UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington D.C. 20549

FORM 10-K

X ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the Fiscal Year ended December 31, 2016

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the transition period from _____ to ____

Commission File Number: 000-30415

Zivo Bioscience, Inc.

(Name of Registrant as Specified in Its Charter)

Nevada (State or Other Jurisdiction of Incorporation or Organization) 87-0699977

(I.R.S. Employer Identification No.)

2804 Orchard Lake Rd., Suite 202, Keego Harbor, MI 48320 (Address of Principal Executive Offices)

(248) 452 9866

(Issuer's telephone number)

Securities registered under Section 12(b) of the Exchange Act: None

None

Securities registered under Section 12(g) of the Exchange Act:

Common Stock, par value \$.001 per share (Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No x

Indicate by check mark whether the 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 x No

Indicate by checkmark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Date File required to be submitted and posted 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 and post such files).

Yes x No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. \underline{x}

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

Large accelerated filer Non-accelerated filer

(Do not check if a smaller reporting company) Smaller reporting company

Accelerated filer

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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No x

The aggregate market value of the issuer's voting and non-voting common equity held as of June 30, 2016 by non-affiliates of the issuer was \$7,967,207 based on the closing price of the registrant's common stock on such date.

As of March 29, 2017, there were 136,995,347 shares of \$.001 par value common stock issued and outstanding

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FORM 10-K ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained in this report are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements involve known and unknown risks, uncertainties and other factors which may cause our or our industry's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to statements regarding:

- · our ability to raise the funds we need to continue our operations;
- our goal to begin to generate revenues and become profitable;
- · regulation of our product;
- · market acceptance of our product and derivatives thereof;
- the results of current and future testing of our product;
- the anticipated performance and benefits of our product;
- the ability to generate licensing fees; and
- · our financial condition or results of operations.

In some cases, you can identify forward-looking statements by terms such as "may", "will", "should", "could", "would", "expects", "plans", "anticipates", "believes", "estimates", "projects", "predicts", "potential" and similar expressions intended to identify forward looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this report. Except as otherwise required by law, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained in this report to reflect any change in our expectations or any change in events, conditions or circumstances on which any of our forward-looking statements are based. We qualify all of our forward-looking statements by these cautionary statements.

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PART I

Item 1. Business.

General

We were incorporated under the laws of the State of Nevada on March 28, 1983, under the name of "L. Peck Enterprises, Inc." On May 27, 1999, we changed our name to "Western Glory Hole, Inc." From 1990 until October 2003, we had no business operations; we were in the development stage and were seeking profitable business opportunities. On October 30, 2003, we acquired 100% of the outstanding shares of Health Enhancement Corporation ("HEC") in exchange for 9,000,000 of our shares, making HEC our wholly-owned subsidiary. In connection with this transaction, we changed our name to Health Enhancement Products, Inc. On October 14, 2014, at the annual meeting of the Shareholders of the Company, a proposal was passed to change the name of the Company from Health Enhancement Products, Inc. to ZIVO Bioscience, Inc. ("ZIVO"). On October 30, 2014, the Financial Industry Regulatory Authority ("FINRA") approved the name ZIVO Bioscience, Inc. for trading purposes and the symbol change to ZIVO effective November 10, 2014.

We acquired HEC in 2003 because we believed its unique and complex algal culture produced natural bioactive compounds that promoted health benefits. A production facility based in Scottsdale, AZ produced and marketed a liquid dietary supplement with marginal success beginning in 2003 until sales were suspended in January of 2012.

Our new management team, in place since December 2011, determined the sole focus for the near term was to move forward with a research-based product development program. From 2012 through 2016, we engaged fully in such activities, all as more fully explained herein. We are implementing a business model in which we would derive future income from licensing and selling natural bioactive ingredients that may be derived from or are initially based on the algae cultures. We expect that these planned new products will likely be sold to much larger, better-financed animal, food, dietary supplement and medical food manufacturers. The anticipated income streams are to be generated from a) royalties and advances for licensed natural bioactive ingredients, and b) bulk sales of such ingredients. These bulk ingredients will likely be made by contracted ingredient manufacturers and then sold by us to animal food, dietary supplement and medical food processors and/or name-brand marketers. Further, we expect to license our bioactive molecules as lead compounds or templates for synthetic variants intended for therapeutic applications.

In January 2007, we established HEPI Pharmaceuticals, Inc. as our wholly owned subsidiary ("HEPI Pharma"). The purpose of HEPI Pharma was to develop potential pharmaceutical applications for the bioactive ingredients that may be derived from our algae cultures.

In February 2013, we formed ZIVO Biologic, Inc., a Delaware corporation, for the purpose of manufacturing and commercialization of proprietary ingredients for non-medicinal animal health applications. Zivo Biologic is 100% owned by Zivo Bioscience, Inc.

In August 2013, we acquired the assets, consisting primarily of intellectual property rights, of Wellness Indicators, Inc. ("Wellness"), a Michigan corporation based in Illinois. Concurrently, we formed WellMetris, LLC ("WellMetris") as a 100% owned entity of ZIVO. We acquired four patent applications as part of the transaction, in addition to engineering drawings, prototypes, chemical formulae, validation data, laboratory equipment and IT equipment. We assigned all of the intellectual property acquired to WellMetris with a stated value of \$1,391,281. The mission of WellMetris is to develop, manufacture, market and sell Wellness Tests. The Wellness Tests are intended to provide individuals the information and opportunity to optimize their health and identify future health risks or to provide insurers, employers and healthcare providers timely information to intervene with wellness programs, fitness regimes or other preventative measures. During the period of time since we have owned WellMetris, we have filed / drafted an additional eight patent applications around the intellectual property acquired, as noted in the section "Patents and Proprietary Rights." In the summer of 2014, we evaluated the circumstances related to the original four patent applications acquired and determined that that two of the existing patent applications could be improved and filed new patents applications to redefine and better protect our intellectual property than the original purchased patent applications. We have abandoned one of the initial four patent applications purchased, released two of the four applications purchased and substituted them with two new patent applications, and retained ownership of one of the four applications purchased, which has now converted to a national phase application. In connection with the abandoned patents, we have protected our rights with regards to the original patent applications purchased, however we determined we should record a loss on abandonment of \$1,391,281 for the year ended December 31, 2014 as the initial value of the acquired patent applications pending resides in the newly filed / drafted eight patent applications.



ZIVO Algal Products & Derivatives

The marketing and sale of all future products is subject to compliance with applicable regulations. Based on the findings from ongoing research, we intend to approach potential customers or licensees in the following market verticals. The products described throughout this document are still in the development stage, and subject to development risk. There can be no assurance that any of the products described below will prove to be effective, or if found to be effective, will be able to be produced in a commercially viable manner.

Animal Nutrition and Health

A 2007 pilot study in dairy cows indicated that our algal culture may be effective in fending off the onset, or significantly reducing symptoms, of bovine mastitis – a condition that effectively stops milk production. According to the National Mastitis Council, the condition affects 10% of the U.S. dairy herd at any one time, costing producers approximately \$1,100 per case. In the U.S. alone, production losses are nearly \$3 billion. *Mycoplasma bovis* causes a highly contagious and potentially fatal form of bovine mastitis (an infection of the mammary gland), for which there currently is no treatment. In the cow's udder, mammary epithelial cells form an immunological barrier to protect the mammary gland. When bacteria or other pathogens break through this barrier, an infection sets in, affecting quality and quantity of milk produced. Our compounds showed promising early results for restoration of the immunological barrier in experiments conducted *in vitro*, as conducted by the Principal Researcher at the University of Wisconsin - Madison, Department of Dairy Science.

On December 20, 2013, we entered into a Collaboration and Option Agreement ("Agreement") with Zoetis, a global animal health company, in connection with the prevention, treatment, and management of bovine mastitis. In the Agreement, we granted to the counterparty an exclusive option to negotiate an exclusive license with us. Specifically, upon completion of a collaborative study (which is in process and will be completed upon adequate funding), the Agreement provides for a 90 day exclusivity period for evaluation of results and, based on the counterparty's desire for an exclusive license thereto, 90 days to conclude an exclusive license agreement.

With respect to livestock and poultry applications, we intend to move on three related fronts – working to bring an algal feed ingredient to market in the United States by amplifying the algae culture; working to produce a dietary supplement or feed additive for global consumption outside the U.S.; and, putting ourselves in a position to license the isolated bioactive molecules to a pharmaceutical or drug development company for synthetic development as a prescribed drug for production animal applications. The isolated bioactive molecules form the intellectual property of interest to Zoetis. The feed ingredient, feed additive and dietary supplement are intended for other potential collaborators.

The veterinarian who conducted the initial dairy cow *in vivo* study believes that the same autoimmune effect may be useful in combating bovine respiratory disease complex ("BRDC"), also known as "shipping fever." BRDC typically occurs when beef cattle are shipped from the ranch to the feedlot prior to processing. According to the American Association of Beef Producers, cattle ranchers and feedlot operators attribute a 30% loss in body weight to BRDC when it occurs – a \$10 billion problem in the U.S. alone. We are planning a field study to validate several dosing modalities before offering a licensing option.

A 2008 pilot study in dogs indicated that our algal culture may be effective in relieving the symptoms of osteoarthritis and soreness from overexertion. That same experiment with our amplified algae culture can be repeated in dogs, which if successful could allow a relatively rapid release to production and sales as a companion animal dietary supplement. According to the Nutrition Business Journal, the canine joint-health dietary supplement market segment tops \$360 million annually in the U.S. alone. Estimates for the world market may be substantially higher, but such estimates are difficult to obtain. An *in vitro* tissue explant experiment conducted by the Comparative Orthopaedics Laboratory at University of Missouri found that direct stimulation of living canine joint tissue with our bioactive compounds protected cartilage from degradation by IL-1b, an inflammatory cytokine. If our product is proven to be effective *in vivo* and can be produced on an efficient basis, we intend to sell or license our product as a supplement ingredient to larger, well-established and profitable brand names in the pet industry. We have conducted other laboratory studies simulating the effects of canine osteoarthritis with positive results.

With all of the above, the isolated bioactive molecules found in the amplified algae product may, subject to successful negotiations, be licensed to a pharmaceutical company for development as a synthetic prescription drug. We expect that the process of developing and testing such a drug could take years. Therefore, as is common practice, we intend to work toward negotiating a reasonable upfront licensing fee, milestone payments upon each successful conclusion of a development phase, followed by pre-market approval; and finally, a steady stream of royalties in the future. The other revenue streams generated by feed and supplement sales may begin to be realized in late 2017 or early 2018, but no assurance can be provided in that regard. Much of the research and licensing progress has been and will continue to be paced by the availability of capital funding and/or debt financing (see Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations: Liquidity and Capital Resources).

Functional Food Ingredient

According to NutraIngredients-USA, functional foods, or health foods, represent an estimated \$20 billion business in the U.S. and a \$28 billion business in Europe. The Middle East, although significantly smaller, is growing at a rate of 12-14% annually, followed closely by the newly-affluent in China and India. These foods typically are processed products that contain one or more staple foods augmented with a variety of performance-enhancing ingredients.

We intend to enter the food market with a healthy cholesterol and healthy immune response ingredient if and when the efficacy of our product can be demonstrated and it clears necessary regulatory hurdles. The timeframe is difficult to predict because of capital funding issues.

Dietary Supplement & Nutraceutical

The success of spirulina algae, dried kelp, Omega-3 fish oil, resveratrol, saw palmetto and similar supplements attests to the American public's obsession with 'natural' products. The dietary supplement business is a \$24 billion industry in the U.S. alone, and twice that the world over.

Rather than attempting to market a potential cholesterol related bioactive as a branded nutraceutical or supplement, we will endeavor to private-label the compound or finished product for larger, established marketers and retailers. If we are able to accomplish this, we believe this is a more efficient use of capital and resources while still retaining control of the intellectual property, the manufacturing process and pricing decisions. We do not intend to be placed in a position where our premier product application is commoditized and we must compete on price.

Medicinal Food

Doctors prescribe medicinal foods prior to, during or after various medical procedures, including surgery, chemotherapy, radiation therapy and physical therapy. At times, medicinal foods are used to augment the effects of prescription drugs. These medicinal foods are expensive and typically reimbursed by health insurers.

We believe that this area has potential for us if we can demonstrate that various properties of the algal extract can be isolated and produced as a medicinal food or beverage prescribed by physicians. This is an FDA-regulated sector, but the standards are less stringent than pharmaceutical applications. Once again, under our new business model, if we are able to produce a commercial product in this area, we will endeavor to enter into a private-label arrangement with a larger strategic partner to produce and distribute this product application.

Pharmaceuticals

We believe that we may be able to pursue prescription drug applications for our product. However, the process for developing a new prescription drug is costly, complex and time-consuming. It is an undertaking well beyond our current financial capabilities and one that may take years to achieve. If we pursue the development of a prescription drug, we will likely seek a partnership with a co-developer that will share in the risk and expense of the initial development process, and then share in any royalties resulting from the licensing or sale of any synthetic molecule and its homologs we are able to develop and license.

The first such step was the execution of the bovine mastitis Collaboration and Option Agreement with Zoetis. Part of our business plan is to execute agreements that may ultimately result in option payments, licenses fees and royalty payments across animal and human applications.

WellMetris

WellMetris was formed for the purpose of developing, manufacturing, marketing, and selling tests that we believe will allow individuals and their care providers to optimize personal health and identify future health risks. The information obtained will also provide insurers, employers and healthcare providers timely information to intervene with wellness programs, fitness regimes or other preventative measures. We plan to develop and commercialize such tests in three phases:

- In phase one ("Phase One") or, alternately named Gen 1.0, we plan to develop and commercialize a series of tests, which are intended to measure indicators of good health and optimal metabolic function (collectively, the "Phase One Test"). The Phase One Test is being designed to measure biomarkers related to oxidative stress, inflammation, and antioxidant status to establish a metabolic assessment from which intervention can commence, and from which metabolic syndrome can be inferred.
- · In phase two ("Phase Two") or alternately named Gen 1.5, we plan to develop and commercialize a testing technology focused on the positive or negative metabolic effects of metabolizing fat and muscle efficiency due to changes in diet, exertion, hydration and dietary supplements in a self-administered format that integrates with smartphone operating systems.
- In phase three ("Phase Three") or alternately named Gen 2.0, we plan to develop and commercialize additional tests intended to provide a more complete metabolic profile for an individual utilizing the metabolites present in urine. The Company believes the Gen 2.0 tests, in aggregate, will allow identification of healthy versus unhealthy bodily processes in real-time. This technology can also be applied to livestock and companion animals. As capital funding becomes available, the Company will move forward with finalizing its transition cow syndrome test, for which a provisional patent application has already been filed.

We are currently in Phase One of development as described above.

We believe there is a viable market for our Wellness Tests. More than 19% of Americans are afflicted with cardiovascular diseases, diabetes, autoimmune diseases and cancer. The Wellness Tests are intended to identify pre-conditions to such illnesses. Such identification may allow for early intervention and reduce incidence of such illnesses or forestall their onset. This is critically important to large employers, insurers and governmental agencies who are payers for health claims and are facing massive increases in premiums or cash outlays.

The WellMetris technology also incorporates sophisticated software to analyze, report, record and manage wellness and health data for large groups such as large employers, pension funds, accountable care organizations, state Medicaid agencies and their actuarial consultants, underwriters, re-insurers and wellness consultants. The software also contains tools to conduct meta-analysis of baseline health benchmarks and monitor the progress of pre-clinical intervention programs within large groups.

Due to funding issues, all development work has been halted until this entity is either sold, funded independently of ZIVO Bioscience, or spun out as a free-standing business.

Corporate Communications

We maintain our website: www.zivobioscience.com and provide a toll free number (888) 871-6903. The content of our website is not a part of this Annual Report on Form 10-K and should not be construed as such.

WellMetris maintains a separate website: www.wellmetris.com and provides the same toll free number as ZIVO Bioscience on its website.

Competition

ZIVO Algal Products & Derivatives

Generic dietary supplements and functional food ingredients such as vitamins, Omega-3 and antioxidants are made and marketed in a fiercely competitive, price-sensitive market environment. Recently, several algae producers have made health claims for their proprietary algae strains, ranging from treatment for diabetes to controlling HIV symptoms. Proprietary products offered by some marketers are often dogged by unsubstantiated claims of product efficacy or present potential product safety issues, which in turn draw the attention of regulators. The optimal position for a supplement and ingredient maker is when pricing power can be exerted through well-protected intellectual property and further backed by well-documented safety and efficacy claims.

