



A Hope for Pets with Cancer

Ashley Kalinauskas, CEO



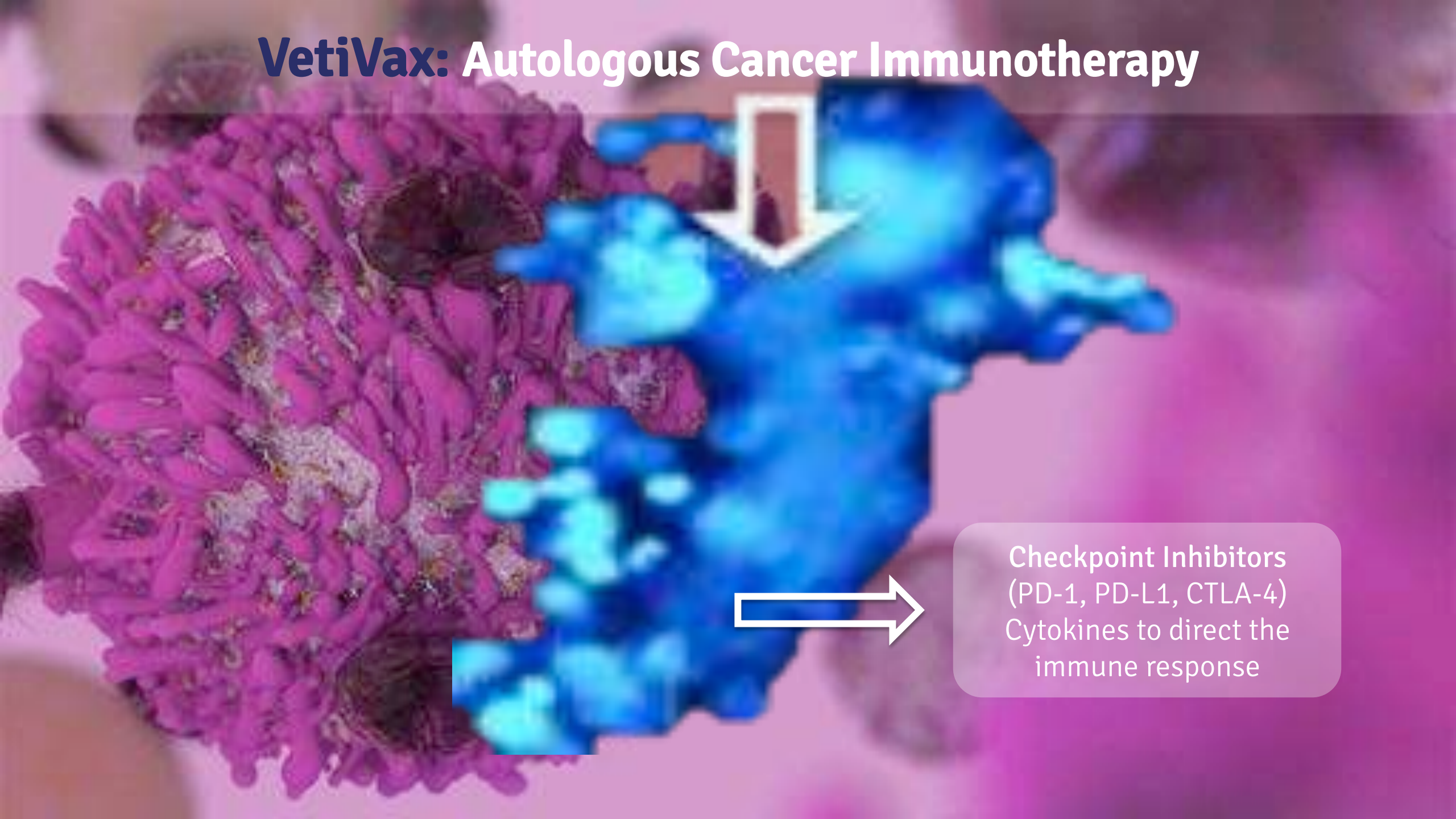
Over **4 million**  and **4 million** 
are diagnosed with cancer each year



VetiVax

VetiVax™ is a personalized cancer immunotherapy that trains the body to fight the cancer as foreign.

VetiVax: Autologous Cancer Immunotherapy



Checkpoint Inhibitors
(PD-1, PD-L1, CTLA-4)
Cytokines to direct the
immune response

\$900
per treatment

Traditional Therapies:
Chemo & Radiation
\$5,000 Minimum





TORIGEN

Pharmaceuticals Inc.



