

*ASX Limited  
Market Announcements Office*

## **Updated Non-Confidential Investor Presentation for CEO Roadshow**

14 May 2018, Melbourne: Australian drug delivery company, Phosphagenics Limited (ASX: POH; OTCQX: PPGNY) released today an updated non-confidential investor presentation to accompany the investor roadshow to be undertaken by Dr Ross Murdoch, CEO & Managing Director, from 15th to 18th May.

Dr Murdoch will meet with brokers and potential investors in:

- Perth on Tuesday 15th May,
- Adelaide on Wednesday 16th May,
- Brisbane on Thursday 17th May and
- Sydney on Friday 18th May.

Phosphagenics' 2018 Annual General Meeting will be held on Friday, 25 May 2018, commencing at 9:30 am (Melbourne time) at the Oliphant Auditorium at the National Centre for Synchrotron Science, 800 Blackburn Road, Clayton.

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### **About Phosphagenics**

Phosphagenics Limited is focused on developing and commercialising innovative Human Health, Animal Health and Personal Care products using its proprietary drug delivery system called TPM<sup>®</sup> (Tocopheryl Phosphate Mixture). TPM<sup>®</sup> is derived from Vitamin E using a unique, proprietary and patented process and has been proven to enhance the solubility and oral, dermal and transdermal absorption of drugs and nutrients.

Amongst its major projects, Phosphagenics' is developing TPM<sup>®</sup> enhanced patches, gels and injectable products for the human health market and is also developing TPM<sup>®</sup> to enhance the feed efficiency and health of livestock.

Phosphagenics' shares are listed on the Australian Securities Exchange (POH) and its ADR – Level 1 program in the US is with The Bank of New York Mellon (PPGNY).

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#### **Phosphagenics Limited**

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**Inherent Risks of Investment in Biotechnology Companies**

There are a number of inherent risks associated with the development of pharmaceutical products to a marketable stage. The lengthy clinical trial process is designed to assess the safety and efficacy of a drug prior to commercialisation and a significant proportion of drugs fail one or both of these criteria. Other risks include uncertainty of patent protection and proprietary rights, whether patent applications and issued patents will offer adequate protection to enable product development, the obtaining of necessary drug regulatory authority approvals and difficulties caused by the rapid advancements in technology.

**Forward-looking Statements**

Certain statements in this announcement may contain forward-looking statements regarding Company business and the therapeutic and commercial potential of its technologies and products in development. Any statement describing Company goals, expectations, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the process of discovering, developing and commercialising drugs that can be proven to be safe and effective for use as human therapeutics, and in the endeavour of building a business around such products and services.

[www.phosphagenics.com](http://www.phosphagenics.com)



May 2018

# Phosphagenics:

## Non-confidential Investor Presentation

[www.phosphagenics.com](http://www.phosphagenics.com)  
(ASX : POH)



# Safe Harbour Statement

*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.*

*Actual results may differ from the expectations expressed in these forward-looking statements, and the differences may be material (whether positive or negative). The risks that may cause Phosphagenics' actual results, performance or achievements to be materially different from those expressed or implied by such forward-looking statements, include but are not limited to: (1) risks inherent in the development, approval and commercialization of potential products; (2) uncertainty of clinical trial results or regulatory approvals or clearances; (3) changes to market trends or government laws or regulations; (4) the potential need for future capital; (5) dependence upon collaborators; and (6) protection of intellectual property rights, among others. Accordingly, you should not place undue reliance on these forward-looking statements.*

## Mission

To become a leading biopharmaceutical company, utilising our TPM<sup>®</sup> delivery technology to develop innovative therapeutics that address unmet medical needs and enhance patients' quality of life.



## A snapshot of Phosphagenics



- **TPM<sup>®</sup>** is a proprietary solubilisation / drug delivery technology combining multiple forms of Vitamin E (protected by **15+ patent Families**)
- Result of 15+ years R&D and over **\$100M investment**

- Pipeline of **TPM<sup>®</sup> injectables** with enhanced usability characteristics
- TPM<sup>®</sup> patch & gel products with enhanced delivery characteristics
- Additional products targeting **lucrative markets** beyond Human Health



