



November 2015

World leader in TPM[®] technology

Non-Confidential Presentation

www.phosphagenics.com
(ASX: POH; OTCQX: PPGNY)



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This presentation, and any representations made before, during or after the presentation, may include forward-looking statements that are inherently subject to risks and uncertainties. These statements relate to, but are not limited to: (1) the safety or efficacy of, or potential applications for, Phosphagenics' TPM[®] platform technology; (2) the strength of Phosphagenics' intellectual property; (3) the timelines for Phosphagenics' clinical trials and regulatory processes for its different products; (4) the scalability and efficiency of manufacturing processes; (5) revenue projections, market share expectations, share price expectations and capital requirements.

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Phosphagenics is a compelling investment opportunity

- ✓ Approx. \$20M cash and receivables - equating to 2.5 to 3 years burn (Jun'15)
- ✓ \$2M+ annual revenues* from TPM[®] and Vital ET[®] with plans initiated to increase current capacity to support increased sales, margin and revenue
- ✓ Meaningful newsflow planned over 2015/16:
 - Near term Ph2a clinical results expected within 6 months (oxycodone patch)
 - Multiple Animal Health & Nutrition trials over 2015/16
- ✓ TPM[®] technology already partnered for specific dermal and injectable use – high interest in future business development opportunities
- ✓ Attractive valuation: share price at all-time low: below asset value
- ✓ Focus is on shorter-term, value-adding endpoints and revenue
- ✓ New Management/Board with strong industry experience

“...we believe that Phosphagenics is substantially undervalued ... the Company’s current total value should be A\$80-100M, or 8.5c per share...(there is) substantial upside ...”

M.Wijma, Chief Research Analyst, Van Leeuwenhoeck Research, September 2015



Topics:

Company and Core Technology

Business Focus

Human Health - Pain and other applications

Animal Health - Products and trial

Bulk products and Personal care

Milestones and conclusion



Phosphagenics is an innovative drug delivery company headquartered in Melbourne

Key Management Personnel

- Dr Ross Murdoch (CEO & Managing Director)
- Dr Paul Gavin (CSO)
- Ms Anna Legg (CFO)
- Dr Roksan Libinaki (GM Animal Health & Nutrition)
- Mr Greg Moses (GM Production & Personal Care)

Key Statistics

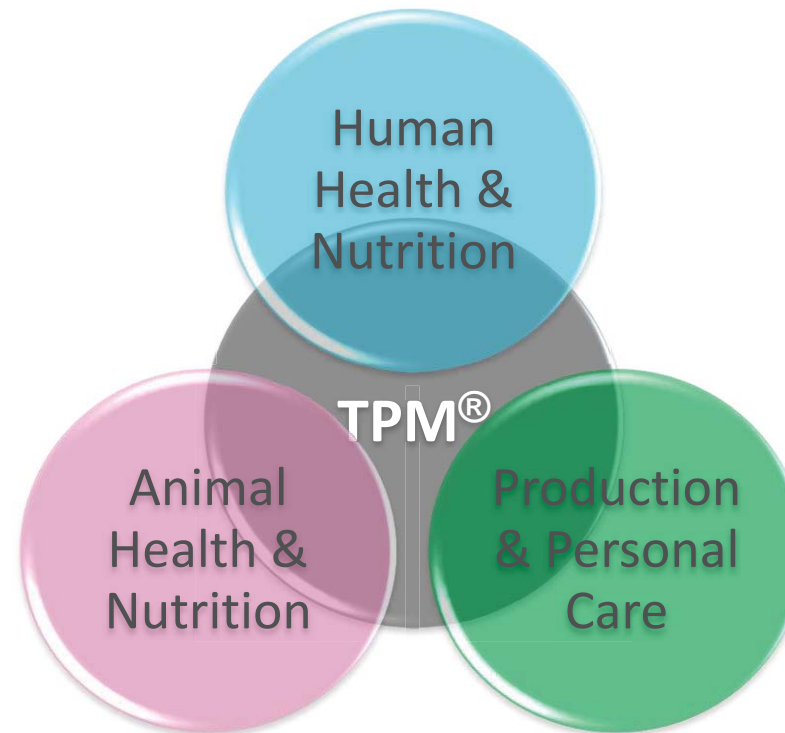
ASX/OTCQX Code	POH/PPGNY
Headquarters	Melbourne, Australia
Employees	19
Cash (June 2015)	\$20M = 2-3 year runway
Revenue (2014)	\$2.3M

