



**From New Mechanisms  
to New Standards of Care**

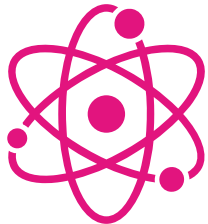
ASM Hub Track: Pharma Pipeline

*June 2019*



# Summit's Strategy: Innovation in Antibiotics

## NEW SCIENCE



Using new science to discover  
new mechanism antibiotics

Targeting a pathogen or an  
infection

## NEW PHILOSOPHY



Identify an unmet need

Aim to improve patient  
outcomes and become the  
standard of care

Designing clinical trials for  
compelling datasets

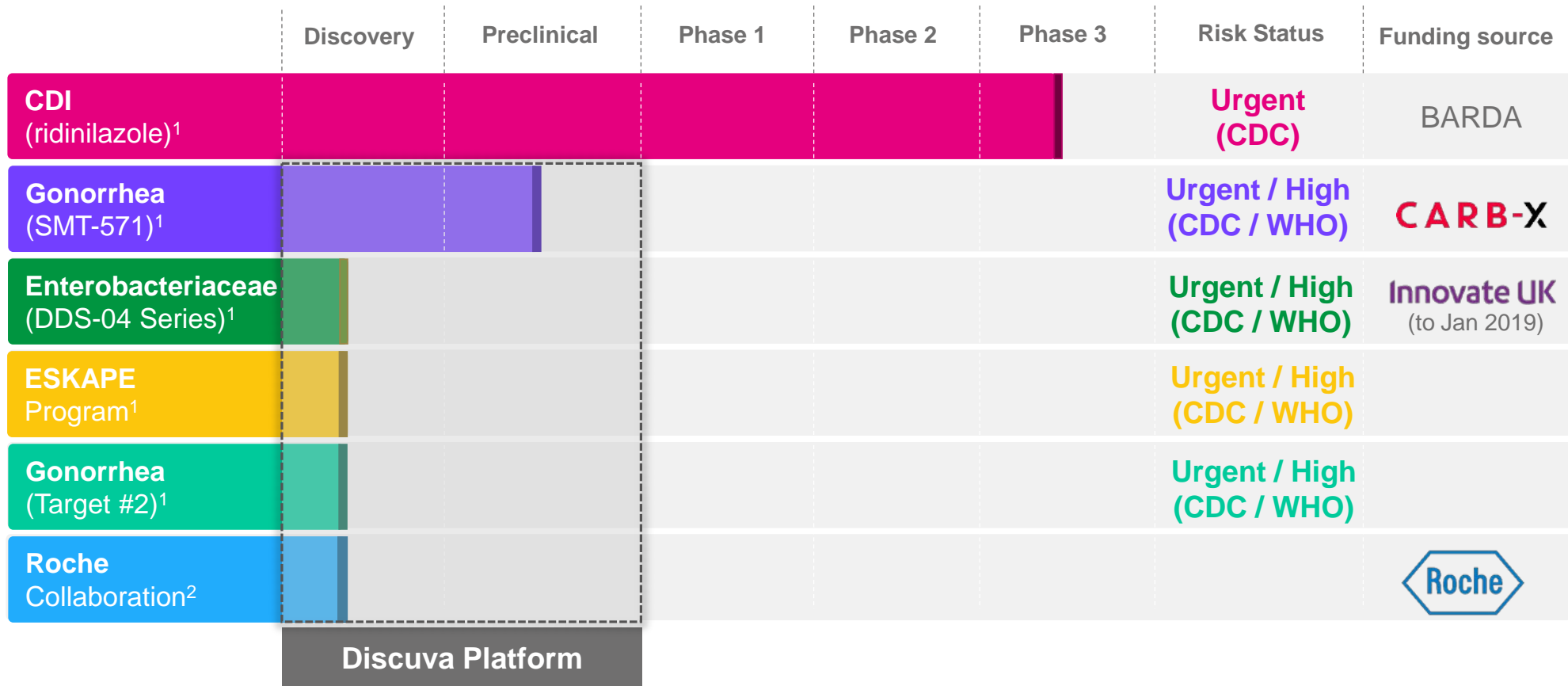
## NEW OPPORTUNITY



Delivering clinical and  
economic data to support use

Support antimicrobial  
stewardship

# Our New Mechanism Antibiotic Pipeline



(1) Summit owns worldwide, except ridinilazole is licensed to Eurofarma in Latin America  
 (2) Roche holds worldwide rights; Summit is entitled to specified milestone payments from Roche.

