

Polymers for Better Living<sup>™</sup>

Kevin Matthews, CEO 25<sup>th</sup> January 2018

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## Itaconix - Bio-based Specialty Chemicals Business

### Specialty Polymers; Unique Performance Ingredients

Leader in bio-based polymers based on itaconic acid using an established proprietary process with break-through economics to produce unique or enhanced product performance at a competitive price.

Target markets: Homecare, Personal Care, Industrial Wide range of performance applications. Examples include:



**Haircare** 

- Hair styling
- Frizz control
- Heat protection



<u>Dishwash</u>

- Anti-spotting
- Shine



**Laundry** 

- Bleach performance
- Hard-water management
- Malodour management



## Sustainability – The Mega Trend of Our Generation

#### **L'ORÉAL**

L'Oréal: Sustainability targets change the way products are designed

By 2020, L'Oréal is committed to improve the environmental or social profile of 100% of its new or renovated products. This means that all consumers around the world can be assured that every new L'Oréal product they buy has improved its impact on the environment and on society.

Established Itaconix Partners

### P&G



#### Our Long-Term Product End-Points

- Using 100% renewable or recycled materials for all products and packaging
- · Having zero consumer waste go to landfills
- Designing products to delight consumers while maximizing the conservation of resources

#### **CRODA**

Sustainability is the thread that connects every aspect of our Business

In 2016, we have continued to lead our industry with almost two thirds of our raw materials being derived from natural and renewable resources.



AkzoNobel, Arkema, BASF, Bayer Clariant, DSM, DuPont, Evonik, Henkel, IFF, Lanxess, Solvay, Wacker

Itaconix's bio-based polymers are aligned with this global agenda, with products ideally positioned to play a significant role in improving performance with sustainability



## Market Seeks New Performance Ingredients

### **Drivers of Change**

### **Itaconix patented products**

### Safety / Regulations

Products that are safer alternatives for humans and/or the environment

Phosphates replacement in laundry / dishwash

**Itaconix® DSP™** 

Itaconix® CHT ™

#### **Performance**

Improving consumer products
Efficient use of ingredients

Bio-based malodour products in homecare

Encapsulation of bleach in liquid laundry / dishwash

Itaconix ® ZINADOR ™

**Eureco™ RP103 (licence to Solvay)** 

### Sustainability

Consumer trend to bio-based products Products that save energy or materials

Bio-based hair styling

RevCare™ NE / HP



## **Targeted Ingredient Segments**

Product opportunities across a \$30bn market space currently addressing identified market niches worth > \$1.4bn

Target Ingredient Markets	Size of Potential Market	Products	Use
Water Soluble Polymers	\$30bn <sup>5</sup> - composed of many niches	Itaconix <sup>®</sup> ZINADOR™	Homecare & Industrial: Malodour management/Smell fresh
	Water treatment, paper, oil and gas recovery, mineral processing, detergents,	Itaconix <sup>®</sup> TSI™	Industrial mineral dispersing aid
	textiles, personal care, coatings & construction		
Chelants	Chelant market: Total= \$4.8bn <sup>1</sup>	Itaconix <sup>®</sup> DSP™,	Homecare: Hard water management (chelant) for laundry and dishwash
	<ul> <li>Household &amp; Ind cleaning: \$1bn<sup>1</sup></li> <li>MGDA (BASF) estimated at \$500M<sup>2</sup></li> </ul>	Itaconix® CHT™	
Encapsulation	Household: \$500M <sup>3</sup>	Licences (Royalty)	Homecare: Improved bleach cleaning - laundry
Hair Styling Polymers	US & EU Market: \$400M <sup>4</sup>	RevCare™ NE RevCare™ HP	Personal Care: Bio-based hair styling

Grandview Research, Feb 2016, Water Soluble Polymers Market



<sup>1.</sup> Zion Market Research; Aug 2016; Chelating agents market

<sup>2.</sup> Itaconix estimates

Grandview Research; Jan 2017; Microencapsulation Market Estimates & Trends

Kline & Company; 2016.
 5.

### **Business Model**

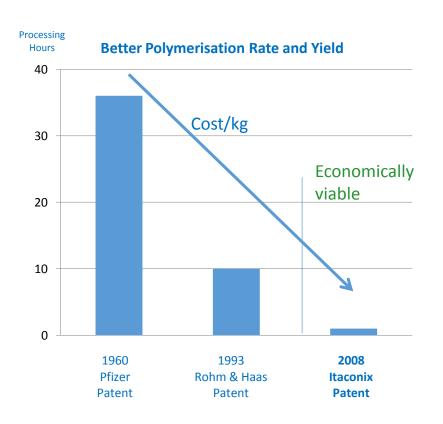
Core focus on products derived from itaconic acid using patent protected IP. Most significant challenge is scaling market access for current products and identifying niche applications where new products have a competitive advantage