Board of Directors

- Mr Peter Lankau (Chairman & Independent Director)
- Dr Ross Murdoch (CEO & Managing Director)
- Dr Geert Cauwenbergh (Independent Director)
- Dr Greg Collier (Independent Director)
- Mr Nathan Drona (Independent Director)

Our Structure Optimises Business Focus

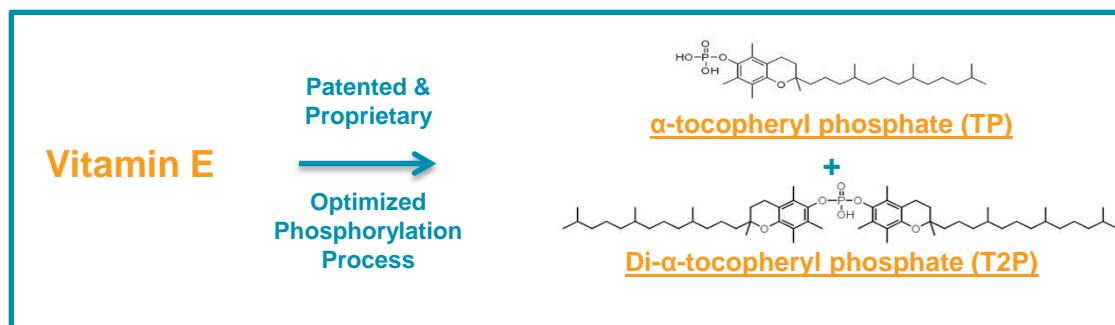
“...leverages TPM[®]’s unique properties across multiple lucrative markets.”



“...sharing knowledge, data and expertise reduces development risk, time and cost.”

The TPM[®] Technology

TPM[®] is a unique proprietary blend of two Vitamin E derivatives and is protected by 14 Patent families



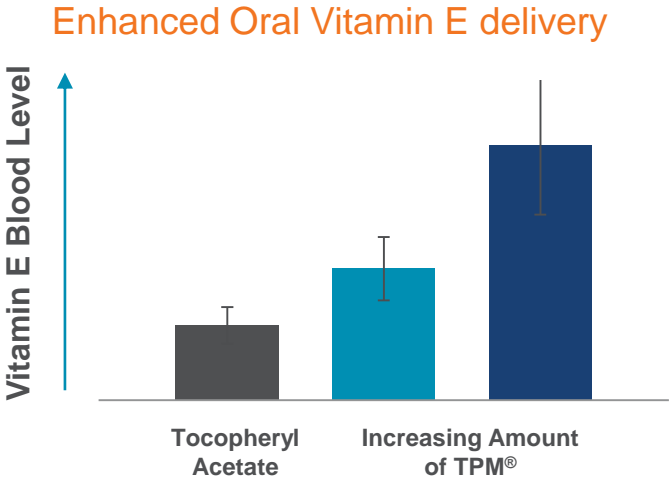
TPM[®] self assembles into nanoparticles that encapsulate drugs and nutrients to....

1. Enhance their absorption into the skin
2. Increase their oral bioavailability
3. Increase their solubility and stability for use in injectable dosage forms

TPM[®] is very well tolerated and has GRAS status



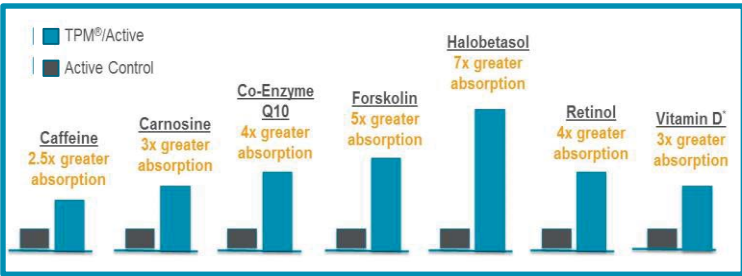
TPM[®] provides proven value across multiple health applications