We believe that our primary competition will come from innovators in food technology such as DSM-Martek, Cognis, ConAgra, Cargill and Nestle, each of which has active M&A efforts, a large scientific staff and a generous R&D budget to develop supplements and ingredients for a wide range of applications. However, we intend to approach these very same competitors as potential strategic partners, in order to leverage their specific expertise in certain food and supplement categories where a mutually beneficial relationship can be established. There can be no assurance that this strategy will be effective.

With respect to animal health, the companion animal dietary supplement segment, and specifically canine joint health, is made up almost exclusively of chondroitin/glutathione supplements, which have dominated that segment for more than a decade. This \$360 million segment represents a potentially lucrative opportunity to introduce a completely new product if we are able to demonstrate superior benefits and produce a product at a comparable price.

Further, the animal health market as it pertains to mastitis in dairy cows, and specifically feed ingredients that exhibit beneficial properties, has been largely in the realm of yeast-based products. Only recently has there been a focus on algae-based alternatives, as promoted by Alltech with its \$200 million expansion of an algae facility in Kentucky. In the U.S., feed ingredients cannot be promoted using any form of health claim, and dietary supplements for production animals are, to our knowledge, non-existent. However, outside the U.S., the use of dietary supplements is widespread, and we intend to market our refined ingredients to a worldwide market in partnership with a global brand name.

WellMetris

The biomedical and biotech fields are fiercely competitive. Many of the "wellness" tests available to the healthcare consumer or provider are not necessarily accurate nor reliable because some do not take into account urine concentration as normalized by creatinine or specific gravity, which changes markedly throughout the day. Blood-based wellness tests can be even less reliable because the biomarkers for oxidative stress and inflammation are extremely dynamic and will often change before the blood can be tested, casting doubt on the results.

Although we are not aware that competitors or competing products have entered the market recently, there is no guarantee that our products will be proven to be effective and commercially viable, or that a larger, better-financed competitor may not emerge once we begin promoting our products.

Raw Materials

ZIVO Algal Products & Derivatives

We produce our microbial mixture using third party facilities. At the close of 2016, we contracted Synthetic Genomics, Inc. to conduct commercial scale-up at a facility in Imperial Valley, California. We continue to use the AzCATI facility at Arizona State University to produce our microbial mixture for continued experimentation.

<u>WellMetris</u>

In tandem with seeking regulatory approval, we will need two physical components to deliver our services. A dedicated, custom reader device and a test comprised of eight (8) different chemistry tests on a single urine test panel housed in a proprietary disposable cartridge.

- The dedicated, custom reader device is manufactured by a third party to our specifications. We do not believe that there is a risk of supply, as there are several manufacturers available to produce the unit.
- The test panel and proprietary cartridge are manufactured by a third party to our specifications. We do not believe that there is a risk of supply, as there are several manufacturers available to produce the units.

Dependence on Customers

As discussed above, we have readjusted the business model to focus in the near term on research and development in order to license our product and technology to third parties. At this time, there are no customers providing any revenue.

Production

ZIVO Algal Products & Derivatives

We produce our microbial mixture using third party laboratory facilities. At this time, we are only manufacturing the product for purposes of research and development programs that are currently underway.

<u>WellMetris</u>

As discussed above, we are using third parties to manufacture our custom reader device and test panel, which we are currently using for development purposes.

Patents and Proprietary Rights

We have rights in certain patent applications and trademarks. With respect to patents and trademarks, we have secured patent and federal trademark registrations in the U.S. Patent and Trademark Office ("USPTO") as described below:

- U.S. Patent No. 7,807,622 issued October 5, 2010, relates to our proprietary complex algal culture. The title of the patent is: "Composition and use of phyto-percolate for treatment of disease." This invention relates generally to a method of preparation of a phytopercolate that is derived from fresh water mixture including algae. The invention further relates to the potential use of the phyto-percolate in a variety of disease states. This patent was filed on November 30, 2006 and has a term of 20 years from the earliest claimed filing date (which may be subject to extension via Patent Term Adjustment and Patent Term Extension).
- · U. S. Patent No. 8,586,053 issued November 19, 2013, relates to our proprietary algal culture. The title of the patent is: "Composition and Use of Phytopercolate for Treatment of Disease." This invention relates generally to a method of preparation of a phyto-percolate that is derived from fresh water mixture including algae. The invention further relates to the use of the phyto-percolate in a variety of disease states. The phyto-percolate is believed to contain an activity that induces the reduction of soluble and insoluble fibrin. Further, the phyto-percolate is believed to reduce oxidative stress in the body. The patent was filed on April 20, 2006 and has a term of 20 years from the earliest claimed filing date.
- · U.S. Patent No. 8,791,060 issued July 29, 2014, relates to our proprietary culture. Title of the patent is the same: "Composition and Use of Phytopercolate for Treatment of disease." This invention relates generally to a method of preparation of a phyto-percolate that is derived from fresh water mixture including algae. The invention further describes proteolytic activity. The patent was filed on October 4, 2010 and has a term of 20 years from the earliest claimed filing date.
- · U.S. Patent No. 9,486,005 relates to our proprietary culture. Title of the patent is: "Agents and Mechanisms for Treating Hypercholesterolemia." This invention relates generally to a method of treating hypercholesterolemia in mammals, by administering an effective amount of microbial fermentation product and regulating genes involved in lipoprotein metabolism.

We also have an allowed pending trademark applications for "ZIVO BIOSCIENCE," "ZIVO BIOLOGIC," and ZIVO ZOOLOGIC". We may have other common law rights in other trademarks, trade names, service marks, and the like which will continue as long as we use those respective marks.

The following files have issued as patents, await examination or are in process:

Title	Country	Patent/Application Number	Status
Composition and Use of Phytopercolate For Treatment of Disease	U.S.	7,807,622	Issued Patent
Composition and Use of Phytopercolate For Treatment of Disease	Canada	2,631,773	Office action issued; response filed to foreign associate;
Composition and Method For Affecting Cytokines and NF- κB	Canada	PCT/US2010/056862 Canadian App. No. 2,780,144	Office action received 8/15/16; Awaiting examination
Composition and Method For Affecting Cytokines and NF- κB	European Union	10830908.9	Office action received; Response to office action filed
Composition and Method For Affecting Cytokines and NF- κB	РСТ	PCT/US2010/056862	National stage filings completed

Composition and Method For Affecting Cytokines and NF- κB	US	14/558,516	Application filed; informational notice to applicant received; office action received; response filed
Composition for Affecting Cytokines, Lactoferrin, and Serum Amyloid A	U.S.	61/834,842	Application Filed 6/13/2013, non-provisional and PCT filed 6/13/14
Composition for Affecting Cytokines, Lactoferrin and Serum Amyloid A	РСТ	PCT/US 14/42331	National stage filings completed
Method of Cholesterol Regulation	РСТ	PCT/US11/ 25713	National Phase entered 8-22-12 (US, JP, MX) National Phase entered 9-22-12 (EP) Canada extended National Phase DDD 8-22-13
Agents and Mechanisms for Treating Hypercholesterolemia	Europe Union	SN 11745434.8	Undergoing Prosecution
Stress and Inflammation Biomarker Urine Panel for Dairy Cows and Beef Cattle	US	SN 61/835,282	Converted to PCT 6/14/14
Agents and Mechanisms for Treating Hypercholesterolemia	Canada	SN 2,827,401	Undergoing Prosecution
Wellness Panel for Companion Animals	US	SN 61/872,928	Converted to PCT 9/3/14
Wellness Panel	US	SN 13/812,220	Undergoing Prosecution
Wellness Panel	US	61/367,486	Converted to PCT
Wellness Panel	РСТ	PCT/US11/44786	US National Phase entered
Methods of modulating immune response and inflammatory response via administration of algal biomass	РСТ	PCT/US16/18105	Filed: National stage filings due 8/16/17
Nutritional support for animals via administration of an algal derived supplement	US	62/295,976	Application filed Feb 16, 2016; Non-provisional and foreign/PCT due 2/16/17; converted to PCT
Methods of modulating immune response and inflammatory response via administration of algal biomass	US	SN 62,116,766	Filed Feb 16, 2015; converted to PCT
Smartphone urinalysis device	US	SN 62 136,764	Filed March, 23, 2015; converted to PCT
Agents and Mechanisms for Treating Hypercholesterolemia	US Div	SN15/330,830	Undergoing prosecution
Stress and Inflammation Biomarker Urine Panel for Dairy Cows and Beef Cattle	Intl.	SN14/42464	Undergoing prosecution
Wellness Panel for Companion Animals Smartphone Enabled Urinalysis Devise, software and Test Platform	US PCT	SN14/916,068 PCT/US16/23702	Undergoing prosecution US National Phase pending
Sample Collection Device and Method for Urine and other Fluids	РСТ	PCT/US/16/29725	US National Phase pending
Composition for Affecting Cytokines, Lactoferrin, and Serum amyloid A	US	SN 14/898,091	Application filed 12/11/15; received notice of publication 5/5/16; office action response filed 12/21/16.

Regulation

ZIVO Algal Products & Derivatives

General Regulatory Framework

In the United States and any foreign market we may choose to enter, our product(s) are subject to extensive governmental regulations.

In the United States, these laws, regulations and other constraints exist at the federal, state and local levels and at all levels of government in foreign jurisdictions. The majority of these regulations directly relate to (1) the formulation, clinical testing, manufacturing, packaging, labeling, distribution, sale and storage of our product(s) and (2) product claims and advertising, including claims and advertising by us, as well as claims and advertising by distributors for which we may be held responsible.

U.S. product classification

In the U.S., the formulation, testing, manufacturing, packaging, storing, labeling, promotion, advertising, distribution and sale of our product(s) are subject to regulation by various governmental agencies, primarily (1) the Food and Drug Administration ("FDA") and (2) the Federal Trade Commission ("FTC"). Our activities also are regulated by various agencies of the states and localities and foreign countries in which our product(s) are manufactured, promoted, distributed and sold. The FDA, in particular, regulates the formulation, manufacture and labeling of conventional foods, dietary ingredients and dietary supplements (or nutraceuticals).

The FDA is responsible for the oversight of all foods (including dietary supplements), drugs, cosmetics and medical devices in the United States. To the extent that we manufacture finished product(s) for sale to consumers (and in certain other limited circumstances where we sell our product as an ingredient), FDA regulations require us to comply with current good manufacturing practice ("cGMP") regulations for the preparation, packing and storage of dietary supplements. This is a complex series of regulations that have posed significant compliance challenges to the supplement industry. To the extent that we supply our product(s) as ingredients for the use in foods or nutraceuticals, we would be required to comply with cGMP regulations for foods, as well as the provisions of the Food Safety Modernization Act of 2011 which require all companies involved in the production of food and food ingredients to develop and implement a Hazard Analysis and Critical Control Point ("HACCP") program.

The Dietary Supplement Health and Education Act of 1994 (DSHEA") revised the provisions of the Federal Food, Drug and Cosmetic Act ("FFDCA") by recognizing "dietary supplements" as a distinct category of food and, we believe, is generally favorable to the dietary supplement industry. The legislation grandfathered, with some limitations, dietary ingredients that were on the market before October 15, 1994. A dietary supplement that contains a dietary ingredient that was not on the market before October 15, 1994. A dietary supplement that contains a dietary ingredient that was not on the market before October 15, 1994. Will require evidence of a history of use or other evidence of safety establishing that it is reasonably expected to be safe. To the extent that we offer for sale unique, proprietary ingredients we will be required to file with FDA evidence supporting the conclusion that we have a "reasonable expectation" that they will be safe for human consumption when used as directed. The FDA recently published an "Advance Notice of Proposed Rulemaking" which the nutraceutical industry believes will substantially increase the level of evidence required to satisfy the "reasonable expectation" standard.

DSHEA provides for specific nutritional labeling requirements for dietary supplements. DSHEA permits substantiated, truthful and non-misleading statements of nutritional support to be made in labeling, such as statements describing general well-being from consumption of a nutraceutical ingredient or the role of a nutrient or dietary ingredient in affecting or maintaining structure or function of the body. A company making a statement of nutritional support must possess adequate substantiating scientific evidence for the statement, disclose on the label that the FDA has not reviewed the statement and that the product is not intended to mitigate, treat, cure or prevent disease, and notify the FDA of the statement within 30 days after its initial use. To the extent we produce finished product for use by consumers as nutraceuticals, we will be required to comply with these provisions of DSHEA.

Labeling and advertising regulations

We may market one or more of our products as a conventional food or for use as an ingredient in conventional foods. Within the U.S., this category of products is subject to the Nutrition, Labeling and Education Act ("NLEA") and regulations promulgated under the NLEA. The NLEA regulates health claims, ingredient labeling and nutrient content claims characterizing the level of a nutrient in the product. The ingredients added to conventional foods must either be generally recognized as safe by experts ("GRAS") or be approved as food additives under FDA regulations.

The FTC, which exercises jurisdiction over the advertising of our product, has for years instituted enforcement actions against companies marketing supplements for alleged false, misleading or unsubstantiated advertising of some of their products. The FTC has specific guides for advertising claim substantiation as well as for the use of testimonials. As a general matter, companies making health related claims for their products or ingredients are required to possess well designed human clinical studies supporting such claims at the time they are made. Enforcement actions have often resulted in consent decrees and significant monetary payments by the companies involved. In addition, the FTC has increased its scrutiny of the use of testimonials which we have and may in the future utilize.

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International regulations of our product(s)

In many foreign markets in which we may choose to offer our product(s) for sale, we may be required to obtain an approval, license or certification from the relevant country's ministry of health or comparable agency. This would hold true for jurisdictions such as Canada, the European Union, Japan, Australia and New Zealand. The approval process generally requires us to present each product and product ingredient to appropriate regulators for review of data supporting safety as well as substantiating any claims we may desire to make. We would also be required to comply with product labeling and packaging regulations that vary from country to country. Our failure to comply with these regulations could prevent our product(s) from being legally offered for sale.

California Proposition 65

California's Safe Drinking Water and Toxic Enforcement Act of 1986, also known as Proposition 65, provides that no person in the course of doing business shall knowingly discharge or release a chemical known to the state to cause cancer or reproductive toxicity into water or into land where such chemical passes or probably will pass into any source of drinking water, without first giving clear and reasonable warning. Among other things, the statute covers all consumer goods (including foods) sold in the State of California. Prop. 65 allows private enforcement actions (sometimes called "bounty hunter" actions). Reports indicate that over 100 such actions have been commenced annually over the past 3 years against companies in the nutraceutical industry (e.g., lead content of calcium, lead content of ginseng, PCB in fish oil) alleging that their products are contaminated with heavy metals or other compounds that would trigger the warning requirements of the Act. While we intend to take appropriate steps to ensure that any of our products that we may market will be in compliance with the Act, given the nature of this statute and the extremely low tolerance limits it establishes (well below federal requirements), there is a risk that we, our contracted producer or a licensee could be found liable for the presence of miniscule amounts of a prohibited chemical in our product. Such liability could be significant.

General

To the extent dictated by our research partners, we will produce research-only feedstock for chemical analysis, safety studies and efficacy studies compliant with applicable state and federal regulations. However, we will rely on our research partners to conduct their respective R&D programs in a manner compliant with applicable regulation and law. Once a product concept has been fully developed, we intend to manufacture that product, either internally or on a contract basis. In either case, we intend to adhere to all state and federal regulations relative to the safety and efficacy of the product application, as well as relevant regulations covering the safe and consistent manufacture of that product.

Compliance

In fall of 2016, we accelerated our efforts to achieve GRAS (Generally Recognized As Safe) status for the algal biomass, intended for use in humans, poultry, dogs and cattle. We contracted a well-regarded FDA consultant to map out the strategy and manage the process of developing product specifications, safety testing, publication of results and convening a GRAS panel for human use. In late 2016, as a result of a binding Letter of Intent with NutriQuest, an animal nutrition company based in Cedar Rapids, Iowa, the strategy expanded to accommodate a compliance track for poultry use as well.

