



(OTCQB: ZIVO)

# Transformative Opportunities in Therapeutics & Nutrition

Updated: August 2024



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- The Company's ability to raise the funds we need to continue our operations;
- The Company's goal to begin to generate revenues and become profitable;
- Regulation of our products;
- Market acceptance of our products and derivatives thereof;
- The results of current and future testing of our products;
- The anticipated performance and benefits of our product;
- The Company's ability to expand its intellectual property;
- The Company's ability to enter into strategic partnerships;
- The Company's ability to generate licensing fees; and
- The Company's financial condition or results of operations

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## One Natural Source. Numerous Commercial Opportunities.

Developing novel therapeutics and functional food ingredients to power immune health



### Currently Generating Revenue

- Direct-to-consumer launch of Zivolife™, a nutritional supplement for the human green powder and vegan protein markets



### Longer-term Valuation Drivers

- Published studies support active therapeutics pipeline addressing billion-dollar opportunities in animal and human treatments through immune and other novel pathways



### Robust and Versatile Products

- Numerous commercial applications in animal and human pharmaceuticals, food, dietary supplements, nutraceuticals and cosmetics

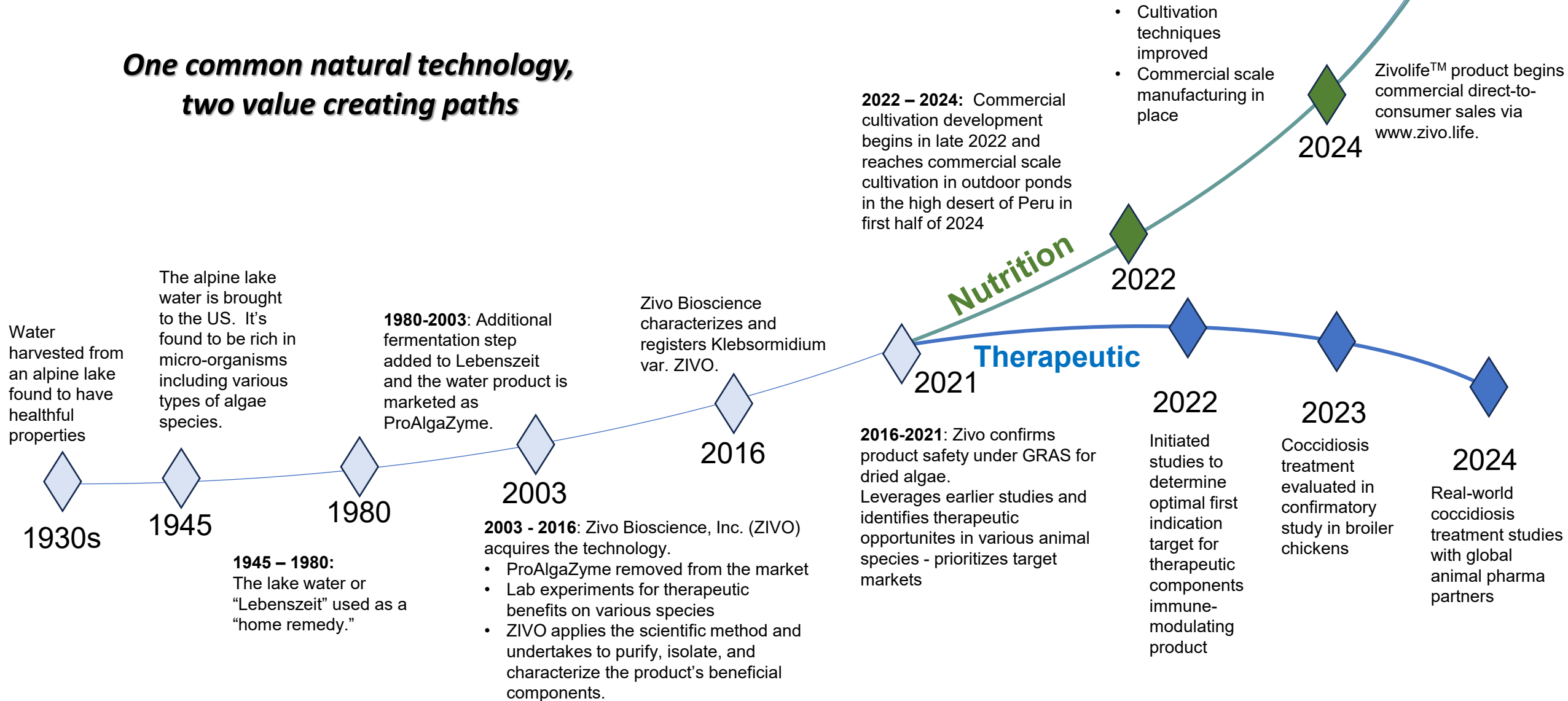
- ✓ Patent-pending for use as an immune modulating candidate that may establish a new class of therapeutic products
- ✓ Potential for numerous therapeutic applications across three global mega-markets: human, livestock and companion animals