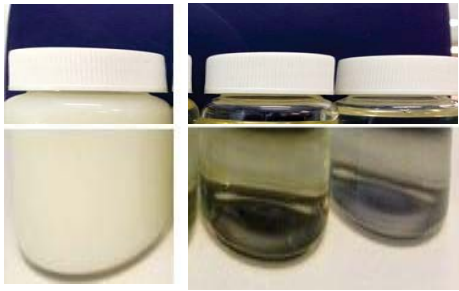
Potent Dermal Protective Effect against irritation caused by:

- Mechanical
- Environmental
- Bacterial
- Chemical

Enhanced delivery of active ingredients



Enhanced solubilisation and stability*



Std emulsion → Micro-emulsion

*Photo of Propofol vials

8 * Photo of commercial (white, left) and TPM[®]/Propofol (clear, right) formulations



Core Technology

Business Focus

Human Health – Pain and other applications

Animal Health - Products and clinical trial

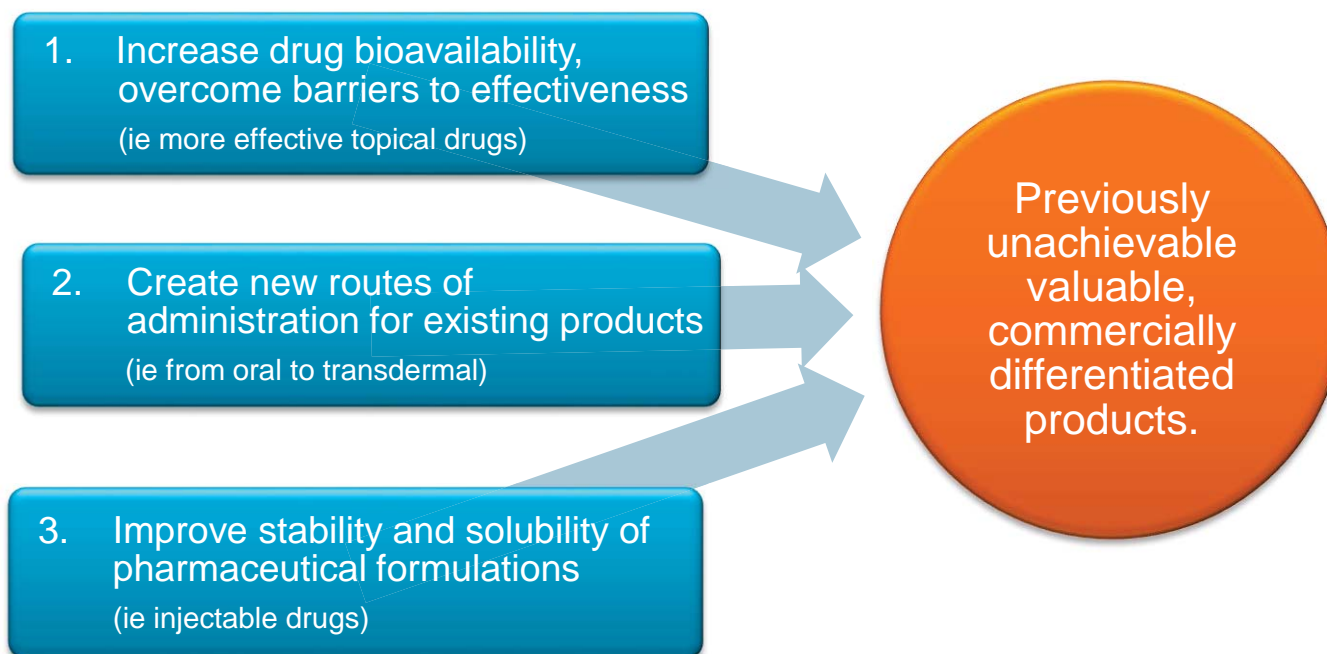
Bulk products and Personal care

Milestones and conclusion



Our Product Development Strategy

“...leverage TPM®’s unique properties to enhance already approved drugs.”



“...create valuable new products utilizing pathways with less risk, time and cost.”



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Voveran[®] (TPM[®]/Diclofenac gel) was launched by Novartis in India in 2014

NOVARTIS

What is TPM?

- A new technology from Phosphagenics, Australia
- An ultra-flexible drug delivery system that can squeeze between skin cells
- No irritation or skin damage

Targeted Penetration Matrix for enhanced delivery

Diclofenac Gel BP
New Voveran TPM gel
More Penetration for Deeper Relief

TPM[®] is a proprietary trademark of Phosphagenics, Australia.

