



# PHOSPHAGENICS

*Commercialising a platform  
delivery system: TPM<sup>®</sup>*

Investor Presentation – October 2011

Dr Esra Ogru

Chief Executive Officer

# Disclaimer

This presentation contains forward-looking statements based on current expectations of future events. If underlying assumptions prove inaccurate or unknown risks or uncertainties materialise, actual results could vary materially from Phosphagenics' expectations and projections. Risks and uncertainties include general industry conditions and competition; economic conditions, such as interest rate and currency exchange rate fluctuations; technological advances and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approvals; domestic and foreign health care reforms and governmental laws and regulations.



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# Company Overview

*Phosphagenics Ltd is an ASX-listed life sciences company in the early stages of commercializing drug delivery applications based on its novel transdermal (drugs administered via skin) TPM® - Targeted Penetration Matrix technology.*

## Board & Management

Jonathan Addison (Chairman and Independent Director)

Harry Rosen (President & Chief Executive Officer)

Dr Esra Ogru (Chief Executive Officer)

Donald Clarke (Independent Director)

Stuart James (Independent Director)

Sandra Webb (Independent Director)

## Key Statistics (as at September 2011)

ASX Code	POH
Current Share Price	16.5 cents
52 Week High / Low	19 / 9 cents
Shares on Issue	823 million
Market Capitalisation	\$135.8 million
Net Cash	\$6.3 million as of August

## Share Price Performance



## Major Shareholders

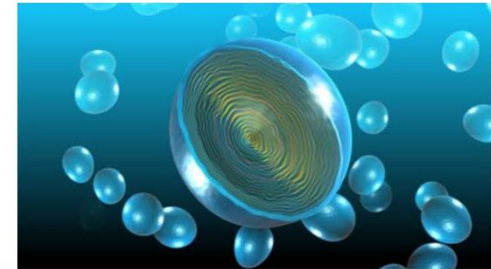
Holder Name	%
Orbis Global Equity Fund Limited	14.6
Paroha Nominees Pty Ltd	7.8
Jogra Nominees Pty Ltd	6.1
Ross Copeland	5.6
Ingalls & Snyder LLC	4.1



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# TPM<sup>®</sup> Technology

