



Investor Presentation

December 2022

PETV (NASDAQ)

PetVivo Holdings, Inc.

Forward-Looking Statements

This presentation and the accompanying oral commentary contains forward-looking statements within the meaning of the federal securities laws, which statements are subject to substantial risks and uncertainties that could cause actual results to differ materially from those anticipated or projected by the forward-looking statements. Forward-looking statements include all statements that are not statements of historical facts and can be identified by words such as “anticipates,” “believes,” “seeks,” “estimates,” “expects,” “intends,” “will,” “would,” “may,” “plans,” “potential,” “predicts,” “projects,” “should,” “could,” or similar expressions and the negatives of those expressions. In particular, forward-looking statements contained in this presentation and the accompanying oral commentary relate to, among other things, the therapeutic effectiveness of our product Spryng™, with OsteoCushion™ Technology, as well as our ability to develop and successfully commercialize other companion animal or human therapeutics, our future or assumed financial condition, results of operations, strategic plans and objectives, product development plans, use of proceeds, competitive position, and potential opportunities.

Forward-looking statements represent our management’s current beliefs and assumptions based on information currently available. Forward looking statements involve numerous known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We discuss these risks, uncertainties and other factors in the section entitled “Risk Factors” in our Annual Report on Form 10-K that we filed with the Securities and Exchange Commission (“SEC”) on June 24, 2022, as well as in our other filings with the SEC. Except as required by law, we assume no obligation to update any forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward looking statements, even if new information becomes available in the future.

Certain of the information provided in this presentation, and the accompanying oral commentary, has been obtained from independent industry sources, publications or research reports. This information has been obtained from sources we believe to be reliable. However, we have not independently verified such information.

Financial Highlights (PETV and PETVW)



Total Shares Authorized: \$250M



Total Shares Outstanding: Approx. 10.1M Shares



Total Registered Warrants (PETVW): Approx. 2.875M (Exercise Price = \$5.625; Expiration Aug. 2026)



Total Public Float Shares: Approx. 5.4M



PETV Trading History (1YR):



Company Highlights



Focus on estimated \$11B companion animal veterinary care and product sales market



Spryng™, with our OsteoCushion™ Technology, is a veterinary device that mimics and reinforces articulating cartilage tissue for the management of lameness and other joint-related afflictions including osteoarthritis



Spryng comprises the same components & structure as natural cartilage to provide additional support and functionality to protect the joint from pain



Signed Exclusive Distribution Agreement with MWI with shipments to multiple distribution centers throughout U.S.



Strong IP portfolio with ten U.S. and nine foreign issued patents



FDA premarket approval or clearance not required for veterinary medical devices



Experienced Management Team and Board of Directors



Drive revenue and traffic for Veterinarians; better outcomes and cost for pet owners

Osteoarthritis (OA) Opportunity

\$11B Veterinary Care and Product Sales Market

Osteoarthritis: a common affliction of the joints

- Affects approximately 14 million adult dogs and 1 million horses*
- Causes pain and inflammation from degenerated cartilage of stressed joints
- Lameness worsens with time from ongoing loss of cartilage and the presence of inflammation in the joint