TPM[®]/Diclofenac gel is marketed by two companies in India: Novartis and Themis

More Penetration for Deeper Relief

Back & Muscles, Neck & Shoulders, Knees & Joints, Sprains & Strains

The Original Diclofenac with TPM technology for Deeper Pain Relief

NOVARTIS

Diclofenac Gel BP
New Voveran TPM gel
30g

व्होवेरान "टीपीएम" जेल

Composition:
Diclofenac Diethylamine BP 1.16% w/w
Equivalent to Diclofenac Sodium BP 1% w/w in a gel

Dosage: As directed by the physician
Store in a cool dry place.
Do not allow to freeze.
Store in original packaging.
Keep out of reach and sight of children.
Keep the tube tightly closed after use.
Protect from light.
Mfg. Lic. No.

Manufactured by:
Themis Medicare
at Kernwell Biopharma Pvt. Ltd., 34th K.M.,
Tumkur Road, T. Begur, Nelamangala,
Bangalore Rural 562 123, India.

Marketed by:
Novartis India Limited
Sandoz House, Shivajinagar Estate,
Worli, Mumbai-400 015, India.

8003000000000000

The clinical and preclinical data supporting this product demonstrated that it outperformed the existing gold standard – both delivering more diclofenac and increasing depth of penetration



Human Health Pipeline

Phosphagenics is poised to take advantage of the fast growing transdermal market with its unique opioid patches

Product	Formulation	Therapeutic Area	Partner (Geography)	Research	Development	Marketed
Diclofenac	Gel	Pain (NSAID)	Novartis; Themis (India)			
Oxycodone	Patch	Pain (opioid)	TBD			
Oxymorphone	Patch	Pain (opioid)	TBD			
Antibiotic*	Injectable	Antibiotic	Mylan (Global)			

■ Partnered
 ▨ Not Partnered
 ★ Clinical POP achieved
 * Molecule yet to be publicly disclosed

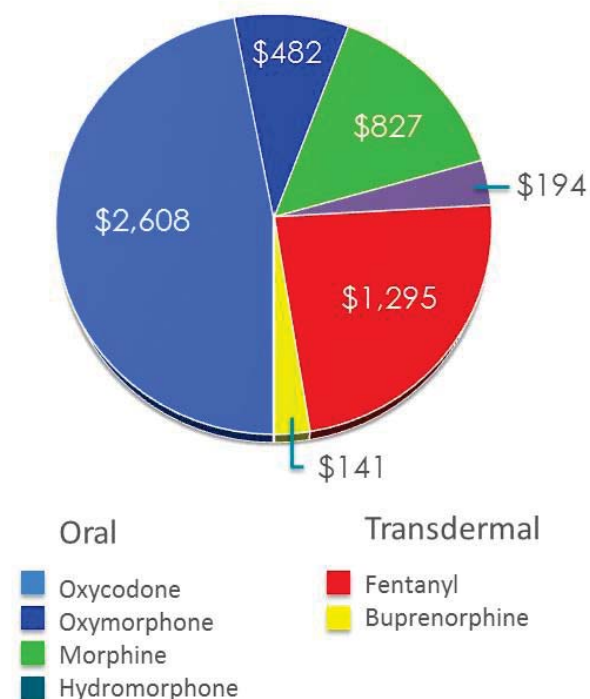


The Extended Release Opioid Market (USA)

US\$8 billion Opioid Market

- ✓ Extended Release (ER) opioids account for 70% of the market by revenue (\$6B)
- ✓ Oxycodone and oxymorphone account for 50% of all ER opioid revenues (\$3B) (despite serious PK and abuse liabilities)
- ✓ Transdermal opioids (buprenorphine and fentanyl) account for 25% of all ER opioid revenues (\$1.5B)

