piper plant family, such as kava.

Currently, the Company’s drug discovery engine involves both a data analytics/machine learning tool to expedite drug discovery and high throughput screening of cell and animal models of disease. As previously mentioned, the Company initially explored the potential medical uses of specific mixtures derived from cannabis-based raw materials, but our early *in silico* tools have now been improved, and they are becoming increasingly effective for investigating the medical applications of potential therapeutic mixtures from any plant-derived starting material. In 2014, the Company developed its first rapid screening and assaying system which tested thousands of combinations of cannabinoids and terpenes against cell-based models of diseases. This process has been refined over the years and now has identified precise mixtures of cannabinoids and terpenes, many of which contained no THC, to treat categories of disease conditions, including neurological disorders, inflammation, heart disease, metabolic syndrome, chronic and neuropathic pain. Through GBSGB, the Company has filed for patent protection on these plant-inspired, minimum essential mixtures, and they are validating them in disease-specific animal models in preparation for human trials.

The Company’s drug discovery process combines: 1) PhAROS™: Phytomedical Analytics for Research Optimization at Scale for the prediction of minimum essential mixtures from plant-based materials, and 2) HTS: high throughput screening to refine and validate plant-inspired, minimum essential mixtures in well-established cell and animal models of diseases. This combined approach to drug discovery increases research efficiency and accuracy reducing the time from ideation to patenting from 7 years to 1.5 years. The Company now uses its PhAROS™ Drug Discovery Platform to ‘pre-validate’ therapeutic mixtures. PhAROS can both prioritize and eliminate some potential combinations, which reduces time and resources used in the discovery period. PhAROS™ can also be used to identify and predict the efficacy of plant-inspired, minimum essential mixtures for specific diseases *in silico*, which are then tested by screening in cell and animal models. Screening of plant-inspired mixtures for drug discovery involves the testing of specific combinations of plant chemicals from many naturally occurring plants and the use of live models for these diseases that have been well established by other researchers. The Company refines the potential therapeutic mixtures pre-validated by PhAROS™ to optimize their effectiveness using cell and animal models. Based on data from disease-specific assays, therapeutic formulations are refined during the HTS screening process by removing compounds that do not act synergistically with the others in the mixtures. The goal is to identify minimum essential mixtures (MEM) that retain the efficacy of the whole plant extracts, but with the manufacturing and quality control advantages of single ingredient pharmaceutical products.

Recently, the Company has received positive preclinical results supporting the efficacy of its proprietary kava-based formulas designed for the treatment of anxiety, which were obtained as a part of its on-going preclinical study of kava-inspired formulations for the treatment of anxiety or depression. The Company is addressing the growing need for anxiety and depression medications with non-psychedelic kava-based formulations. As mental health disorders increasingly impact global populations, Gb Sciences is developing psychotropic but non-psychedelic treatments for anxiety and depression that compete with the emerging billion-dollar psychedelic companies. Gb Sciences' psychotropic kava-inspired formulas enhance mood, but they do not have potentially unwanted psychedelic side-effects. The National Research Council of Canada ("NRC") has been testing the Company's proprietary, psychotropic plant-based formulas for the treatment of depression and anxiety. For these novel psychotropic drug candidates, the Company used their AI-enabled PhAROS™ platform to identify new ingredients to improve upon an initial formulation for anxiety based on traditional medicine. The original plant mixture was derived from the kava plant, but some elements of kava are thought to cause liver toxicity. PhAROS™ identified ingredients from the Piper plant family as a substitute for the functionality of the ingredients in question without the potentially adverse safety profiles of those original ingredients. The Piper plant family includes pepper plants that are used worldwide in traditional medicines. The Company's novel psychotropic formulations have been tested in preclinical trials at the Zebrafish Toxicology, Genomics and Neurobiology Lab at the NRC, led by Dr. Lee Ellis, Research Officer and Team Lead. The ongoing work between the NRC and the Company has produced strong and applicable data for the evaluation of its therapies, and this trial could provide novel treatment options for patients with depression and anxiety.

The U.S. Patent and Trademark Office allows complex mixtures to be claimed as Active Pharmaceutical Ingredients ("APIs"). Through GBSGB, the Company has six issued patents, plus a series of pending patents containing plant-derived complex mixtures and minimum essential mixtures that act as therapeutic agents for specific disease categories, as described below. The Company's pending patents are protected whether the individual compounds are derived from the cannabis plant, another plant, synthetically produced, or derived from a combination of sources for the individual chemical compounds in these mixtures.

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Drug Development Progress

The Company has made significant strides in the past year with respect to both its drug discovery research and product development programs. The Company, through GBSGB, has five preclinical phase product development programs and is aggressively preparing its lead formulations for the treatment of Parkinson's disease for a first-in-human clinical trial. Our lead program in Parkinson's disease is being prepared for a first-in-human trial through the following essential steps: a) creating clinical prototypes by combining our proprietary Parkinson's formulas with a convenient oral delivery system; b) performing a dose response study in rodents to establish the correct range of active ingredients for our first-in-human trial; c) performing necessary ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicology) tests on the clinical prototypes; and d) selecting a Contract Research Organization (CRO) to prepare an Investigational New Drug (IND) application to the US FDA to begin our first-in-human trial. In addition to our work in preparing the Parkinson's formulation for a First-in-Human trial, the Company's chronic pain, anxiety, and depression formulations are currently in preclinical animal studies with Dr. Lee Ellis of the National Research Council ("NRC") Canada in Halifax, Nova Scotia. Based on our positive preclinical, proof-of-concept data supporting our minimum essential mixtures for the treatment of Cytokine Release Syndrome in COVID-19 (COVID-CRS) and other severe hyperinflammatory conditions, the Company's lead COVID-CRS candidates will be optimized in late-stage preclinical studies with Dr. Norbert Kaminski at Michigan State University.

For the Company’s lead program in PD therapeutics, the efficacy of our original formulations has been improved and the Company has filed a new patent application family to protect our defined cannabinoid ratio-minimum essential mixtures (DCR-MEMs) for the treatment of Parkinsonian motor symptoms. The Company had announced previously that it has obtained the statistically significant reduction of Parkinson’s-disease like symptoms using proprietary cannabinoid-containing MEMs in an animal model of Parkinson’s disease ("PD"). These important preclinical results will be included in GBS’ Investigational New Drug ("IND") application with the US FDA to enter human clinical trials as soon as possible. New therapies to address Parkinson’s disease symptoms are needed to help those afflicted with this debilitating disease. The combined direct and indirect costs associated with Parkinson’s disease are estimated at $52 billion in the U.S. alone.