As part of the accelerated effort, we contracted a number of well-regarded private and academic laboratories to establish a nutritional profile for the algal biomass, as well conduct various safety and toxicology tests required for the GRAS self-affirmation process. The tests, studies and validations will likely continue through most of 2017.

<u>WellMetris</u>

We are working to make the WellMetris testing systems compliant with existing FDA regulations and to that end have retained FDA counsel and a medical device consulting firm, which have advised us as to the most time and cost-efficient path to classification and approvals. This activity will continue upon availability of additional funding.



Research and Development

ZIVO

Research

Our algal culture has been subjected to product testing in its original form over several years, beginning in 2004. In spring of 2009, we undertook a research and development process with a view to fractioning the existing product into much smaller, concentrated groups of molecules with similar physical properties. These groups were then tested *in vivo* and *in vitro* with successful results noted in maintaining healthy cholesterol levels. A patent application describing a novel method of cholesterol regulation was submitted to the US Patent & Trademark Office in spring of 2010 and a PCT filing was submitted in February of 2011.

Since January 2012 we continue to develop our research programs internally and direct outside academic researchers, private laboratories or contract research organizations to conduct experiments, tests and studies on our behalf. We spent approximately \$800,000 for the year ended December 31, 2016 on research and development, as compared to \$1 million in 2015. The resources were spent on external research, mainly to independent facilities involved in the analysis and validation of our bioactive compounds in various applications and animal models. To date, all of these amounts have been directly expensed as they have been incurred.

As of mid-March 2016, the Company has moved forward with the following R&D activities:

- We are continuing work on a large-scale bovine mastitis study utilizing samples validated *in vitro* by the principal researcher at the University of Wisconsin Madison and samples processed and validated by other researchers in the fall of 2016. The pre-pilot and pilot arms of this study have been completed and the results gained thus far may shorten the primary arm of this bovine study, which is expected to commence upon available funding in early 2017
- A study utilizing cadaver cartilage and joint tissue at the Comparative Orthopaedics Laboratory located at the University of Missouri showed positive early results for protective effects in canine joint health, using our natural bioactive compounds. The study will be repeated and expanded when capital funding is made available.
- A canine whole blood experiment was conducted at an international contract research organization to study the effects of our natural bioactive compounds on inflammatory cytokines and chemokines present in blood to assess whether a systemic or localized mechanism of action can be determined. Although the results trended in a positive direction, Company principals determined that a more definitive in vivo study would be more useful, pending capital funding.
- The ongoing elucidation and characterization of the natural bioactive compounds had undergone a data integrity review in early 2014. Further work to develop a more comprehensive understanding of the bioactives and developing a 3D model had been placed on hold since spring of 2014 pending available funding. In mid-March 2016, the Company re-activated the elucidation and characterization of the natural bioactive compounds as funding became available. The Center for Complex Carbohydrate Research at the University of Georgia was tasked with sample purification and preliminary analysis. Other laboratories were contracted to conduct bioassays to validate the bioactivity of the purified and isolated samples, with work ongoing at the close of 2016.

The purposes for these various tests and experiments are manifold: We are not only isolating bioactive molecules, but also testing the method of isolation and then validating that the isolated molecules retain their bioactivity across a select range of human and animal cell lines, and that these molecules exhibit no deleterious effects before they are introduced into humans or animals during *in vivo* studies. We must ensure that this does not occur occasionally, it is required for every production process, every safety validation process and every intended application, such as a canine dietary supplement that is mixed with food, as opposed to a canine dietary supplement that is administered in the form of a chewable caplet.

Further, as we now enter production scale-up, we are required to provide cGMP protocols and Quality Assurance ("QA") protocols that show we can produce the algal biomass and/or the active ingredients safely, consistently and in defined quantities, and therefore rely on these same experiments and methods to substantiate our quality claims. These datasets form the basis for establishing the value of a license agreement. Therefore, every single license that we hope to issue requires its own data set and safety validation for the specific application being licensed. These datasets represent the core of the intellectual property that is being licensed.

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Status of Culturing and Production

Independent of identifying the bioactive compound(s) or validating their bioactivity and safety is the process and method of growing and maintaining the algal culture that gives rise to the bioactive compound(s) in the first place. This culture and its growing environment were developed decades ago. However, the method was not commercially viable, and the Company has expended considerable resources to develop a single-species, high-volume and commercially viable production methodology.

We made the decision to spread product development risk, resulting in the creation of a product platform strategy whereby four different forms could be developed for future marketing across several categories and applications:

a) the raw algae biomass, which would naturally contain the beneficial compound(s); b) a more refined extraction which could be introduced into animal feed or supplements; c) the isolated natural molecule(s) which could be more appropriate for human consumption in food or supplements; and d) the synthetic version of any such natural molecule(s) which could be licensed to drug development companies or joint-ventured in a risk-sharing arrangement.

To that end, we contracted with several experts in the field to coordinate isolation of the different organisms present in the culture, grow each of them separately and then subject them to the same life-cycle stressors as the original culture. The stated goal was to grow algae in bulk as a direct source of micro-nutrition and feed ingredient for production animals, namely beef cattle and dairy cows, as well as companion animal dietary supplementation. The production capability would be licensed to others. Per the business model, we have no intention of fielding a finished product, but rather empowering licensees to strike supply agreements with larger, better-financed brand names or licensing directly with such brand names. There can be no assurance that commercially viable products will be developed, or that they can be successfully and profitably manufactured and marketed.

Over the course of 2013 and 2014, our contracted researchers have been able to successfully isolate one or more algal species, scale up the production/output of the isolated species and still retain some of the key, desirable bioactive properties associated with the earlier, complex culture. Proof of concept growing techniques, including both pond and bioreactor modes, have shown that our target algal specie can be grown in commercially viable quantities, and the harvest time has been compressed from several months to several days' time. We are uncertain if we can grow biomass in sufficient tonnage for livestock feed, but we believe that the current production methods will allow us to satisfy demand for a more refined extract introduced into animal supplements and, as a more purified substance, into human supplements.

In 2014, we tested the algal biomass and isolates derived from the aforementioned prototype growing facilities in dairy cows with successful results.

In 2015, we finalized development of Standard Operating Procedures ("SOP's") in order to draft contractual terms with contract growers domestically and abroad. The SOP's form the basis for current Good Manufacturing Practice ("cGMP") protocols to which contract growers and processors must adhere as part of the FDA's updated Food Safety Modernization Act of 2011 ("FSMA") requirements, regardless of country of origin. In early 2016, we contracted with a Florida-based algae grower to scale-up production in a commercial setting. Due to weather problems, including Hurricane Matthew, the grower was unable to successfully deliver the biomass required. To remedy the situation, we identified and began contract negotiations in late October with Synthetic Genomics, Inc., (SGI) which operates an algae production facility in Imperial Valley, California, and concluded a tolling agreement in late December, 2016. SGI will also convert and upgrade the SOPs to cGMP level specifications so that we can meet compliance requirements. We conducted experiments in post-processing, such as spray-drying centrifugal water extraction and other techniques to better understand feed and food handling requirements. We interviewed FDA compliance consultants for animal feed applications and contracted the Burdock Group of Orlando, Florida in summer of 2016 to manage the compliance process on our behalf.

Looking Forward

A significant portion of our research efforts have been directed towards identifying a candidate "class of compound" and one or more "active ingredients", as it relates to autoimmune and anti-inflammatory response. These are very broad categories and work is still required to fully describe the 3D structure of such compounds, as the actual structure is how the bioactivity exists and where the value is locked. One approach among several we've taken is to create synthetic homologs, and from them deduce the composition and 3D structure of the naturally bioactive compounds. In early 2014, we determined that the synthetic approach was not yielding the hoped-for results and halted that particular effort.

In mid-March 2016, we restarted the elucidation and characterization effort by contracting the Center for Complex Carbohydrate Research at the University of Georgia to begin sample purification, isolation and analyses, supported by bioassay validation conducted at several private labs.

Subject to the availability of sufficient funding, we estimate that we will, in fiscal 2017, be required to expend in excess of \$3,000,000 on research and subsequent product development in order to complete the initiatives discussed herein. In addition to the activity in 2017, we plan to continue our research and development efforts in 2018 and beyond. These expenditures will need to be met from external funding sources. In the past, we have had difficulty raising funds from external sources. Thus, we may not be able to raise the funding required to continue our research and development activities. In the event that these sources are not available or adequate to meet our research needs, we will be unable to pursue our research activities, in which case our ability to substantiate the accumulated intellectual property with objective clinical support for its characterization, method of action and efficacy will continue to be impeded, thereby severely hindering our ability to generate licensing revenue (or otherwise commercialize our products) and adversely affect our operating results.

In the event that we are successful in raising the necessary capital, we will continue our current research program with our research partners, we will expand our investigations to include various experts and consultants on an as-needed basis and explore new product concepts and applications. Our current contracts with our research partners cover the following activities:

- · Ongoing isolation and characterization of individual natural molecules from various production formats in sufficient quantities for downstream analyses, experiments, standards development, FDA compliance, cGMP and QA protocols
- Ongoing validation of samples *in vivo* and *in vitro* to substantiate efficacy and safety for each specific application or claim, i.e., poultry immune health, canine osteoarthritis, canine joint health, porcine respiratory/reproductive syndrome, etc., to boost value for each specific license
- · Synthetic development/validation of individual molecules to boost value of licenses
- · Ongoing validation of samples in vivo and in vitro for standards development, FDA safety compliance, cGMP and QA protocols
- Product development initiatives such as the joint development project with NutriQuest to develop a successful poultry feed ingredient; a protein enhancement ingredient for fruit and vegan drinks and smoothies and a human dietary supplement formulation

Ancillary development activities would occur in parallel with our research partners.

Development

<u>WellMetris</u>

WellMetris was initially focused on large-scale, programmatic applications of its testing and reporting platform. We are interested in supporting the intervention by wellness consultants or medical professionals in the lifestyle choices made by individuals covered by traditional health insurance plans, retiree medical benefits pools, employer-sponsored health initiatives and taxpayer-sponsored programs like Medicaid and the ACA (Affordable Care Act) or its replacement. These interventions, which are typically non-medical, have been shown to be successful in delaying the onset of chronic diseases such as diabetes or cardiovascular problems. We believe that targeting asymptomatic individuals and focusing intervention efforts on these individuals may have a positive result for wellness programs, and potentially lower premiums and health claims.

At the close of 2015, the WellMetris product platform required additional prototype analyzers and additional dry chemistry reagent strips and cartridges to conduct pilot programs for potential customers, and to use the result of these pilot programs to help normalize data for the dry chemistry reagents as part of the FDA submission package. Such efforts are currently on hold, pending capital funding.

In early 2016 we refocused product development on self-monitoring of individual health, primarily focused on those individuals who purchase dietary supplements, join health clubs or are otherwise actively pursuing a healthy lifestyle. This involves miniaturizing some aspects of our test cartridge concept and creating a mobile application, thereby eliminating the need for the analyzer device. This is a significant undertaking, which will not commence until we realize revenues from our Phase 1 product launch or attract additional capital funding. However, incremental steps were taken in 2016 to finalize 3D models of the sample collection device and the assay carrier in preparation for finite element testing of each component sometime in 2017, pending available funding.

Compliance with Environmental Laws

We believe that we are, in all material respects, in compliance with local, state, and federal environmental laws applicable to our production and waste disposal. The cost of this compliance activity to date has not been material, and has been absorbed within our general operations overhead.

Employees

As of December 31, 2016 we had two full-time employees, positioned in executive management. In addition, we have three part-time people acting on a consulting basis as our Chief Science Officer; Director, Research & Development; and Lead Scientist & Clinical Coordinator. We believe that our employee relations are good. No employee is represented by a union.

Available Information

Our website is http://zivobioscience.com/. Information on our website is not incorporated by reference into this Form 10-K and should not be considered part of this report or any other filing we make with the SEC. We file annual, quarterly and current reports, and other information with the Securities and Exchange Commission. Our filings with the SEC can be viewed at www.sec.gov.

Item 1A. Risk Factors.

There is substantial doubt about our ability to continue as a going concern. Our independent registered public accounting firm has issued an opinion on our consolidated financial statements which states that the consolidated financial statements were prepared assuming we will continue as a going concern and further states that our recurring losses from operations, stockholders' deficit and inability to generate sufficient cash flow to meet our obligations and sustain our operations raise substantial doubt about our ability to continue as a going concern.

We are materially dependent on external sources for continued funding. Unless and until we realize licensing and royalty revenues sufficient to cover our expenses, we will be reliant upon external sources to fund our continued operations. There is no guarantee that this funding will continue. If we are unable to raise additional funds, there will be a material adverse effect on our business, financial condition and results of operations.

We only have 450 million shares authorized for issuance. As of December 31, 2016, we had 136,745,347 shares outstanding. We also had contractual commitments to issue 145,605,722 additional shares as of December 31, 2016, consisting of 111,086,456 common shares issuable upon the conversion of convertible debentures and related accrued interest and 32,071,901 common shares issuable upon the exercise of outstanding warrants. This totals a potential 282,423,964 shares outstanding if all debentures were converted and warrants exercised. In order to increase the authorized shares to a higher number, we would need to amend our articles of incorporation, which would require shareholder approval. There is no guarantee that we will be able to obtain the shareholder approval necessary to amend our articles of incorporation to increase our authorized shares.

Our future success is dependent on our ability to establish strategic partnerships. We do not have resources to pursue the development, manufacturing and marketing of products on our own, and we will need to rely on third parties for some of these activities. There is no guarantee that we will be able to successfully establish strategic partnerships.

The ability to market our product is dependent upon the completion of proven, clinical research. While we are currently undergoing studies to further identify the active ingredients in our products, there is no guarantee that the research will successfully achieve this goal. If our current research does not return the results we expect, our business prospects will be materially and adversely affected.

Government regulation of our products may adversely affect sales. Nutraceutical and animal supplement products, although not subject to FDA approval, must follow strict guidelines in terms of production and advertising claims. Our ability to produce and successfully market our products is dependent upon adhering to these requirements. If we fail to comply with applicable government regulations concerning the production and marketing of our product, we could be subject to substantial fines and penalties, which would have a material adverse effect on our business.

We have a history of losses, we expect to continue to incur losses and we may not achieve or sustain profitability in the future. We have incurred losses in each fiscal year of our existence. We cannot assure you that we will reach profitability in the future or at any specific time in the future or that, if and when we do become profitable, we will sustain profitability. If we are ultimately unable to generate sufficient revenue to meet our financial targets, become profitable and have sustainable positive cash flows, investors could lose their investment.

Competition from current competitors and new market entrants could adversely affect us. We compete with a wide range of established companies in a variety of different markets, all of whom have substantially greater name recognition and resources than we do. We face or will face other specialized competitors if we are able to expand into new vertical markets. These competitors may be more efficient and successful than we are. If we fail to compete successfully, our operating results and financial condition will be materially adversely affected.

Changes in laws and/or regulations may cause our business to suffer. The future success of our business depends upon our ability to meet regulatory requirements for the sale of our products. Increased enforcement of existing laws and regulations, as well as any laws, regulations, or changes that may be adopted or implemented in the future, could limit our ability to market our products.

The loss of key employees and technical personnel or our inability to hire additional qualified personnel could have a material adverse effect on our business. Our success depends in part upon the continued service of our senior management personnel. Our success will also depend on our future ability to attract and retain highly qualified technical, managerial and marketing personnel. The market for qualified personnel has historically been, and we expect that it will continue to be, intensely competitive. We cannot assure you that we will continue to be successful in attracting or retaining such personnel. The loss of certain key employees or our inability to attract and retain other qualified employees could have a material adverse effect on our business.

We could incur substantial costs as a result of any claim of infringement of another party's intellectual property rights. In recent years, there has been significant litigation in the U.S. and elsewhere involving patents and other intellectual property rights. Companies are increasingly bringing and becoming subject to suits alleging infringement, misappropriation or other violations of patents, copyrights, trademarks, trade secrets or other intellectual property rights. These risks have been amplified by an increase in the number of third parties whose sole or primary business is to assert such claims. We could incur substantial costs in prosecuting or defending any intellectual property litigation. Additionally, the defense or prosecution of claims could be time-consuming and could divert our management's attention away from the execution of our business plan.

We cannot be certain that our products do not infringe the intellectual property rights of third parties. Claims of alleged infringement or misappropriation could be asserted against us by third parties in the future. We cannot be sure that we would prevail against any such asserted claim.