# Development History



**One common natural technology,  
two value creating paths**





## Nutrition

- Growth and distribution of Zivolife™, ZIVO's proprietary whole algal biomass, for use as a food or food ingredient to leverage its unique nutritional values
- The identified components of ZIVO's algae lead to many potential structure-function claims for nutrition and enhancement of overall health
- Retail product launched through our distributor, demand is exceeding supply



## Therapeutics

- Identification and development of extracts, fractions or molecules derived from proprietary algal polyculture
- For use in treating disease or other health conditions in humans and in animals
- Protected by patents, trade secrets and know-how
- Plan to monetize through licensings, joint ventures or other structures to leverage established manufacturing and sales and distribution of end products.



# Nutrition: Zivolife™ – Proprietary Algal Biomass

Our first revenue-generating, commercially-available product



**\$1.0 billion market by 2031**

Global green powder market

## Background

- ✓ Zivolife is natural, non-GMO, and a source of plant-based protein, naturally occurring beta glucan and fiber
- ✓ Sustainable, whole-food product that delivers a wide range of nutrients contributing to overall health

## Growing Market

- ✓ Rapid growth in demand for plant-based protein sources being driven by trends in healthy living, environmental sustainability and ethical considerations, market expected to grow at 13.4% CAGR through 2031

## Revenue Generation

- ✓ Entire Zivolife supply produced in first 18 months contractually committed for purchase by our distributor

## Scale Up

- ✓ Collaboration with Alimenta Algae SAC to repurpose prior microalgae facility, to reach full capacity by mid-2025



[www.zivo.life](http://www.zivo.life)



Dairy Free



GMO Free



Gluten Free



Vegan



# Nutrition: Committed Revenue Stream Grows with Scale

## 24,000 kg annual purchase commitment<sup>1</sup>

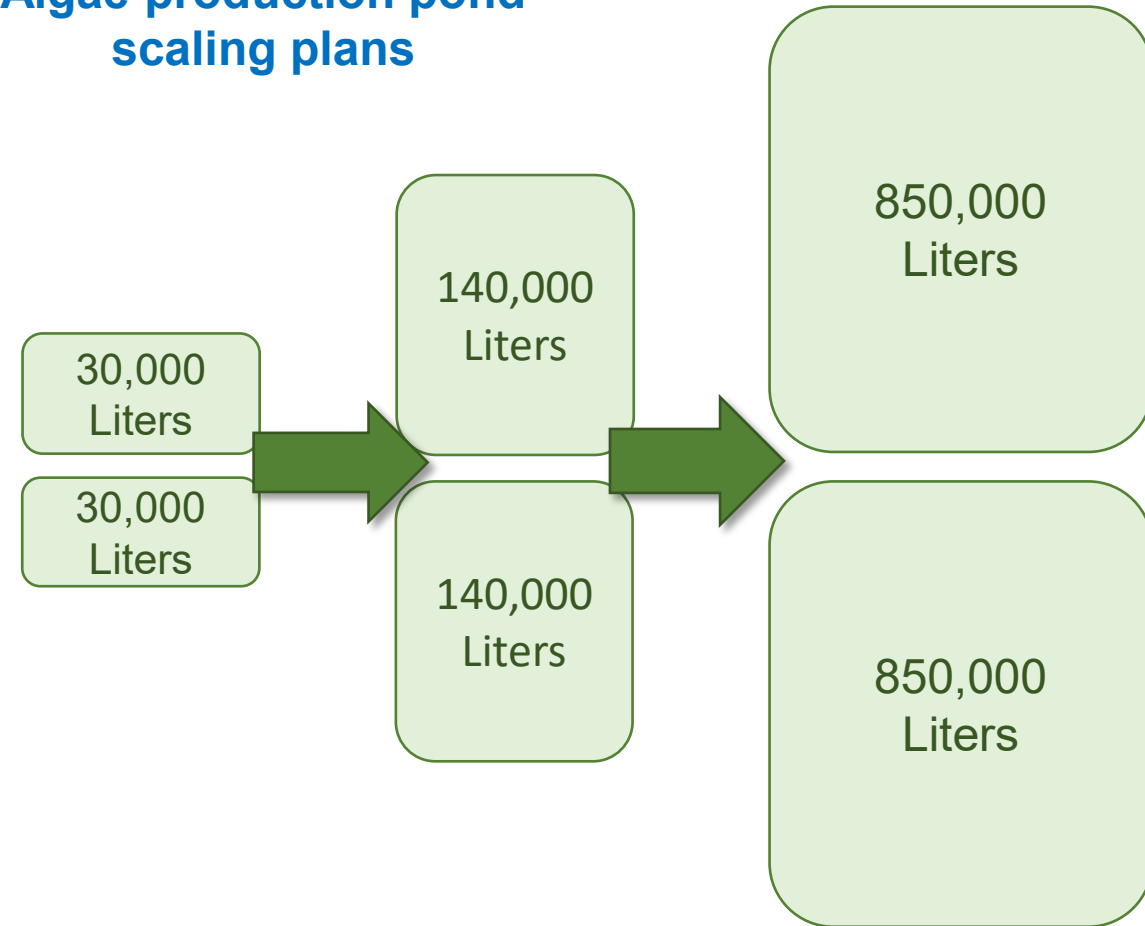
ZWorldwide is ZIVO's global distribution partner, with an initial focus on North America