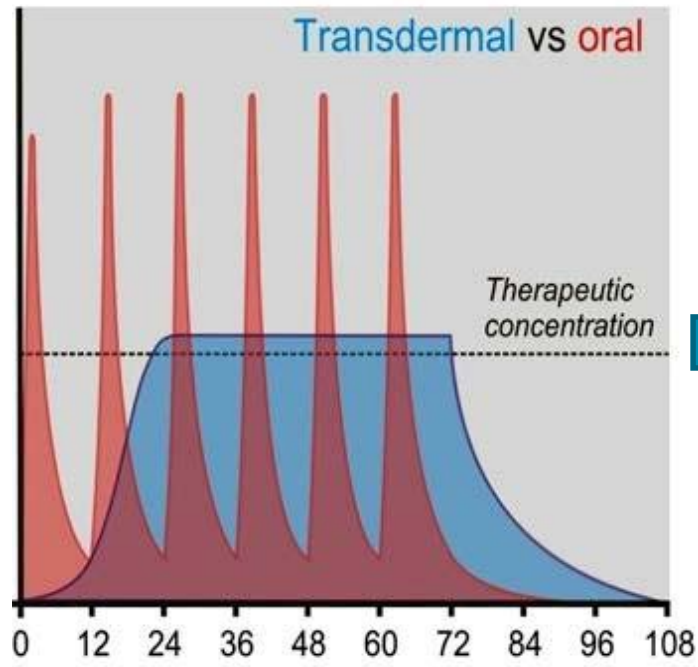
Opioid Sales 2013 (US\$ millions)



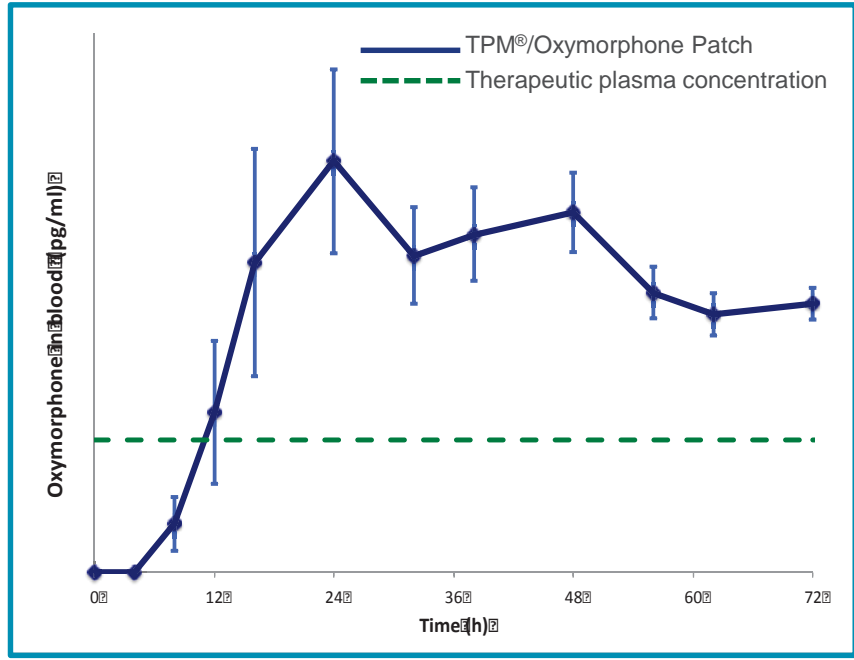


Phosphagenics' TPM[®]/Oxymorphone Patch has already been shown to deliver a desired PK Profile

Ideal



Actual





TPM[®]/Oxymorphone Patch has Clear Advantages over its Oral Competitors

Feature	Oral*	TPM [®] /Oxymorphone Patch
Breakthrough Pain	High Potential	Low Potential
Convenient Dosing	6x in 72 hours	1x in 72 hours
PK Profile	12 to 24 hour peaks and troughs, resulting in CNS effects (euphoria, abuse potential), GI effects (nausea) and breakthrough pain	Stable and moderate levels over 72 hour period, resulting in less side effects and better pain control
First Pass Metabolism	High	Bypassed
Reduced Drug Load	Up to 240mg	< 60mg
Need for Supplemental Medication	Moderate	Low
Risk of Accidental Overdose	High	Low
Constipation & Adverse CNS Effects	High Potential	Low Potential

- *Demonstrated clinically efficacious drug levels and tolerability*
- *Animal tests suggest that TPM[®] may overcome oxymorphone's historic problems with dermal irritation and sensitisation*
- *A reformulation effort to develop a commercial patch is expected to complete in 2016*