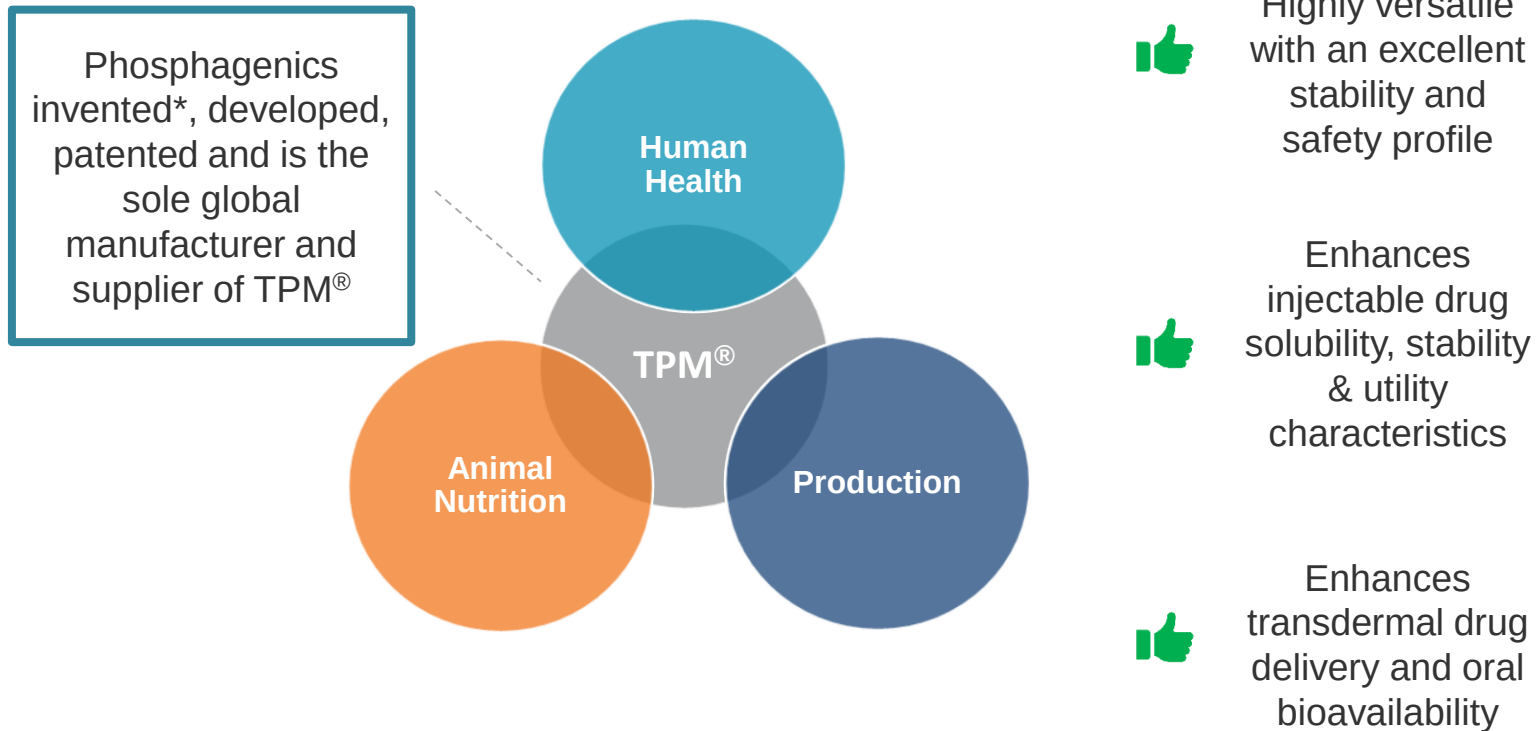
- **\$5.4M cash** (18 Jan'18), **no debt** and **\$100M+ tax losses**
- **Recurring annual revenues** (from manufacturing): \$1M+/year
- Benefit of Australia's R&D incentive (**43% rebate**) for applicable R&D
- **Potential upside** from international arbitration with decision expected 1H 2018 (claims lodged of ~US\$300M)

- **Experienced** international management team and Board of Directors
- Global **partnerships** providing additional funding and expertise



## TPM® is core to Phosphagenics' portfolio

Phosphagenics leverages TPM®'s unique properties, data and broad patent portfolio across multiple lucrative markets