In August of 2023, we successfully completed a stability study validating the clinical prototypes for our top three performing cannabinoid-containing Parkinson’s formulations with Catalent Pharma, Inc. based on incorporating our proprietary cannabinoid formulations for Parkinson’s disease into Catalent Pharma’s proprietary Zydis® delivery system. Catalent Pharma’s Zydis® delivery system is an Orally Disintegrating Tablet format (“ODT”) that should be ideal for delivering our cannabinoid-ratio controlled formulations to Parkinson’s patients. More than 50% of Parkinson’s patients have trouble swallowing, but the Zydis® format delivers the active ingredients into the mouth by dispersion without needing water or the ability to swallow. To ready the Company’s Parkinson’s disease therapies for a First-in-Human trial, the initial clinical prototypes of our Defined Cannabinoid Ratio (DCR)-MEM have been formulated by Catalent Pharma using Catalent’s Zydis® Orally Disintegrating Tablet technology and they have passed a stability test within range. As mentioned above, the ODT format was selected for the PD formulas because it dissolves on the tongues of patients without the need to swallow for ease of use in patients with PD, who often have difficulties with swallowing. Previously, the Company has completed two proof-of-concept studies for its MEM. Now, the Company has completed both the Stability Study and a Feasibility Study that has produced the clinical prototypes for its DCR-MEM. The Company selected Catalent for the delivery of their PD therapies due to Catalent’s prior experience in working on US FDA-approved, cannabinoid-containing drugs, their Schedule I drug manufacturing facilities, their familiarity with US FDA and international regulatory and manufacturing requirements, their expertise in tackling formulation challenges, and their ability to achieve the stability and dosing necessary for these novel therapeutic mixtures. In addition to its Zydis® technology, Catalent has early drug development services and additional oral drug delivery solutions available for the efficient delivery of the Company's proprietary APIs.

Additionally, the Company has successfully completed our required dose response study in a rodent model of Parkinson’s disease, which will help us to establish the correct dosing for our first-in-human trial. The University of Lethbridge completed this study in February of 2023, and the final report has recently been delivered to us for our usage. Prior to filing our IND application, we must conduct ADMET testing on the clinical prototypes of our Parkinson’s medication being formulated for us by Catalent Pharma. The Company has identified a Contract Research Organization that will perform the ADMET testing. In the IND application for our novel Parkinson’s disease therapy, the ADMET testing data will be combined with the Chemistry Manufacturing and Controls (CMC) data prepared by Catalent Pharma and our proof-of-concept data (National Research Council Canada). In the near future, we expect to announce the selection of the Contract Research Organization that will write the IND-application and run the first-in-human trials for our novel treatment for the motor symptoms of Parkinson’s disease.

For its lead chronic pain program, the Company is testing its MEM for chronic pain both as encapsulated, time-released nanoparticles, as well as in non-encapsulated forms of these therapeutic mixtures in an animal model at the NRC in Halifax, Nova Scotia. In preparation for human clinical trials, our standard MEM and the time-released MEM are currently being compared in an animal model that demonstrates their potential effectiveness at treating chronic pain. The early results from this preclinical research project look very promising.

The Company received positive proof-of-concept data from a human immune cell model supporting the efficacy of their proprietary MEM designed for the suppression of COVID-related, cytokine release syndromes (CRS) while preserving key anti-viral immune responses. Based on this new positive proof-of-concept data, GBSGB converted their provisional patent application entitled, “CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF CYTOKINE RELEASE SYNDROME WHILE PRESERVING KEY ANTI-VIRAL IMMUNE REACTIONS” to a nonprovisional patent application. The best performing MEM will be further developed in preparation for clinical studies to evaluate their anti-inflammatory potential in the treatment of severely ill COVID-19 patients contending with Cytokine Release Syndrome (CRS) and associated hyperinflammatory conditions, such as macrophage activation syndrome (MAS) and acute respiratory distress syndrome (ARDS). CRS, MAS, and ARDS are the leading causes of deaths in COVID-19 patients. The Company’s proof-of-concept study was performed at Michigan State University using a state-of-the-science human immune model. In the Company’s proof-of-concept study, immune cells from human donors were co-cultured together in one of four treatment groups: untreated (no inflammatory stimulus), inflammatory stimulus, control (inflammatory stimulus + vehicle from cannabinoid mixtures), or pre-treatment with the cannabinoid mixture + inflammatory stimulus. Then a panel of cytokines and inflammatory markers was measured from each of these treatment groups from different immune cell types within the co-cultured cells at four time points to determine whether the Company’s MEMs were able to alter the levels of pro-inflammatory cytokines or other inflammatory agents. The Company’s COVID-CRS formulations showed potential for the selective inhibition of pro-inflammatory processes in response to viral- and bacterial-triggered hyperinflammation in a human immune cell model. These positive proof-of-concept results support the potential for some of these mixtures to accomplish our therapeutic goals, but, ultimately, clinical trial results will determine whether they are efficacious. The Company’s plant-based drug discovery platform is advancing biopharmaceutical research at a time when thousands are dying from COVID-19. The next step is to further develop our plant-inspired drugs and eventually bring them to human trials so that the use of well-defined cannabinoid mixtures in clinical practice can become a reality.

As mentioned above, the Company has announced that our kava-inspired formulas for anxiety have achieved statistically significant efficacy in animal proof-of-concept studies. Gb Sciences is now preparing its non-psychedelic, kava-based anxiety formulations to treat the growing global need for anxiety and depression relief. The NRC of Canada has tested our proprietary, psychotropic plant-based formulas for the treatment of depression and anxiety in preclinical animal studies. The Company has leveraged its patent-pending PhAROS™ (Phytomedical Analytics for Research Optimization at Scale) platform to identify these combinations of plant compounds for novel drug candidates to treat depression and anxiety. These are the company's first non-cannabis formulations to achieve proof-of-concept efficacy in preclinical studies. For these novel psychotropic drug candidates, the Company used the PhAROS™ platform to identify new ingredients to improve upon an initial formulation for anxiety based on traditional medicine. The original plant mixture was derived from the kava plant, but some elements of kava are thought to cause liver toxicity. PhAROS™ identified ingredients from the Piper plant family as a substitute for the functionality of the ingredients in question without the potentially adverse safety profiles of those original ingredients. The Piper plant family includes pepper plants that are used worldwide in traditional medicines. The Global Anxiety Disorder and Depression Treatment Market size is forecast to reach USD 19.81 Billion by 2028 according to Reports & Data.

Favorable Research Updates from our university collaborators reveal the promise in our discovery programs including: 1) Multiple MEM discovery projects using and advancing our proprietary PhAROS™ drug discovery platform in conjunction with Chaminade University, 2) the Company's Cannabis Metabolomics Project with both Chaminade University of Honolulu, Hawai'i and the University of Athens, Greece, and 3) the Company's Time-Released Nanoparticles for Delivery of Cannabis-based Ingredients with the University of Seville, Spain and the University of Cadiz, Spain.