**Management estimate based on data in articles prepared by Morris Animal Foundation and American Horse Council.*

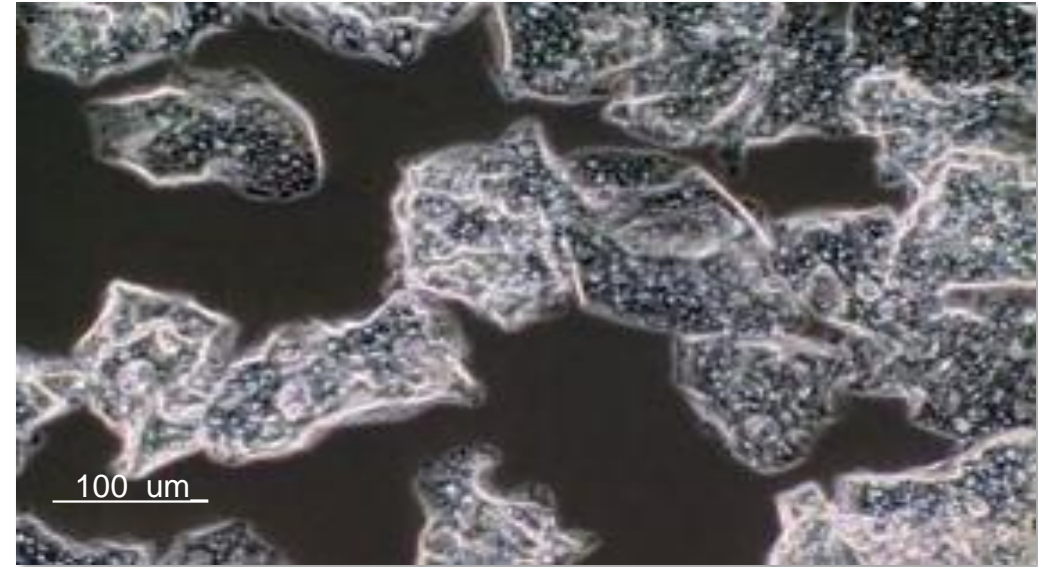
Current solutions treat symptoms, but do not manage the cause

- Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) are approved to alleviate pain and inflammation:
 - Known to cause liver and kidney problems
 - Do not halt or slow joint degeneration
- Steroid and/or Hyaluronic Acid injections are used for treating pain, inflammation and/or joint lubrication
 - slow acting, short duration
- Stem Cell and PRP are used for treating joint deterioration
 - require blood draw or painful tissue harvesting
 - are time-sensitive, time-consuming and expensive
 - provide limited effects

The Optimal OA Solution: Spryng with OsteoCushion Technology

- Spryng provides a biocompatible lubricious cushion, which reinforces the cartilage barrier between the bones to protect the remaining cartilage and bone and improve joint function
 - Similar components/function found in natural cartilage (i.e. collagen, elastin and heparin)
- Spryng particles are injected into the synovial space with standard intra-articular injection technique; multiple joints can be injected simultaneously
- Case studies indicate long-lasting (e.g. ~12 months or longer) improvement in lameness*
- Avoids NSAIDs side effects by minimizing their use
- Effective and economical solution for managing OA

* See Slides 8-9.



Spryng Particles in Saline

Spryng with OsteoCushion Technology

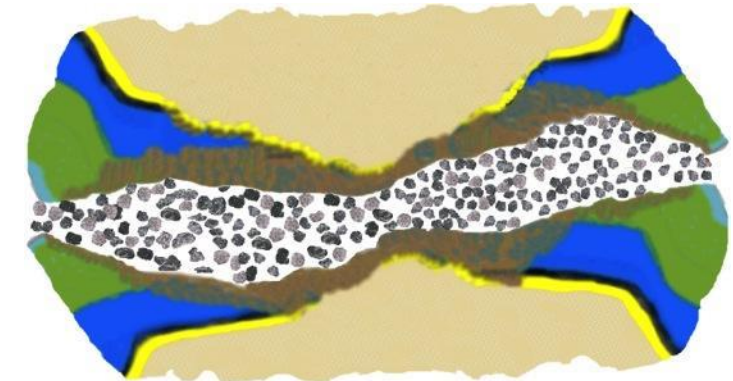
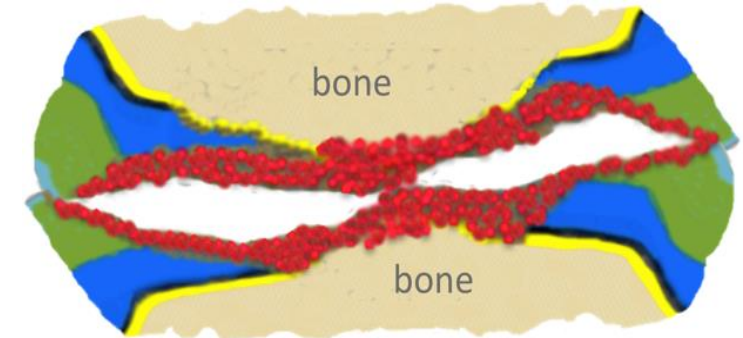
- Spryng is a unique new medical device addressing the root cause of the affliction, not just the symptoms
- Purified components self-assemble to form an insoluble, hydrated matrix
 - Protein source bovine tissues (i.e. collagen and elastin) from isolated herds
 - Carbohydrate source porcine tissues (i.e. heparin) from isolated herds
 - Highly unlikely to trigger an inflammatory or foreign body response
- Companion animal use supported by underlying 145 human patient FDA dermal-filler clinical trial*
- Established IP portfolio with ten United States and nine foreign patents