## ***Injectable Portfolio***

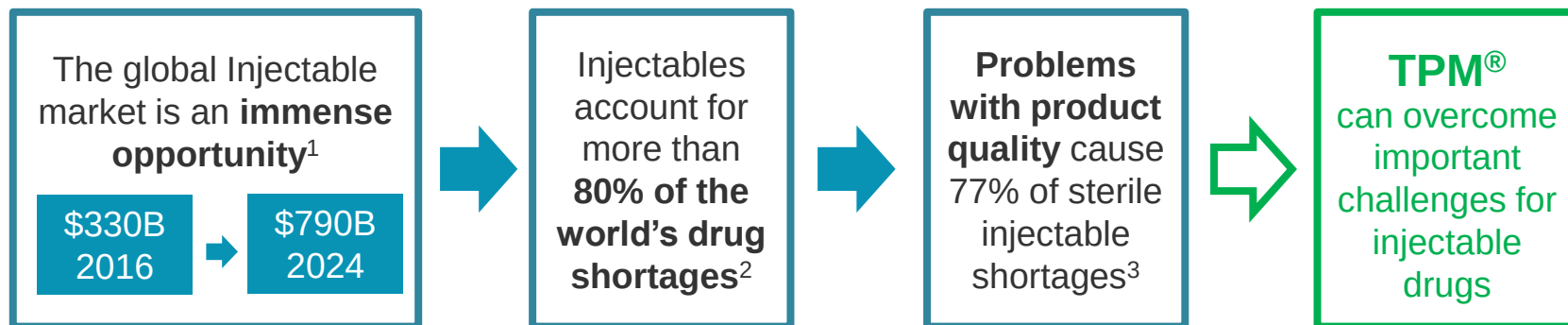
*Pain Portfolio*

*Animal Health*

*Personal Care*



# Phosphagenics has a strong Human Health “Injectable” portfolio strengthened by the benefit of global partnerships



| Product             | TPM Advantage                    | Territory | Partner                                                                                              | Research                                                                              | Development | Marketed |
|---------------------|----------------------------------|-----------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|----------|
| Injectable Products |                                  |           |                                                                                                      |                                                                                       |             |          |
| Daptomycin          | Reconstitution speed & Stability | Global    |  <b>Mylan®</b>    |    |             |          |
| Propofol            | Clarity & Excipient toxicity     | Global    |  <b>TERUMO®</b> |  |             |          |
| Other Products*     | Multiple benefits                | Global    | Available                                                                                            |  |             |          |

 Partnered

 Yet to Partner

\* Not yet publicly disclosed

1 [www.researchandmarkets.com](http://www.researchandmarkets.com); "Global Injectable Drug Delivery Market Analysis, Companies Profiles, Size, Share, Growth, Trends and Forecast to 2024"

2 IMS Study Reveals Drug Shortages in U.S. Disruptive Yet Narrowly Concentrated, IMS Institute for Healthcare Informatics, Nov. 14, 2011

3 [www.ncsl.org/research/health/drug-shortages-preserving-the-drug-supply.aspx](http://www.ncsl.org/research/health/drug-shortages-preserving-the-drug-supply.aspx)

# TPM<sup>®</sup> can overcome key challenges for injectable drugs



## CHALLENGES



## “TPM<sup>®</sup> targets”

### Manufacturing

- Solubilisation needs complex, toxic or allergenic excipients
- Unstable formulation needs lyophilisation
- Drug is too unstable to be an injectable

- A **safer** and more natural excipient
- **Improve stability** reducing need to lyophilise
- Allows previously unsuitable drugs to be **injectable**

### Supply Chain

- ‘Cold chain’ needed to maintain stability
- Reconstitution of lyophilised powders is difficult, incomplete or time consuming

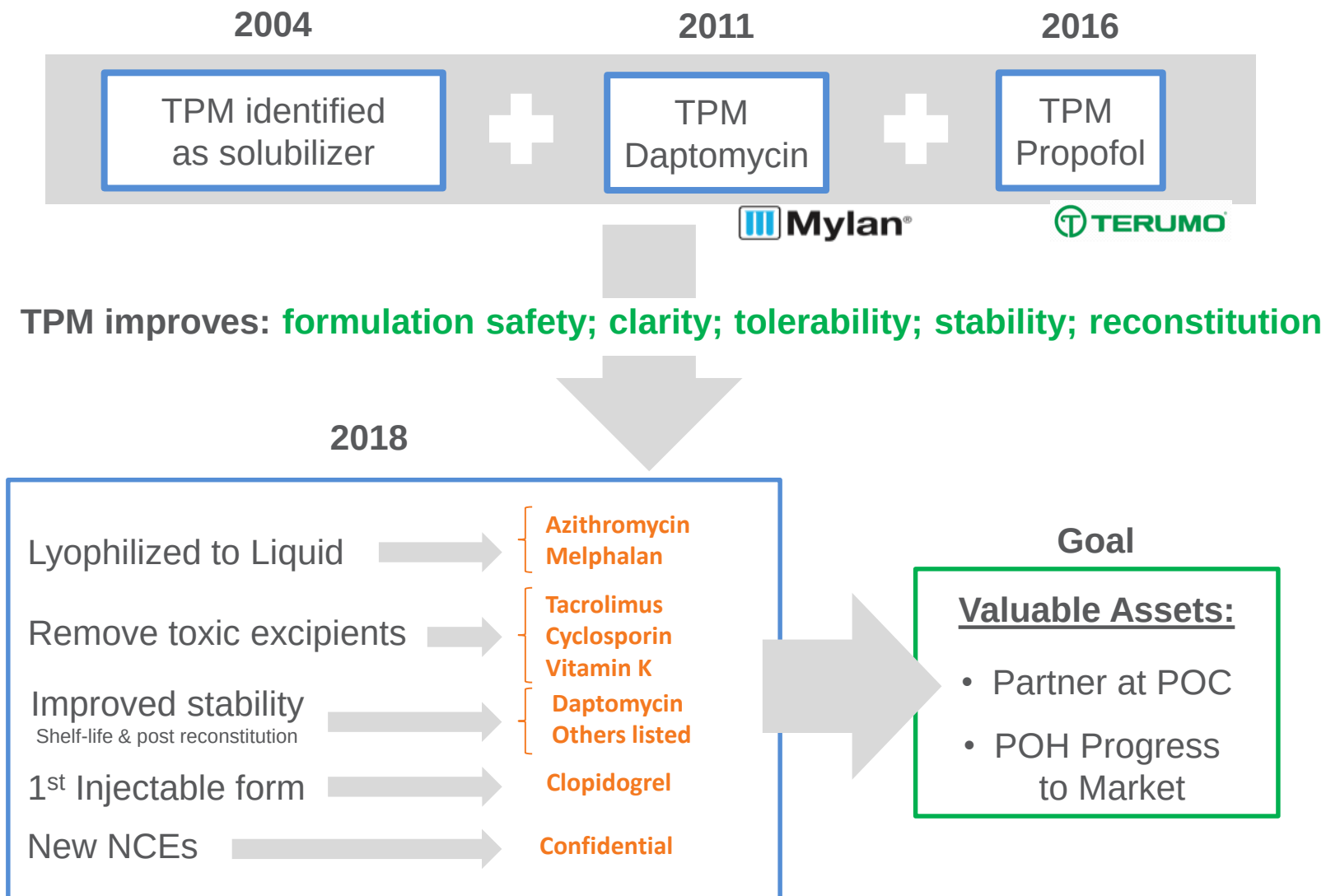
- **Reduce ‘cold chain’** by improving RT\* stability
- **Speed up reconstitution** of lyophilised drugs