Moreover, any settlement or adverse judgment resulting from a claim could require us to pay substantial amounts or obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology. We cannot assure you that we would be able to obtain a license from the third patty asserting the claim on commercially reasonable terms, that we would be able to develop alternative technology on a timely basis, or that we would be able to obtain a license to use a suitable alternative technology to permit us to continue offering, and our customers to continue using, our affected products or technology. In addition, we may be required to indemnify our customers for third-party intellectual property infringement claims, which would increase the cost to us. An adverse determination could also prevent us from offering our products or services to others. Infringement claims asserted with or without merit against us may have an adverse effect on our business, financial condition and results of operations.

If we are required to make substantial payments or undertake any of the other actions noted above as a result of any intellectual property infringement claims against us or any obligation to indemnify our customers for such claims, such payments or costs could have a material adverse effect upon our business and financial results. Even if we are not a party to any litigation between a customer and a third party, an adverse outcome in any such litigation could make it more difficult for us to defend our technology in any subsequent litigation in which we are a named party. Moreover, such infringement claims with or without merit may harm our relationships with our existing customers and may deter others from dealing with us.

We may not be able to adequately protect our intellectual property rights and efforts to protect them may be costly and may substantially harm our business. Our ability to compete effectively is dependent in part upon our ability to protect our intellectual property rights. While we hold one issued patent and pending patent applications covering certain elements of our technology, these patents, and, more generally, existing patent laws, may not provide adequate protection for portions of the technology that are important to our business. In addition, our pending patent applications may not result in issued patents.

U.S. patent, copyright, trademark and trade secret laws offer us only limited protection and the laws of some foreign countries do not protect proprietary rights to the same extent. Accordingly, defense of our trademarks and proprietary technology may become an increasingly important issue as we seek to expand our product development into countries that provide a lower level of intellectual property protection than the U.S. Policing unauthorized use of our trademarks and technology is difficult and the steps we take may not prevent misappropriation of the trademarks or technology on which we rely. If competitors are able to use our trademarks or technology without recourse, our ability to compete would be harmed and our business would be materially and adversely affected.

We may elect to initiate litigation in the future to enforce or protect our proprietary rights or to determine the validity and scope of the rights of others. That litigation may not be ultimately successful and could result in substantial costs to us, the reduction or loss in intellectual property protection for our technology, the diversion of our management's attention and harm to our reputation, any of which could materially and adversely affect our business and results of operations.

We do not anticipate paying any dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. If we do not pay cash dividends, you could receive a return on your investment in our common stock only if the market price of our common stock has increased when you sell your shares.

Substantial future sales of our common stock in the public market could cause our stock price to fall. Sales of substantial amounts of our common stock in the public market, or the perception that these sales could occur, could cause the market price of our common stock to decline and impede our ability to raise capital through the issuance of additional equity securities. We have outstanding warrants and convertible debt that may result in substantially more outstanding shares, which could cause the price of our common stock to decline.

Sales Risk – WellMetris products. We have not finished developing our products or sold any products. We have only begun test marketing. We cannot be assured that there is a sufficient market demand for our products. In addition, while we are actively pursuing the relationships necessary to begin manufacturing and marketing the Wellness Tests, we have not yet finalized agreements with potential business partners, including third-party resellers, labs or distributors of the Wellness Tests. Failure to secure these critical alliances on reasonable terms could negatively impact us, our business and future plans.

Dependence on Manufacturers. We do not own or operate, and currently do not plan to own or operate, manufacturing facilities for production of tests or devices which are critical to the successful operation of the business. We plan to target manufacturers and to form alliances for the mass production of our products, but we have no assurance that such alliances will be established. Furthermore, once we enter into such relationships, we may not have sufficient long-term agreements with any third-party manufacturers to ensure adequate supply and price controls. This may result in delays, quality control issues, additional expenses, and failure to meet demand or other customer obligations or needs.

Failure of Manufacturers to Meet Design Specifications. The success of our products is contingent upon one or more third parties manufacturing products according to design specifications. In practice, this is difficult to enforce and guarantee. As a result, we may never realize the expected efficiency, quality or sensitivity of our products and, as a result, may be required to continue research and development with another manufacturer. If a joint venture partner or contractor fails to meet design specifications, we will experience delays in commencing operations or delays in fulfilling orders in the future. Such delays could have a material adverse impact on our financial condition.

Item 1B. Unresolved Staff Comments.

Not required for smaller reporting companies.

Item 2. Facilities.

We have leased 500 square feet in Bloomfield Hills, Michigan and 2,000 square feet in Keego Harbor, Michigan on a month to month basis to serve as the headquarters of our company. The monthly rent is \$4,500.

Item 3. Legal Proceedings.

From time to time we are involved in litigation incidental to our business.



PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock is quoted on the OTC Market ("OTCQB") administered by the Financial Industry Regulatory Authority under the symbol "ZIVO." The following table sets forth the range of high and low bid information as reported on the OTCQB by quarter for the last two fiscal years. These quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions.

Year ended December 31, 2015	<u>HIGH</u>	LOW
First Quarter	\$ 0.11	\$ 0.06
Second Quarter	0.20	0.06
Third Quarter	0.14	0.08
Fourth Quarter	0.09	0.04
Year ended December 31, 2016	<u>HIGH</u>	LOW
Year ended December 31, 2016 First Quarter	<u>HIGH</u> \$ 0.09	<u>LOW</u> \$ 0.04
,		
First Quarter	\$ 0.09	\$ 0.04

As of December 31, 2016 we had 145 shareholders of record.

We have not paid any dividends on our common stock during the last two fiscal years, due to our need to retain all of our cash for operations. We do not anticipate paying any cash dividends on our common stock for the foreseeable future.

Recent Sales of Unregistered Securities.

During the three months ended March 31, 2016, we issued 517,500 shares of common stock valued at \$36,000 in connection with \$1,000,000 of convertible debt financings in the first quarter.

During the three months ended June 30, 2016, we issued 112,500 shares of common stock valued at \$9,000 in connection with \$250,000 of convertible debt financings in the second quarter.

During the three months ended September 30, 2016, we issued 330,000 shares of common stock valued at \$18,000 in connection with \$500,000 of convertible debt financings in the third quarter. In addition, the Company also issued 3,500,000 shares of common stock, valued at \$175,000, to an investor relations consulting firm.

During the three months ended December 31, 2016, we issued 128,571 shares of common stock valued at \$9,000 in connection with \$250,000 of convertible debt financings in the fourth quarter.

The Company believes that the foregoing transactions were exempt from the registration requirements under Rule 506 of Regulation D promulgated under the Securities Act of 1933, as amended ("the Act") or Section 4(2) under the Act, based on the following facts: in each case, there was no general solicitation, there was a limited number of investors, each of whom was an "accredited investor" (within the meaning of Regulation D under the "1933 Act", as amended) and/or was (either alone or with his/her purchaser representative) sophisticated about business and financial matters, each such investor had the opportunity to ask questions of our management and to review our filings with the Securities and Exchange Commission, and all shares issued were subject to restrictions on transfer, so as to take reasonable steps to assure that the purchasers were not underwriters within the meaning of Section 2(11) under the 1933 Act.

Item 6. Selected Financial Data.

Not required for smaller reporting companies.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Overview

For ZIVO, we have put in place a business model in which we would derive future income from licensing and selling natural bioactive ingredients that may be derived from or are initially based on the algae cultures. We expect that these planned new products will likely be sold to much larger, better-financed animal, food, dietary supplement and medical food manufacturers. The anticipated income streams are to be generated from a) royalties and advances for licensed natural bioactive ingredients, and b) a toll on bulk sales of such ingredients. These bulk ingredients will likely be made by contracted ingredient manufacturers and then sold by us to animal food, dietary supplement and medical food processors and/or name-brand marketers. Further, we expect to license our bioactive molecules as lead compounds or templates for synthetic variants intended for therapeutic applications.

For WellMetris, we are developing, with the intention to manufacture, market, and sell tests, that we believe will allow people to optimize their health and identify future health risks. We plan to develop and commercialize such tests in three phases:

- In phase one ("Phase One") or, alternately named Gen 1.0, we plan to develop and commercialize a series of tests, which are intended to measure indicators of good health and optimal metabolic function (collectively, the "Phase One Test"). The Phase One Test is being designed to measure biomarkers related to oxidative stress, inflammation, and antioxidant status to establish a metabolic assessment from which intervention can commence, and from which metabolic syndrome can be inferred.
- In phase two ("Phase Two") or alternately named Gen 1.5, we plan to develop and commercialize a testing technology focused on the positive or negative metabolic effects of metabolizing fat and muscle efficiency due to changes in diet, exertion, hydration and dietary supplements in a self-administered format that integrates with smartphone operating systems.
- In phase three ("Phase Three") or alternately named Gen 2.0, we plan to develop and commercialize additional tests intended to provide a more complete metabolic profile for an individual utilizing the metabolites present in urine. The Company believes the Gen 2.0 tests, in aggregate, will allow identification of healthy versus unhealthy bodily processes in real-time. This technology can also be applied to livestock and companion animals. As capital funding becomes available, the Company will move forward with product development.

We believe there is a viable market for our Wellness Tests. More than 19% of Americans are afflicted with cardiovascular diseases, diabetes, autoimmune diseases and cancer. The Wellness Tests are intended to identify pre-conditions to such illnesses. Such identification may allow for early intervention and reduce incidence of such illnesses or forestall their onset. This is critically important to large employers, insurers and governmental agencies who are payers for health claims and are facing massive increases in premiums or cash outlays.

The WellMetris technology also incorporates sophisticated software to analyze, report, record and manage wellness and health data for large groups such as large employers, pension funds, accountable care organizations, state Medicaid agencies and their actuarial consultants, underwriters, re-insurers and wellness consultants. The software also contains tools to conduct meta-analysis of baseline health benchmarks and monitor the progress of pre-clinical intervention programs within large groups.

Since 2004, we have been incurring significant operating losses and negative cash flow. We experienced only nominal sales of our algal product, which was pulled from the market in January of 2012, and have relied primarily on the sale of company securities and shareholder loans to fund operations. We are also experiencing an ongoing and substantial working capital deficiency. We have had difficulty raising capital from third parties. In March of 2017, we successfully raised capital to fund operations and research for the first half of 2017. If we are unable to obtain additional funding in the near term, we may be unable to continue as a going concern, in which case you would likely suffer a total loss of your investment in our company.

Results of Operations for Years Ended December 31, 2016 and 2015

Sales

We had no sales for the years ended December 31, 2016 and 2015.

Cost of Sales

The Company had no Costs of Sales for the years ended December 31, 2016 and 2015. As noted above, we ceased all sales activities as of January 2012.

Selling Expenses

The Company had no Selling Expenses for the years ended December 31, 2016 and 2015. As noted above, we ceased all sales activities as of January 2012.

General and Administrative Expenses

General and administrative expenses decreased approximately \$131,000 to \$832,000 in 2016 compared to \$963,000 in 2015. General and administrative expenses decreased in the following areas: a reduction of WellMetris operating expenses of \$108,000, travel expenses of \$22,000 and an overall reduction in office expenses. Our decrease in general and administrative expenses was due to our difficulty in raising capital.

Professional Fees and Consulting Expense

Professional fees and consulting expense increased approximately \$809,000 to \$1,869,000 in 2016 compared to \$1,060,000 in 2015. Professional fees and consulting expense were increased in 2016 due to the following: an increase of \$824,000 in the use of an Investor Relations Firm and use of financial consultants (of the total expense in 2016 related to these activities of \$1,378,000, \$1,291,000 was a non-cash expense in the forms of stock and warrants issued for services rendered), an increase of \$19,000 in filing and listing fees, and an increase in legal and accounting fees of \$24,000 offset by a reduction in Board of Director Fess of \$57,000 (of the total expense in 2016 related to these activities of \$110,000, \$70,000 was a non-cash expense in the form of warrants issued for services rendered).

Research and Development Expenses

Research and development expenses decreased approximately \$244,000 to \$789,000 in 2016 compared to \$1,033,000 in 2015 for the comparable period. The decrease in research and development for 2016 can be attributed to a decrease in available funding. We expect external research and development to increase in 2017 as we pursue additional external trials, subject to the availability of sufficient funding, which we do not currently have.

Other Income (Expenses)

During the year ended December 31, 2016, we recorded approximately \$1,376,000 relating to amortization of bond discount as compared to \$2,048,000 for the year ended December 31, 2015, a \$642,000 decrease. The decrease is due to a reduction of in amortization of bond discounts based on the timing of the discounts. The discounts are amortized over a two year period, and a number of periods rolled out during 2016.

During the year ended December 31, 2016, we recorded approximately \$135,000 in amortization of deferred finance costs as compared to \$85,000 in 2015. The increase of \$50,000 is due to additional funding received in 2016 which incurred finance costs which are amortized over a two year period.

During the year ended December 31, 2016, we recorded approximately \$72,000 in finance costs paid in stock and warrants as compared to \$96,000 in 2015. The decrease of \$24,000 was due to a lower funding level combined with a lower stock price which is used to calculate the finance costs.

During the year ended December 31, 2016, we recorded approximately \$986,000 in interest expense as compared to \$720,000 in 2015. The increase of \$266,000 is due to the increased debt the Company incurred in 2016.

Liquidity and Capital Resources

The consolidated financial statements contained in this report have been prepared on a "going concern" basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. For the reasons discussed herein, there is a significant risk that we will be unable to continue as a going concern, in which case, you would likely suffer a total loss of your investment in our company.



As of March 31, 2017, we had cash in the bank of \$1,005,000. We have incurred significant net losses since inception, including a net loss of approximately \$6,060,000 during the year ended December 31, 2016. We have, since inception, consistently incurred negative cash flow from operations. During the year ended December 31, 2016, we incurred negative cash flows from operations of approximately \$2,543,000. As of December 31, 2016, we had a working capital deficiency of \$10,662,057 and a stockholders' deficiency of \$13,621,235. Although we recently raised a limited amount of capital, we have a near term need for significant additional capital.

During the year ended December 31, 2016, our operating activities used approximately \$2,543,000 in cash, compared with \$2,297,000 in cash during the comparable prior period. The approximate \$247,000 decrease in cash used by our operating activities was due primarily to the following (all of which are approximated): a \$270,000 increase in net loss, a \$427,000 change (decrease) in accounts payable, a \$20,000 change (decrease) in prepaid expenses, a \$14,000 change in due to related party (decrease), and a \$265,000 change in accrued interest (increase), offset by a \$24,000 decrease in financing costs (a non-cash expense item), a \$135,000 decrease in accrued liabilities, a \$464,000 decrease in amortization and depreciation (a non-cash expense item) and an increase of \$836,000 in stocks and warrants issued for services rendered (a non-cash expense item).

During the years ended December 31, 2016 and 2015, there were no investing activities.

During the years ended December 31, 2016 and 2015, our financing activities generated \$3,034,000 and \$2,312,000 in cash, respectively. The difference of \$722,000 was primarily related to a net increase of proceeds of \$1,183,000 from issuance of convertible debentures (with loans payable converted into convertible debentures), offset by a decrease of \$287,000 in loans from related parties, a decrease of \$48,000 from the proceeds of sales of common stocks and deferred finance costs of \$125,000.

During the fourth quarter of 2011, we entered into an agreement with HEP Investments, LLC ("HEP") under which HEP agreed to purchase convertible notes in the aggregate principal amount of \$2,000,000. Through 2016, we amended this agreement to provide for funding up to \$17,500,000. As of the date of this filing, HEP had advanced a total of \$14 million pursuant to this arrangement. HEP's convertible notes are secured by all our assets.

Although we raised a limited amount of capital during 2016, we continue to experience a shortage of capital, which is materially and adversely affecting our ability to run our business. As noted above, we have been largely dependent upon external sources for funding. We have in the past had difficulty in raising capital from external sources. We are still heavily reliant upon external financing for the continuation of our research and development program.

We estimate that we will require approximately \$5,000,000 in cash over the next 12 months in order to fund our normal operations and to fund our research and development initiatives. Based on this cash requirement, we have a near term need for additional funding. Historically, we have had substantial difficulty raising funds from external sources; however, we recently were able to raise a limited amount of capital from outside sources. If we are unable to raise the required capital, we will be forced to curtail our business operations, including our research and development activities.