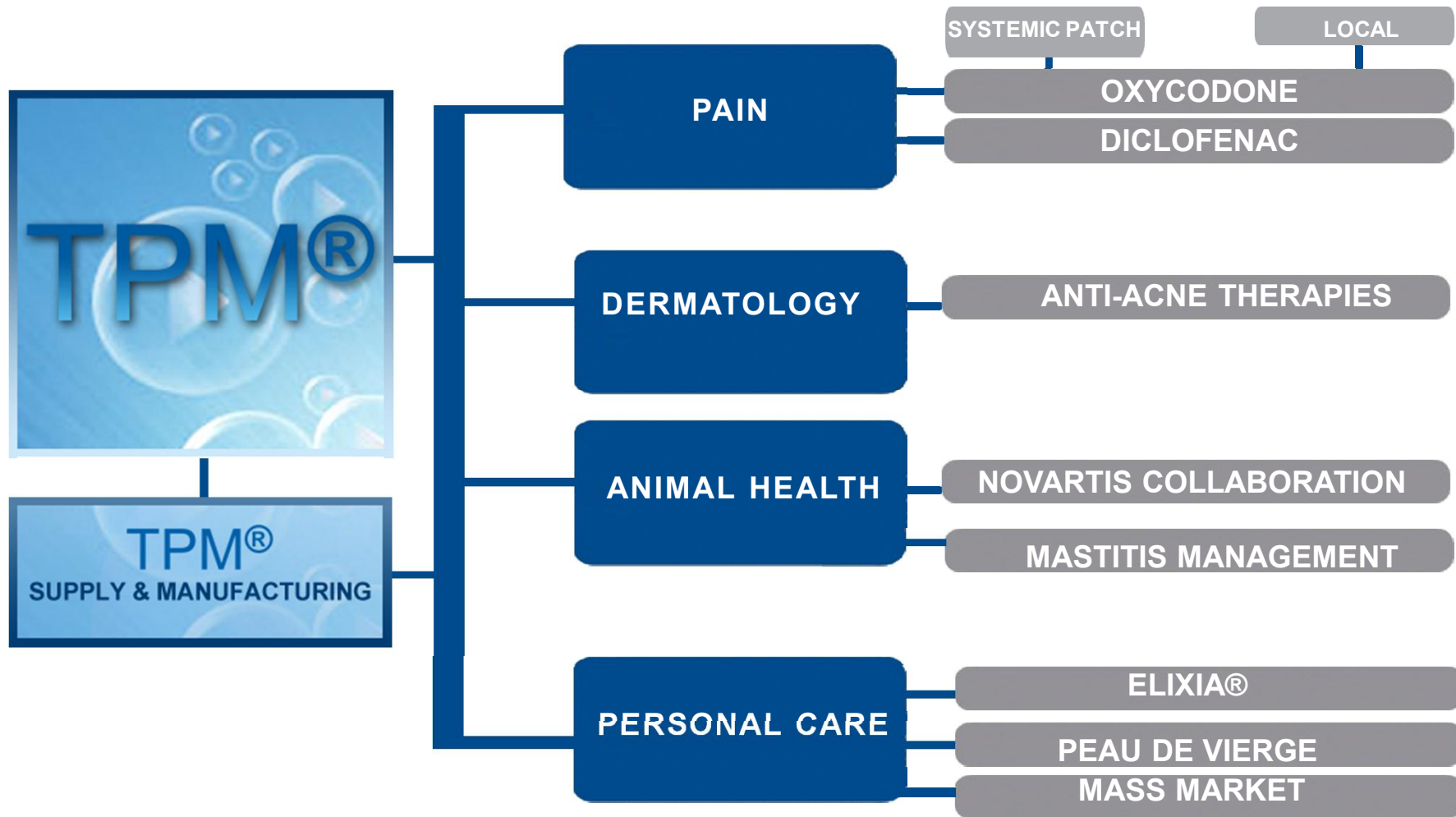
- “ Phosphagenics is a world leader in transdermal drug delivery technology: TPM<sup>®</sup>- *Targeted Penetration Matrix*
- “ A drug delivery system with applications across multiple products and markets
- “ TPM<sup>®</sup> is a unique first in class topical (localised, non-systemic) and transdermal (into the blood via the skin) drug delivery system
- “ TPM<sup>®</sup> can deliver small and large molecules
- “ TPM<sup>®</sup> is a non-invasive & non-irritant drug delivery system
- “ TPM<sup>®</sup> is comprised of two active components both derived from Vitamin E
- “ Strong intellectual patent portfolio – 23 patent families
- “ TPM<sup>®</sup> has USA GRAS status★



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★ "GRAS" is an acronym for the phrase **Generally Recognized As Safe**. Generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use