### Clinical Use

- Excipients are allergenic or toxic to certain patients (black box warning)
- Lack of stability post reconstitution - limited to single use only
- Unmet medical need caused by inability to make an injectable formulation

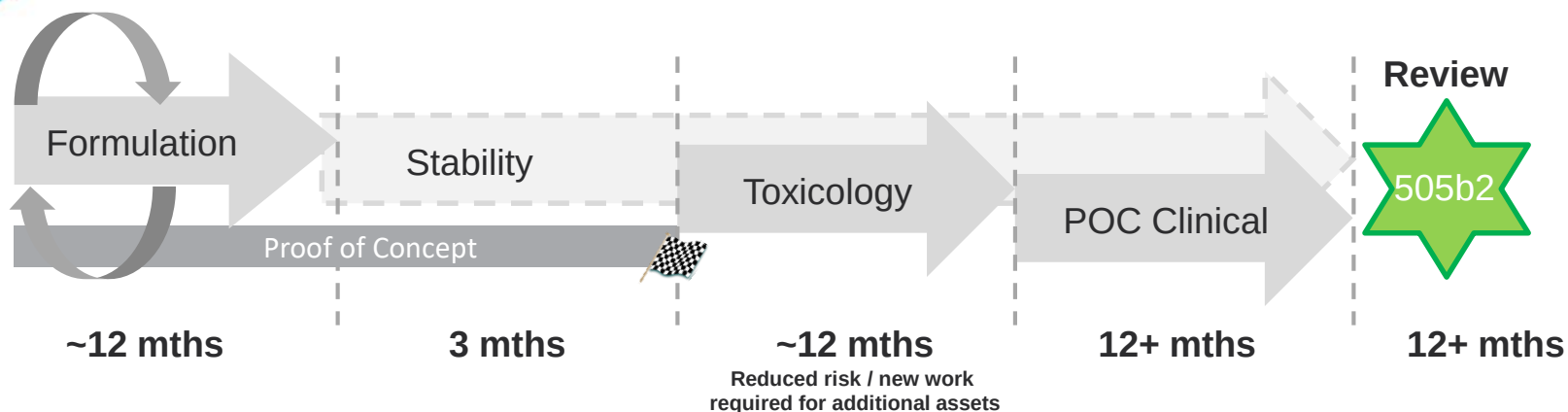
- **Replace problem** excipients
- **Increase stability** of reconstituted drugs – potentially allowing multi-use products
- **Enable injectable formulation** of previously unsuitable drugs to address unmet medical need