A **dozen** supporting pre-clinical publications



8 Issued Patents on Tissue Vaccines



Over **250** companion animals treated to-date

My “Why” Lula Mae



**Prognosis- Less than 3 months to live
in July, 2013**



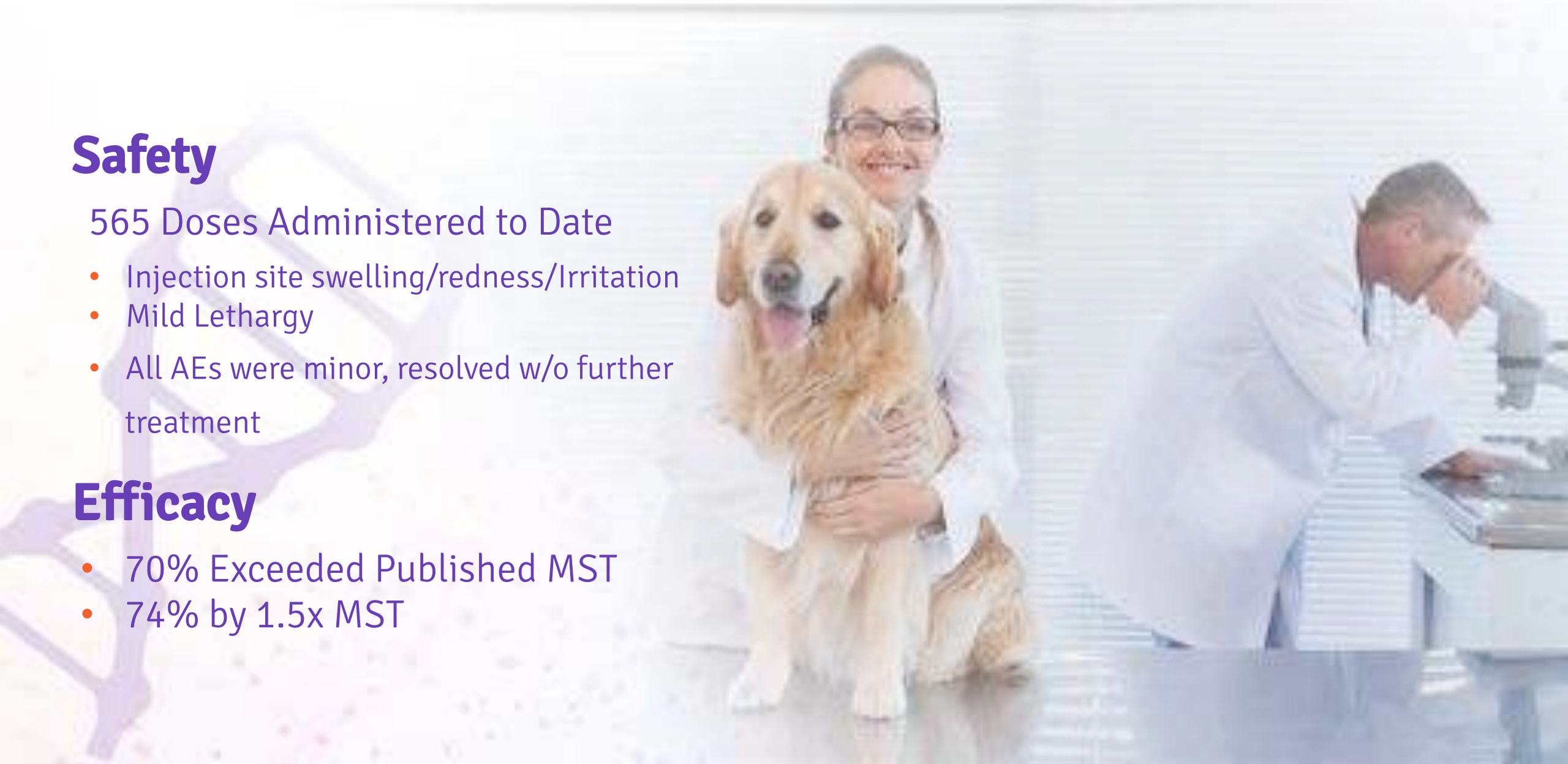
Safety

565 Doses Administered to Date


























- Injection site swelling/redness/Irritation
- Mild Lethargy
- All AEs were minor, resolved w/o further treatment

Efficacy

- 70% Exceeded Published MST
- 74% by 1.5x MST



Competitive Landscape

Company Name	Technology Description	Multiple Cancers	Treatment under 1 mo.	IP protection	USDA Licensure
 TORIGEN Pharmaceuticals Inc	Autologous tumor vaccine, fixed + SIS				
 ARATANA THERAPEUTICS	Listeria vaccine expressing HER2				
 MERIAL	DNA vaccine encoding human tyrosinase				
 MEDIVET Biologics Advanced Cellular Solutions	UV-treated autologous tumor vaccine + CpG				
 ELIAS ANIMAL HEALTH	Autologous tumor vaccine + ex vivo T cells				

Other pet cancer therapeutics under development at several companies and academic centers include checkpoint inhibitors, CAR-T, DNA and RNA vaccines, and oncolytic viruses

1,600 Board Certified
Veterinary Surgeons

4 per month



48 per year

48 cases/yr
x
\$900/treatment
x
1,600 surgeons

\$69m
annually



42,000 GP Veterinarians
that perform tumor
removal surgeries

1 per month



12 per year

12 cases/yr
x
\$900/treatment
x
42,000 vets

\$454m
annually

Go To Market Strategy

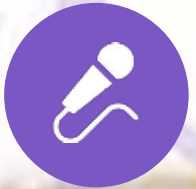
TORIGEN
Pharmaceuticals Inc.