In the past year GBLX/GBSGB's foreign patents for plant-based treatments of serious disorders were allowed in different countries, expanding our patent protections as follows. On February 3, 2023, GB Sciences' first foreign patent protecting its proprietary cannabinoid-based formulations for Parkinson's disease was issued in China. China is an increasingly important pharmaceutical market with cultural acceptance of plant-based formulations, which is a good fit for GB Sciences' drug candidates. The global market for treatments of Parkinson's disease is projected to grow to $8.8 billion by the year 2026, and new therapies to address Parkinson's disease symptoms are greatly needed. On April 25, 2023, the Japanese patent was issued for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. On June 28th of 2023, GbS received a Notice of Allowance for its Israeli patent application for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. On July 7th, GbS received a Notice of Allowance for its European patent application for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. Additionally, on August 19th, 2023, GbS received a Notice of Allowance for an additional US Patent for GbS' Cannabinoid-Containing Complex Mixtures with refined formulations to be used in the treatment of Parkinson's disease. Several more of GBLX/GBSGB's foreign and US patents for plant-based treatments of serious disorders were allowed in different countries, expanding our patent protections as follows. On February 10, 2023, the Japanese (JP) Patent was issued, protecting GBLX/GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). MCAS is a severe immunological condition in which mast cells inappropriately and excessively release inflammatory mediators, resulting in a range of severe chronic hyperinflammatory symptoms and life-threatening anaphylaxis attacks. On March 2, 2023, the Israeli (IL) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On March 30, 2023, the Australian (AU) Patent was issued, protecting our Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On April 24, 2023, GBLX/GBSGB received the Notice of Allowance for its Hong Kong (HK) Patent for our Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. On September 27, 2023, the European Patent was issued protecting GBLX/GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. On September 7th of 2023, the Australian patent was issued for GBLX/GBSGB's Myrcene-Containing Complex Mixtures (MCCM) for use in the treatment of pain related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. On March 9, 2023, the Notice of Allowance was received for the Company's U.S. Patent Application No. 16/878,295. This Notice of Allowance protects the use of the Company's Myrcene-Containing Complex Mixtures in the treatment of cardiac hypertrophy, overactive bladder, and refractory chronic cough, which expands the medical conditions protected by the patent.

In 2021, our growing intellectual property portfolio was augmented with additional patent-protections for our PhAROS™ drug discovery platform that were filed in July of 2021 and in October of 2021. The Company, through GBSGB, also filed for protection of new PhAROS™ discovered, non-cannabis formulations in July of 2021. In September of 2021, the Company filed a patent application for the Company's improved DCR-MEM formulations for our PD therapeutic program. These new patent applications expanded upon the solid foundation of intellectual property developed over the past six years. In 2020, the three patents which protect formulations for the Company's lead therapeutic programs were issued by the USPTO. The issuance of U.S. Patent No. 10,653,640 entitled "Cannabinoid-Containing Complex Mixtures for the Treatment of Neurodegenerative Diseases" on May 19, 2020 protects methods of using GBSGB's proprietary cannabinoid-containing complex mixtures (CCCM™) for treating Parkinson's Disease. This was an important milestone in the development of these vitally important therapies and validates GBSGB's drug discovery platform. In the US alone, the combined direct and indirect costs associated with Parkinson's disease are estimated at $52 billion, and new therapies to address Parkinson's disease symptoms are greatly needed. This was also the first time that a US patent has been awarded for a cannabis-based complex mixture defined using this type of drug discovery method. The first US patent for PD therapies validated our drug discovery platform and strengthened our intellectual property portfolio of unique CCCM's™, each targeting one of up to 60 specific clinical applications.

The issuance of the Company's second and third US patents for active pharmaceutical ingredients that are complex mixtures identified by our biotech platform further confirmed that the Company's pharmaceutical compositions can be patent protected for use as biopharmaceutical and nutraceutical products. The US Patent entitled "Myrcene-Containing Complex Mixtures Targeting TRPV1" protects methods of using our proprietary MEMs for the treatment of pain disorders related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. In the US alone, chronic pain represents an estimated health burden of between $560 and $650 billion dollars, and an estimated 20.4% of U.S. adults suffer from chronic pain that significantly decreases their quality of life. Despite the widespread rates of addiction and death, opioids remain the standard of care treatment for most people with chronic pain. The Company believes that it is important to create safer, less addictive alternatives to opioids for the treatment of chronic pain disorders, like GBSGB's myrcene-containing MEMs.

The Company's third issued US Patent entitled "Cannabinoid-Containing Complex Mixtures for the Treatment of Mast-Cell-Associated or Basophil-Mediated Inflammatory Disorders" protects methods of using the Company's proprietary MEMs for treating Mast Cell Activation Syndrome (MCAS). MCAS is a severe immunological condition in which mast cells inappropriately and excessively release inflammatory mediators, resulting in a range of severe chronic hyperinflammatory symptoms and life-threatening anaphylaxis attacks. Receiving this patent for the treatment of MCAS using our MEMs is an important milestone in the development of this urgently needed medicine. There is no single recommended treatment for MCAS patients. Instead, they attempt to manage MCAS symptoms primarily by avoiding 'triggers' and using rescue medicines for their severe hyperinflammatory attacks. Therefore, MCAS patients need new therapeutic options to control their mast cell related symptoms, and our MEMs were designed to simultaneously control multiple inflammatory pathways within mast cells as a comprehensive treatment option. The Company is strategically targeting MCAS for two additional reasons. By focusing on a rare disease with no known cure, our company can apply for the U.S. Food and Drug Administration's expedited approval process, which allows clinically successful treatments to get to market both quicker and more cost effectively. Gaining approval from the US FDA for the entire anti-inflammatory market would be extremely time consuming and cost prohibitive. Demonstrating that our MEMs are safe for the treatment of MCAS would favorably position our Company for clinical testing of these MEMs as potential treatments for other related inflammatory disorders, such as inflammatory bowel disease, thereby widening the target market and drastically shortening the development cycle and costs.

The Company's fourth US Patent was issued on March 1, 2022 for a cannabinoid-containing mixture designed to treat cardiac hypertrophy, often present in advanced heart disease. Gb Sciences' newly issued patent also covers the use of these receptor-targeted formulations for the treatment of TRPV1-receptor associated hearing loss and urinary cystitis. Despite multiple categories of prescription heart medications on the market, heart disease remains the leading cause of death in the United States for people of most racial and ethnic groups. Alternative therapeutic approaches are still needed, especially for the treatment of advanced heart disease. The market for prescription heart disease medications is predicted to rise to $64 billion dollars in the US by 2026, with future market growth fueled by innovative new therapeutic approaches.

Intellectual Property Portfolio

GBSGB retained Fenwick & West, a Silicon Valley based law firm focusing on life sciences and high technology companies with a nationally top-ranked intellectual property practice, to develop strategies for the protection of the Company's intellectual property. The status of the intellectual property portfolio is as follows. Unless otherwise indicated, all patents listed below are assigned to the Company's wholly-owned subsidiary, GBS Global Biopharma, Inc.