# Phosphagenics has a strong Human Health “Injectable” portfolio strengthened by the benefit of global partnerships

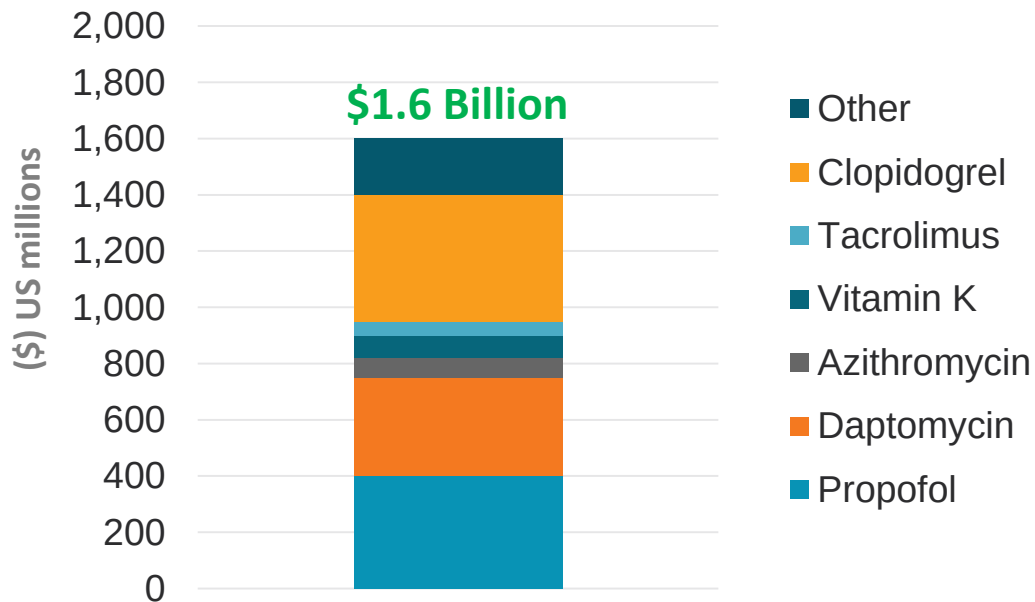




## “Injectable” assets are quick to develop and profitable



### Estimated 2030 US Market potential for Current TPM/Injectable Pipeline

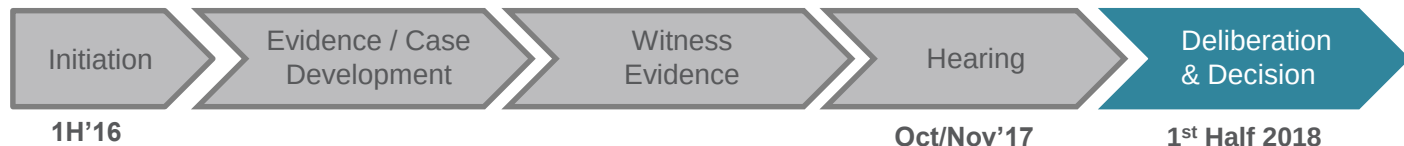


#### TPM COGS allows:

- improved / reformulated 505b2 products at Generic pricing
- Competitive pricing that capturing large volume / market share

# Phosphagenics' arbitration with Mylan

- 2011/12:** Signed agreements with Agila Specialties Private Ltd to develop and market Phosphagenics' TPM<sup>®</sup>/Daptomycin injectable
- 2013:** Strides Shasun (STR:IN NATL INDIA) sold Agila to Mylan (MYL (NASDAQ, TASE)) for ~US\$1.4B
- 2016:** Phosphagenics filed arbitration in Singapore asserting Agila and Mylan breached agreements (multiple claims and causes of action)
- Hearing:** **Completed** Nov' 2017 Phosphagenics represented by Mr J Rowlands and Corrs Chambers Westgarth (voted #1 law firm in Australia & APAC by The Legal 500)



- Decision:** **Expected 1H 2018** (exact timing at the discretion of the Arbitrator)
- Licensing Agreement continues in full force, (pending the Arbitrator's decision)
  - Settlement discussions can occur in parallel

**Damages:** Maximum total damages could approach **US\$300M\***

\*Phosphagenics' independent experts opinion if successful on all claims and causes of action, aggregate of all claims, recognising a probability of success from zero to maximum calculated by the experts

## Board of Directors recommends shareholder return\*

If Phosphagenics is successful and receives a material payment from Mylan, the Board intends to recommend a return of capital\* (after costs):

### Calculation:

30%  
of net cash  
proceeds up to  
\$50M

+

50%  
of net cash  
proceeds  
between  
\$50M - \$100M

+

70%  
of net cash  
proceeds  
greater than  
\$100M

### Illustrative Example

| Net Award*<br>Aus\$ | Return to<br>Shareholders* | Shareholder Return<br>Per 1% Held # |
|---------------------|----------------------------|-------------------------------------|
| \$30M               | \$9M                       | \$90,000                            |
| \$60M               | \$20M                      | \$200,000                           |
| or \$120M           | \$54M                      | \$540,000                           |

\* Actual amount and timing of shareholders return will be dependent on (i) financial position of the company at the time of decision, (ii) Actual Cash Award received by POH less estimated costs, (iii) number of shares on issue and (iv) Board and shareholder approval