* *Evaluation of the Safety and Efficacy of Cosmetalife for the Correction of Nasalabial Folds at www.clinicaltrials.gov (NCT00414544).*

Spryng Mechanism of Action

- An animal suffering from osteoarthritis generally exhibits damaged and/or lost cartilage thereby creating bone on bone contact that results in an increase of joint inflammation, pain and further loss of cartilage
- Spryng reinforces synovial membrane function, without pharmaceutical, chemical or metabolic action
- Biocompatible Spryng particles are lubricious, “cushioning” and reside in joint synovial space
- These spongy reinforcing particles mimic the protective function of cartilage – providing both a slippery cushion and a protective barrier between bones
- Particles are slippery, wet, permeable, durable and resilient
- Particles resemble natural cartilage in composition, structure, hydration and function



Spryng Canine Success: Buggy



Source: Ann Sherwood, Veterinarian

- **CONDITION**

Buggy is a 13-year-old mixed breed who has led a very active lifestyle. For the last 6 years she has experienced painful mobility, but over the last 2 years her mobility issues have worsened. She commonly trembles with movement. She has not been able to run and play outside with the other dogs as she loves to do. On orthopedic exam, Buggy was found to have decreased ROM of both hips but especially her right side.

- **TREATMENT**

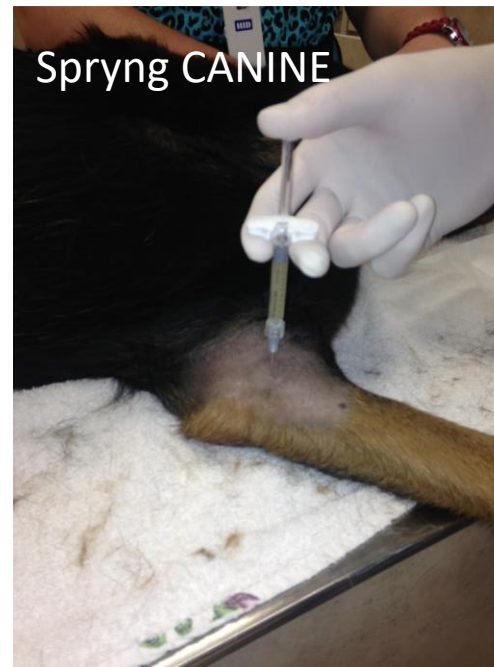
Buggy was placed under heavy sedation. Both hips were clipped and surgically prepared in turn. Each hip was injected with 1.0 ml of Spryng with OsteoCushion Technology using a 20 g 1 ½" needle. After the injection, each hip was moved through a range of motion to help disperse the particles.

- **RESULTS**

Buggy responded very well to the bilateral Spryng with OsteoCushion Technology hip injections. She started improving within a short period of time. She is now able to run and play with the other dogs and can even trot up the stairs. Her owner remarked that Buggy is "now running, jumping and playing which is amazing! Buggy is no longer on any oral therapy or supplements and her stomach is a lot better too."