- ✓ Commits to minimum annual volume purchases for 5 years
- ✓ ZWorldwide to purchase entire Zivolife supply for initial 18 months
- ✓ Annual commitment includes at least 24,000 kg of Zivolife

### Scaling Plans to Meet Growing Demand

- ✓ Collaboration with Alimenta Algae SAC to convert development facility to commercial production
- ✓ Facility capable of producing up to 100,000 kg annually
- ✓ Planned to operate at full capacity by Q4 of 2025

### Algae production pond scaling plans



<sup>1</sup> The purchase commitment is per year for 5 years, may be limited by production capacity



# Nutrition: Additional Nutrition Opportunities

ZIVO will develop algae based products to address other food, supplement, and cosmetic markets

## Food or Supplement Ingredient

### Green Powder

#### Geographic Expansion

- Canada
- Europe
- ROW

#### Ingredient in other green powders

### Health Foods

#### Dry

- Health Bars
- Granola Mixes

#### Liquid

- Smoothie mix consumer or restaurant
- Drinks
- Teas

### Snack Foods

Healthy versions of tortilla chips, pretzels, etc.

### Other Foods

#### Baby food

Breads and baked goods  
Dry mixes (cake, pancake, muffin, etc)

### Cosmetics

#### Topical Opportunities

- Serums / Creams
- Cleansers
- Gommage / Masks
- Spa treatments

#### Cosmeceuticals

✓ Monetization via partnering with established food and nutrition supplement companies

✓ Joint develop agreements, as needed





# Nutrition: Significant Market Opportunity

## Proprietary dried algal biomass as a food or food ingredient



Nutritive compounds found in ZIVO algae include functional food ingredients proven to enhance overall health in humans

### Cultivation Model

- ✓ Presently growing in commercial scale cultivation ponds in central Peru with low startup cost, sustainability, high yield and continuous harvest
- ✓ We have optimized the production process for commercial product and now only need to scale up to commercial size ponds
- ✓ Multiple cultivation options exist (e.g., open ponds, photo bioreactors); important as we look for additional growers

### Product Versatility

- ✓ Significant levels of protein, micronutrient and non-starch polysaccharides
- ✓ Ease of post-processing, utilize mostly industry-standard equipment
- ✓ Low taste and odor, takes flavorings well
- ✓ Cooperates well with other wet and dry ingredients
- ✓ Shelf stable, does not require refrigeration



### Market Opportunity

**\$6.3 billion in 2021**

Protein supplement market (global)

**\$1.0 billion by 2031**

Green powder nutritional market





# Therapeutic: Significant Market Opportunity

Bioproducts from Zivo proprietary assets feature broad therapeutic potential in animals and humans.