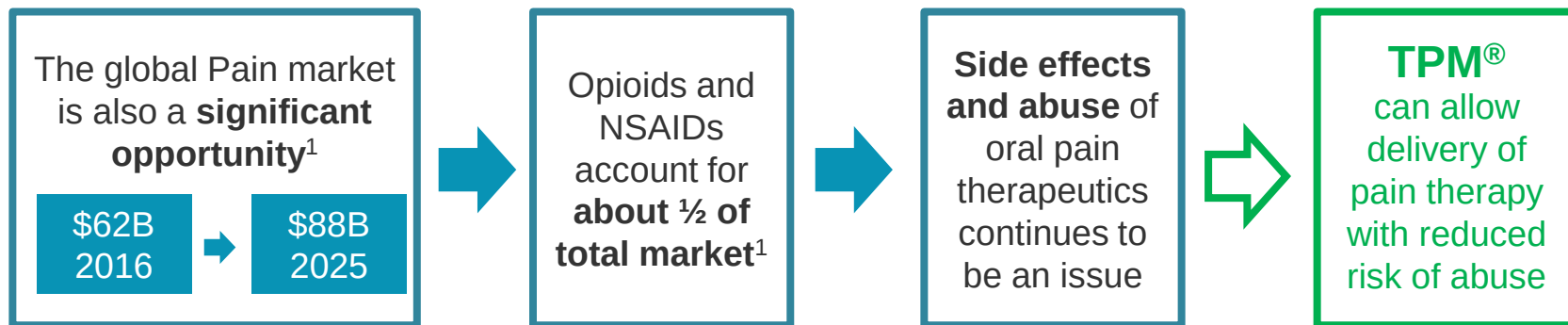
*Injectable Portfolio*

***Pain Portfolio***

*Animal Health*

*Personal Care*

# Phosphagenics has a strong Human Health “Pain Product” portfolio strengthened by the benefit of global partnerships



| Product                                                                                  | TPM Advantage                                | Territory    | Partner                                                                                             | Research                                                                              | Development | Marketed |
|------------------------------------------------------------------------------------------|----------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|----------|
| <b>Pain Products</b>                                                                     |                                              |              |                                                                                                     |                                                                                       |             |          |
| Diclofenac Gel                                                                           | Enhanced delivery                            | India        |  <b>NOVARTIS</b> |    |             |          |
| Diclofenac Gel                                                                           | Enhanced delivery                            | 16 countries |                  |    |             |          |
| Oxycodone Patch                                                                          | Transdermal Delivery & reduced abusability** | Global       | Available                                                                                           |   |             |          |
| Oxymorphone Patch                                                                        | Transdermal Delivery & reduced abusability** | Global       | Available                                                                                           |  |             |          |
| Additional Products<br>ie: {<br>Lidocaine gel<br>ropivacaine gel<br>others not disclosed | Enhanced delivery & other                    | Global       | Available                                                                                           |  |             |          |





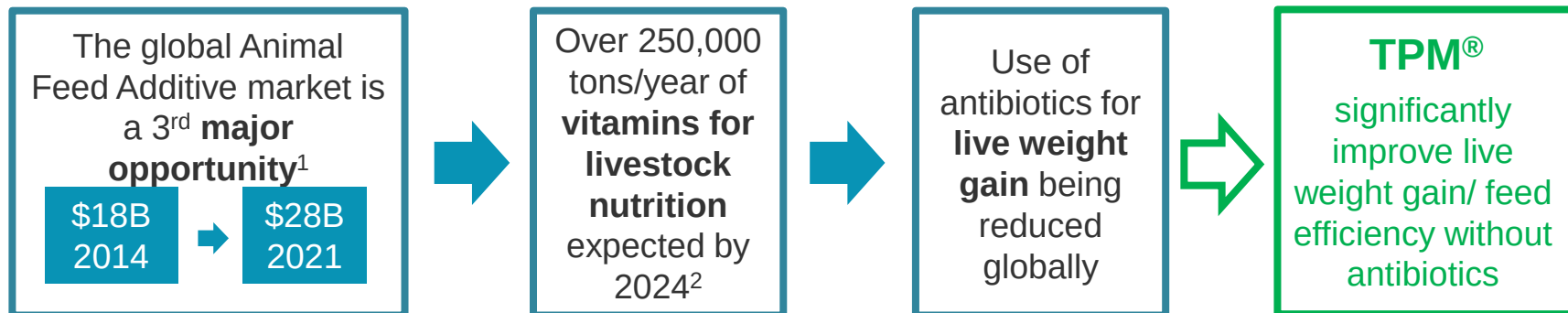
*Injectable Portfolio*

*Pain Portfolio*

***Animal Health***

*Personal Care*

# Phosphagenics has a strong “Animal Health” portfolio driven by recent strong trial data



| Product                                       | TPM Advantage                                                              | Territory | Partner   | Research | Development | Marketed |
|-----------------------------------------------|----------------------------------------------------------------------------|-----------|-----------|----------|-------------|----------|
| <b>Animal Health &amp; Nutrition Products</b> |                                                                            |           |           |          |             |          |
| Pig, Poultry, Feed efficiency                 | 3%+ increase in Feed Efficiency                                            | Global    | Available | →        |             |          |
| Cattle mastitis & fertility                   | Positive data as drench treatment, more work needed as an in-feed additive | Global    | Available | →        |             |          |