# Ridinilazole for *Clostridium difficile* Infections

*Preserving the microbiome to prevent recurrence*

## CDI recurrence the unmet medical need

- Increased morbidity
- Increased mortality
- Increased risk of further recurrence

## Ridinilazole designed to target *C. difficile* & preserve the microbiome

- Clinical PoC with superior sustained cures

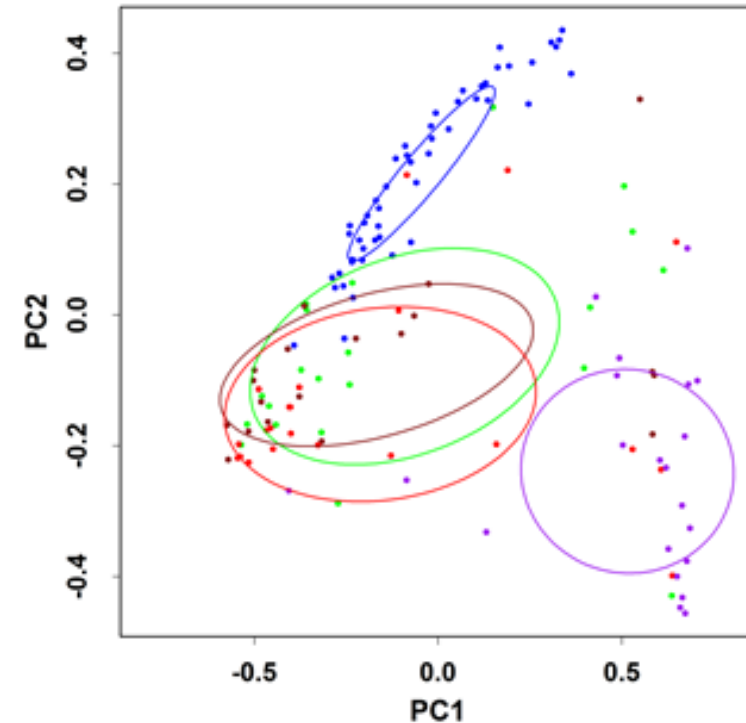
## Ridinilazole meets Summit's strategy

- Addresses the medical need
- Superior efficacy to standard of care
- Aligns with aims of stewardship
- Improving outcomes for patients

## RiCoDIFy Phase 3 Trials: Enrolment Initiated Q1 2019

4

## Ridinilazole Causes No Collateral Damage to the Microbiome



- Ridinilazole, BL
- Vancomycin, BL
- Ridinilazole, EOT
- Vancomycin, EOT
- Controls

# Phase 2 Proof of Concept Study

## Study design and efficacy outcomes

### Double blind, randomised, active controlled clinical trial

- 100 CDI patients recruited across 34 North American sites
- Subjects randomised (1:1) to 10 days treatment
- Ridinilazole 200mg BID; vancomycin 125mg QID
- 30 day follow-up to monitor for rCDI

