

IMUGENE
Animal Health
Biological Products

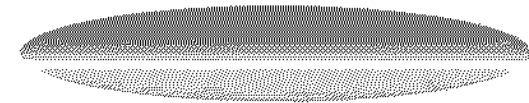
Dr Warwick Lamb

Managing Director

**CONFERENCE
PRESENTATION**

October 2004

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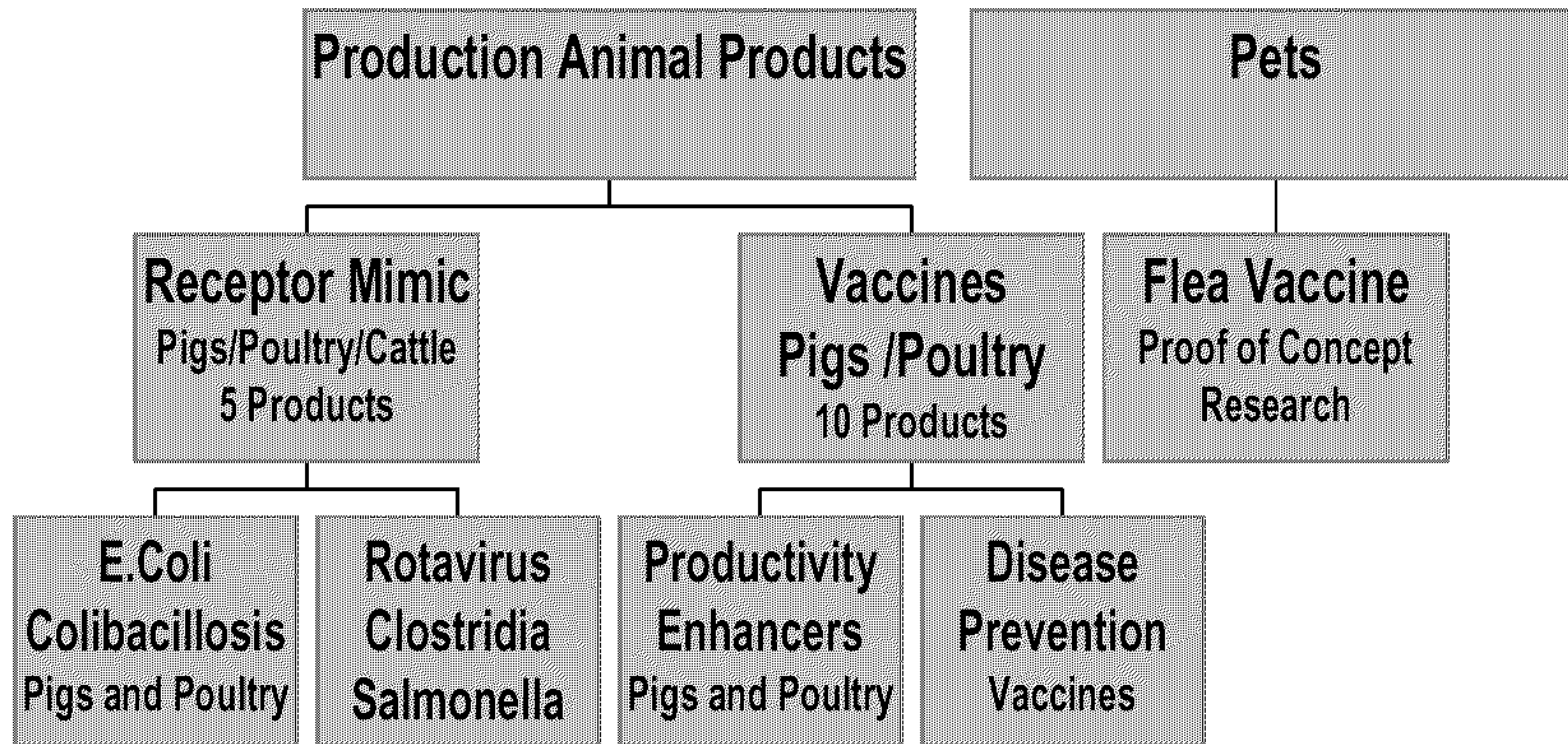
LIMITED