Seasonality

Based on our business model implemented at the beginning of 2012, anticipated income streams are to be generated from the following:

For ZIVO

a) royalties and advances for licensed natural bioactive ingredients, isolated natural compounds and synthetic variants thereof,

and

b) bulk sales of such ingredients;

For WellMetris

The selling of wellness tests and data services related to medical records management and analysis/compilation of data gathered on behalf of payers. For insurers, the primary selling season is November through April of any given year.

We do not anticipate that these will be affected by seasonality.

Staffing

We have conducted all of our activities since inception with a minimum level of qualified staff. We currently do not expect a significant increase in staff.

Off-Balance Sheet arrangements

We have no off-Balance Sheet arrangements that would create contingent or other forms of liability.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Not required for smaller reporting companies.

Item 8. Financial Statements and Supplementary Data.

Reference is made to the Consolidated Financial Statements, the Reports thereon, and the Notes thereto, commencing on page F-1 of this report, which Consolidated Financial Statements, Reports, Notes and data are incorporated herein by reference.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

(a) Evaluation of Disclosure Controls and Procedures. Based on their evaluation as of December 31, 2016, our Chief Financial Officer has concluded that our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), were effective as of the end of the period covered by this report to ensure that the information required to be disclosed by us in this Annual Report on Form 10-K was recorded, processed, summarized and reported within the time periods specified in the SEC's rules and instructions for Form 10-K. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Financial Officer, to allow timely decisions regarding required disclosure.

(b) Management's Annual Report on Internal Control Over Financial Reporting. Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined by Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on our assessment of those criteria, management believes that the Company maintained effective internal control over financial reporting as of December 31, 2016.

This annual report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

This Management's report is not deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, unless we specifically state in a future filing that such report is to be considered filed.

(c) Changes in Internal Control over Financial Reporting. There were no changes in our internal control over financial reporting (as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) during the year ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Directors and Executive Officers

Incorporated by reference to the Registrant's 2016 Proxy Statement to be filed within 120 days after the Registrant's fiscal year end.

Code of Ethics

We have adopted a Code of Ethics and Business Conduct that defines the standard of conduct expected of our officers, directors and employees. We will upon request and without charge provide a copy of our Code of Ethics. Requests should be directed to Principal Accounting Officer, Zivo Bioscience, Inc., 2804 Orchard Lake Road, Suite 202, Keego Harbor, MI 48320.

Item 11. Executive Compensation

Incorporated by reference to the Registrant's 2016 Proxy Statement to be filed within 120 days after the Registrant's fiscal year end.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Incorporated by reference to the Registrant's 2016 Proxy Statement to be filed within 120 days after the Registrant's fiscal year end.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Incorporated by reference to the Registrant's 2016 Proxy Statement to be filed within 120 days after the Registrant's fiscal year end.

Item 14. Principal Accountant Fees and Services

Incorporated by reference to the Registrant's 2016 Proxy Statement to be filed within 120 days after the Registrant's fiscal year end.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) (1) (2) Financial Statements.

Financial Statements are listed in the Index to Consolidated Financial Statements on page F-1 of this report.

All schedules have been omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or Notes thereto.

(3) Exhibits.

The Exhibit Index and required Exhibits immediately following the Signatures to this Form 10-K are filed as part of, or hereby incorporated by reference into, this Form 10-K.



SIGNATURES

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

ZIVO BIOSCIENCE, INC.

Date: March 31, 2017

By: <u>/s/ Philip M. Rice II</u> Philip M. Rice II Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: <u>/s/Andrew Dahl</u> Andrew Dahl, Principal Executive Officer CEO, President March 31, 2017

By: <u>/s/ Philip M. Rice II</u> Principal Financial Officer, Chief Financial Officer, Director March 31, 2017

By: <u>/s/Christopher Maggiore</u> Christopher Maggiore, Director March 31, 2017

By: <u>/s/Nola Masterson</u> Nola Masterson, Director March 31, 2017

By: <u>/s/John Payne</u> John Payne, Director March 31, 2017

By: <u>/s/Robert Rondeau</u> Robert Rondeau, Director March 31, 2017



REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES

We have audited the accompanying consolidated balance sheets of Zivo Bioscience, Inc. and Subsidiaries (the "Company") as of December 31, 2016 and 2015 and the related consolidated statements of operations, stockholders' deficiency and cash flows for each of the two years in the period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Zivo Bioscience, Inc. and Subsidiaries at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has incurred significant operating losses for the years ended December 31, 2016 and 2015 and, as of December 31, 2016, has a significant working capital and stockholders' deficiency. These factors raise substantial doubt about the Company's ability to continue as a going concern. Management's plans regarding those matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

<u>/s/ WOLINETZ, LAFAZAN & COMPANY, P.C.</u> WOLINETZ, LAFAZAN & COMPANY, P.C.

Rockville Centre, New York March 31, 2017

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ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEET

ASSETS		December 31, 2015	December 31, 2016
CURRENT ASSETS: Cash Prepaid Expenses Total Current Assets	\$	16,589 12,341 28,930	\$ 506,986 13,437 520,423
PROPERTY AND EQUIPMENT, NET	_	43,750	18,750
OTHER ASSETS: Deferred Finance Costs, net	_	<u> </u>	198,119
TOTAL ASSETS	\$	72,680	\$ 737,292
LIABILITIES AND STOCKHOLDERS' DEFICIT			
 CURRENT LIABILITIES: Accounts Payable Due to Related Party Loans Payable, Related Parties Convertible Debentures Payable, less discount of \$385,190 and \$500,490 at December 31, 2015 and 2016, respectively Accrued Interest Accrued Liabilities – Other Total Current Liabilities LONG TERM LIABILITIES: Convertible Debenture Payable, less discount of \$1,458,741 and \$73,953 at December 31, 2015 and 2016, respectively Total Long Term Liabilities TOTAL LIABILITIES COMMITMENTS AND CONTINGENCIES 	\$ 	1,114,426 211,233 337,107 1,224,510 1,673,386 410,248 4,970,910 4,598,759 4,598,759 9,569,669	\$ 666,365 319,234 245,979 6,886,710 2,659,574 404,618 11,182,480 3,176,047 3,176,047 14,358,527
STOCKHOLDERS' DEFICIT:			
Common stock, \$.001 par value, 450,000,000 shares authorized; 132,156,776 and 136,745,347 issued and outstanding at December 31, 2015 and 2016, respectively Additional Paid-In Capital Accumulated Deficit Total Stockholders' Deficit	-	132,157 38,085,266 (47,714,412) (9,496,989)	136,745 40,016,059 (53,774,039) (13,621,235)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	\$_	72,680	\$ 737,292

The accompanying notes are an integral part of these financial statements

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ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF OPERATIONS

•

	-	For the year ended December 31, 2015		For the year ended December 31, 2016
REVENUES:	\$	-	\$	-
COSTS AND EXPENSES: General and Administrative Professional Fees and Consulting Expense Research and Development Total Costs and Expenses	-	963,296 1,059,633 1,033,351 3,056,280		832,239 1,869,234 788,971 3,490,444
LOSS FROM OPERATIONS	-	(3,056,280)	•	(3,490,444)
OTHER INCOME (EXPENSE): Other Income Amortization of Bond Discount Amortization of Deferred Finance Costs Financing Costs Finance Costs Paid in Stocks and Warrants Interest Expense – Related Parties Interest Expense	-	34,927 (1,866,842) (84,645) (95,580) (718,311) (2,400)		$(1,376,182) \\ (26,813) \\ (108,000) \\ (72,000) \\ (950,698) \\ (35,490)$
Total Other Income (Expense)	-	(2,732,851)	Ī	(2,569,183)
NET INCOME (LOSS)	\$_	(5,789,131)	\$	(6,059,627)
BASIC AND DILUTED LOSS PER SHARE	\$	(0.04)	\$	(0.05)
WEIGHTED AVERAGE BASIC AND DILUTED SHARES OUTSTANDING	-	130,945,979		133,844,254

The accompanying notes are an integral part of these financial statements

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ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENT OF STOCKHOLDERS' DEFICIENCY FOR THE PERIOD JANUARY 1, 2015 THROUGH DECEMBER 31, 2016

	Common	n Stoo	ck	Additional Paid in		Accumulated		
	Shares	Α	mount	Capital	-	Deficit	_	Total
Balance, January 1, 2015	128,773,859	\$ 1	28,774 \$	5 35,427,339	\$	(41,925,281)	\$	(6,369,168)
Issuance of warrants to board of directors	-		-	126,679		-		126,679
Issuance of warrants for services	-		-	321,845		-		321,845
Issuance of warrants for services – related party	-		-	16,053		-		16,053
Issuance of common stock for services	961,539		962	75,190		-		76,151
Issuance of common stock and warrants pursuant to								
private placements	970,000		970	47,530		-		48,500
Common stock issued on conversion of 1% Convertible								
Debt	100,000		100	(100)		-		-
Common stock issued on conversion of 11% Convertible								
Debt	500,000		500	59,500		-		60,000
Discounts on issuance of 11% convertible debentures	-		-	1,916,501		-		1,916,501
Warrants issued for financing costs	-		-	21,150		-		21,150
Common stock issued for financing costs	851,378		851	73,579		-		74,430
Net income					-	(5,789,131)	_	(5,789,131)
Balance, December 31, 2015	132,156,776	\$ <u>1</u>	32,157 \$	38,085,266	\$ <u>_</u>	(47,714,412)	\$_	(9,496,989)
Issuance of warrants to board of directors	-		-	69,712		-		69,712
Issuance of warrants for services	-		-	1,116,444		-		1,116,444
Issuance of warrants for services – related party	-		-	15,601		-		15,601
Issuance of common stock for services	3,500,000		3,500	171,500		-		175,000
Discounts on issuance of 11% convertible debentures	-		-	106,693		-		106,693
Warrants issued for financing costs	-		-	99,931		-		99,931
Common stock issued for financing costs	1,088,571		1,088	70,912		-		72,000
Settlement of Litigation – related party	-		-	280,000		-		280,000
Net loss					-	(6,059,627)	_	(6,059,627)
Balance, December 31, 2016	136,745,347	\$ <u>1</u>	36,745 §	40,016,059	\$_	(53,774,039)	\$ <u></u>	(13,621,235)

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

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ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENT OF CASH FLOWS

Cash Flows from Operating Activities	For the year ended December 31, 2015	For the year ended December 31, 2016
Cash Flows from Operating Activities: Net Loss	\$ (5,789,131)	\$ (6,059,627)
Adjustments to reconcile net income (loss) to net cash used in operating	\$ (3,789,131)	\$ (0,039,027)
activities:		
Stocks and warrants issued for services rendered	397,997	1,291,444
Issuance of warrants for services – related party	16,053	15,601
Warrants issued for Directors' Fees	126,679	69,713
Stocks and warrants issued for financing costs	95,580	72,000
Amortization of deferred finance costs	-	26,813
Amortization of bond discount	1,866,842	1,376,181
Depreciation expense	25,000	25,000
Changes in assets and liabilities:	- ,	
(Increase) decrease in prepaid expenses	19,383	(1,096)
(Decrease) in accounts payable	(21,430)	(448,061)
Increase in due to related party	121,500	108,001
Increase in accrued interest	720,711	986,188
Increase (decrease) in accrued liabilities	123,929	(5,630)
Net Cash (Used) in Operating Activities	(2,296,887)	(2,543,473)
Cash Flows from Investing Activities:		
Net Cash (Used) in Investing Activities		
Cash Flow from Financing Activities:		
Proceeds (payments) from loans payable, related parties	196,093	(91,130)
Deferred Finance Costs	-	(125,000)
Proceeds from issuance of 11% convertible debentures	2,067,500	3,250,000
Proceeds from sale of common stock and exercise of warrants	48,500	-
Net Cash Provided by Financing Activities	2,312,093	3,033,870
Increase in Cash	15,206	490,397
Cash at Beginning of Period	1,383	16,589
Cash at End of Period	\$ 16,589	\$506,986
Supplemental Disclosures of Cash Flow Information:		
Cash paid during the period for:		
Interest	¢ - 2	¢ -
	φ Φ	φ Φ
Income taxes	⊅	ۍ

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

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ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENT OF CASH FLOWS (*Continued*)

Supplemental Schedule of Non-Cash Investing and Financing Activities:

For the Year Ended December 31, 2016:

During the quarter ended March 31, 2016, the Company recorded \$49,630 in discounts on 11% convertible debentures.

During the quarter ended June 30, 2016, the Company recorded \$17,439 in discounts on 11% convertible debentures.

During the quarter ended September 30, 2016, the Company recorded \$24,218 in discounts on 11% convertible debentures, and issued 900,000 common stock warrants, valued at \$50,371 as Deferred Finance Costs. These warrants are exercisable at \$.10 per share and expire five (5) years from the date of issuance.

During the quarter ended December 31, 2016, the Company recorded \$15,407 in discounts on 11% convertible debentures, and the Company issued 975,000 common stock warrants, valued at \$49,560 as Deferred Finance Costs. These warrants are exercisable at \$.10 per share and expire five (5) years from the date of issuance. In addition, the Company reduced its 11% Convertible Debt, due to a related party by \$280,000 to offset an award received in settlement of litigation against the related party.

For the Year Ended December 31, 2015:

During the quarter ended March 31, 2015, the Company recorded \$211,501 in discounts on 11% convertible debentures.

During the quarter ended June 30, 2015, the Company recorded \$705,000 in discounts on 11% convertible debentures.

During the quarter ended June 30, 2015, the holder of 11% Convertible Debentures, converted \$30,000 into 250,000 shares of the Company's common stock.

During the quarter ended September 30, 2015, the Company recorded \$500,000 in discounts on 11% convertible debentures.

During the quarter ended September 30, 2015, the holder of 11% Convertible Debentures, converted \$30,000 into 250,000 shares of the Company's common stock.

During the quarter ended December 31, 2015, the Company recorded \$500,000 in discounts on 11% convertible debentures.

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

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – DESCRIPTION OF BUSINESS

The business model of Zivo Bioscience, Inc. and Subsidiaries (Health Enhancement Corporation, HEPI Pharmaceuticals, Inc., WellMetris, LLC, and Zivo Biologic, Inc.) (collectively the "Company") is as follows: 1) to derive future income from licensing and selling natural bioactive ingredients derived from their proprietary algae cultures to animal, human and dietary supplement and medical food manufacturers (currently, the Company's focus is on research and identification of its bioactive ingredients and is not currently selling its product commercially), and 2) developing, manufacturing, marketing, and selling tests that the Company believes will allow people to optimize their health and identify future health risks.

NOTE 2 – BASIS OF PRESENTATION

Going Concern

The Company had a net loss of \$6,059,627 and \$5,789,131 during the years ended December 31, 2016 and 2015, respectively.

In addition, the Company had a working capital deficiency of \$10,662,057 and a stockholders' deficiency of \$13,621,235 at December 31, 2016. These factors raise substantial doubt about the Company's ability to continue as a going concern.

There can be no assurance that sufficient funds required during the next year or thereafter will be generated from operations or that funds will be available from external sources such as debt or equity financings or other potential sources. The lack of additional capital resulting from the inability to generate cash flow from operations or to raise capital from external sources would force the Company to substantially curtail or cease operations and would, therefore, have a material adverse effect on its business. Furthermore, there can be no assurance that any such required funds, if available, will be available on attractive terms or that they will not have a significant dilutive effect on the Company's existing stockholders.

The accompanying consolidated financial statements do not include any adjustments related to the recoverability or classification of asset-carrying amounts or the amounts and classification of liabilities that may result should the Company be unable to continue as a going concern.

The Company is attempting to address its lack of liquidity by raising additional funds, either in the form of debt or equity or some combination thereof. There can be no assurances that the Company will be able to raise the additional funds it requires.

During the year ended December 31, 2016, the Company received proceeds of \$3,250,000 from the issuance of 11% convertible debt.

NOTE 3 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

<u>Principles of Consolidation</u> - The consolidated financial statements include the accounts of Zivo Bioscience, Inc. and its whollyowned Subsidiaries, Health Enhancement Corporation, HEPI Pharmaceuticals, Inc., WellMetris, LLC, and Zivo Biologic, Inc. All significant intercompany transactions and accounts have been eliminated in consolidation.