Spryng Competitive Distinctions

- Outcomes address affliction/not just symptoms
- Current treatments rely on biologic activity to treat symptoms; Spryng provides structural components to address affliction
- Price/Cost advantage
- Ease of application
- Vet clinic exclusivity and enhanced margins
- Over 1,500 dogs and horses successfully injected with Spryng



Unique Solution: Spryng and Current Treatments

Product	Spryng	NSAIDs	Polysulfated Glycosaminoglycan	Conversion Electron Therapy	Hyaluronic Acid Injections	Polyacrylamide Injections	Joint Replacement
Pro	Protects Joint, Increases Activity, Reduces Pain, Excellent Safety Profile	Temporary Pain Relief	Reduces inflammation; Pain Relief	Reduces synovitis and chronic pain	Temporary Pain Relief	Increases Lubricity in the Joint	Total Joint Replaced
Con	Minimally invasive	Potential for gastric ulcers and kidney problems; does not treat condition	Minimally invasive; effective for 3-4 days	Minimally invasive; radioactive materials; toxic in other applications	Effectiveness diminishes over 30 days - Minimally invasive	Minimally Invasive	Invasive and expensive surgical procedure requiring rehabilitation
Dosing/ Treatment	Typically injected once per year	Once or twice daily by owner	Twice weekly for 4 weeks; repeat as needed	Injected once per year	Monthly injection at vet clinic	Typically injected once per 4 - 12 months	Surgery and Rehab
Annual Owner Cost	\$600 - \$900	\$400 - \$1,440	\$600 - \$1,200	\$1,995	\$600 - \$900	\$350 - \$1,400	\$5,000 - \$8,000

Exclusive Distribution Services Agreement

AmerisourceBergen

MWI Animal Health®



MWI – PetVivo Distribution Services Agreement Terms:

- Two years of exclusivity with option for third year upon achieving mutually agreed upon milestones
- Transition to non-exclusive designation for following years
- Designated distributor for PetVivo’s veterinary medical device, Spryng with OsteoCusion Technology

MWI Overview:

- One of largest distributors of veterinary products in the world
- More than 400 Territory Managers in United States
- Recently expanded European distribution with a veterinary market distributor purchase in the Nordic countries of northern Europe

Spryng Clinical Trials



EQUINE

- Completed Equine Tolerance Study
- Principle investigator = Oklahoma City Equine Clinic, P.C. (OCEC), Dr. Brian S. Carroll, DVM and OCEC staff veterinarians
- Study Design = Equine Tolerance Study, 21 horse blinded study
- Completed = December 2021

SMALL ANIMAL

- Canine Tolerance Study
- Principle investigator = Inotiv, Inc.
- Study Design = Canine Tolerance Study, 20 dogs blinded study
- Expected Completion Date = February 2023

SMALL ANIMAL

- COLORADO STATE UNIVERSITY
 - Principle investigator = Felix Duerr, DVM, MS, Dr. med.vet., CCRT, DACVS-SA, DECVS, DACVSSMR
 - Study design – Evaluation of intra-articular injection of a hydrophilic extracellular matrix biomaterial on naturally occurring elbow osteoarthritis-associated pain in dogs – a pilot study
 - Expected completion date: Q4 2023
- ETHOS
 - Principle investigators ▪ Chand Khanna, DVM, PhD, DACVIM, DACVP
 - Samuel Stewart, DVM, DACVECC
 - Chris Thomson, DVM, DACVS-SA
 - Study design – Pilot study to evaluate the intra-articular injection of Spryng in dogs with stifle disease with initial product tolerance review.
 - Expected completion date – Q1 2023
 - Anticipated Abstract Presentation March 2023