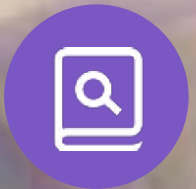
Conferences



KOL Groups



Speaking Engagements



Publications



Building a Clinical Database that allows for our Pipeline Research to Extend Beyond Companion Animals

1

Identical
Cancers &
Similar
Mutations

2

Histopathologically
Indistinguishable

3

Translational
Immuno-
Oncology



Meet the Team



Ashley Kalinauskas, MS, CEO

University of Notre Dame :
Cancer Immunology/Business
University of Connecticut :
Pathobiology



Dr. Brad Poff, COO

General Mgmt, Business
& Clinical Ops, 4 startups



Dr. Mark Suckow, CTO

University of Notre Dame
University of Minnesota



John Kallassy, CFO

CFO & Corporate Dev.
Successful Animal Health
Entrepreneur



Dr. Terry Dew, CMO

Board Certified
Veterinary Surgeon



Doug Weaver, MBA

Quality Consultant
Director of Quality at Shire
Pharmaceuticals

Financial Projections

	2018	2019	2020	2021	2022
Units	510	4,818	12,432	20,496	28,560
Revenue	\$0.5m	\$4.5m	\$11.9m	\$20.2m	\$28.9m
COGS	\$0.1m	\$1.0m	\$2.3m	\$3.8m	\$5.4m
Gross Profit	\$0.3m	\$3.5m	\$9.6m	\$16.4m	\$23.6m
Gross Margin (%)	76%	78%	81%	81%	81%
G&A	\$0.6m	\$2.5m	\$3.9m	\$5.7m	\$6.4m
Sales & Marketing	\$0.1m	\$0.9m	\$2.1m	\$3.3m	\$4.7m
R&D	\$0.4m	\$0.5m	\$0.6m	\$1.3m	\$1.3m
Investment	\$2.0m	\$0.0m	\$0.0m	\$0.0m	\$0.0m
EBIT	-\$1.0m	-\$1.2m	\$2.2m	\$5.1m	\$10.2m



Our Commitment to Growth

TORIGEN
Pharmaceuticals Inc.



Pursuing additional
collaborations



Database
Development



Creation of a
Technology Pipeline



Contact:



Ashley Kalinauskas



(860)519-9956



a.kalinauskas@vetivax.com




www.VetiVax.com

www.Torigen.com



Strategy & Pipeline: Personalized Cancer Vaccines



	Discovery	Pre-Clinical Research	Experimental Therapy	USDA Conditional Licensure	
Tissue Vaccines & Extracellular Matrix Adjuvant					December, 2018
Tissue Vaccines(+) Checkpoint Inhibitors, Cytokines	★				
Creation of Neo-Antigen Personalized Vaccines	★				



Patents

Issued Patents	Country	Patent Number	Issue Date
Tissue Vaccine and Uses Thereof	US	8,257,715	09/04/2012
Tissue Vaccine and Uses Thereof	US	8,062,646	11/22/2011
Use of Extracellular Matrix Materials as a Vaccine Carrier and Adjuvant	US	8,778,360	07/15/2014
Extracellular Matrix Cancer Vaccine Adjuvant	US	8,802,113	07/23/2014
Use of Extracellular Matrix Material as a Vaccine	Australia	20077309193	05/24/2014
Extracellular Matrix Adjuvant & Methods for Prevention and/or Inhibition of Ovarian Tumors and Ovarian Cancer	US	8,846,059 B2	09/30/2014
Use of Extracellular Matrix Materials as a Vaccine	Europe	EP2109667	10/19/2007
Anti-Tumor/Cancer Heterologous Acellular Collagenous Preparations and Uses Thereof	US	8,778,362	07/15/2014
Uses of Extracellular Matrix Material as a Vaccine	Canada	520837-00036	10/03/2017

Competitive Analysis

	Surgery Alone	Chemo/ Radiation	 Immunotherapies	
Price	✓	✗	✓	✓
Quality of Life	✓	✗	✓	✓
Direct Target	✗	✗	✓	✓
Speed		✓	✗	✓
No Synthetics			✗	✓
Direct Targeting of Tumor Cells			✗	✓

VetiVax™ is indicated for solid tumors, including:



- Melanoma
- Squamous Cell Carcinoma
- Fibrosarcoma
- Soft Tissue Sarcoma
- Adenocarcinoma
- Hepatocellular Carcinoma
- Nasal Carcinoma
- Mast Cell Tumors
- Basal Cell Carcinoma
- Transitional Cell Carcinoma

We require ~5 grams of tumor material for processing.