Six USPTO & Ten Foreign Patents Issued; Two USPTO & Three Foreign Patents Allowed*
*Notice of Allowances received which confirms patent protection on claim set

Title: CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF NEURODEGENERATIVE DISEASES (002 Patent Family)

U.S. Patent Number: US10653640B2	Issued: May 19, 2020
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.
Chinese Patent Number: CN109963595B	Issued: Feb 3, 2023
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.
Japanese Patent Number: JP7225103B2	Issued: April 25, 2023
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.
Israeli Patent Application: IL265902	Allowed: June 28, 2023
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.
European Patent Application: EP17800639.1	Allowed: July 7, 2023
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.
U.S. Patent Application No.: 16/844,713	Allowed: August 19, 2023
Expiration date: October 10, 2037	Inventors: Andrea Small-Howard et al.

On May 19, 2020, U.S. Patent protection was granted for GbS' Cannabinoid-Containing Complex Mixtures for the treatment of Parkinson's disease. On February 3, 2023, the Chinese Patent was issued for GbS' Cannabinoid-Containing Complex Mixtures for the treatment of Parkinson's disease. On April 25, 2023, the Japanese patent was issued for the use of GbS' Cannabinoid-Containing Complex Mixtures in the treatment of Parkinson's disease. On June 28th of 2023, GbS received a Notice of Allowance for its Israeli patent application. On July 7th, GbS received a Notice of Allowance for its European patent application. On August 19, 2023, GbS received a Notice of Allowance for an additional US Patent for GbS' Cannabinoid-Containing Complex Mixtures with refined formulations to be used in the treatment of Parkinson's disease. These patents claim benefit of U.S. Patent Application No. 62/406,764 that was originally filed October 11, 2016.

Title: MYRCENE-CONTAINING COMPLEX MIXTURES TARGETING TRPV1 (005 Patent Family)

U.S. Patent Number US10709670B2	Issued: July 14, 2020
Expiration date: May 22, 2038	Inventors: Andrea Small-Howard, et al.
US Patent Application: US20200390721A1	Allowed: March 9, 2023
Expiration date: May 22, 2038	Inventors: Andrea Small-Howard et al.

As of July 14, 2020, GBSGB's Myrcene-Containing Complex Mixtures (MCCM) are protected in the US for use in the treatment of pain related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. On June 28th of 2023, GBSGB received a Notice of Allowance on its Australian patent application. On March 9, 2023, the Notice of Allowance was received for GBSGB's U.S. Patent Application No. 16/878,295, which was filed as a Continuation of Review of US Patent Application No. 15/986,316 (originally filed on May 22, 2018). The Notice of Allowance on the US Continued Review Application protects the use of GBSGB's MCCM in the treatment of cardiac hypertrophy, overactive bladder, and refractory chronic cough. On September 7th of 2023, the Australian patent was issued for GbS' Myrcene-Containing Complex Mixtures (MCCM) for use in the treatment of pain related to arthritis, shingles, irritable bowel syndrome, sickle cell disease, and endometriosis. These patents claim benefit of U.S. Patent Application No. 62/509,546 that was originally filed May 22, 2017.

Title: CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF MAST CELL-ASSOCIATED OR BASOPHIL-MEDIATED INFLAMMATORY DISORDERS (003 Patent Family)

U.S. Patent Number US10,857,107B2	Issued: December 8, 2020
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.
IL Patent Number: IL268211B	Issued: March 2, 2023
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.
AU Patent Number: AU2018215200B2	Issued: March 30, 2023
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.
JP Patent Number: JP7225104B2	Issued: February 10, 2023
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.
European Patent Application: EP3576724A1	Issued: September 27, 2023
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.
HK Patent Application: HK62020008641.6	Allowed: April 24, 2023
Expiration date: January 31, 2038	Inventors: Andrea Small-Howard et al.

On December 8, 2020, U.S. Patent protection was granted for GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On February 10, 2023, the Japanese (JP) Patent was issued, protecting GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On March 2, 2023, the Israeli (IL) Patent was issued, protecting GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On March 30, 2023, the Australian (AU) Patent was issued, protecting GBSGB's Cannabinoid-Containing Complex Mixtures for the treatment of Mast Cell Activation Syndrome (MCAS). On April 24, 2023, the Company received the Notice of Allowance for its Hong Kong (HK) Patent for its Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. On September 27, 2023, the European Patent was issued protecting the Company's Cannabinoid-Containing Complex Mixtures for the treatment of MCAS. These patents claim benefit of U.S. Patent Application No. 62/453,161 originally filed February 1, 2017.

Title: TRPV1 ACTIVATION-MODULATING COMPLEX MIXTURES OF CANNABINOIDS AND/OR TERPENES (006 Patent Family)

U.S. Patent Number US11260044B2	Issued: May 1, 2022
Expiration date: May 22, 2039	Inventors: Andrea Small-Howard, et al.

U.S. Patent coverage was granted for CBGA-containing mixtures used for the treatment of TRPV1-associated heart disease, renal cystitis, and hearing loss. This patent claims benefit of U.S. Patent Application Nos. 62/674,843 filed May 22, 2018; 62/769,743 filed November 20, 2018; and 62/849,719 filed May 17, 2019.

Title: METHODS AND COMPOSITIONS FOR PREVENTION AND TREATMENT OF CARDIAC HYPERTROPHY (050 Patent Family)

U.S. Patent Number: US9084786B2	Issued: July 21, 2015
U.S. Patent Number: US10137123B2	Issued: November 27, 2018
European Union Patent Number: EP2635281B1	Issued: March 14, 2018
Hong Kong Patent Number: HK14102182.8B1	Issued: March 14, 2018
Inventor: Alexander Stokes	Assignee: University of Hawai'i

GBSGB has sublicensed these two issued USPTO patents and two issued international patents for the prevention and treatment of heart failure due to cardiac hypertrophy through therapeutic regulation of TRPV1 from Makai Biotechnology, LLC.

Title: METHOD FOR PRODUCING A PHARMACEUTICAL COMPOSITION OF POLYMERIC NANOPARTICLES FOR TREATING NEUROPATHIC PAIN CAUSED BY PERIPHERAL NERVE COMPRESSION (008 Patent Family)
Spanish Patent: ES2582287 Issued: September 29, 2017
Expiration: February 9, 2035
Inventors: Martin Banderas, Lucia; Fernandez Arevalo, Mercedes; Berrocoso, Dominguez, Esther; and Mico Segura, Juan Antonio
Assignees: Universidad de Sevilla, Universidad de Cadiz, and Centro de Investigacion Biomedica En Red
Exclusive worldwide license held by GbS Global Biopharma, Inc. Claims benefit of Spanish Patent Application no. P201500129 (Pub. No. ES 2582287).

GBSGB holds the exclusive worldwide rights to commercialize the issued Spanish patent-protected, cannabinoid-containing, time-released, oral nanoparticles for the treatment of neuropathic pain.