Accounting Estimates - The Company's consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America, which require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities, at the date of the financial statements and reported amount of revenues and expenses during the reporting period. Actual results could differ from those estimates. Management uses its best judgment in valuing these estimates and may, as warranted, solicit external professional advice and other assumptions believed to be reasonable.

<u>Cash and Cash Equivalents</u> - For the purpose of the statements of cash flows, cash equivalents include time deposits, certificates of deposit and all highly liquid debt instruments with original maturities of three months or less. The Company maintains cash and cash equivalents balances at financial institutions and are insured by the Federal Deposit Insurance Corporation up to \$250,000. At times, balances in certain bank accounts may exceed the FDIC insured limits. Cash equivalents consist of highly liquid investments with an original maturity of three months or less when purchased. At December 31, 2016, the Company did not have any cash equivalents.

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<u>**Property and Equipment**</u> – Property and equipment consists of furniture and office equipment, and are carried at cost less allowances for depreciation and amortization. Depreciation and amortization is determined by using the straight-line method over the estimated useful lives of the related assets, generally five to seven years. Repair and maintenance costs that do not improve service potential or extend the economic life of an existing fixed asset are expensed as incurred.

Deferred Financing Costs

The Company follows authoritative guidance for accounting for financing costs as it relates to convertible debt issuance cost. These costs are deferred and amortized over the term of the debt period or until redemption of the convertible debentures. Amortization of deferred financing costs amounted to \$26,813 and \$-0- for the years ended December 31, 2016 and 2015.

Revenue Recognition

For revenue from product sales, the Company recognizes revenue in accordance with Staff Accounting Bulletin No. 104, "Revenue Recognition" ("SAB No. 104"), which superseded Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" ("SAB No. 101"). SAB No. 104 requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred; (3) the selling price is fixed and determinable; and (4) collectability is reasonably assured. Determination of criteria (3) and (4) are based on management's judgment regarding the fixed nature of the selling prices of the products delivered and the collectability of those amounts. Provisions for discounts and rebates to customers, estimated returns and allowances, and other adjustments will be provided for in the same period the related sales are recorded.

Shipping and Handling Costs

Shipping and handling costs are expensed as incurred. For the years ended December 31, 2016 and 2015 no shipping and handling costs were incurred.

Research and Development

Research and development costs are expensed as incurred. The majority of the Company's research and development costs consist of clinical study expenses. These consist of fees, charges, and related expenses incurred in the conduct of clinical studies conducted with Company products by independent outside contractors. External clinical studies expenses were approximately \$789,000 and \$1,033,000 for the years ended December 31, 2016 and 2015, respectively.

Income Taxes

The Company follows the authoritative guidance for accounting for income taxes. Deferred income taxes are determined using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The tax effects of temporary differences that gave rise to the deferred tax assets and deferred tax liabilities at December 31, 2016 and 2015 were primarily attributable to net operating loss carry forwards. Since the Company has a history of losses, and it is more likely than not that some portion or all of the deferred tax assets will not be realized, a full valuation allowance has been established. In addition, utilization of net operating loss carry-forwards are subject to a substantial annual limitation due to the "change in ownership" provisions of the Internal Revenue Code. The annual limitation may result in the expiration of net operating loss carry-forwards before utilization.

Stock Based Compensation

We account for stock-based compensation in accordance with FASB ASC 718, *Compensation – Stock Compensation*. Under the provisions of FASB ASC 718, stock-based compensation cost is estimated at the grant date based on the award's fair value and is recognized as expense over the requisite service period. The Company generally issues grants to its employees, consultants and board members. At the date of grant, the Company determines the fair value of the stock option award and recognizes compensation expense over the requisite service period. The fair value of the stock option award is calculated using the Black Scholes option pricing model.

During 2016 and 2015, warrants were granted to employees, directors and consultants of the Company. As a result of these grants, the Company recorded compensation expense of \$1,201,758 and \$464,577 during the years ended December 31, 2016 and 2015 respectively.

The fair value of warrants was estimated on the date of grant using the Black-Scholes option-pricing model based on the following weighted average assumptions:

	Year Ended December 31,				
	2016	2015			
	158.53% to	128.36% to			
Expected volatility	173.53%	155.43%			
Expected dividends	0%	0%			
Expected term	5 years	3 to 5 years			
Risk free rate	.71% to 1.04%	.51% to 1.75%			

The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee warrants have characteristics significantly different from those of traded options and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion the existing models may not necessarily provide a reliable single measure of the fair value of its employee options.

Income (Loss) Per Share

Basic loss per share is computed by dividing the Company's net loss by the weighted average number of common shares outstanding during the period presented. Diluted loss per share is based on the treasury stock method and includes the effect from potential issuance of common stock such as shares issuable pursuant to the exercise of warrants and conversions of debentures. Potentially dilutive securities as of December 31, 2016, consisted of 111,086,456 common shares from convertible debentures and related accrued interest and 32,071,901 common shares from outstanding warrants. Potentially dilutive securities as of December 31, 2015, consisted of 73,883,330 common shares from convertible debentures and related accrued interest and 14,705,818 common shares from outstanding warrants. For 2016 and 2015, diluted and basic weighted average shares were the same, as potentially dilutive shares are anti-dilutive.

Advertising Costs

Advertising costs are charged to operations when incurred. There were no Advertising Costs during the years 2016 and 2015.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and cash equivalents. The Company has historically maintained cash balances at financial institutions which exceed the current Federal Deposit Insurance Corporation ("FDIC") limit of \$250,000 at times during the year.

Reclassifications

Certain items in these consolidated financial statements have been reclassified to conform to the current period presentation.

Future Impact of Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2014-09 (ASU 2014-09), "*Revenue from Contracts with Customers.*" ASU 2014-09 superseded the revenue recognition requirements in "Revenue Recognition (Topic 605)," and requires entities to recognize revenue when it transfers promised goods or services to customers in an amount that reflect the consideration to which the entity expects to be entitled to in exchange for those goods or services. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early adoption is not permitted. ASU 2014-09 is not expected to have a material impact on the Company's financial position or results of operations.

In August 2014, the FASB issued Accounting Standards Update 2014-15 (ASU 2014-15) "Presentation of Financial Statements – Going Concern (Subtopic 205-40)." The amendments in this Update are effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. This Update had no effect on the Company's financial position and results of operations for the year ended December 31, 2016.

Management does not believe there would have been a material effect on the accompanying financial statements had any other recently issued, but not yet effective, accounting standards been adopted in the current period.

NOTE 4 – PROPERTY AND EQUIPMENT

Property and equipment at December 31, 2016 and 2015 consist of the following:

	December 31, 2016		December 31, 2015
Furniture & fixtures Equipment	\$ 20,000 80,000	\$	20,000 80,000
Less accumulated depreciation and amortization	100,000		100,000
	(81,250)		(56,250)
	\$ 18,750	\$	43,750

Depreciation and amortization was \$25,000 and \$25,000 for the years ended December 31, 2016 and 2015, respectively.

NOTE 5 – DUE TO RELATED PARTY

As of December 31, 2016 and 2015, the Company owed HEP Investments, a related party, cumulative balances of \$319,234 and \$211,234, respectively. The basis for the payable is a 5.4% cash finance fee for monies invested in the Company in the form of convertible debt. For the years ended December 31, 2016 and 2015, the Company incurred finance costs related to these transactions of \$108,000 and \$111,820, respectively.

NOTE 6 - LOAN PAYABLE, RELATED PARTIES

During the year ended December 31, 2015, Mr. Christopher Maggiore, a director and a significant shareholder of the Company, had advanced the Company a total of \$156,405, which remained unpaid as of December 31, 2015. During 2016, Mr. Maggiore advanced the Company an additional \$20,000, for a total advanced as of December 31, 2016 of \$176,405. The Company has agreed to pay 11% interest on this loan. During the years ended December 31, 2016 and 2015, the Company recorded interest on this indebtedness of \$20,396 and \$19,835, respectively.

For the year ended December 31, 2015, Officers had advanced the Company \$2,000, which amount remained unpaid as of December 31, 2015. This amount was repaid in 2016.

During the year ended December 31, 2015, HEP Investments, LLC loaned the Company \$2,246,202 (see Note 7 - Convertible Debt). Pursuant to the terms of the agreement with HEP Investments, \$2,067,500 of these loans were recorded as 11% Convertible Secured Promissory Notes, leaving a remaining balance of \$178,702 as of December 31, 2015.

During the year ended December 31, 2016, HEP Investments loaned the Company \$1,890,872 (see Note 7 - Convertible Debt). Pursuant to the terms of the agreement with HEP Investments, \$2,000,000 of these loans were recorded as 11% Convertible Secured Promissory Notes, leaving a remaining balance of \$69,574 as of December 31, 2016.

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NOTE 7 – CONVERTIBLE DEBT

HEP Investments, LLC – Related Party

On December 2, 2011, the Company and HEP Investments, LLC, a Michigan limited liability company ("Lender"), entered into the following documents, effective as of December 1, 2011, as amended through September 30, 2016:

(i) a Loan Agreement under which the Lender has agreed to advance up to \$17,500,000 to the Company, subject to certain conditions, (ii) a Convertible Secured Promissory Note in the principal amount of \$17,500,000 ("Note") and (iii) a Security Agreement, under which the Company granted the Lender a security interest in all of its assets, (iv) an Intellectual Property security agreement under which the Company and its subsidiaries granted the Lender a security interest in all their respective intellectual properties, including patents, in each case order to secure their respective obligations to the Lender under the Note and related documents and (v) enter into a Registration Rights Agreement with respect to all the shares of common stock issuable to the Lender in connection with the Loan transaction. In addition, the Company's subsidiaries have guaranteed the Company's obligations under the Note. The Company has also made certain agreements with the Lender which shall remain in effect as long as any amount is outstanding under the Loan. These agreements include an agreement not to make any change in the Company's senior management, without the prior written consent of the Lender. Two representatives of the Lender will have the right to attend Board of Director meetings as non-voting observers.

During the year ended December 31, 2015, the Company recorded a debt discount, related to the \$2,067,500 of Notes described previously (Note 6), in the amount of \$1,916,501, to reflect the beneficial conversion feature of the convertible debt and fair value of the warrants pursuant to Emerging Issues Task Force ("EITF") 00-27: Application of EITF 98-5, "Accounting for Convertible Securities with Beneficial Conversion Features on Contingently Adjustable Conversion Rates," to certain convertible instruments. In accordance with EITF 00-27, the Company valued the beneficial conversion feature and recorded the amount of \$1,773,078 as a reduction to the carrying amount of the convertible debt and as an addition to paid-in capital. Additionally, the relative fair value of the warrants was calculated and recorded at \$143,423 as a further reduction to the carrying amount of the convertible debt and an addition to additional paid-in capital. The Company is amortizing the debt discount over the term of the debt. Amortization of discounts was \$1,866,842 for the year ended December 31, 2015. The \$2,067,500 of Notes are convertible at \$.10 per share.

During the year ended December 31, 2016, the Company recorded debt discounts, related to the \$2,000,000 of Notes described previously (Note 6), in the amount of \$106,693, to reflect the relative fair value of the related warrants as a reduction to the carrying amount of the convertible debt and an addition to additional paid-in capital. The Company is amortizing the debt discount over the term of the debt. Amortization of the debt discounts was \$1,376,181 for the years ended December 31, 2016. The \$2,000,000 of Notes are convertible at \$.10 per share. As discussed in Note 13 – Settlement of Litigation – Related Party, the Lender reduced the principal of the debt by \$280,000 (at \$.12 per share) relating to a settlement with the Company.

As of December 31, 2016, amounts advanced under the Note are convertible into the Company's restricted common stock according to the following schedule: (A) \$4,152,200 at \$.10 per share, (B) \$2,320,000 at \$.12 per share, (C) \$1,285,000 at \$.15 per share, (D) \$640,000 at \$.22 per share, and (E) \$750,000 at \$.30 per share, (ii) bear interest at the rate of 11% per annum. The Seventh Amended and Restated Senior Secured Convertible Promissory Note (effective December 31, 2015) resets the Due Dates of Tranches 1 through 13 (totaling \$3,740,000) to October 14, 2017. The Eighth Amended and Restated Senior Secured Convertible Promissory Note (effective September 30, 2016) resets the Due Dates of Tranches 14 through 16 (totaling \$1,369,700) to January 31, 2017. The remaining Tranches 17 to 30, totaling \$4,067,500, are due on varying anniversary dates ranging from February 28, 2017 through August 25, 2018. Accrued interest must be paid on the first and second anniversary of the Note. The Company determined that the modification of these Notes was not a substantial modification in accordance with ASC 470-50, "Modifications and Extinguishments." As of December 31, 2016 and December 31, 2015, unpaid interest due was \$2,502,367 and \$1,572,065, respectively and is included in accrued liabilities.

In 2015, the Lender converted \$60,000 of the debt (at \$.12 per share). Any Note that has not yet matured may be prepaid upon sixty days written notice, provided that the Company shall be required to pay a prepayment premium equal to 5% of the amount repaid.



Paulson Investment Company, LLC - Related Debt

On August 24, 2016, the Company entered into a Placement Agent Agreement with Paulson Investment Company, LLC (Paulson). This agreement provides that Paulson can provide up to \$2 million in financings through "accredited investors" (as defined by Regulation D of the Securities Act of 1933, as amended). As of December 31, 2016, the Company received funding of \$1,250,000 through seven (7) individual loans (the "New Lenders"). Each loan includes a (i) a Loan Agreement of the individual loan, (ii) a Convertible Secured Promissory Note ("New Lenders Notes") in the principal amount of the loan, (iii) a Security Agreement under which the Company granted the Lender a security interest in all of its assets and (iv) an Intercreditor Agreement with HEP Investments, LLC (HEP) whereby HEP and the New Lenders agree to participate in all collateral a pari passu basis. The loans have a two year term and mature in September 2018 (\$600,000) and October 2018 (\$650,000). Paulson receives a 10% cash finance fee for monies invested in the Company in the form of convertible debt, along with 5 year, \$.10 warrants equal to 15% of the number of common shares for which the debt is convertible into at \$.10 per share.

The New Lenders Notes are convertible into the Company's restricted common stock at \$.10 per share and bear interest at the rate of 11% per annum. The New Lenders Notes must be repaid as follows: accrued interest must be paid on the first and second anniversary of the Note and unpaid principal not previously converted into common stock must be repaid on the second anniversary of the Note.

Other Debt

In September 2014, the Lender of the 1% convertible debentures agreed to rolling 30 day extensions until notice is given to the Company to the contrary. The Company determined that the modification of these Notes is not a substantial modification in accordance with ASC 470-50, "Modifications and Extinguishments."

Convertible debt consists of the following:	December 31, 2016		December 31, 2015	
1% Convertible notes payable, due January 2017	\$	240,000	\$	240,000
11% Convertible note payable – HEP Investments, LLC, a related party, net of unamortized discount of \$574,443 and \$1,843,931, respectively, due at various dates ranging from January 2017 to October 2018	8,:	572,757		5,583,269
11% Convertible note payable – New Lenders;placed by Paulson, due at various dates ranging fromSeptember 2018 to October 2018Less: Current portion	10,	250,000 062,757 886,710		5,823,269 1,224,510
Long term portion	\$3,	176,047	\$	4,598,759

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NOTE 8 - STOCKHOLDERS' DEFICIENCY

Board of Directors fees

As compensation for serving as a member of the board of directors, the Company granted warrants to purchase 50,000 shares of common stock to Philip M. Rice (CFO and a Director) in January, 2015, at an exercise price of \$.09 per share. The warrants have a term of three years and vested or will vest as follows: 12,500 vested on the grant date and the remaining 37,500 shall vest quarterly (12,500 per quarter). The warrants were valued at \$3,664 using the Black Scholes pricing model relying on the following assumptions: volatility 128.38%; annual rate of dividends 0%; discount rate 0.68%. In addition, Mr. Rice is entitled to receive \$10,000 for each annual term served.

As compensation for serving as a member of the board of directors, the Company granted warrants to purchase 50,000 shares of common stock to Thomas K. Cox in June, 2015, at an exercise price of \$.15 per share. The warrants have a term of three years and vested or will vest as follows: 12,500 vested on the grant date and the remaining 37,500 shall vest quarterly (12,500 per quarter). The warrants were valued at \$6,185 using the Black Scholes pricing model relying on the following assumptions: volatility 155.43%; annual rate of dividends 0%; discount rate 1.09%. In addition, Mr. Cox is entitled to receive \$10,000 for each annual term served.