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A biopharmaceutical company

- **Developing & commercialising biological animal health products:**
 - Improve animal health
 - Improve productivity
 - Eliminate antibiotic and chemical food residues
 - Pig & poultry producers spend US\$4b on preventative treatments each year
 - Sick animals cause expensive production losses

BIOLOGICAL SOLUTIONS





BIOLOGICAL V CHEMICAL

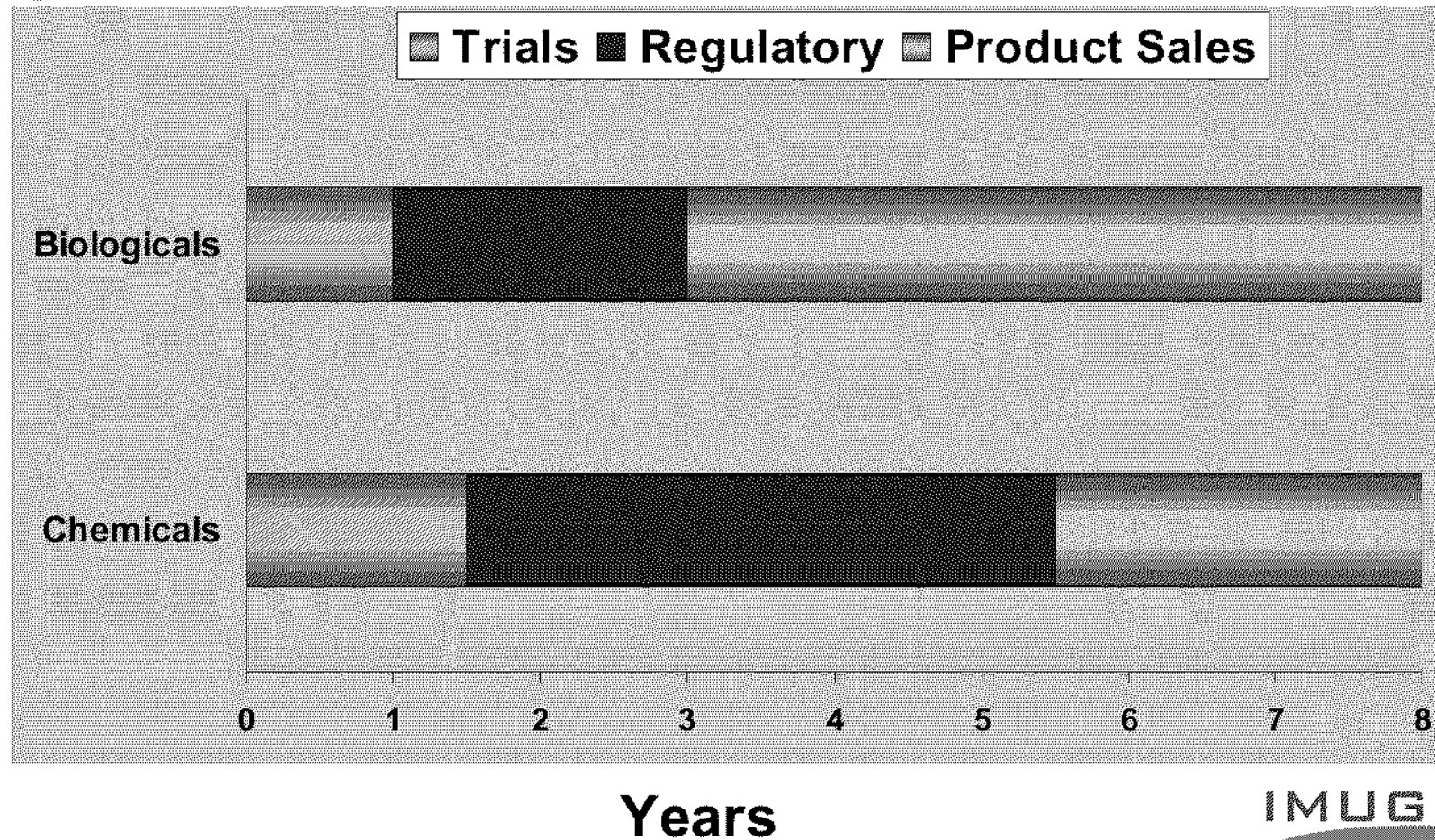
- **US Department of Agriculture - Not FDA**
 - Shorter dossier preparation and registration
- **Good future market dynamics**
 - Withdrawal of in-feed antibiotics
- **Easily adapted to standard commercial production techniques and existing manufacturing resources**