16 * Available only in the US, as Opana[®] ER or generic oxymorphone ER





The 'topical' TPM[®]/Oxycodone Patch is a true industry breakthrough

Phase 2 Clinical Study Protocol: POH035-13 is ongoing and will be completed in 2015

Proof of concept clinical trial of TPM[®]/Oxycodone Patch in patients with postherpetic neuralgia (PHN)

TPM[®]/Oxycodone Patch

- Sustained delivery over 72-hours
- Localised not systemic delivery, which is a key abuse and safety feature
- Allows new indications for opioids
- Potential for pain relief after patch removal



Seven clinical studies (through Phase 1) have demonstrated the dermal and transdermal delivery of TPM[®] formulated oxycodone.



TPM[®] is proven to enhance the solubility and stability of injectable formulations*

Mylan has licensed TPM[®] for an antibiotic product for global development because...

Current Product*

- ✗ Reconstitution is slow and tedious >10 minutes
- ✗ The reconstituted solution is unstable and must be discarded after a single use

TPM[®]/Antibiotic*

- ✓ TPM[®] reduces reconstitution by more than half
- ✓ TPM[®] doubles the shelf life at room temperature, potentially transforming the present single use product into a world first multi-use product

...these attributes add tremendous commercial value and differentiation.

- ✓ *Increased chemical and physical stability*
- ✓ *Transformed an opaque emulsion to a transparent microemulsion*
- ✓ *Increased the shelf life of a reconstituted drug in solution*
- ✓ *Replaced harsh co-solvents known to be irritating*
- ✓ *Replaced excipients known to cause anaphylaxis*
- ✓ *Replaced excipients that increase the rate of spoilage in the product*



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Milestones and conclusion



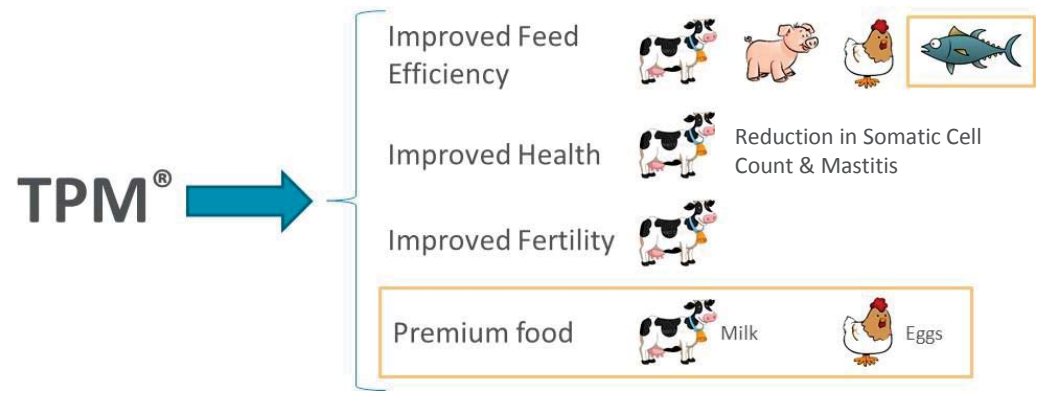
Animal Health & Nutrition Pipeline

We have a pipeline of exciting Animal Health & Nutrition assets and activities across various stages of Commercialisation and R&D

Product	Species	Therapeutic Area	Partner (Geography)	Research	Trials Active / Planned	Marketed
TPM [®] based feed additives	Horses	Nutrition	Integrated Animal Health (Global)	14 products		
	Dairy Cattle	Mastitis	IAH Brinicombe, AU, NZ, UK & IRE	5 products		
	Pigs, Poultry, Cattle	Feed Efficiency		[Hatched bar]		
	Dairy Cattle	Mastitis		[Hatched bar]		
	Cattle	Fertility		[Hatched bar]		

■ Partnered
 ▨ Not Partnered

Our R&D program includes up to eight key trials, most with significant milestones in 2015/16



The objective for TPM[®] addition to animal feed is a ROI to farmers of a minimum of 3:1 across all species, ie for each additional \$1 spent, farmers will gain \$3+ increase in animal and/or production value.