# Diverse Pipeline



# Diverse Revenue Opportunities

Revenues will be driven through various channels

“ **Partnering and licensing in drug delivery**

- . TPM/oxycodone patch
- . Diclofenac
- . Dermatology

“ **Partnering and licensing in Personal Care sector**

- . Mass-market opportunity in negotiation

“ **Personal Care product sales**

- . ELIXIA® & BioElixia™ brands launched in 2011 in Australia and Asia

“ **Manufacture and supply of TPM®**

- . Manufacturing facility in Melbourne can be readily up-scaled





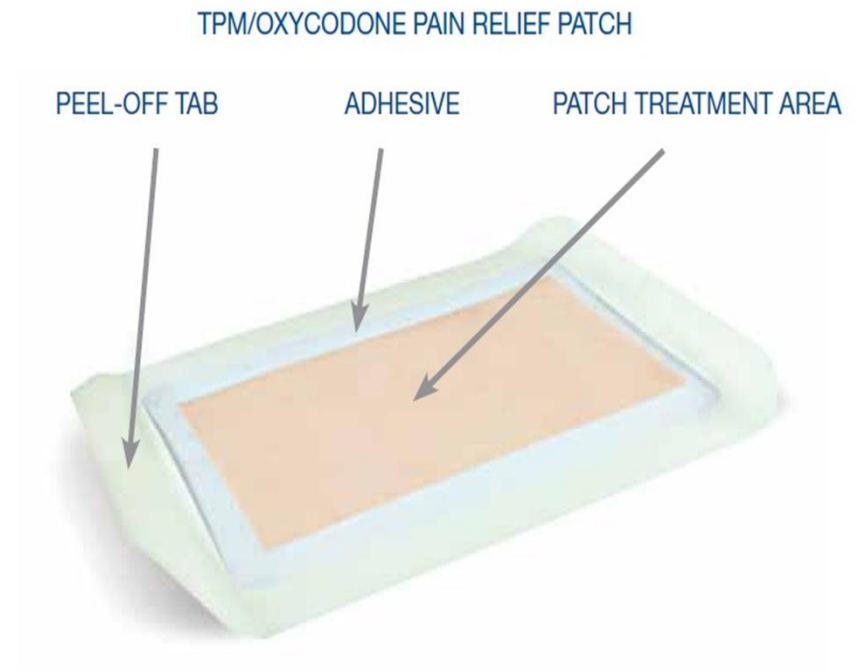
# PHARMACEUTICAL DIVISION



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# TPM/Oxycodone Patch

- “ World’s first transdermal oxycodone patch
- “ Global development partner 3M
- “ Multi-billion dollar global market
  - . Oxycodone brand sales total \$3.5 billion
  - . Oxycodone use in US has risen 866% in the last decade



**3M**



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# Problems with Oral Oxycodone

- “ Common disadvantages of existing oral oxycodone are:
  - . GI related side effects, ie. constipation, head-aches, dizziness
  - . Short duration of effect. Breakthrough pain can occur within 6-8 hours
  - . Drug tolerance develops, requiring increasing doses over time
  - . Rapid absorption creates euphoria, which is the incentive for drug abuse
  - . Oxycodone easily extracted for subsequent abuse
  - . Certain patient populations unable to swallow pills
- “ Every one of the above points are serious limitations for oral oxycodone
- “ Transdermal delivery addresses **ALL of these serious issues**