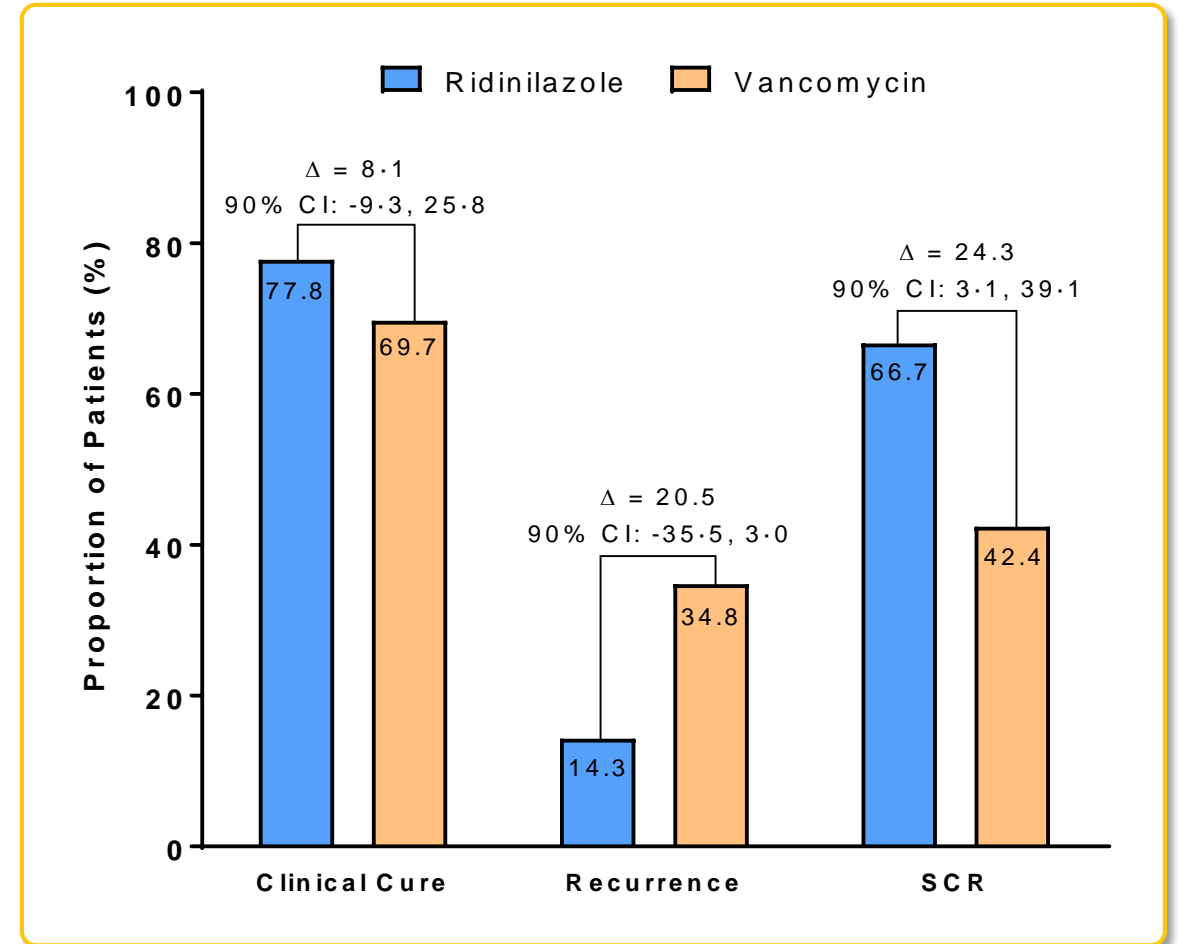
### Primary endpoint: Sustained Clinical Response (SCR)

- Defined as clinical cure at the end of therapy (EOT) and no recurrence to 30 days after treatment

### Key secondary endpoint: Clinical response at TOC\*

### Exploratory analysis: Detailed microbiome assessment

- During course of therapy and in the post dosing follow up period



\*TOC = test of cure visit; 2 days post EOT

# SMT-571: Targeted Antibiotic for *Neisseria gonorrhoeae* Infections

Addressing the emergence of untreatable gonorrhoea

## Ceftriaxone only remaining monotherapy

- Resistance rates in some territories  $\geq 5\%$ ; WHO threshold for therapy switch

## SMT-571 addresses the unmet need

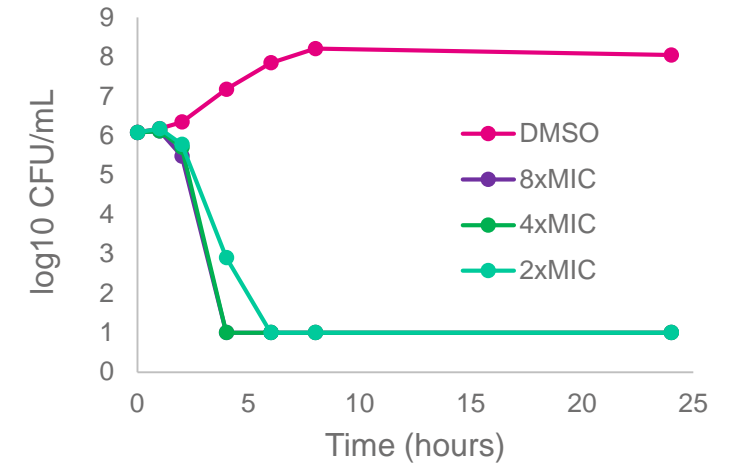
- Novel mechanism
- Targeted spectrum
- Low propensity to resistance development
- Oral dosing

## Potential front line therapy for gonorrhoea

- Overcome resistance
- Replace inappropriate use of ceftriaxone

## IND-enabling studies ongoing

Bacteria	MIC <sub>90</sub>
<i>N. gonorrhoeae</i>	0.125
<i>E. coli</i>	32
<i>K. pneumoniae</i>	>32
<i>Enterobacter spp.</i>	>32
<i>P. aeruginosa</i>	>32
<i>A. baumannii</i>	32
<i>S. aureus</i>	4
<i>Enterococcus spp.</i>	>32
<i>Streptococcus spp.</i>	>32
<i>H. influenzae</i>	0.25
<i>M. catarrhalis</i>	0.06
<i>Actinomyces spp.</i>	32
<i>Clostridium spp.</i>	2
<i>Prevotella spp.</i>	2
<i>Bifidobacterium spp.</i>	>64