Biologicals quicker to market than chemicals or drugs

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TIME TO MARKET

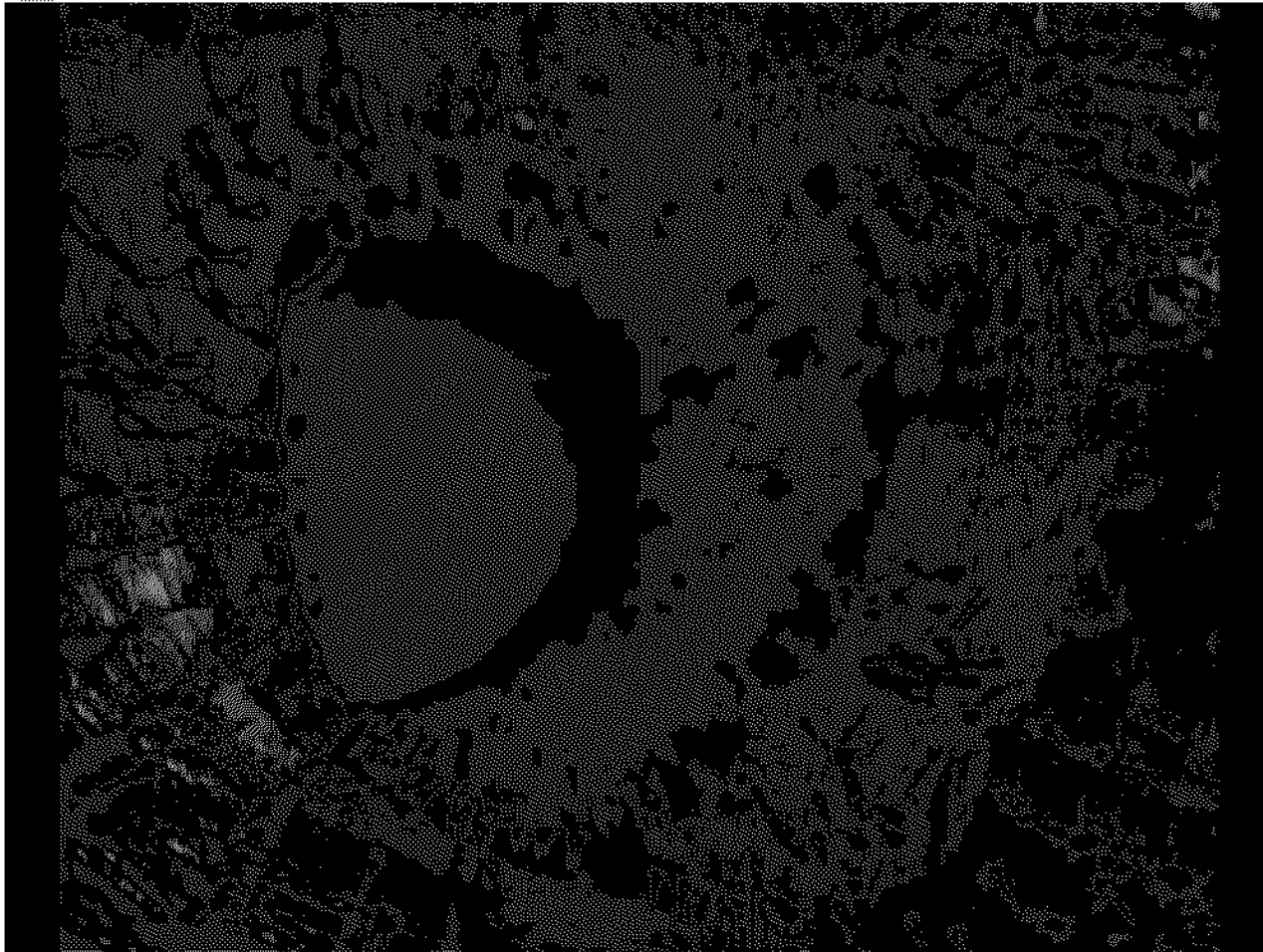


RECEPTOR MIMIC TECHNOLOGY

HOW IT WORKS

- **Bacteria, viruses and protozoa cause disease by:**
 - Producing toxins that bind to receptors on the gut wall
 - Adhering to receptors on the gut wall
- **RMT mimics these receptors**
- **Toxins or organisms bind to the RMT in the gut and are harmlessly excreted**
- **RMT prevents production loss from disease**