## Initial Commercial Application

- ✓ Coccidiosis treatment designed to be introduced in poultry feed or drinking water - IP protected via global patents
- ✓ Study results show our product candidate as a replacement for antibiotics, ionophores and other chemical-based therapies
- ✓ Aligned with evolving industrywide expectations for a non-antibiotic approach and supports a commitment to providing safer and more sustainable solutions for animal health and the human food supply
- ✓ Our product candidate will be regulated for use through the USDA's Center for Veterinary Biologics
- ✓ Joint development agreement and/or license negotiations are next step upon successful 42-day *in vivo* validation study, currently ongoing



## Market Overview

**\$15 billion**

Worldwide annual cost of coccidiosis in poultry

**\$5.8 billion by 2027**

Worldwide animal antimicrobials market

**\$753M in 2020 → \$1.1B by 2025**

Global feed phytogenic market size growth

**\$14.6B in 2020 → \$23.9B by 2028**

Global animal growth promoters and performance enhancers market size growth



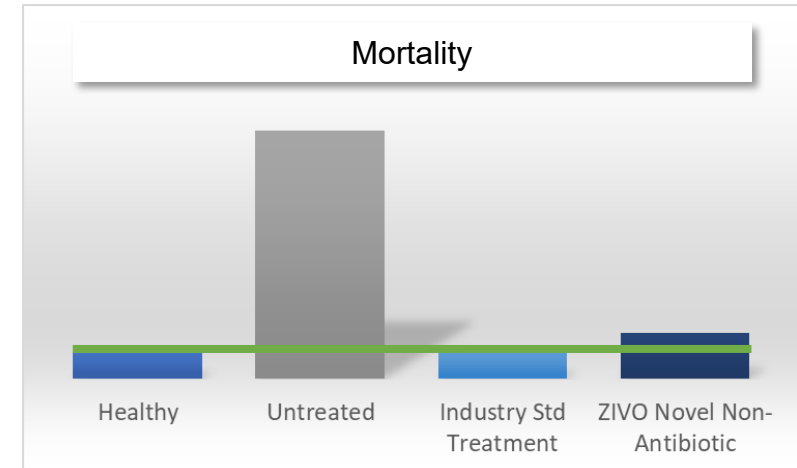
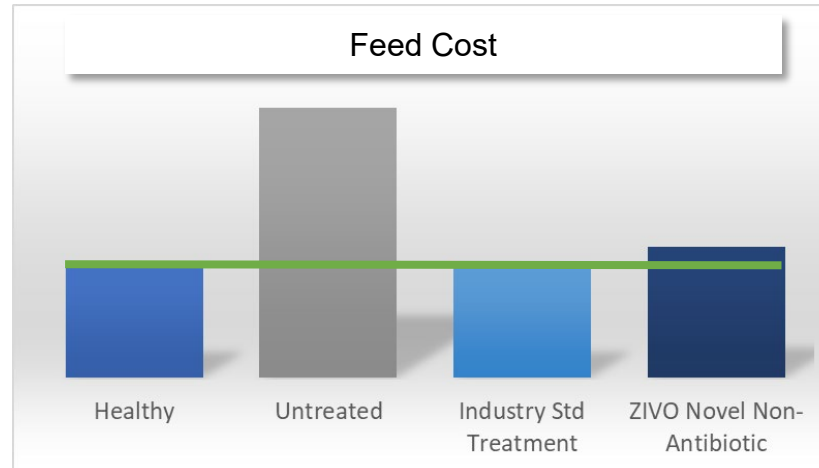
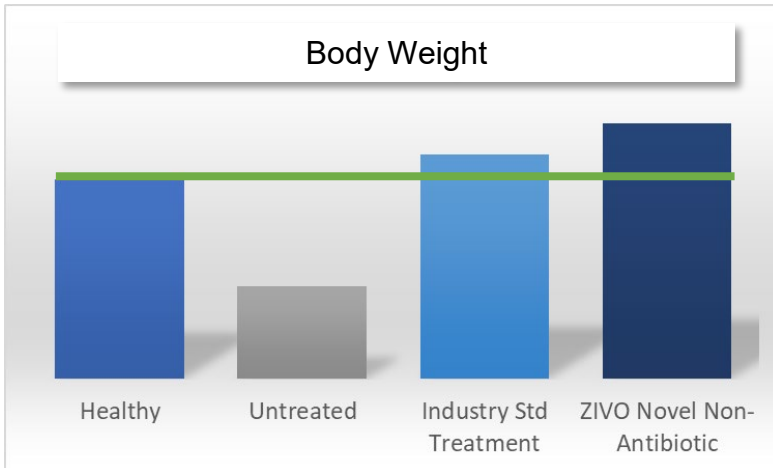
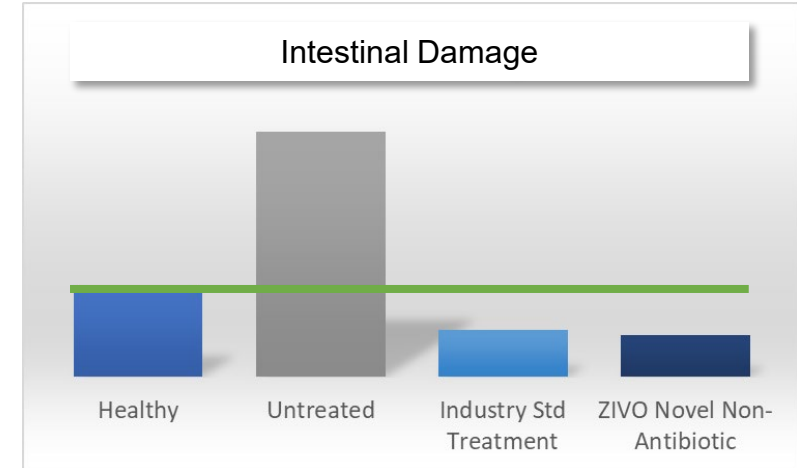
# Therapeutic: Validated Efficacy in Numerous Poultry Studies