Pending Patents

In addition to the issued patents listed above, GBSGB's intellectual property portfolio includes a total of eighteen USPTO and fifty-five international patents pending:

Title	Jurisdiction	Application Number	Other International Applications Filed	Continuation of
CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF NEURODEGENERATIVE DISEASES	US	USPTO 16/844,713 PCT/US2017/055989	AU, CA, CN, EP, HK, IL, JP	US15/729,565 CN202310039015.8A JP2023058599A
MYRCENE-CONTAINING COMPLEX MIXTURES TARGETING TRPV1	US	USPTO 16/878,295 PCT/US2018/033956	AU, CA, CN, EP, HK, IL, JP	US15/986,316 US16/878,295
CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF MAST CELL-ASSOCIATED OR BASOPHIL-MEDIATED INFLAMMATORY DISORDERS	US	USPTO 17/065,400 PCT/US2018/016296	AU, CA, CN, EP, HK, IL, JP	US15/885,620
TRPV1 ACTIVATION-MODULATING COMPLEX MIXTURES OF CANNABINOIDS AND/OR TERPENES	US	USPTO 16/420,004 PCT/US2019/033618	AU, CA, CN, EP, HK, IL, JP	US17/576,485
THERAPEUTIC NANOPARTICLES ENCAPSULATING TERPENOIDS AND/OR CANNABINOIDS	US	USPTO 16/686,069 PCT/ES2019/070765	AU, CA, CN, EP, HK, IL, JP	
TREATMENT OF PAIN USING ALLOSTERIC MODULATOR OF TRPV1	US	USPTO 16/914,205 PCT/US2020/039989	AU, CA, CN, EP, HK, IL, JP	
CANNABINOID-CONTAINING COMPLEX MIXTURES FOR THE TREATMENT OF CYTOKINE RELEASE SYNDROME WHILE PRESERVING KEY ANTI-VIRAL IMMUNE REACTIONS	US	USPTO 17/406,035 PCT/US2021/046584	AU, CA, CN, EP, HK, IL, JP	
IN SILICO META-PHARMACOPEIA ASSEMBLY FROM NON-WESTERN MEDICAL SYSTEMS USING ADVANCED DATA ANALYTIC TECHNIQUES TO IDENTIFY AND DESIGN PHYTOTHERAPEUTIC STRATEGIES	US	USPTO 17/501,498 PCT/US2021/055056	CA, EP, HK, KR	

METHODS AND COMPOSITIONS FOR PREVENTION AND TREATMENT OF CARDIAC HYPERTROPHY	US/EU	EPO 3,348,267	IN, CN
METHOD FOR PRODUCING A PHARMACEUTICAL COMPOSITION OF POLYMERIC NANOPARTICLES FOR TREATING NEUROPATHIC PAIN CAUSED BY PERIPHERAL NERVE COMPRESSION	WIPO/PCT	WIPO 2016/128591 PCT/ES2016/000016	US, EU, CA
CANNABINOID-CONTAINING FORMULATIONS FOR PARKINSONIAN MOVEMENT DISORDERS	US	USPTO 17/501,498 PCT/US2021/055056	
METHODS AND COMPOSITIONS FOR THE IDENTIFICATION OF NOVEL THERAPEUTIC APPROACHES TO MIGRAINE USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	USPTO 63/221,334 (provisional)	
METHOD AND COMPOSITIONS FOR THE PHYTOMEDICAL COMPONENT SUPPLY CHAIN DECISION SUPPORT USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	Incorporated into USPTO 17/501,498 PCT/US2021/055056	
METHODS AND COMPOSITIONS FOR NOVEL PAIN THERAPIES INCLUDING OPIOID-ALTERNATIVE STRATEGIES IDENTIFIED USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	Incorporated into USPTO 17/501,498 PCT/US2021/055056	
METHODS AND COMPOSITIONS FOR NOVEL PAIN THERAPIES TARGETED TO SPECIFIC PAIN SUBTYPES IDENTIFIED USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	Incorporated into USPTO 17/501,498 PCT/US2021/055056	
METHODS AND COMPOSITIONS DEVELOPMENT OF NOVEL THERAPEUTICS BASED ON PIPER SPECIE-CONTAINING PHYTOMEDICINES FOR ANXIETY AND ASSOCIATED DISORDERS USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	Incorporated into USPTO 17/501,498 PCT/US2021/055056	
METHODS AND COMPOSITIONS FOR DECONVOLUTION OF COMPLEX PHYTOMEDICAL FORMULAE FOR CANCER TO IDENTIFY TARGETED STRATEGIES FOR CANCER PAIN AND CYTOTOXIC THERAPEUTIC CANDIDATES USING THE PHAROS IN SILICO DRUG DISCOVERY PLATFORM	US	Incorporated into USPTO 17/501,498 PCT/US2021/055056	
NANOPARTICLE FORMULATIONS FOR TREATING PAIN	US	63/374,581 (provisional)	
FORMULATIONS FOR TREATING CYTOKINE RELEASE SYNDROME	US	63/374,583 (provisional)	
FORMULATIONS FOR TREATING ANXIETY	US	63/374,584 (provisional)	

Partnering Strategy

The Company runs a lean drug development program and minimizes expenses, including personnel, overhead, and fixed capital expenses (such as lab and diagnostic equipment), through strategic partnerships with universities, hospitals, suppliers, Contract Research Organizations ("CROs"), and Contract Manufacturing Organizations ("CMOs"). Through these research and development agreements, the Company has created a virtual pipeline for the further development of novel medicines based on ingredients originally derived from the cannabis plant and other plant-based traditional medicines. The partners bring both expertise and infrastructure at a reasonable cost to the life sciences program. In most instances, the Company has also negotiated with these partners to keep 100% of the ownership of the IP within GBSGB for original patent filings.

The Company currently has on-going research agreements with the following institutions covering the indicated areas of research:

Chaminade University: Broad-based research program to support the drug discovery platform that has yielded many of the Company's original patents to date in the areas of neurodegenerative diseases, heart disease, inflammatory diseases, neuropathic and chronic pain. They have also performed the bioassay portion of the Cannabis Metabolomics study performed with the University of Athens, Greece and the Company. Our collaborations with Chaminade also led to the development of our PhAROS™ drug discovery platform.

University of Athens: Broad-based metabolomics analysis of over 100 cannabis genotypes including both hemp and THC-producing cannabis varieties, in combination with the Company's bioassay data linking genotypes and potential disease-remediations. This project has the potential to define active ingredients from plant-derived mixtures beyond the standard cannabinoids and terpenoids. The discovery potential is huge, and novel agents have recently been discovered. Novel ligands have been identified and are being validated. This project will ultimately yield novel patent-protected therapies.

Michigan State University: Preclinical work using a cutting-edge, multi-cellular model of the human immune system and a multi-cell model of the brain to validate our MEMs for use in the treatment of COVID-19-related cytokine release syndromes (COVID-CRS). MSU has performed experiments using their novel model of the human-immune system that have allowed GBSGB to prepare cannabis-based formulas for the potential treatment of virally-induced hyperinflammation/cytokine storm syndrome that has led to the majority of COVID-19 deaths. Positive proof-of-concept results have guided the development of these selectively anti-inflammatory MEM.