As compensation for serving as a member of the board of directors, the Company granted warrants to purchase 50,000 shares of common stock to John B. Payne in July, 2015, at an exercise price of \$.09 per share. The warrants have a term of three years and vested or will vest as follows: 12,500 vested on the grant date and the remaining 37,500 shall vest quarterly (12,500 per quarter). The warrants were valued at \$4,876 using the Black Scholes pricing model relying on the following assumptions: volatility 155.43%; annual rate of dividends 0%; discount rate 0. 109%. In addition, Mr. Payne is entitled to receive \$10,000 for each annual term served.

On September 10, 2015, the board of directors amended its policy for the compensation of its directors. The Board granted to each of its five (5) Directors warrants to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants have a term of five years and vest immediately. The unvested portion of the previously granted warrants were cancelled due to the Company's change to a program where all director warrant grants are made once per year at the same time. In addition, each director is entitled to receive \$10,000 for each annual term served. As such, Mr. Cox's unvested warrant of 36,986 shares, Ms. Masterson's warrant of 959 shares, Mr. Payne's warrant of 42,740 shares and Mr. Rice's unvested warrant of 15,890 shares, were cancelled.

As compensation for serving as a member of the board of directors, the Company granted warrants to purchase 125,000 shares of common stock to Robert O. Rondeau, a new Director, in March 2016, at an exercise price of \$.09 per share. The warrants have a term of five years and vest immediately. The warrants were valued at \$10,588 using the Black Scholes pricing model relying on the following assumptions: volatility 168.01%; annual rate of dividends 0%; discount rate 0.97%. In addition, Mr. Rondeau will receive \$10,000 for each annual term served, paid quarterly.

On September 10, 2016, the board of directors granted to each of its Directors warrants to purchase 250,000 shares of common stock at an exercise price of \$.05 per share. The warrants have a term of five years and vest immediately. The warrants were valued at \$59,125 using the Black Scholes pricing model relying on the following assumptions: volatility 171.58%; annual rate of dividends 0%; discount rate 0.79%. In addition, each director is entitled to receive \$10,000 for each annual term served.

The Company recorded directors' fees of \$109,713 and \$166,679 for the years ended December 31, 2016 and 2015, respectively, representing the cash fees and the value of the vested warrants described above.

Stock Based Compensation

On April 23, 2015, the Company issued 500,000 shares of common stock valued at \$30,000, to an investor relations consulting firm. On April 15, 2015, the Company issued warrants to purchase 1,875,000 shares of common stock at an exercise price of \$.08 with a term of five years pursuant to an agreement with a financial consultant. The warrants were valued at \$133,862 using the Black Scholes pricing model relying on the following assumptions: volatility 143.36%; annual rate of dividends 0%; discount rate 0.15%. On June 26, 2015, the Company issued warrants to purchase 1,250,000 shares of common stock at an exercise price of \$.08 with a term of five years pursuant to an agreement with a financial consultant. The warrants were valued at \$151,443 using the Black Scholes pricing model relying on the following assumptions: volatility 150.93%; annual rate of dividends 0%; discount rate 1.75%. On August 1, 2015, the Company issued 461,539 shares of common stock valued at \$46,154, to an investor relations consulting firm. On September 10, 2015, the Company issued warrants to purchase 400,000 shares of common stock at an exercise price of \$.10 with a term of five years to four of its consultants (100,000 warrants per consultant) working in research and development. The warrants have a term of five years and are fully vested. The warrants were valued at \$36,540 using the Black Scholes pricing model relying on the following assumptions were valued at \$36,540 using the Black Scholes pricing model relying model relying warrants were valued at \$36,540 using the Black Scholes pricing model relying model relying the warrants were valued at \$36,540 using the Black Scholes pricing model relying on the following assumptions: volatility 0.075%.

On May 19, 2016, the Company issued warrants to purchase 14,500,000 shares of common stock at an exercise price of \$.08 with a term of 5 years pursuant to agreements with financial consultants. The warrants were valued at \$1,095,063 using the Black Scholes pricing model relying on the following assumptions: volatility 170.07%; annual rate of dividends 0%; discount rate 0.89%. On September 19, 2016, the Company issued 3,500,000 shares of common stock, valued at \$175,000, to an investor relations consulting firm. On November 17, 2016, the Company issued warrants to purchase 400,000 shares of common stock at an exercise price of \$.09 with a term of 5 years pursuant to agreements with financial consultants. The warrants were valued at \$21,381 using the Black Scholes pricing model relying on the following assumptions: volatility 173.41%; annual rate of dividends 0%; discount rate 1.04%.

Stock Issuances

On January 14, 2015, the Company received proceeds of \$30,000 from the issuance of 600,000 shares of common stock.

On January 23, 2015, the Company received proceeds of \$13,500 from the issuance of 270,000 shares of common stock.

On February 17, 2015, the Company received proceeds of \$5,000 from the issuance of 100,000 shares of common stock.

On February 27, 2015, in connection with the issuance of \$227,500 in principal of an 11% Convertible Debenture, the Company issued 81,900 shares of common stock valued at \$8,190 and a warrant to purchase 227,500 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$21,150 using the Black Scholes pricing model relying on the following assumptions: volatility 138.3%; annual rate of dividends 0%; discount rate 0.63%. See Note 7 - Convertible Debt.

On March 27, 2015, in connection with the issuance of \$135,000 in principal of an 11% Convertible Debenture, the Company issued 151,329 shares of common stock valued at \$13,050 and a warrant to purchase 135,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$21,150 using the Black Scholes pricing model relying on the following assumptions: volatility 138.9%; annual rate of dividends 0%; discount rate 0.61%. See Note 7 - Convertible Debt.

On April 17, 2015, in connection with the issuance of \$217,800 in principal of an 11% Convertible Debenture, the Company issued 112,011 shares of common stock valued at \$7,841 and a warrant to purchase 217,800 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$13,326 using the Black Scholes pricing model relying on the following assumptions: volatility 143.3%; annual rate of dividends 0%; discount rate 1.31%. See Note 7 - Convertible Debt.

On May 1, 2015, in connection with the issuance of \$237,200 in principal of an 11% Convertible Debenture, the Company issued 121,989 shares of common stock valued at \$8,539 and a warrant to purchase 237,200 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$14,531 using the Black Scholes pricing model relying on the following assumptions: volatility 143.7%; annual rate of dividends 0%; discount rate 1.50%. See Note 7 - Convertible Debt.

On June 26, 2015, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 69,231 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$30,012 using the Black Scholes pricing model relying on the following assumptions: volatility 150.9%; annual rate of dividends 0%; discount rate 1.75%. See Note 7 – Convertible Debt.

On July 7, 2015, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 90,000 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$22,972 using the Black Scholes pricing model relying on the following assumptions: volatility 150.8%; annual rate of dividends 0%; discount rate 1.55%. See Note 7 - Convertible Debt.

On September 2, 2015, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 81,818 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$25,221 using the Black Scholes pricing model relying on the following assumptions: volatility 152.3%; annual rate of dividends 0%; discount rate 0.72%. See Note 7 - Convertible Debt.

On October 8, 2015, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 112,500 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$18,065 using the Black Scholes pricing model relying on the following assumptions: volatility 152.8%; annual rate of dividends 0%; discount rate 0.65%. See Note 7 - Convertible Debt.



On October 29, 2015, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 112,500 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$18,065 using the Black Scholes pricing model relying on the following assumptions: volatility 152.3%; annual rate of dividends 0%; discount rate 0.75%. See Note 7 - Convertible Debt.

On January 27, 2016, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 180,000 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$8,018 using the Black Scholes pricing model relying on the following assumptions: volatility 158.1%; annual rate of dividends 0%; discount rate 0.84%. See Note 7 - Convertible Debt.

On March 1, 2016, in connection with the issuance of \$750,000 in principal of an 11% Convertible Debenture, the Company issued 337,500 shares of common stock valued at \$27,000 and a warrant to purchase 750,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$44,371 using the Black Scholes pricing model relying on the following assumptions: volatility 167.7%; annual rate of dividends 0%; discount rate 0.85%. See Note 7 - Convertible Debt.

On May 16, 2016, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 112,500 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$18,746 using the Black Scholes pricing model relying on the following assumptions: volatility 170.1%; annual rate of dividends 0%; discount rate 0.79%. See Note 7 - Convertible Debt.

On July 26, 2016, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 180,000 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$11,523 using the Black Scholes pricing model relying on the following assumptions: volatility 170.3%; annual rate of dividends 0%; discount rate 0.75%. See Note 7 - Convertible Debt.

On August 25, 2016, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 150,000 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$13,939 using the Black Scholes pricing model relying on the following assumptions: volatility 170.8%; annual rate of dividends 0%; discount rate 0.78%. See Note 7 - Convertible Debt.

On October 20, 2016, in connection with the issuance of \$250,000 in principal of an 11% Convertible Debenture, the Company issued 128,571 shares of common stock valued at \$9,000 and a warrant to purchase 250,000 shares of common stock at an exercise price of \$.10 per share. The warrants were valued at \$16,419 using the Black Scholes pricing model relying on the following assumptions: volatility 173.2%; annual rate of dividends 0%; discount rate 0.84%. See Note 7 - Convertible Debt.

Executive Compensation

As compensation for serving as Chief Financial Officer, the Company, quarterly, will issue warrants to purchase 50,000 shares of common stock to Philip M. Rice at the prevailing market price with a term of 5 years, provided that the preceding quarterly and annual filings were submitted in a timely and compliant manner, at which time such warrants would vest.

On April 6, 2015, the Company issued warrants to purchase 50,000 shares of common stock at \$.085. The warrants were valued at \$3,800 using the Black Scholes pricing model relying on the following assumptions: volatility 143.17%; annual rate of dividends 0%; discount rate 1.31%. On May 13, 2015, the Company issued warrants to purchase 50,000 shares of common stock at \$.08. The warrants were valued at \$3,582 using the Black Scholes pricing model relying on the following assumptions: volatility 143.464%; annual rate of dividends 0%; discount rate 1.57%. On August 13, 2015, the Company issued warrants to purchase 50,000 shares of common stock at \$.11. The warrants were valued at \$5,019 using the Black Scholes pricing model relying on the following assumptions: volatility 152.05%; annual rate of dividends 0%; discount rate 0.72%. On November 13, 2015, the Company issued warrants to purchase 50,000 shares of common stock at \$.08. The warrants were valued at \$3,652 using the Black Scholes pricing model relying on the following assumptions: volatility 152.05%; annual rate of dividends 0%; discount rate 0.72%. On November 13, 2015, the Company issued warrants to purchase 50,000 shares of common stock at \$.08. The warrants were valued at \$3,652 using the Black Scholes pricing model relying on the following assumptions: volatility 151.81%; annual rate of dividends 0%; discount rate 1.2%.

On March 29, 2016, the Company issued warrants to purchase 50,000 shares of common stock at \$.08. The warrants were valued at \$3,771 using the Black Scholes pricing model relying on the following assumptions: volatility 169.28%; annual rate of dividends 0%; discount rate 0.78%. On May 13, 2016, the Company issued warrants to purchase 50,000 shares of common stock at \$.08. The warrants were valued at \$3,777 using the Black Scholes pricing model relying on the following assumptions: volatility 170.23%; annual rate of dividends 0%; discount rate 0.76%. On August 12, 2016, the Company issued warrants to purchase 50,000 shares of common stock at \$.07. The warrants were valued at \$3,307 using the Black Scholes pricing model relying on the following assumptions: volatility 170.83%; annual rate of dividends 0%; discount rate 0.71%. On November 14, 2016, the Company issued warrants to purchase 50,000 shares of common stock at \$.10. The warrants were valued at \$4,745 using the Black Scholes pricing model relying on the following assumptions: volatility 173.53%; annual rate of dividends 0%; discount rate 1.00%.

Common Stock Warrants

A summary of the status of the Company's warrants is presented below.

	Decemb	oer 31, 2016	December 31, 2015			
		Weighted		Weighted		
	Number of	Average	Number of	Average		
	Warrants	Exercise Price	Warrants	Exercise Price		
Outstanding, beginning of year	14,705,818	\$ 0.13	9,053,005	\$ 0.16		
Issued	20,350,000	0.08	7,192,500	0.09		
Exercised	0	-	0	-		
Cancelled	0	-	(96,575)	0.14		
Expired	(2,983,917)	0.14	(1,443,112)	0.13		
Outstanding, end of period	32,071,901	\$0.10	14,705,818	\$0.13		

Warrants outstanding and exercisable by price range as of December 31, 2016 were as follows:

_	Outstanding Warrants			_	Exercisable Warrants			
-	Range of	Number	Average Weighted Remaining Contractual Life in Years	-	Exercise Price	Number		Weighted Average Exercise Price
\$	0.05	1,250,000	4.70	\$	0.05	1,250,000	\$	0.05
	0.08	18,625,000	4.23		0.08	18,625,000		0.08
	0.09	309,110	3.11		0.09	309,110		0.09
	0.10	7,327,200	3.99		0.10	7,327,200		0.10
	0.12	99,041	2.17		0.12	99,041		0.12
	0.14	50,000	2.62		0.14	50,000		0.14
	0.15	2,485,274	1.30		0.15	2,485,274		0.15
	0.17	50,000	2.25		0.17	50,000		0.17
	0.19	100,000	1.46		0.19	100,000		0.19
	0.20	250,000	0.33		0.20	250,000		0.20
	0.22	269,276	1.75		0.22	269,276		0.22
	0.25	707,000	1.52		0.25	707,000		0.25
	0.30	250,000	1.90		0.30	250,000		0.30
	0.33	250,000	1.50		0.33	250,000		0.33
	0.38	50,000	0.01		0.38	50,000	-	0.38
		32,071,901	1.79			32,071,901	\$	0.10

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NOTE 9 - OTHER INCOME (EXPENSE)

On July 15, 2014, the Company settled a dispute with one of its vendors. The settlement agreement calls for the Company to make 10 payments of \$6,250. If the payments are not made timely, a total liability of \$97,463 out of the gross amount recorded on the Company's books of \$191,146 will be due. During the year ended December 31, 2015, the Company met its obligation for timely payments and recognized an additional \$34,963 (the difference between the \$97,463 remaining liability and the agreed upon payments of \$62,500) as "Other Income" on its Statement of Operations the year ended December 31, 2015.

NOTE 10- COMMITMENTS AND CONTINGENCIES

Employment Agreement

The Company's Chief Executive Officer, Andrew Dahl, is serving under the terms of an employment agreement dated December 16, 2011 as amended August 11, 2016. Under the agreement Mr. Dahl serves as CEO for one year terms, subject to automatic renewal, unless either party terminates the Agreement on sixty days' notice prior to the expiration of the term of the agreement. Mr. Dahl is compensated as follows: he receives an annual base salary of \$240,000. In addition, Mr. Dahl is entitled to monthly bonus compensation equal to 2% of the Company's revenue, but only to the extent that such bonus amount exceeds his base salary for the month in question. In addition, Mr. Dahl will be entitled to warrants having an exercise price of \$.25 per share, upon the attainment of specified milestones as follows: 1) Warrants for 500,000 shares upon identification of bio-active agents in the Company's product and filing of a patent with respect thereto, 2) Warrants for 500,000 shares upon entering into a business contract under which the Company receives at least \$500,000 in cash payments, 3) Warrants for 1,000,000 shares upon the Company entering into a codevelopment agreement with a research company to develop medicinal or pharmaceutical applications (where the partner provides at least \$2 million in cash or in-kind outlays). 4) Warrants for 1.000,000 shares upon the Company entering into a co-development agreement for nutraceutical or dietary supplement applications (where the partner provides at least \$2 million in cash or in-kind outlays), 5) Warrants for 1,000,000 shares upon the Company entering into a pharmaceutical development agreement. Further, as it relates to Company's wholly-owned subsidiary, WellMetris, LLC ("WellMetris"), in the event the Company ceases to own a controlling interest in WellMetris for any reason whatsoever, the Company shall cause WellMetris to grant Mr. Dahl warrants to purchase a seven percent (7%) equity interest in WellMetris at the time outside funding is closed and/or at the time an event occurs whereby the Company relinquishes majority control of WellMetris. Such Warrant shall be priced at the per-unit or per-share price at the time of the applicable closing or change of control with respect to WellMetris. As of December 31, 2016, none of the milestones referred to had been achieved and there has been no notice of contract termination.