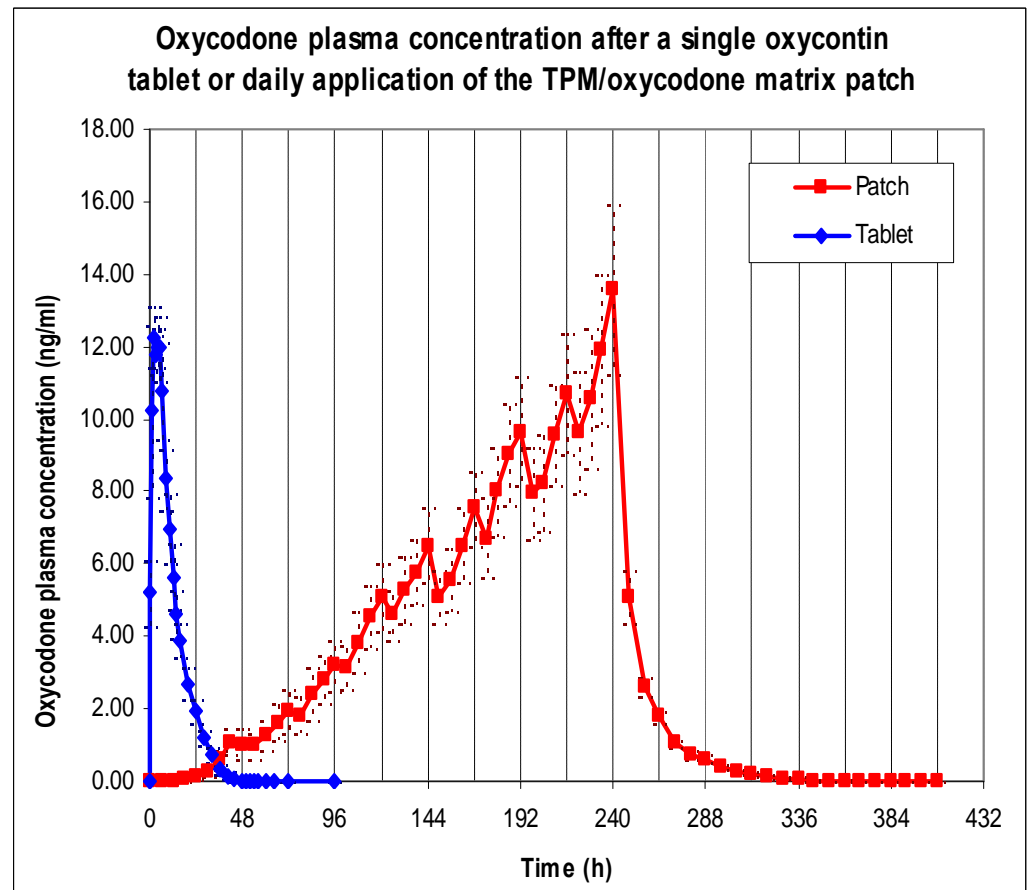
# TPM/Oxycodone Patch

- “ Advantages of the optimised TPM/oxycodone Patch
  - . Improved delivery - up to 500% increase in oxycodone delivery
  - . Steady - state reached, therefore full control of break through pain
  - . Twice weekly patch system compared to twice daily oral
  - . Longer duration of action - less frequency of dosing
  - . Controlled release - no euphoria
  - . Controlled release – reduced onset of tolerance
  - . No GI related side-effects, ie constipation, head-aches, dizziness
  - . Less abuse-able than oral tablet form
  - . Clinician preferred
  - . Improved patient compliance



# Successful Clinical Trials

- “ Initial patch tested in 100 subjects
- “ Daily patch application
- “ Non-invasive delivery
- “ Safe and easy to use
- “ Reproducible and reliable
- “ Favourable delivery profile versus oral tablet



**Phase I trial 200mg patch applied once daily**



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# Successful Collaboration with 3M

- “ Stage 1 completed May 2011
  - . Technical transfer to 3M and patch optimisation
  - . Twice weekly patch
- “ Stage 2 completed September 2011
  - . Scale up in Minneapolis at 3M facilities
  - . Preparation of clinical trial material
- “ Pivotal trials scheduled to start in November 2011



# TPM/Oxycodone Clinical Trial Plans

- “ International clinical and regulatory advisory group appointed
- “ Pivotal trials scheduled to start in November 2011
  - . Pharmacokinetic profiling study followed by a multi-site Phase 3 trial. POH will undertake an accelerated development program since there will be no need to conduct Phase 2 program.
  - . Trials to commence in Australia and expand into the US and Asia in 2012
- “ Trials to be conducted throughout 2012
  - . Product registration to commence in 2013
  - . US FDA 505 B2 – “**old drug new tricks**”  
Oxycodone is a well established and understood drug. POH will be required to conduct safety studies to demonstrate that the deliver of oxycodone in combination with TPM<sup>®</sup> through the skin is safe.



# Physicians Survey

- “ Survey conducted with 60 US physicians
  - . Divided between 3 segments; GP, oncology and pain specialists
  - . Overwhelming support for market uptake of oxycodone patch
  - . Overwhelming support for a twice weekly patch
  - . Potential market for twice weekly oxycodone patch exceeds \$1.1 Billion



# Other TPM<sup>®</sup> Delivery Projects

- “ Creating value by leveraging TPM<sup>®</sup> technology and products across diverse markets
- “ Create global strategic alliance in the field of anti-acne therapy, topical Diclofenac (NSAID), animal health products and large molecule delivery (ie Insulin)
- “ Our partnerships provide:
  - . Synergistic path to value
  - . Credibility
  - . Financial and technical support
  - . Reduce risk through diversification
  - . Provide commercialisation pathway

The logo for CSL, featuring the letters 'CSL' in a bold, red, sans-serif font with a small 'TM' trademark symbol to the upper right.The logo for Novartis Animal Health, featuring a stylized blue and orange flame-like icon to the left of the word 'NOVARTIS' in blue, with 'ANIMAL HEALTH' in a smaller blue font below it.The logo for ProPhase Labs, featuring a blue water droplet icon to the left of the word 'ProPhase' in green, with 'LABS' in blue below it.