The University of Lethbridge: Our research partners bring expertise in studying neurodegenerative diseases using animal models and "Home Cage Small World" assessments using cameras and Artificial Intelligence-to assess efficacy of our proprietary Minimum Essential Mixtures for the treatment of Parkinson's disease symptoms. Our colleagues at the University of Lethbridge have recently finished the dose-response study for our Company's cannabinoid-containing Parkinson's disease therapies.

The University of Seville: Bringing their novel expertise to the development and functional testing of time-released and disease-targeted nanoparticles of cannabis-based minimum essential mixtures for oral administration. These specialized nanoparticles are being used for the precise and time-released delivery of several of our therapies, including the Company's chronic pain MEMs used in the preclinical animal testing performed at the NRC Canada. The University of Seville has completed functional testing on nanoparticles containing myrcene, nerolidol, and beta-caryophyllene for our chronic pain MEMs. In cell-based assays, the effectiveness and kinetics of the nanoparticle-forms of these terpenes were compared with the "naked" terpenes both individually and in mixtures. In all cases, the effectiveness of the nanoparticles was superior to the naked terpenes, however, the mixtures were dramatically more effective than the individuals. Recently, our partners at the University of Seville have completed the formulation of new cannabis-based ingredients for inclusion into the oral, time-released nanoparticle format for the completion of our maximally effective MEMs for chronic pain. The results from Seville are very promising, and these nanoparticles have entered the animal testing phase at the NRC of Canada in Halifax.

The National Research Center (NRC) of Canada, Halifax, Nova Scotia: Three animal-phase studies are being performed by Dr. Lee Ellis' group at the NRC of Canada. 1) Chronic Pain: The Company has re-started a safety and efficacy study in animals for our Chronic Pain (CP) formulas. The midterm results for these preclinical pain studies were promising, but the study was significantly delayed by the COVID pandemic. 2) Anxiety: We recently announced the positive performance of our plant-inspired formulas in an animal model of anxiety. 3) Depression: Minimum essential mixtures of plant-based ingredients from kava and the related Piper plant family are being evaluated now.

The University of Cadiz: Testing the safety and efficacy of the above-mentioned time-released nanoparticles in rodent models of chronic pain. Proof of concept complete for one formulation.

University of Hawaii: Validating the efficacy of a complex cannabis-based mixture for the treatment of cardiac hypertrophy and cardiac disease in a rodent model. Proof of concept work is complete in rodents, and we are seeking commercialization partners.

Path to Market: Drug Development Stages and Proposed Clinical Trials

The Company has plant-based therapeutic products in the following stages of drug development: Discovery, Pre-Clinical, and entering the Clinical Phase. It has also licensed therapeutic products that the Company intends to develop through partners, labeled Partner Programs.

The completion of discovery, preclinical studies, clinical trials, and the required regulatory submissions required for obtaining US FDA pre-market approvals for pharmaceutical products (and equivalent approvals from other corresponding agencies worldwide) is traditionally a long and expensive process. However, the Company asserts that its proprietary, PhAROS™, AI-enabled, drug discovery engine; plant-inspired formulations; lean development program; novel regulatory strategy; experienced development partners; and aggressive licensing of these products at early clinical stages can mitigate some of the risks. The Company uses a combination of *in silico* discovery methods and automated screening of cellular and animal models of disease to decrease the time in Discovery prior to filing novel patent applications for disease-specific therapeutics. Through GBSGB, the Company's original patent applications cover new chemical entities ("NCE") based on discovery and validation of minimum essential mixtures derived from complex, plant-based therapeutics. The Company plans to use an Exploratory IND/Phase 0 Program that gets the Company to First-in-Human sooner than traditional programs, which reduces translational risks, and includes preliminary efficacy measures for responsible development decisions. In contrast, a traditional phased-development path would not provide any efficacy measures until Phase II. After the completion of our Phase 0 study for PD, which compares the efficacies of multiple related cannabinoid-based formulations, the Company plans to advance the lead PD drug candidate using an adaptive trial design that is more efficient than the traditional phased-development pathway. Through GBSGB, the Company has entered into research contracts, partnerships, and/or joint ventures with several respected, independent contract research organizations, medical schools, universities, and with other scientific consultants to increase developmental efficiencies. If and when one or more of the Company's drugs, therapies or treatments are approved by the US FDA, the Company will seek to market them under licensing arrangements with major biotechnology or pharmaceutical companies.

There can be no assurance that we will ever be able to enter into any joint ventures or other arrangements with third parties to finance our drug development program or that if we are able to do so, that any of our projected therapies will ever be approved by the US FDA. Even if we obtain US FDA approval to market one of our therapies, there can be no assurance that it could be successfully marketed or would not be superseded by another plant-based therapy produced by one or more of our competitors. It also may be anticipated that even if we enter into a joint venture development with a financially stable pharmaceutical or institutional partner, we will still be required to raise significant additional capital in the future to achieve the strategic goals of the Company. There can be no assurance that we will be able to obtain such additional capital on reasonable terms, if at all. If the Company fails to achieve its goal of producing one or more plant-inspired pharmaceuticals or therapies, it would have a material adverse effect on our future financial condition and business prospects.

Other Operations

On March 24, 2020, the Company entered into the Membership Interest Purchase Agreement ("Teco MIPA") with AJE Management, LLC. Pursuant to the Teco MIPA, the Company agreed to sell 100% of its membership interests in GB Sciences Nevada, LLC, and GB Sciences Las Vegas, LLC (the "Teco Subsidiaries") for approximately $8 million, which amount includes a cash payment at closing, the extinguishment of certain liabilities owed to the purchaser and affiliates of the purchaser, and an 8% promissory note.

On August 10, 2020, the Company entered into the Membership Interest Purchase Agreement ("Nopah MIPA") and Promissory Note Modification Agreement with 483 Management, LLC. Pursuant to the Nopah MIPA, the Company agreed to sell its 100% membership interest in GB Sciences Nopah, LLC ("Nopah"), which holds a Nevada medical marijuana cultivation certificate. As consideration, the Company would receive $300,000 as a reduction to the balance of the 0% Note payable dated October 23, 2017 and accounts payable of $74,647, which were owed to an affiliate of the purchaser.

The closing of the Teco and Nopah sales was contingent upon the successful transfer of the Nevada cultivation and production licenses. On December 14, 2021, the Company received approval from the Nevada Cannabis Compliance Board for the transfer of cannabis cultivation and extraction licenses held by its subsidiaries GB Sciences Nevada, LLC, GB Sciences Las Vegas, LLC, and GB Sciences Nopah, LLC (the "Nevada Subsidiaries"). Consequently, all conditions to closing the sales of the 100% membership interests in the Nevada Subsidiaries were satisfied, and the transactions formally closed on December 31, 2021. After the closing date, the Company retains no ownership interest in the Nevada Subsidiaries.