- ✓ Primarily product based business, licence agreements for specific applications
- √ Value pricing based on:
  - i. Unique or enhanced Performance at a competitive Cost
  - ii. Sustainable products
- ✓ Accelerate access to global markets through partnerships
  - Croda (ZINADOR)
  - AkzoNobel (CHT/DSP)
- ✓ Access world leading application and technical know-how through partnerships
  - AkzoNobel Performance Additives
  - Solvay



## Competitive Advantage

- Unique, differentiated product performance across a platform of product formats
- Patented technology delivering breakthrough economics





Major expansion of US facility in 2017:

**Bio-based feedstock** 

#### **Efficient Production**

- · High yield; no waste, no downstream purification
- · Very low energy and labour input

**Expanded Product Line** 

Capacity available to support \$15-20M sales



### Automatic Dishwash – Itaconix® CHT<sup>TM</sup>



- Anti-spotting
- Shine

Performance Data at External test houses of Formulations containing Itaconix® CHT<sup>TM</sup>

#### US

Formulation performance comparable to market leading Cascade (P&G)

#### EU

Formulation performance comparable to market leading Somat Gold (Henkel)

### **Example: EU ADW Market opportunity**

- Most mature unit dose/pod market
- 15bn unit doses p.a.: 50% brand; 50% private label
- CHT value per pod = \$0.004
- Estimated EU CHT potential: \$60 million

### Partnership with AkzoNobel designed to

- Maximise global reach
- Increase probability of significant market share





Products containing Itaconix ingredients



### Haircare − Revcare<sup>TM</sup> NE

Hair Styling Format



Global distributor network established to address \$130M market Product line extensions targeted to expand addressable market

- Hair styling
- Frizz control
- Heat protection



Products containing Itaconix ingredients

		Polymer Spend	% Market Accessible	Value Accessible	
	Mousse	\$80M	100%	\$80M	Fully accessible
	Wax	\$40M	50%	\$20M	Aqueous based formulation
	Cream	\$30M	50%	\$15M	Some formulation constraints
	Gel	\$100M	10%	\$10M	Non-ionic rheology modifier required
	Pump Spray	\$50M	10%	\$5M	Improved ethanol solubility opens market further
	Aerosol Spray	\$140M	0%	0	Ethanol solubility & propellant required; currently inaccessible
		\$440M		\$130M	



## Partnerships driving commercial expansion

2019 and beyond 2018 milestones 2017 Chelates supply and joint Access global market via marketing agreement AkzoNobel: Chelates JDA · First sales through AN Performance Additives JDA  $\checkmark$ AkzoNobel Repeat order shipped in CRODA End customer adoptions Access global, multi-industry December Revenue growth market via Croda. Development of sales pipeline First sale of Eureco RP103 using Itaconix technology in Construction of Eureco July 2017. 🖊 RP103 plant planned by Access novel bleach market SCB in Italy via Solvay

2017 revenue build slower than anticipated, but Itaconix is now well positioned for growth



### Outlook – Poised for growth

Market alignment - Significant drivers that align with bio-based ingredients

**Specialty polymers innovator** – Winning customers and partners

- ➤ Validation of Product benefits:
  - > Unique or enhanced product performance at competitive cost
  - Sustainable products

Products launched – Revenue starts & revenue building

➤ 6 products on market, 2-3 further products to be launched in 2018

**Credible partnerships** – Working to support access to markets with Solvay, Croda and AkzoNobel Chelates

**Active new product pipeline** – Product line extensions and new products. Partner JDA's to accelerate commercialisation



# **Appendix**



## **Experienced Board**

# **Executive Directors**



Kevin Matthews (CEO)
Internationally experienced public and private company director
Experienced strategic leader with strong commercial acumen. NED at Low & Bonar Plc. Formerly CEO
Isogenica Ltd and Oxonica Plc, NED at Elementis Plc



Robin Cridland (CFO)
Experienced In Finance and M&A
20+ years of pharma/tech business
development, corporate development and
finance experience:
GSK merger, Renovo IPO,
Shire licence/investment, Revolymer IPO.
NED of Eden Research plc





Bryan Dobson
Chairman
Chairman of Applied Graphene
Materials Plc
30+ years in chemicals industry
including ICI and Croda



Julian Heslop - NED/Audit Chair Previously CFO of GlaxoSmithKline Senior finance roles at Grand Metropolitan and Imperial Brewing and Leisure



Jim Barber - NED
Previously CEO of Metabolix Inc.
Senior commercial roles within
Albermarle group and other
chemicals businesses.
Representative of Itaconix Corp.
Shareholders (pre-acquisition).



Mike Townend - NED 20+ years experience in equity capital markets including Lehman Brothers. Representative of IP Group.



## **Specialty Chemicals Market Characteristics**

### **Key Attributes**

- Small % of final product generally modest volumes
- Performance enhancing properties critical to performance of end product
- Limited price sensitivity high margin business
- Low substitution rates once designed in business is highly secure and predictable
- Product qualification required Itaconix team experienced at qualifying novel compounds

#### **Business built on**

- Quality, differentiated product (value add pricing)
- Close technical relationships