## More than 20 independent research trials to evaluate the efficacy of ZIVO's bioactive compounds in the treatment of coccidiosis have been completed

Validated efficacy and mechanism-of-action studies in poultry gut health

- ✓ Minimize or eliminate the negative effects of coccidiosis on the broiler chickens by numerous measures of gut health and overall well-being
- ✓ Reduce the incidence of Campylobacter, Salmonella, E. coli, and Clostridium perfringens (all significant sources of food-borne illness) in the digestive tract of broiler chickens in the absence of antibiotics or other antimicrobial compounds
- ✓ Reduced mortality
- ✓ Enhanced feed conversion, growth and body weight via increased nutrient uptake

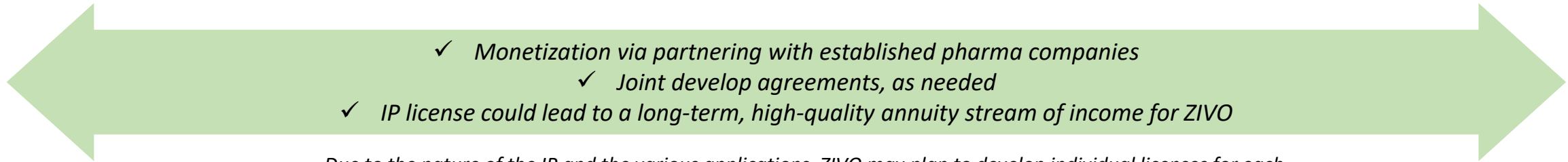
## Healthier Birds, Better Profitability, *Without Antibiotics/Ionophores/Chemicals*



# Therapeutic: Additional Opportunities

ZIVO will expand products/technology into other therapeutic opportunities, and employ a business model to license proprietary molecules or bioproducts to monetize its intellectual property portfolio

Poultry Other (Livestock)	Porcine (Livestock)	Bovine (Livestock)	Canine (Companion)	Human
<b>Therapeutic Opportunities</b> <ul style="list-style-type: none"> <li>• Avian flu</li> <li>• Necrotic enteritis</li> <li>• Foodborne gut pathogens</li> </ul>	<b>Therapeutic Opportunities</b> <ul style="list-style-type: none"> <li>• Respiratory disease</li> <li>• Digestive health</li> </ul>	<b>Therapeutic Opportunities</b> <ul style="list-style-type: none"> <li>• Mastitis</li> </ul>	<b>Therapeutic Opportunities</b> <ul style="list-style-type: none"> <li>• Joint health</li> </ul>	<b>Therapeutic Opportunities</b> <ul style="list-style-type: none"> <li>• Joint health</li> <li>• Anti-aging / Skin health</li> <li>• Sepsis</li> </ul>