Production Strategy

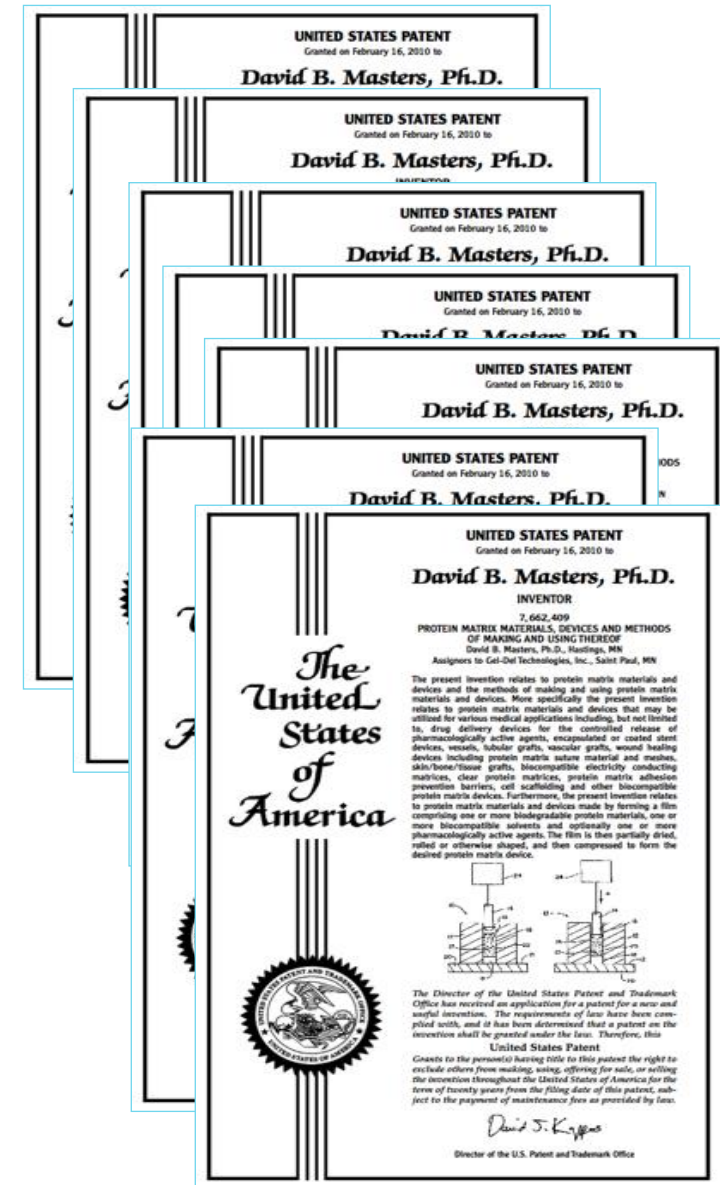
- Spryng product is manufactured in PetVivo's ISO certified cleanroom
- Current batch size of 2,500 syringes; planning to increase to batches of 5,000+ syringes per month
- Current production facility annual capacity is approximately 500,000 syringes; cleanroom manufacturing facility can be easily and economically duplicated



PetVivo's Cleanroom (ISO 8 to ISO 7 to ISO 5) – Edina, MN

Comprehensive IP Portfolio

- 10 US Patents and 9 Foreign Patents
- Broad Claim Language - “Comprising” Transitions
- Our Patents & Trade Secrets Protect:
 - Protein & Carbohydrate Based Thermoplastics
 - Biomaterials of Many Compositions
 - Medical, Drug Delivery & Combination Products
 - Medical & Pharmaceutical Applications
 - Validated Self-Assembly Production Processes
- Our Intellectual Property is Extensively Cited
 - Over 150 Patent Examiners Citations
 - Over 250 Patent Applicant Citations



Pet Product Pipeline *(FDA clearance not required)*

	Pet Therapeutics	Species	Safety	Pilot	Efficacy	Commercial
VD-01	Osteoarthritis	Canine (Spryng™)				Q3 2021
VD-02	Osteoarthritis	Equine (Spryng™)				Q3 2021
VD-03	Digital Cushion Lameness	Equine				TBD
VD-04	Urinary Incontinence	Canine				TBD
VD-06	Osteoarthritis	Feline (Spryng™)				TBD
VD-07	Mucoadhesive Devices	Canine, Equine, Feline				TBD

Particle Based Devices	Drug Delivery Devices
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Market Overview: Companion Animal/Veterinarian

- US Pet Spend increased from \$103.6B in 2020 to \$123.6B in 2021
- Veterinary care and products is a leading growth driver
 - \$11B in 2021 in US
- 70% of US Households own a pet
 - 69.0M Dogs; 45.3M Cats
- Approximately 7.2M horses in US*
- Pet owners' spending has increased before they would refuse or stop treatment on their pet:
 - From \$1,704 in 2012 to \$10,725 (dogs) in 2020
- Pet insurance market growing rapidly
 - Insured pets have increased from 1.8 million in 2017 to 3.98 million in 2021
 - Pet health insurance increased 27.7% from 2020 to 2021
- Market ripe for more effective medical devices and therapeutics

Source: American Pet Products Assoc.; North American Pet Health Insurance Association, American Horse Council, LendEDU