Opportunities to be addressed in later Phases

Species	2015				2016								2017									
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Swine	→																					
Poultry					→																	
Cattle					→																	



There is strong proof-of-concept that tocopheryl phosphates can drive additional value across multiple species

Objectives for using TPM[®] in animal feed include:

- Increased rate of growth = Reduced time in feedlots/farming (ie improved turnover)
- Increased feed efficiency = Reduced feed costs (ie reduced overall consumption/kg)
- Improved animal health and wellbeing (ie immune benefits, fertility etc)

TPM[®] has commercially attractive applicability across a range of animal species.

Animal	Estimated Improvement in Turnaround Time [#]	Estimated Feed Savings per Head
Beef Cattle ¹	Up to 17 days	Up to 178 kg
Swine ²	Up to 9 days	Up to 28 kg
Broilers ³	~ 1 day	~ 0.18 kg
Salmon ⁴	Up to 10 days	~ 0.18 kg

Proof-of-Concept work (Showa Denko)*, showed that tocopheryl phosphate (TP) @10-300 ppm/kg in feed may increase LWG by about 3% to 6% over tocopheryl acetate (TA) or no Vitamin E supplementation.

Using LWG proof-of-concept, we believe that other livestock and aquaculture markets could benefit from TPM[®]

* Source: United States Patent # 6,022,867

Based upon an assumption of 30ppm TPM[®] producing a 5% increase in LWG

1 Based on 100 day lot stay, 1 ton grain feed per stay, and 2% daily LW feed consumption (Meat & Live Stock Australia figures 2010/11); 2 Based on Baconers (Australian Pork Limited, Australian Pig Annual 2010/11), 3% daily LW feed consumption; 3 Based on Ross 308 Broiler Performance; 4 Based on Norwegian smelt performance



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TPM[®] is already included in over 100 marketed products*

Human Health & Personal Care

Voveran TPM gel
 NOVARTIS
 la prairie
 KINCOUS
 Kimberly-Clark PROFESSIONAL
 THEMIS MEDICARE
 ULTRACEUTICALS
 Dr Dennis Gross + SKINCARE
 AHAVA
 rescue gel
 BORGHESE
 LE MËTIER DE BEAUTÉ




Animal Health

Phytate MAX | Gp MAX
 Obla PLUS | Obla MAX
 E.I.P.H. MAX
 Sunshine D3 MAX
 Tocopheryl MAX
 Udder-Mate
 The Dairy Farmers Natural Helper

* Either alone or as a component of Vital ET[®]
Note: this is only a selection of marketed products containing TPM[®]



Bulk Production and Personal Care

Product	Formulation	Partner (Geography)	Research	Trials Active / Planned	Marketed
TPM [®] based BioElixia [®]	Multiple	TBD		14 products	
Vital-ET [®] based Products	Multiple	Ashland		100+ products	
TPM [®] based Nutrition/Delivery	Oral	Active testing by non-disclosed partner			

- ✓ *Vital ET[®] is unique, bio-available Tocopherol Phosphate Complex shown to reduce the appearance of skin redness and irritation induced by various external skin aggressions: bacterial (acne), mechanical (razor burn) and UV induced.*
- ✓ *Phosphagenics manufactures and sells over 20 tonnes of TPM[®]/Vital ET[®] per year from its manufacturing site in Clayton, Victoria, Australia.*
- ✓ *To meet the growing demand, we have initiated planning to increase our capacity to manufacture about 10 fold (expected to complete in 2016).*

* BioElixia[®] brand is presently available for sale



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We expect considerable Newsflow over the next 12 months

Business	Milestones		Timing
Human	1.	Initial results for TPM [®] /Oxycodone Patch Phase 2a trial	4Q'15/1Q'16
	2.	Reformulation of TPM [®] /Oxymorphone patch	2/3Q'16
	3.	Key development milestone for our injectable antibiotic (Mylan)	1H'16
	4.	Regulatory meeting with FDA meeting on key development issues for both opioid patches	1H'16
Animal	1.	First results for Swine LWG* program	1Q'16
	2.	First results for Poultry LWG* program	2H'16
	3.	Cattle trials Somatic cell count/Fertility program: initiates	1H '16
Production/ Personal Care	1.	Increase TPM [®] manufacturing capacity – (complete up-scale reactor plant)	1H'16
	2.	Promising personal care relationships being negotiated	2H'15/1H'16



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