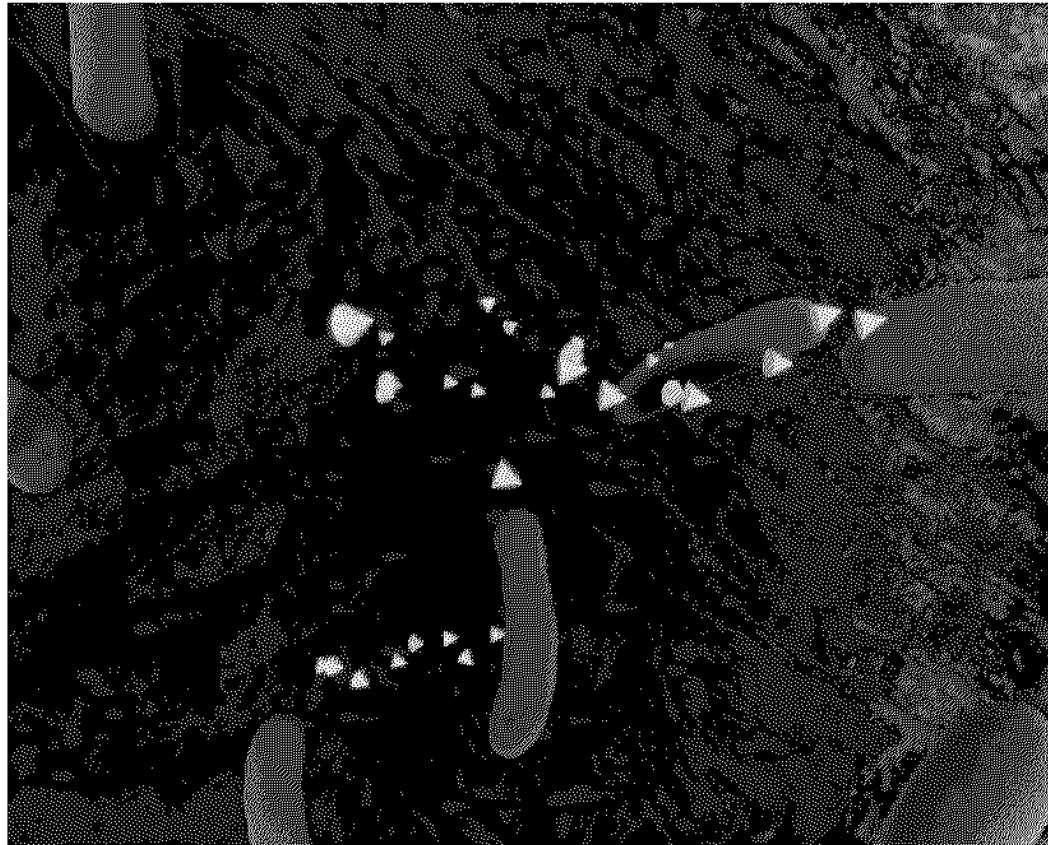
RMT – How it works



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Without RMT

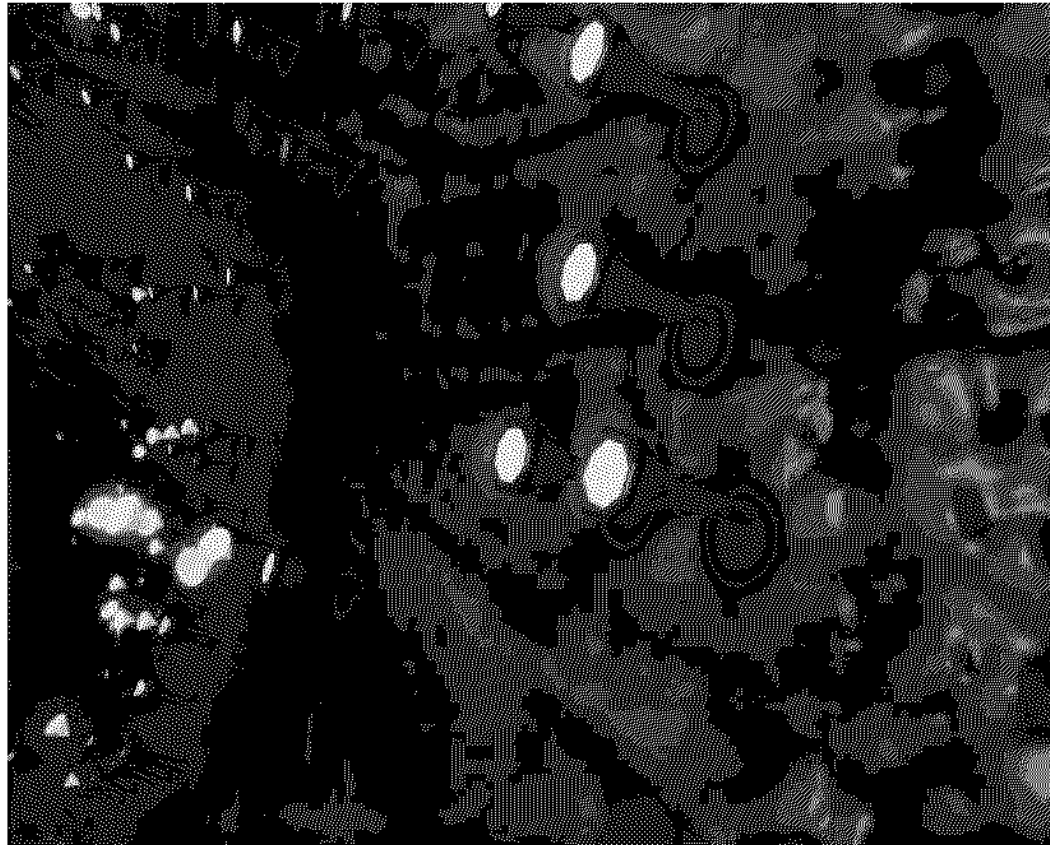
***E coli* produce toxin**



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Without RMT

Disease caused when toxin binds to gut receptors

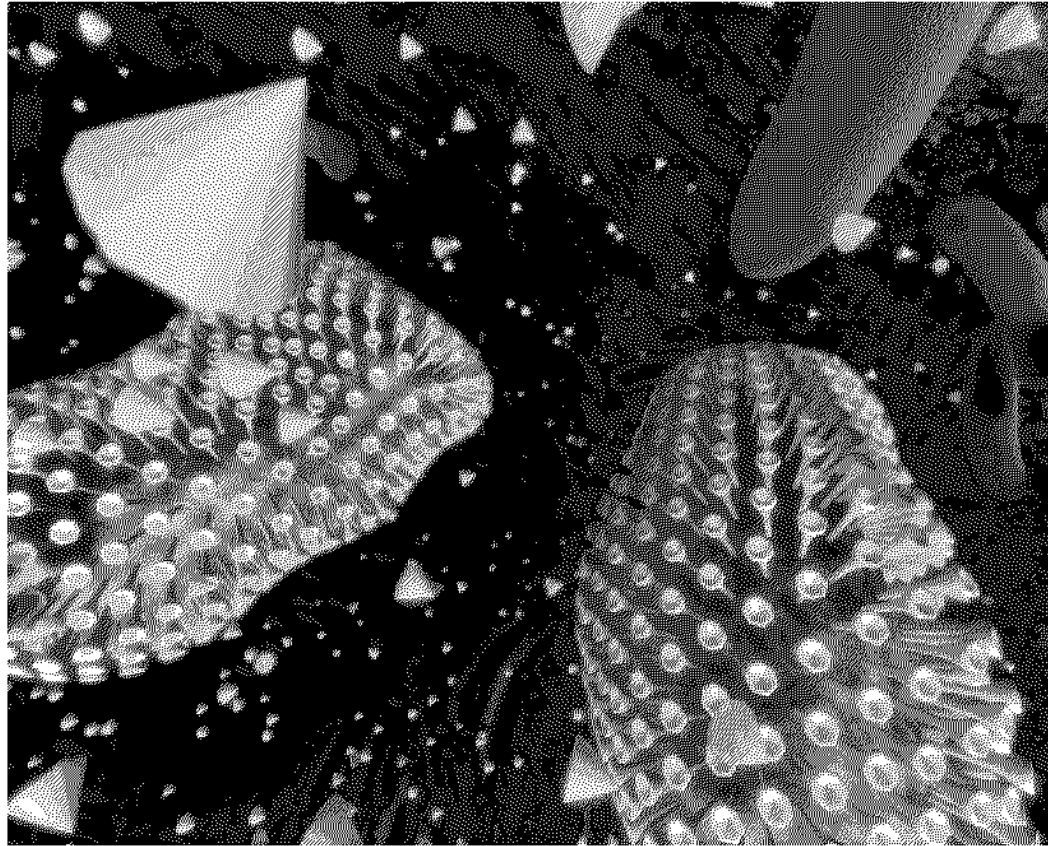



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With RMT

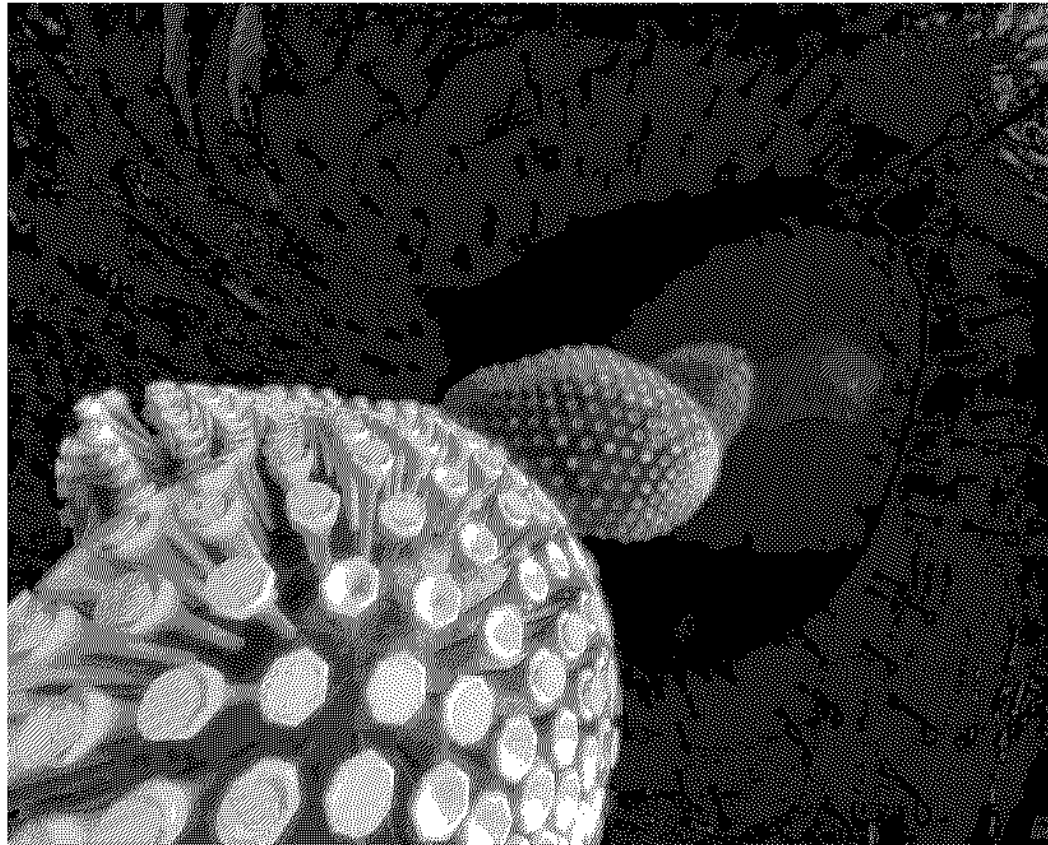
RMT display decoy receptors



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RMT Prevents the Disease

RMT bound toxin harmlessly excreted



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COMPETITIVE ADVANTAGES