** Agricultural and professional equine markets not included*

Management Team

- John Lai, Chief Executive Officer, *Blue Earth Resources, Genesis Capital Group*
- Robert J. Folkes, Chief Financial Officer, *Tactile Medical, Advanced Respiratory*
- Randall Meyer, Chief Operating Officer, *Gel-Del Tech, Softscope Medical, Tactile Medical*
- John F. Dolan, Vice President Business Development and General Counsel, *Traust Structured, LLC, Fredrikson & Byron, US Patent Trademark Office*
- Mark Middleton, National Director of Sales, *Animal Health International*
- Russell Siakel, Director of Marketing, *Zoetis, Boehringer Ingelheim Animal Health*
- Josh Wilhelm, Director of Manufacturing, *Schulze Diabetes Institute, Medtronic*
- Ann Zieser, DVM, Senior Technical Veterinarian (Small Animal), *Middleton Veterinary Hospital, WVMA, AVMA*
- Joe Manning, DVM, Senior Technical Veterinarian (Large Animal), *Merck Animal Health, Animal Health International, Vetoquinol-USA and Dechra Veterinary Products*

Board of Directors and Advisors

Board of Directors

- James Martin, Board Chairman, *KPMG LLP (Partner; Retired)*
- Joseph Jasper, *Vermillion Capital Management, Piper Jaffray*
- Robert Rudelius, *Noble Ventures LLC, MedicaMetrix, Inc.*
- Leslie Coolidge, *Power Solutions International, Inc., KPMG LLP (Partner; Retired)*
- Robert Costantino, *WFS Financial, Inc., Westcorp, Inc, Mitsubishi Motors Credit of America, Inc., Volvo Cars of North America*
- Scott Johnson, *Boston Scientific, Sci-Med Life Systems, Stratego, Inc.*
- John Lai, *Chief Executive Officer*

Advisors

- Dr. Tracy Turner, *DVM, MS, Dipl. ACVS, Dipl. ACSMR, Amer. Academy Thermology, AAEP Board*
- Dr. Michael Sterns, *DVM, MBA, Alta View Animal Hospital, Relief Veterinarian for Banfield*

Growth Drivers

- Expand Sales Force and Distribution
 - Add regional sales managers
 - Distributor networks
 - Vetcove  (Dec. 2021)
 - MWI DSA (June 2022)
- Increase KOL Adoption
 - Used by veterinarians in 47 states
 - Podium presentations at conferences
- Increase Market Awareness
 - Trade shows, digital outreach
 - Clinical education, white papers
- Clinical Studies
 - Equine Tolerance Field Study Completed
 - Ethos – thirty-five dogs injected
 - Colorado State University – twenty-eight dogs injected
 - Inotiv Canine Tolerance Study – 20 dogs
 - Additional studies for canine, feline and equine
- Expand Spryng to Other Indications
- International - Country specific

PetVivo Highlights



Large market opportunity - \$11B Veterinary Care and Products Market and growing



Increased humanization of companion animals driven by Covid-19 pandemic



Spryng is an optimal solution for the management of OA over the current treatments



Offers significant benefits for the management of OA by protecting the joint over current treatments: NSAIDs, Corticosteroids, HA, stem cell and PRP therapies



Vet exclusivity with enhanced revenue and margins; cost effective solution for pet owners



Signed Exclusive Distribution Agreement with MWI with shipments to multiple distribution centers throughout U.S.



Experienced Management Team and Board of Directors



Strong IP portfolio with ten United States and nine foreign issued patents



John Lai

Chief Executive Officer

jlai@petvivo.com (612) 328-4325

PetVivo.com

**To order, contact info1@petvivo.com
or 844-PET-VIVO (844-738-8486)**

Spryng™ with OsteoCushion™ Technology is a
veterinary medical device by **PetVivo, Inc.**

Spryng™ is a trademark of PetVivo Holdings, Inc.
This product is covered by U.S. Patent Nos. (US 8,153,591;
US 9,107,937; US 9,999,705; US 10,850,006; CA 2,537,315;
CA 2,583,561) and other pending applications and foreign patents.

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