RESULTS OF OPERATIONS

The following table sets forth certain of our Statements of Operations data from continuing operations:

	For the Three Months Ended September 30,		For the Six Months Ended September 30,	
	2023	2022	2023	2022
General and administrative expenses	$ 551,49	$ 275,839	$ 816,614	$ 735,357
LOSS FROM OPERATIONS	(551,49)	(275,839)	(816,614)	(735,357)
OTHER INCOME/(EXPENSE)				
Interest expense	(42,742)	(37,218)	(83,546)	(75,789)
Loss on impairment of capitalized patent and trademark costs	-	-	(42,194)	-
Other income	160,000	-	235,000	-
Total other income (expense)	117,258	(37,218)	109,260	(75,789)
LOSS BEFORE INCOME TAXES	(434,233)	(313,057)	(707,354)	(811,146)
Income tax expense	-	-	-	-
NET LOSS	$ (434,233)	$ (313,057)	$ (707,354)	$ (811,146)

Comparison of the Three Months Ended September 30, 2023 and 2022

General and Administrative Expenses

General and administrative expenses increased by $275,652 to $551,491 for the three months ended September 30, 2023, compared to $275,839 for the three months ended September 30, 2022. The increase is attributable to non-cash share-based compensation expense of $219,168 related to options. In addition, the Company is continuing its efforts to maintain administrative costs at a minimum and to make the best use of its limited resources in advancing research & development of the Company's intellectual property portfolio.

Interest Expense

Interest expense increased by $5,524 to $42,742 for the three months ended September 30, 2023, compared to $37,218 in the prior year quarter. The increase is attributable to an increase in net note balances due to new notes in the current period.

Loss on impairment of capitalized patent and trademark costs

During the three months ended September 30, 2023, the Company made no additional impairment of capitalized patents and trademark costs. No impairment was recorded during the three months ended September 30, 2022.

Other income

During the three months ended September 30, 2023, the Company recorded other income of $160,000. The Income in the 2023 period relates to the receipt of $160,000 from the makers of a note receivable in the amount of $2,520,833 due and payable to the Company. The note receivable was fully allowed for as of March 31, 2023 and therefore the receipt of cash from the payor has been classified as other income.

Comparison of the Six Months Ended September 30, 2023 and 2022

General and Administrative Expenses

General and administrative expenses increased by $81,257 to $816,614 for the six months ended September 30, 2023, compared to $735,357 for the six months ended September 30, 2022. The increase is attributable to non-cash share-based compensation expense of $219,168 related to options. In addition, the Company is continuing its efforts to maintain administrative costs at a minimum and to make the best use of its limited resources in advancing research & development of the Company's intellectual property portfolio.

Interest Expense

Interest expense increased by $7,757 to $83,546 for the six months ended September 30, 2023, compared to $75,789 in the prior year quarter. The increase is attributable to a slight increase in net note balances.

Loss on impairment of capitalized patent and trademark costs

During the six months ended September 30, 2023, the Company recorded an impairment of all remaining capitalized patents and trademark costs totaling $42,194. No impairment was recorded during the six months ended September 30, 2022.

Other income

During the six months ended September 30, 2023, the Company recorded other income of $235,000. The Income in the 2023 period relates to the receipt of $235,000 from the makers of a note receivable in the amount of $2,520,833 due and payable to the Company. The note receivable was fully allowed for as of March 31, 2023 and therefore the receipt of cash from the payor has been classified as other income.

LIQUIDITY AND CAPITAL RESOURCES

Current Liquidity

The Company will need additional capital to implement its strategies. There is no assurance that it will be able to raise the amount of capital needed for future growth plans. Even if financing is available, it may not be on terms that are acceptable. If unable to raise the necessary capital at the times required, the Company may have to materially change the business plan, including delaying implementation of aspects of the business plan or curtailing or abandoning the business plan. The Company represents a speculative investment and investors may lose all of their investment. In order to be able to achieve the strategic goals, the Company needs to further expand its business and financing activities. Based on the Company's cash position, it is necessary to raise additional capital by the end of the next quarter in order to continue to fund current operations. These factors raise substantial doubt about the ability to continue as a going concern. The Company is pursuing several alternatives to address this situation, including the raising of additional funding through equity or debt financing. In order to finance existing operations and pay current liabilities over the next twelve months, the Company will need to raise additional capital. No assurance can be given that the Company will be able to operate profitably on a consistent basis, or at all, in the future.

The principal sources of liquidity to date have been cash generated from sales of debt and equity securities and loans along with the sale of our subsidiaries.

At September 30, 2023, cash was $104,530, other current assets excluding cash were $129,655, and our working capital deficit was $4,618,126. Current liabilities were $4,852,311 and consisted principally of $1,991,799 in accounts payable and accounts payable - related party, accrued interest of $399,796, $75,628 in accrued liabilities, $1,426,633 in notes and convertible notes payable, and a federal income tax liability related to the Company's past ownership of the Nevada Subsidiaries of $958,455.

At March 31, 2023, cash was $109,912, other current assets excluding cash were $199,592, and our working capital deficit was $4,450,202. Current liabilities were $4,759,706, which consisted principally of $1,982,740 in accounts payable, $346,806 in accrued interest, $75,628 in accrued liabilities, $1,396,077 in notes and convertible notes payable, and an income tax liability related to the Company's past ownership of the Nevada Subsidiaries of $958,455.

Sources and Uses of Cash

Operating Activities

Net cash used in operating activities was $517,825 for the six months ended September 30, 2023, compared to cash used of $907,564 for the six months ended September 30, 2022. The decrease in cash used in operating activities is due to the net loss of $707,354 for the six months ended September 30, 2023 offset by non-cash share-based compensation of $219,168, compared to the net loss of $811,146 for the six months ended September 30, 2022. We anticipate that cash flows from operations will be insufficient to fund business operations for the next twelve-month period. Accordingly, we will have to generate additional liquidity or cash flow to fund our current and anticipated operations. This will likely require the sale of additional common stock or other securities. There is no assurance that we will be able to realize any significant proceeds from such sales, if at all.

Investing Activities

During the six months ended September 30, 2023, the Company recorded cash provided by investing activities of $235,000 related to amounts collected on a note receivable fully allowed for in a prior reporting period. During the six months ended September 30, 2022, the Company recorded cash used by investing activities for intangible assets of $30,320.

Financing Activities

During the six months ended September 30, 2023, cash flows provided by financing activities included $220,196, in gross proceeds from the exercise of warrants, gross proceeds of $75,000 from the issuance of convertible notes, less $17,753 paid in brokerage fees related to the exercise of warrants. Cash provided by financing activities for the six months ended September 30, 2022 included $1,595,000 gross proceeds from sales of the Company’s common stock in a private placement and was offset by $25,905 used in payment of principal on notes payable, and $207,350 paid in brokerage fees related to the private placement.