■ Partnered

□ Yet to Partner



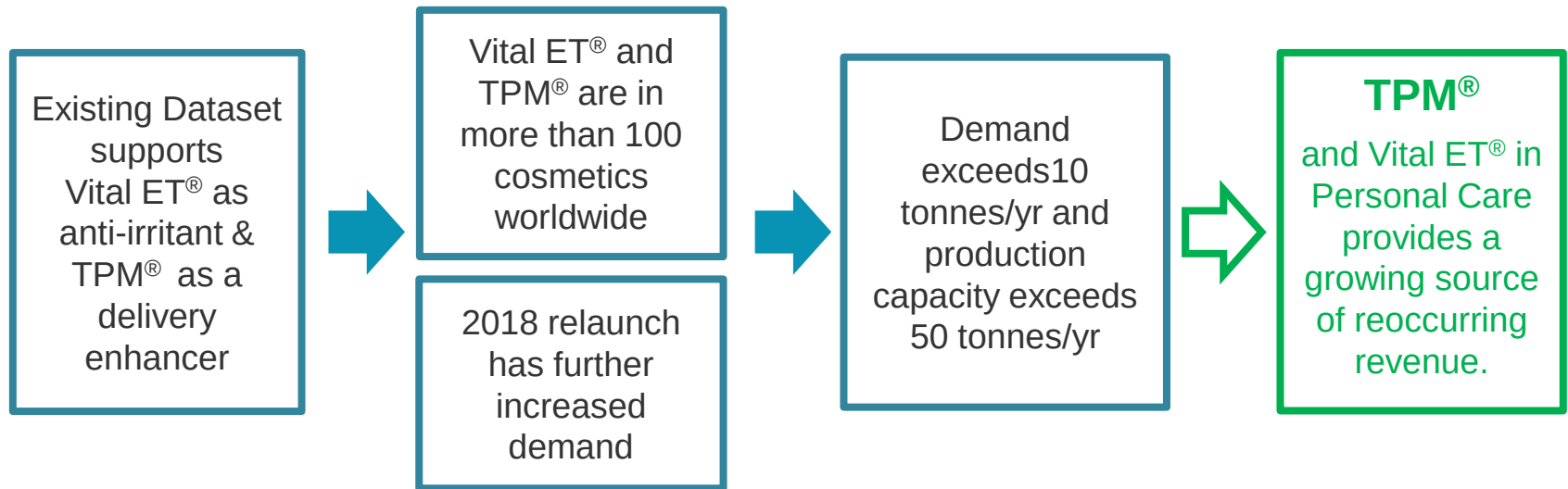
*Injectable Portfolio*

*Pain Portfolio*

*Animal Health*

***Personal Care***

# Phosphagenics' “Personal Care” portfolio has multiple partnerships generating growing recurring revenues



| Product                   | Territory | Partner                                                      | Research        | Development | Marketed |
|---------------------------|-----------|--------------------------------------------------------------|-----------------|-------------|----------|
| <b>Personal Care</b>      |           |                                                              |                 |             |          |
| Vital ET® (100+ Products) | Global    | <b>ASHLAND</b>                                               | Partnership bar |             |          |
| TPM® Based Products       | Global    | LE MËTIER DE BEAUTÉ<br>Pure Beauty Australia<br>RODAN+FIELDS | Partnership bar |             |          |

Partnership bar

Partnership bar (Non-exclusive). Available for additional Non-exclusive partners.

# We have delivered consistent substantial news flow and target valuable newsflow over the next 12 months

**2H 2016**

|                                                         |               |                 |
|---------------------------------------------------------|---------------|-----------------|
| Patch options (2) and R&D Alliance deal (3) with Terumo | Human Health  | <b>Complete</b> |
| R&D Agreement for new projects with Terumo.             | Human Health  | <b>Complete</b> |
| ProPhase Arbitration Decision                           | Personal Care | <b>Complete</b> |

**1H 2017**

|                                                        |               |                 |
|--------------------------------------------------------|---------------|-----------------|
| Commercial reformulation of TPM®/Oxymorphone Patch     | Human Health  | <b>Complete</b> |
| Successful Results for Swine Feed Efficiency Program   | Animal Health | <b>Complete</b> |
| Successful results for Poultry Feed Efficiency Program | Animal Health | <b>Complete</b> |