Legal Contingencies

We may become a party to litigation in the normal course of business. In the opinion of management, there are no legal matters involving us that would have a material adverse effect upon our financial condition, results of operation or cash flows.

Workers' Compensation

The Company does not carry workers' compensation insurance, which covers on the job injury.

NOTE 11 - RELATED PARTY TRANSACTIONS

Due to Related Party

See Note 5 Due to Related Party for disclosure of payable to related Party.

Loan Payable - Related Party

See Note 6 Loan Payable - Related Parties for disclosure of loans payable to related Parties

Executive Compensation

See Note 8 - Stockholder' Deficiency for disclosure of compensation to the Chief Financial Officer.

Employment Agreement

See Note 10 - Commitments and Contingencies for disclosure of the Employment Agreement with the Chief Executive Officer.

NOTE 12 - INCOME TAXES

At December 31, 2016 the Company had available net-operating loss carry-forwards for Federal tax purposes of approximately \$39,732,000, which may be applied against future taxable income, if any, at various dates from 2016 through 2036. Certain significant changes in ownership of the Company may restrict the future utilization of these tax loss carry-forwards.

At December 31, 2016 the Company had a deferred tax asset of approximately \$15,893,000 representing the benefit of its net operating loss carry-forwards. The Company has not recognized the tax benefit because realization of the tax benefit is uncertain and thus a valuation allowance has been fully provided against the deferred tax asset. The difference between the Federal and State Statutory Rate of 40% and the Company's effective tax rate of 0% is due to an increase in the valuation allowance of approximately \$3,693,000 in 2016.

NOTE 13 – SETTLEMENT OF LITIGATION - RELATED PARTY

On July 15, 2015, a shareholder of the Company ("Shareholder") brought action against HEP Investment alleging certain technical violations of Section 16(b) of the Securities Act of 1934, as amended. On March 3, 2017, without admitting any liability whatsoever, HEP Investment settled with the Shareholder by agreeing to reduce the Company's debt owed to HEP Investment by \$280,000. Related to this debt reduction, the Company will pay to the Shareholder's legal counsel \$60,000 and 250,000 shares of the Company's common stock valued at \$22,500. The Company considered the settlement to be a Type 1 subsequent event and recorded legal fees of \$82,500 on the Statement of Operations and recorded the settlement amount of \$280,000 as a reduction of convertible debt owed to HEP Investments and an increase to Additional Paid-In Capital.

NOTE 14 – SUBSEQUENT EVENTS

CONVERTIBLE DEBT: HEP Investments, LLC

Debt Modification

On March 1, 2017, the Company and HEP Investments, LLC ("Lender"), entered into the following documents, effective as of March 1, 2017: (i) Eighth Amendment to Loan Agreement under which the Lender has agreed to advance up to a total of \$17,500,000 to the Company, subject to certain conditions, and (ii) a Ninth Amended and Restated Senior Secured Convertible Promissory Note. The Eighth Amendment to Loan Agreement amends and restates the Seventh Amendment to Loan Agreement, which was entered into with the Lender on December 31, 2015 and disclosed in the Company's Form 8-K Current Report filed on January 7, 2016. The Ninth Amended and Restated Senior Secured Convertible Promissory Note resets the total outstanding debt as of March 1, 2017 and provides for a maturity date of September 30, 2018. The total outstanding debt as of March 1, 2017 is \$12,982,203. This amount includes unpaid principal of \$9,427,200, interest outstanding as of February 28, 2017 of \$2,955,003 and restructuring and legal fees of \$600,000.

The Company, as consideration for the extension of the maturity date to September 30, 2018, agreed to provide for the conversion of the \$12,982,203 Convertible Promissory Note into the Company's restricted common stock at \$.10 per share, with interest at the rate of 11% per annum.

The related indebtedness represented by this note shall be paid to the Lender in monthly installments of interest only beginning on July 1, 2017 and continuing on the first day of each month thereafter.

Based on the above, the total shares of common stock, if the Lender converted the complete \$12,982,203 convertible debt, would be 129,822,030 shares, not including any future interest charges which may be converted into common stock.

Amounts advanced under the Note are secured by all the Company's assets.

The Company has agreed to pay the following fees in connection with the Loan transaction (when the final \$4,517,797 in funding is achieved): (i) a \$361,602 closing fee, consisting of \$216,961 in cash, and \$144,641 paid in shares of common stock, which will be accomplished by the issuance of common stock valued at various amounts based on the timing of the funding and the related stock price.

The Company has made certain agreements with the Lender which shall remain in effect as long as any amount is outstanding under the Loan. These agreements include an agreement not to make any change in the Registrant's senior management. Two representatives of the Lender will have the right to attend Board of Director meetings as non-voting observers.

The Company determined that the modification of these Notes was a substantial modification in accordance with ASC 470-50, "Modifications and Extinguishments." As such, the Company will recognize a loss on extinguishment.

11% Convertible Debt - HEP Investments, LLC

On March 31, 2017, HEP Investments LLC ("Lender") funded an additional of \$1,000,000. Due to this additional funding, the Company issued to the Lender a \$1,000,000, 11% convertible note and warrants to purchase 1,000,000 shares of common stock, at an exercise price of \$.10 for a term of five years. The terms of the debt are in described in Note 7 - Convertible Debt.

Stock Based Compensation

On February 27, 2017, the Company issued warrants to purchase 500,000 shares of common stock at an exercise price of \$.10 with a term of 5 years pursuant to an agreement with a financial consultant.

EXHIBIT INDEX

Exhibit Number	Title	
3.13	Articles of Incorporation of Health Enhancement Products, Inc., as amended	(1)
3.11	Amendment to Articles of Incorporation of the Company, dated July 24, 2012	(2)
3.12	Amended Articles of Incorporation dated October 16, 2014 for name change	(3)
3.1	Certificate to Amendment of Articles of Incorporation of Incorporation dated November 14, 2016	(4)
3.2	Amended and restated By-laws of the Company	(5)
10.04	Security Agreement with HEP Investments, LLC (\$100K loan) dated September 8, 2011	(6)
10.05	Senior Secured Note with HEP Investments, LLC (\$100K loan) dated September 8, 2011	(7)
10.06	Loan Agreement with HEP Investments, LLC (\$2M loan) dated December 2, 2011	(8)
10.07	Senior Secured Note with HEP Investments, LLC (\$2M loan) dated December 2, 2011	(9)
10.08	Security Agreement with HEP Investments, LLC (\$2M loan) dated December 2, 2011	(10)
10.09	IP Security Agreement with HEP Investments, LLC (\$2M loan) dated December 2, 2011	(11)
10.10	Investor Rights Agreement with Venture Group, LLC (\$500K loan) dated November 8, 2011	(12)
10.14	Subscription Agreement with Venture Group, LLC (\$500K loan) dated January 26, 2012	(13)
10.15	Subordinated Convertible Note with Venture Group, LLC (\$500K loan) dated January 27, 2012	(14)
10.16	Warrant Agreement with Venture Group, LLC (\$500K loan) dated January 26, 2012	(15)
10.17	Security Agreement with Venture Group, LLC (\$500K loan) dated January 26, 2012	(16)
10.18	Termination Agreement with Venture Group, LLC (\$500K loan) dated January 26, 2012 (terminating agreements with Venture Group, LLC dated November 8, 2011)	(17)
10.19	Termination Agreement with Oxford Holdings, LLC, dated January 26, 2012	(18)
10.20	License Agreement between Zus Health LLC and the Company dated September 2, 2010	(19)
10.21	Lease Agreement between the Company and BCO, LLC dated February 28, 2011	(20)
10.24	Amended and Restated Senior Secured Convertible Promissory Note and the First Amendment to Loan Agreement with HEP Investments, LLC dated April 15, 2013	(21)
10.25	Asset Purchase Agreement with Essex Angel Capital Inc. dated April 15, 2013	(22)
10.26	Second Amendment to Loan Agreement with HEP Investments, LLC dated December 16, 2013	(23)
10.27	Third Amendment to Loan Agreement with HEP Investments, LLC dated March 17, 2014	(24)
10.28	Third Amendment to Loan Agreement with HEP Investments, LLC dated July 1, 2014	(25)
10.29	Fourth Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated July 1, 2014	(26)
10.30	Change of Control Agreement dated August 10, 2014	(27)
10.31	Fourth Amendment to Loan Agreement with HEP Investments, LLC dated December 1, 2014	(28)
10.32	Fifth Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated December 1, 2014	(29)
10.33	Fifth Amendment to Loan Agreement with HEP Investments, LLC dated April 28, 2015	(30)
10.34	Sixth Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated April 28, 2015	(31)
10.35	Amended and Restated Change of Control Agreement dated April 9, 2015	(32)
10.36	Sixth Amendment to Loan Agreement with HEP Investments, LLC dated December 31, 2015	(33)
10.37	Seventh Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated December 31, 2015	(34)
10.38	Amended and Restated Change of Control Agreement dated December 31, 2015	(35)
10.39	Amended and Restated Employment Agreement with Andrew Dahl, the Registrant's CEO	(36)
10.40	Seventh Amendment to Loan Agreement with HEP Investments, LLC dated September 30, 2016	(37)
10.41	Eighth Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated September 30, 2016	(38)
10.42	Eighth Amendment to Loan Agreement with HEP Investments, LLC dated March 1, 2017	(39)
10.43	Ninth Amended and Restated Senior Secured Convertible Promissory Note with HEP Investments, LLC dated March 1, 2017	(40)
14.1	Code of Ethics	*
21	Subsidiaries of the Registrant	*

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- 31.1 Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
- 31.2 Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended
- 32.1 Certification of the Principal Executive Officer pursuant to U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 Certification of the Principal Financial Officer pursuant to U.S.C. Section 1350 as adopted pursuant to Section 906 of the * Sarbanes-Oxley Act of 2002

*Filed herewith

Filed as Exhibit 3.13 to the Registrant's Form 8K filed with the Commission on June 29, 2015 and incorporated herein by this reference. (1)Filed as Exhibit 3.11 to the Registrant's Form 100 filed with the Commission on March 25, 2013 and incorporated by this reference. (2)Filed as Exhibit 3.12 to the Registrant's Form 10Q filed with the Commission on November 14, 2014 and incorporated by this reference. (3) Filed as Exhibit 3.1 to the Registrant's Form 10Q filed with the Commission on November 14, 2016 and incorporated by this reference. (4) Filed as Exhibit 3.2 to the Registrant's Form 10Q filed with the Commission on May 17, 2010 and incorporated by this reference. (5) (6) Filed as Exhibit 10.04 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. Filed as Exhibit 10.05 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (7)Filed as Exhibit 10.06 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (8) Filed as Exhibit 10.07 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (9) Filed as Exhibit 10.08 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (10)Filed as Exhibit 10.09 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (11)Filed as Exhibit 10.10 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (12)(13)Filed as Exhibit 10.14 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (14)Filed as Exhibit 10.15 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. Filed as Exhibit 10.16 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (15) (16) Filed as Exhibit 10.17 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. Filed as Exhibit 10.18 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (17)Filed as Exhibit 10.19 to Form 10K filed with the Commission on March 30, 2012 and incorporated by this reference. (18)Filed as Exhibit 10.20 to Form 10K filed with the Commission on April 15, 2011 and incorporated by this reference. (19)(20)Filed as Exhibit 10.21 to Form 10Q filed with the Commission on August 22, 2011 and incorporated by this reference. Filed as Exhibit 10.24 to Form 10Q filed with the Commission on May 16, 2013 and incorporated by this reference. (21)Filed as Exhibit 10.25 to Form 10Q filed with the Commission on May 16, 2013 and incorporated by this reference. (22) (23)Filed as Exhibit 10.26 to Form 10K filed with the Commission on March 31, 2014 and incorporated by this reference. (24) Filed as Exhibit 10.27 to Form 10K filed with the Commission on March 31, 2014 and incorporated by this reference. (25)Filed as Exhibit 10.28 to Form 10K filed with the Commission on March 31, 2014 and incorporated by this reference. Filed as Exhibit 10.29 to Form 10K filed with the Commission on March 31, 2014 and incorporated by this reference. (26)(27) Filed as Exhibit 10.30 to Form 10Q filed with the Commission on August 14, 2014 and incorporated by this reference. Filed as Exhibit 10.31 to Form 8K filed with the Commission on December 26, 2014 and incorporated by this reference. (28)(29) Filed as Exhibit 10.32 to Form 8K filed with the Commission on December 26, 2014 and incorporated by this reference. (30) Filed as Exhibit 10.33 to Form 8K filed with the Commission on May 1, 2015 and incorporated by this reference. Filed as Exhibit 10.34 to Form 8K filed with the Commission on May 1, 2015 and incorporated by this reference. (31) (32) Filed as Exhibit 10.35 to Form 8K filed with the Commission on April 9, 2015 and incorporated by this reference. Filed as Exhibit 10.36 to Form 8K filed with the Commission on January 7, 2016 and incorporated by this reference. (33) (34)Filed as Exhibit 10.37 to Form 8K filed with the Commission on January 7, 2016 and incorporated by this reference. (35) Filed as Exhibit 10.38 to Form 8K filed with the Commission on January 7, 2016 and incorporated by this reference. Filed as Exhibit 10.39 to Form 100 filed with the Commission on August 12, 2016 and incorporated by this reference. (36)Filed as Exhibit 10.40 to Form 8K filed with the Commission on October 5, 2016 and incorporated by this reference. (37)(38) Filed as Exhibit 10.41 to Form 8K filed with the Commission on October 5, 2016 and incorporated by this reference. (39) Filed as Exhibit 10.42 to Form 8K filed with the Commission on March 6, 2017 and incorporated by this reference. (40) Filed as Exhibit 10.43 to Form 8K filed with the Commission on March 6, 2017 and incorporated by this reference.

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Certification Pursuant to pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended

I, Andrew D. Dahl, certify that:

1. I have reviewed this Annual report on Form 10-K of Zivo Bioscience, Inc. (the "Company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The Registrants other certifying officers 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 the material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly through 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 evaluations, 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 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 control over financial reporting.

Date: March 31, 2017

<u>/s/ Andrew D. Dahl</u> Andrew D. Dahl Chief Executive Officer

Certification Pursuant to pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended

I, Philip M. Rice II certify that:

1. I have reviewed this Annual report on Form 10-K of Zivo Bioscience, Inc. (the "Company");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The Registrants other certifying officers 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 the material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly through 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 evaluations, 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 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 control over financial reporting.

Date: March 31, 2017

/s/ Philip M. Rice II Philip M. Rice II Chief Financial Officer

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Annual Report of Zivo Bioscience, Inc., a Nevada corporation (the "Company"), on Form 10-K for the year ended December 31, 2016 as filed with the Securities and Exchange Commission (the "Report"), I, Andrew D. Dahl, Chief Administrative Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350), that to the best of my knowledge and belief:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

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

Date: March 31, 2017

<u>/s/ Andrew D. Dahl</u> Andrew D. Dahl Chief Executive Officer

A SIGNED ORIGINAL OF THIS WRITTEN STATEMENT REQUIRED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 HAS BEEN PROVIDED TO ZIVO BIOSCIENCE, INC. AND WILL BE RETAINED BY ZIVO BIOSCIENCE, INC. AND FURNISHED TO THE SECURITIES AND EXCHANGE COMMISSION OR ITS STAFF UPON REQUEST.

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Annual Report of Zivo Bioscience, Inc., a Nevada corporation (the "Company"), on Form 10-K for the period ended December 31, 2016 as filed with the Securities and Exchange Commission (the "Report"), I, Philip M. Rice II, Chief Accounting Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350), that to the best of my knowledge and belief:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and

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

Date: March 31, 2017

<u>/s/ Philip M. Rice II</u> Philip M. Rice II Chief Financial Officer

A SIGNED ORIGINAL OF THIS WRITTEN STATEMENT REQUIRED BY SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 HAS BEEN PROVIDED TO ZIVO BIOSCIENCE, INC. AND WILL BE RETAINED BY ZIVO BIOSCIENCE, INC. AND FURNISHED TO THE SECURITIES AND EXCHANGE COMMISSION OR ITS STAFF UPON REQUEST.