- **RMT cannot contribute to antibiotic resistance**
- **RMT has no effect on beneficial bacteria**
- **Easy, cost effective manufacture**
- **More rapid to market than chemicals/drugs**
- **No side effects**

RECEPTOR MIMIC TECHNOLOGY

- **Pig pilot trial completed**
 - Clinical trials fourth quarter 2004
- **Product development commenced for:**
 - Poultry – E coli, Clostridia
 - Cattle - Clostridia
 - Pig rotavirus
- **Scale up to commercial production in TGA approved facility has commenced**
- **Contract manufacturing and distribution via established international veterinary companies**

WHY CONTRACT MANUFACTURE?

- **Maximises shareholder returns**
 - Lower capital expenditure
 - No time required for factory construction
- **TGA approved product sourced from approved contract manufacturer means regulatory process starts much earlier**
 - Most rapid path to market
 - More sales during patent life
- **Flexibility in response to market demand**

ADENOVIRAL DELIVERY VECTOR TECHNOLOGY

Patented Platform Delivery System

10 products currently under development

- **7 vaccines against pig/poultry diseases**
- **3 biological productivity enhancers**
- **Large international markets**
- **Rapid development of new products for new diseases**
 - **PRRS ('pig reproductive & respiratory disease')**
 - **Avian Influenza ('bird flu')**