*Due to the nature of the IP and the various applications, ZIVO may plan to develop individual licenses for each application in each target species*

**Animal Market Annualized**

Vaccines: **\$9.2 billion**

Phytogenics: **\$0.8 billion**

Eubiotics: **\$3.9 billion**

**Human Market Annualized**

Antibiotics: **\$40.0 billion**

Eubiotics: **\$37.9 billion**

Autoimmune: **\$110.0 billion**

Antidiabetic: **\$48.8 billion**



## Nutrition

Algal Biomass  
Extracts  
Dry Mixes

### Strategic Partnerships & Regional Distributors

- ✓ Establish regional distributorships
- ✓ Find partners to create new marketing channels, products

### Production & Global Supply Chain

- ✓ Recruit agribusinesses globally as licensed growers
- ✓ Establish global supply chain with QC compliance
- ✓ Expand algae production in LATAM and North America

### Product Development & Compliance

- ✓ Scale-up of Zivolife
- ✓ Topical skin health ingredient and formulated product launch in U.S., UK pending regulatory approvals

**Currently generating revenue and ready to scale up.**

## Therapeutic

Molecules  
Compounds  
Complexes

### Poultry Digestive Health

- ✓ Prospective licensing or joint development deal
- ✓ Continue refinement of poultry product candidates
- ✓ Finalize product, commercialize successful market entry

### Immune Modulating Product

- ✓ Commercial scale ramp-up of bioactive molecules
- ✓ Begin testing in swine and canine models

### Intellectual Property Portfolio

- ✓ Targeting 50+ patents pending across the globe

**Patents filed. Tested. Ready to license.  
An opportunity for major value inflection.**



**John B. Payne – President and CEO**

Served on ZIVO's Board since 2013 and Chairman since 2019. He has a significant management experience in publicly-traded healthcare companies and currently also serves as Chairman of the Board for American Humane and as Vice Chairman of the Board of Regents at Ross University School of Medicine and School of Veterinary Medicine.



**Harlan L. Miller III, PhD – VP Technology and Global Supply**

Dr. Miller is a recognized expert in algal production systems, previously as Sr. Technology Director - Algenol Biotech, LLC. He manages international farm conversions SuperFarm engineering and global tech support, and also directs cultivation science and product development at Ft. Myers research facility.



**Keith R. Marchiando – CFO**

25 years of functional experience and technical knowledge in corporate finance, planning, and accounting for manufacturing and technology firms. Mr. Marchiando holds broad responsibilities for all finance functions, HR, legal and IT matters. Mr. Marchiando is also corporate secretary and reporting/compliance officer.



**Amy E. Steffek, PhD - Director R&D**

Over 20 years in life science startups ranging across clinical/analytic research, study coordination and regulatory compliance. Dr. Steffek manages multiple research studies, analyses and reporting of research findings pertaining to the Company's proprietary, naturally derived compounds and bioactive molecules.



**William P. Pfund, MS - VP R&D**

Wide-ranging career in Big Pharma, life science startups and contract research orgs. Responsible for all R&D strategies aimed at developing and validating novel therapeutics and product candidates from ZIVO's proprietary bioproducts, leveraging specific expertise in analytical, in vitro, and in vivo sciences.



## One Natural Source. Numerous Commercial Opportunities.

Developing novel therapeutics and functional food ingredients to power immune health



### Currently Generating Revenue

- DTC launch in June 2023 of Zivolife™, a nutritional supplement for the human green powder and vegan protein markets



### Longer-term Valuation Drivers

- Published studies support active therapeutics pipeline addressing billion-dollar opportunities in animal and human treatments through immune and other novel pathways



### Robust and Versatile Products

- Numerous commercial applications in animal feed, functional and medical foods, dietary supplements, nutraceuticals and pharmaceuticals

- ✓ Patent-pending for use as an immune modulating candidate that may establish a new class of therapeutic products
- ✓ Potential for numerous therapeutic applications across three global mega-markets: human, livestock and companion animals