Going Concern

The Company's consolidated financial statements have been prepared assuming the Company will continue as a going concern. The Company has sustained net losses since inception, which have caused an accumulated deficit of $109,412,669 at September 30, 2023. The Company had a working capital deficit of $4,618,126 at September 30, 2023, compared to a deficit of $4,450,202 at March 31, 2023. In addition, the Company has consumed cash in its operating activities of $517,825 for the six months ended September 30, 2023, compared to $907,564 used in operating activities for the six months ended September 30, 2022. These factors, among others, raise substantial doubt about the Company's ability to continue as a going concern.

Management has been able, thus far, to finance the losses through a public offering, private placements and obtaining operating funds from stockholders. The Company is continuing to seek sources of financing. There are no assurances that the Company will be successful in achieving its goals.

In view of these conditions, the Company's ability to continue as a going concern is dependent upon its ability to obtain additional financing or capital sources, to meet its financing requirements, and ultimately to achieve profitable operations. Management believes that its current and future plans provide an opportunity to continue as a going concern. The accompanying financial statements do not include any adjustments relating to the recoverability and classification of recorded assets, or the amounts and classification of liabilities that may be necessary in the event the Company is unable to continue as a going concern.

VARIABLES AND TRENDS

In the event the Company is able to obtain the necessary financing to progress with its business plan, the Company expects expenses to increase significantly to grow the business. Accordingly, the comparison of the financial data for the periods presented may not be a meaningful indicator of future performance and must be considered in light of these circumstances.

CRITICAL ACCOUNTING POLICIES

A description of the Company's significant accounting policies is included in Note 3 of its Annual Report on Form 10–K for the fiscal year ended March 31, 2023.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

As a "smaller reporting company" as defined by Item 10 of Regulation S-K, the Company is not required to provide information required by this Item.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that material information required to be disclosed in the periodic reports filed under the Securities Exchange Act of 1934, as amended, or 1934 Act, is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and to ensure that such information is accumulated and communicated to management, including the chief executive officer and chief financial officer as appropriate, to allow timely decisions regarding required disclosure. At the end of the quarter ended September 30, 2023, the Company carried out an evaluation, under the supervision and with the participation of management, including the principal executive officer and the principal financial officer, of the effectiveness of the design and operation of disclosure controls and procedures, as defined in Rule 13(a)-15(e) and Rule 15d-15(e) under the 1934 Act. Based on this evaluation, management concluded that as of September 30, 2023, the disclosure controls and procedures were not effective due to material weaknesses: (1) as no member of our board of directors qualifies as an "audit committee financial expert" as defined in Item 407(d)(5) of Regulation S-K promulgated under the Securities Act; and (2) due to the fact the duties of the principal executive officer and the principal financial officer are consolidated in one person and therefore the Company lacks duel control within the duties of these two positions.

Limitations on Effectiveness of Controls and Procedures

Management, including the Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer), does not expect that disclosure controls and procedures will prevent all errors and all 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. Because of 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, within the Company have been detected. These inherent limitations include, but are not limited to, the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Controls

On April 14, 2023, the long-time principal financial officer of the Company resigned his position to accept other employment. On the same day the principal executive officer of the Company was appointed interim principal financial officer. Despite the fact the new interim principal financial officer has both a strong educational and operational background in accounting and financial management, consolidating the positions in one person constitutes a change in the internal controls over financial reporting that have materially affected or are reasonably likely to materially affect the internal controls over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. Legal Proceedings

No new items to disclose.

ITEM 1A. Risk Factors

There are no material changes from the risk factors previously disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended March 31, 2023, as filed with the SEC.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

On June 30, 2023, the Company issued a convertible note payable in the face amount of $25,000. On July 11, 2023, the Company issued a convertible note payable in the face amount of $50,000. These notes bear interest at 6% per annum and are convertible into shares of the Company's common stock at $0.03 per share. The notes were not registered under the Securities Act of 1933 (the "Act"), and were issued in reliance upon the exemption from registration contained in Section 4(2) of the Act since the transactions were not a part of any public offering.

On October 2, 2023, the Company issued 22,015,134 common shares to a total of five persons and/or entities upon the exercise of warrants at the exercise price of $0.01 per share. The common shares were not registered under the Act and were issued in reliance upon the exemption from registration contained in Section 4(2) of the Act since the transactions were not a part of any public offering.

ITEM 3. Defaults Upon Senior Securities

No new items to disclose.

ITEM 4. Mine Safety Disclosures

Not Applicable.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

In reviewing the agreements included as exhibits to this Form 10-Q, please remember that they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about the Company or the other parties to the agreements. The agreements may contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the parties to the applicable agreement and:

- ●should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate;
- ●have been qualified by disclosures that were made to the other party in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- ●may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- ●were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and are subject to more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time. Additional information about the Company may be found elsewhere in this Form 10-Q and the Company's other public filings, which are available without charge through the SEC's website at http://www.sec.gov.

The following exhibits are included as part of this report:

Exhibit Number	Description of Exhibit
3.1	Articles of Incorporation (Incorporated by reference to an exhibit to Form SB-2 No. 333-82580 filed with the Commission on February 12, 2002)
3.2	Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.2 to Form S-1/A No. 333-82580 filed with the Commission on October 6, 2014 and Exhibit 3.2 to the Annual Report on Form 10-K filed with the Commission on June 27, 2014)
3.3	Articles of Incorporation (Incorporated by reference to Exhibit 3.3 to the Annual Report on Form 10-K filed with the Commission on August 28, 2020)
3.4	Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.3 to the Annual Report on Form 10-K filed with the Commission on August 28, 2020)
3.5	Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.5 to the Annual Report on Form 10-K filed with the Commission on July 14, 2023)
3.6	Bylaws (Incorporated by reference to an exhibit to Form SB-2 No. 333-82580 filed with the Commission on February 12, 2002)
31.1	Certification of Principal Executive and Financial Officer and Pursuant to Rule 13a-14
32.1*	Chief Executive Officer and Chief Financial Officer Certification Pursuant to Section 906 of the Sarbanes-Oxley Act
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* This certification is being furnished and shall not be deemed “filed” with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

In accordance with the requirements of the Securities Exchange Act of 1934, the Registrant has caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GB SCIENCES, INC.

Date: November 20, 2023

By: /s/ John Poss
John Poss, Chief Executive Officer, Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)

GB SCIENCES, INC. AND SUBSIDIARIES
September 30, 2023
(unaudited)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE AND FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John Poss, certify that:

1.I have reviewed this quarterly report on Form 10-Q of GB Sciences, Inc.;

2.Based on my knowledge, the quarterly report does not contain any untrue statement of 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 quarterly 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 over financial reporting that occurred during the registrant's most recent fiscal quarter 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 function):

(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 controls.

Date: November 20, 2023

/s/ John Poss
John Poss, Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)

GB SCIENCES, INC. AND SUBSIDIARIES
September 30, 2023
(unaudited)

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 the Quarterly Report of GB Sciences, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John Poss, Chief Executive Officer and 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:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2)The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

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.

Date: November 20, 2023

/s/ John Poss
John Poss, Chief Executive Officer and Chief Financial Officer
(Principal Executive Officer and Principal Financial Officer)