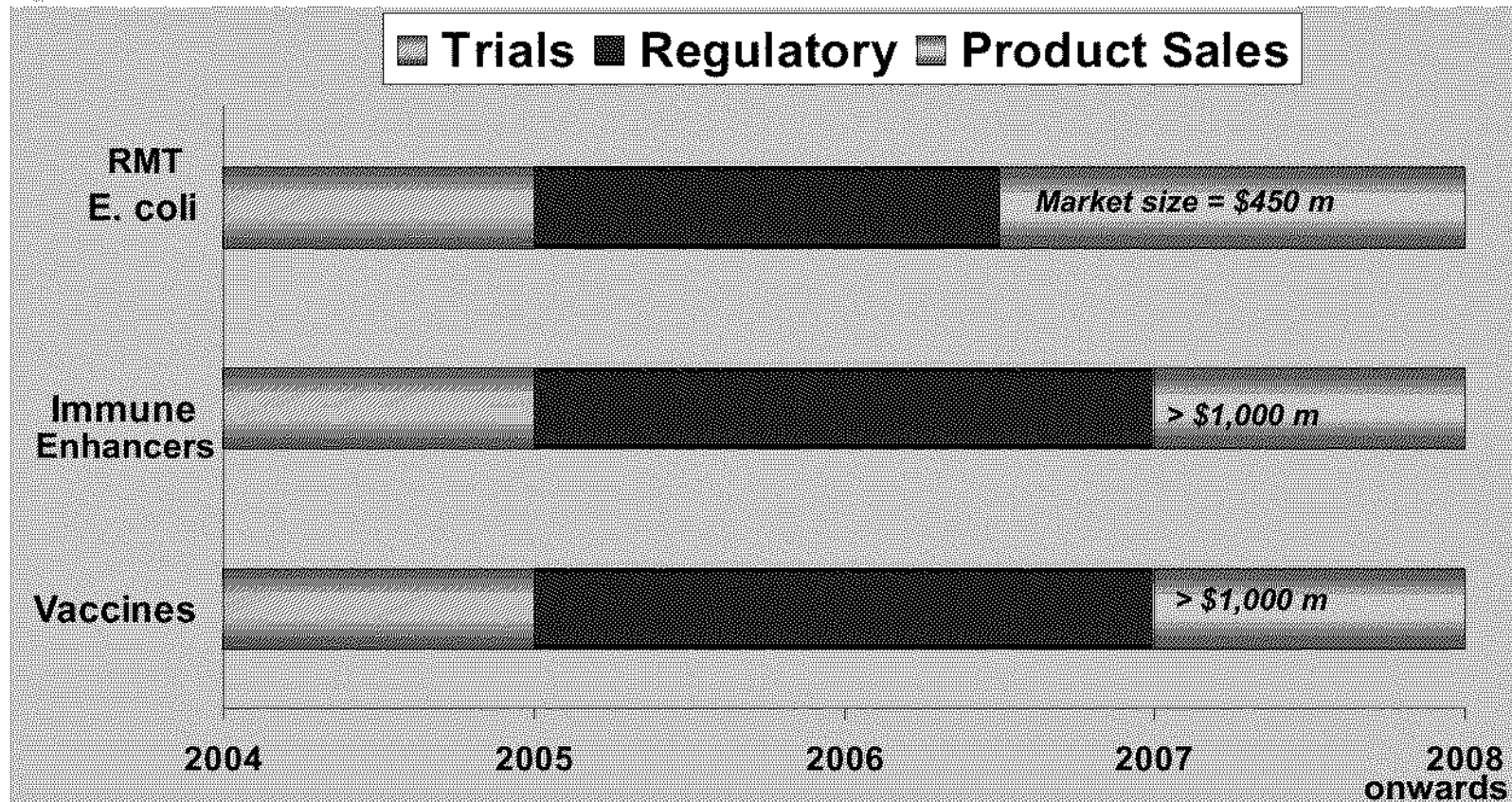
COMPETITIVE ADVANTAGES

- **Vaccines are highly protective**
- **Easy to administer (feed, water or aerosol)**
- **Trials increase poultry/pig growth up to 10%**
- **Antibiotic feed additives deliver <4%**
- **Vaccines are effective against some diseases that existing vaccines cannot protect against**
- **Residue free in animal**
- **No genetic modification of animal**

CURRENT AGREEMENTS

- **Merial (Merck and Aventis) – world leading animal health company (annual turnover of US\$1.7 b)**
 - **3 vector products under contract**
- **Market leader in Viral Vector Vaccines**
- **External recognition**
- **Merial to fund all regulatory, trial and scale up manufacturing costs**
- **Expertise/resources in international product development, regulatory affairs and marketing**

LEAD PRODUCTS





MANAGEMENT TEAM

- **Strong management team**
 - **proven experience in international animal health companies**
 - **Taking products from research to international markets**
 - **Management of R&D under commercial guidelines**
 - **Integrating research and regulatory affairs**

STRATEGIC DIRECTION

Continue to increase shareholder value



strong focus on commercialisation



contract 'bio-manufacturing' & partnering arrangements



lead products have large markets and near term market launches

CAPITAL STRUCTURE

Shares on issue	108 m
(major holders: board 15%)	
Options :	
A. public: (11.25c exp. Dec 04)	2.8 m
B. consultants: (22.5c exp. Oct 07)	4.6 m
C. directors & mgmt (30c exp. Dec 06)	6.0 m
<u>Cash</u>	
Current reserves – June 2004	\$1.0 m
Due from other sources in 2nd half 2004	\$1.1 m
(options (see A), grants & other)	
Burn rate per month (12mth average)	\$0.14 m

KEY POINTS

- **Biological solutions: replacing drugs and chemicals**
 - Poultry & pig health & growth promotion and disease control
 - Flea control in companion animals
- **Effective & safe - no residues or genetic modification of animal**
- **Large existing global markets & potential to expand markets**
- **Multiple commercialisation strategies**
- **Multinational pharmaceutical validation – including MERIAL – the world’s leading animal health company**
- **IP secure – patent position**
- **Relevant and experienced management of research, development, commercialisation and corporate finance**