# PERSONAL CARE DIVISION



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# Revenue Generating Cosmeceuticals

- “ TPM® technology underpins emerging range of Personal Care products and licensing deals
- “ Anti-aging and anti-cellulite products are current focus, other products in the pipeline
- “ Three-pronged strategy to grow revenue
  - License TPM® to high-end global cosmetic brands such as Le Métier
  - Develop mid-market wholly-owned brands ELIXIA® & BioElixia™
  - Seek licensing / partnership with global player in mass-market sector
- “ In 2010, the global sales for anti-aging and anti-cellulite cosmeceutical products were +USD20 billion



ELIXIA®



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# ELIXIA®

- “ ELIXIA® launched in Australia May 2011:
  - . \$2m sales achieved to-date
- “ *BioElixia*™ to launch in Asia October 2011:
  - . Distribution with A.S. Watson Group; +7,000 stores in Asia
  - . Rapid store rollout in China

**A.S. Watson Group**  
A Hutchison Whampoa Company

**MYER**

 **pulse**  
PHARMACY

 **TerryWhite** chemists®

 **TVSN**  
TV Shopping Network

 **priceline**  
beauty health wellbeing

 **VITAMINME**



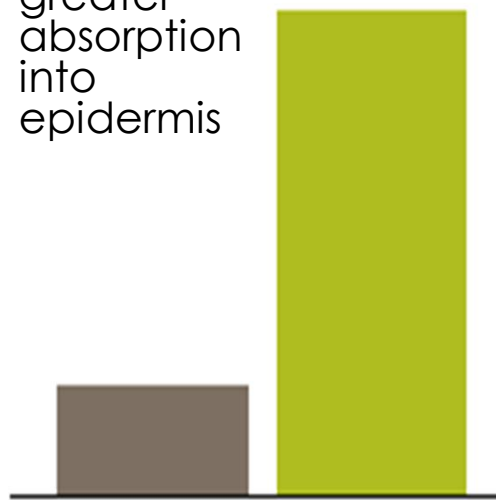
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### Vitamin A

Retinol is an antioxidant that increases collagen production and enhances skin's barrier function.

**4x**

greater absorption into epidermis



Retin-A  
20,000ug

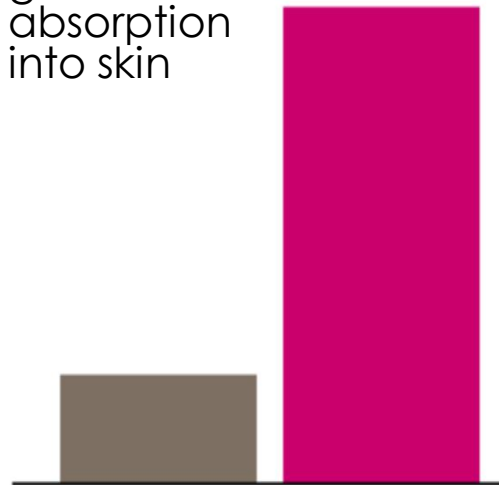
Vitamin A + TPM  
95,000ug

### CoEnzyme Q10

An antioxidant that occurs naturally in the body and helps to protect cells from free radical damage.

**4x**

greater absorption into skin



Nivea Visage  
500ug

CoQ10 + TPM  
2000ug

### Carnosine

A potent, naturally occurring anti-ageing antioxidant that inhibits AGE's and the cross linking of collagen.

**3x**

greater absorption into dermis



Carnosine without TPM

Carnosine + TPM



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# ELIXIA®

Featured on TodayTonight, A Current Affair & TVSN



## BodyShaper Cellulite Contour Crème® (150ml)

A revolutionary product containing a unique "Active Peptide Complex" that is scientifically proven to reduce the size of fat cells, plus a concentrated blend of antioxidants and patented TPM® technology for firmer, tighter looking skin.

### Key Ingredients: Tricellite Active® complex

- “ AOP9604 – patented anti-fat peptide
- “ Caffeine – slimming
- “ Forskolin – used in body building for muscle shaping and tone



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# VALUE DRIVERS



# Value Drivers

- “ Multiple value drivers at play – Pharmaceutical and Personal Care business
  - . License TPM/oxycodone patch following completion of Phase 3 for chronic pain
  - . License TPM/oxycodone gel product following completion of Phase 2 for topical application
  - . Licensing of other products, ie TPM/diclofenac topical formulation
  - . Multiple licensing and partnership arrangements within Personal Care – mass market, high-end and joint venture
  
- “ Creating value by leveraging TPM<sup>®</sup> platform into multiple market segment and creating global strategic alliances
  
- “ Positive cash flow and sales trends within Personal Care
  
- “ Manufacturing and sale of TPM<sup>®</sup> for use in drugs, Personal Care products, foods and supplements for humans and animals





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