**2H 2017/**

**1H 2018**

|                                                      |               |                          |
|------------------------------------------------------|---------------|--------------------------|
| Sale of BioElixia® brand                             | Personal Care | <b>Completed Aug '17</b> |
| Terumo Agreement signed for "TPM®/Oxymorphone Patch" | Human Health  | <b>Completed Aug '17</b> |
| Credit Pharma Term Sheet for "TPM®/Diclofenac Gel"   | Human Health  | <b>Completed Sep '17</b> |
| Rights Issue raised over \$3.3M (+\$1.3M Jan'18)     | Corporate     | <b>Completed Oct '17</b> |
| Mylan Arbitration Formal Hearing                     | Human Health  | <b>Completed Nov '17</b> |
| Results of Dairy Cattle Feed additive program        | Animal Health | <b>Completed Dec '17</b> |
| Initial TPM® Injectable Candidate enter development  | Human Health  | On track 1H '18          |
| Outcome of Mylan Arbitration                         | Human Health  | Targeted 1H '18          |

# Phosphagenics is a exciting investment opportunity



**Validated TPM® Technology** exploited through three businesses

- Portfolio including “world first” transdermal opioid patches, gels & injectables



**Multiple Commercialised Products** and consistent annual revenues from partnerships and sales of TPM® & Vital ET®



**Strong Track record** of delivering milestones with significant value-adding milestones targeted over the next 12 months



**Attractive valuation:** Share price/value disparity. Substantial upside potential and potential capital return from any net cash received from Mylan Arbitration



**Experienced Management / Board** with strong track record of success



**Strong Financials** A\$5.4M cash (18 Jan'18); No Debt; Tax losses >A\$100M

# Experienced Management & Board with strong track record of success

**Greg Collier, Chairman & Independent Director**

- 20+ yrs experience; current CEO Invion (ASX: IVX)
- Previous: CEO of ChemGenex (sold to Cephalon for \$200M+)
- 150 peer reviewed publications, 33 patents, Roche Award for Excellence

**Anna Legg, CFO & Company Secretary**

- 20+ yrs financial experience; joined Phosphagenics in 2013
- Experience with establishment of international entities, statutory reporting, system development and financial modeling

**Ross Murdoch, CEO & Managing Director**

- 25+ yrs experience; joined Phosphagenics in 2015
- Previous: SVP Shire Pharmaceuticals, President & COO Prana Biotechnology
- PhD in Clinical Pharmacology, University of Melbourne

**Paul Gavin, CSO**

- 15+ yrs with Phosphagenics; an inventor of the TPM<sup>®</sup> platform technology
- Responsible for all Research & Development at Phosphagenics
- PhD in Biochemistry & Molecular Biology, Monash University

**Peter Lankau, Independent Director**

- 30+ yrs experience; currently on Boards of Cipla Ltd
- Previous: Executive Chairman of Nautilus Pharmaceuticals, Chairman & CEO of Logical Therapeutics, CEO & Director of Endo, VP of Alpha

**Alex Stojanovic, VP Bus. Dev. & Commercial**

- 14 yrs experience; joined Phosphagenics in 2014
- Previous: Sr Director of Grunenthal, Strategy Consultant of ZS Associates
- PhD in Pharmacology & Toxicology, Dartmouth College

**David Segal, Non-Independent Director**

- 30+ yrs experience as a stockbroker
- Shareholder of Phosphagenics since 1999 (when known as Vital Capital)
- Previous: Investor Relations manager of Phosphagenics

**Roksan Libinaki, GM Animal Health & Nutrition**

- 15+ yrs with Phosphagenics, managing R&D programs focused on improved oral bioavailability and/or efficacy of nutrients and drugs
- PhD in Biochemistry & Molecular Biology, Monash University



[www.phosphagenics.com](http://www.phosphagenics.com)

## Key Statistics:

|                         |                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ASX/OTCQX Code</b>   | POH/PPGNY (listed 2004)                                                                                                                  |
| <b>Headquarters</b>     | Melbourne, Australia                                                                                                                     |
| <b>Employees</b>        | 12                                                                                                                                       |
| <b>Shares</b>           | ~1.5 billion                                                                                                                             |
| <b>Cash</b>             | \$5.4M (18 Jan 2018)                                                                                                                     |
| <b>Revenue</b>          | ~\$1.2M (2017)                                                                                                                           |
| <b>Market Cap</b>       | ~\$20M (at \$.012/share)                                                                                                                 |
| <b>3 Business Units</b> | <ul style="list-style-type: none"><li>• Human Therapeutics</li><li>• Animal Nutrition</li><li>• Production &amp; Personal Care</li></ul> |

## Contacts

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