Frequency of Resistance	
WHO-M	$< 8.2 \times 10^{-10}$ @ 4 x MIC
WHO-V	$< 3.1 \times 10^{-10}$ @ 4 x MIC
WHO-X	$< 8.7 \times 10^{-10}$ @ 4 x MIC



# DDS-04 for Infections due to Enterobacteriaceae

*Precision therapy for serious healthcare associated infections*

## Enterobacteriaceae infections cause for concern

- Significant cause of morbidity and mortality

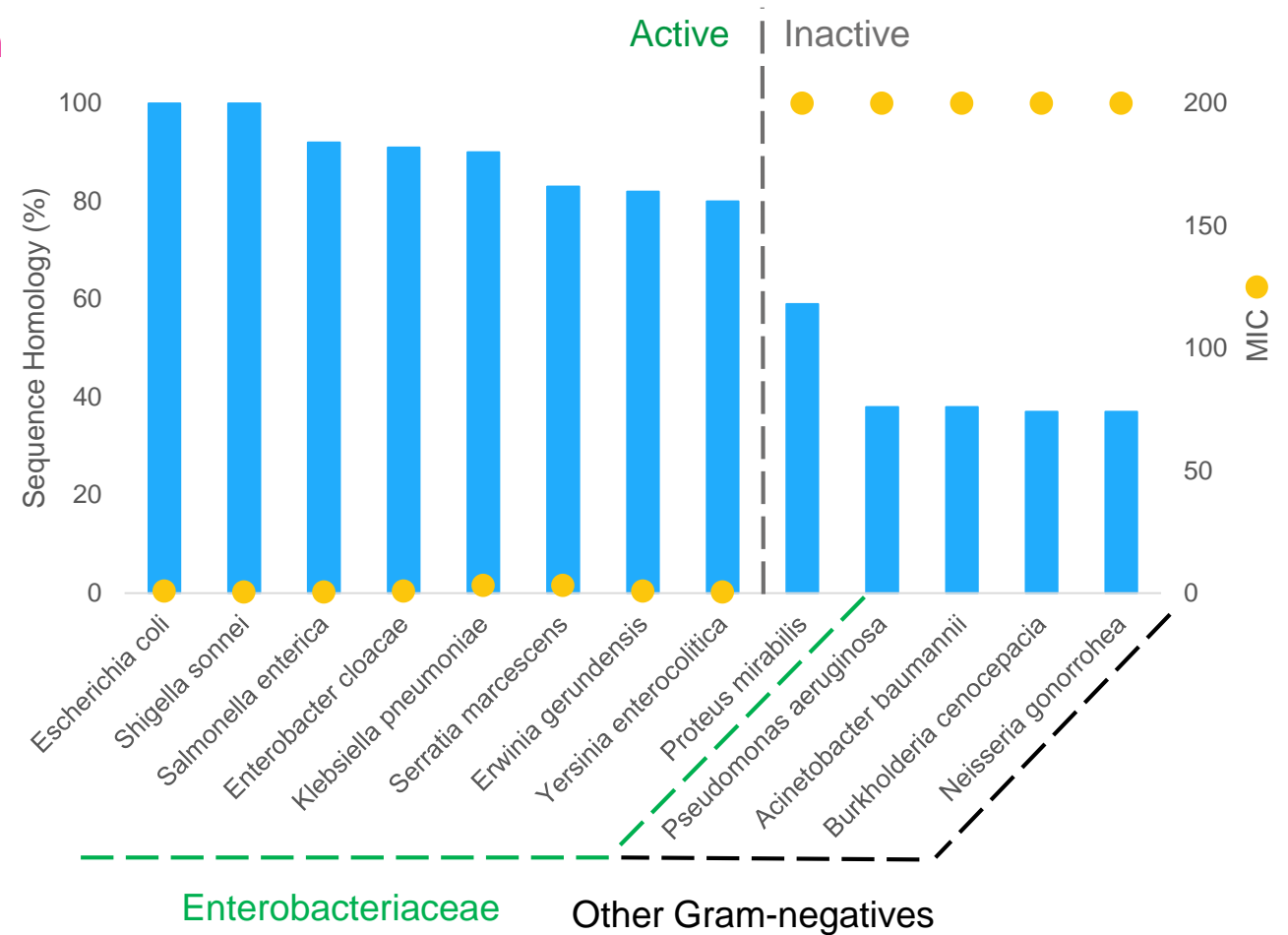
## DDS-04 a new mechanism series

- Enterobacteriaceae specific targeting LoIC/E
- No cross resistance to other antibiotic classes
- *In vivo* PoC established

## A targeted therapy for serious infections

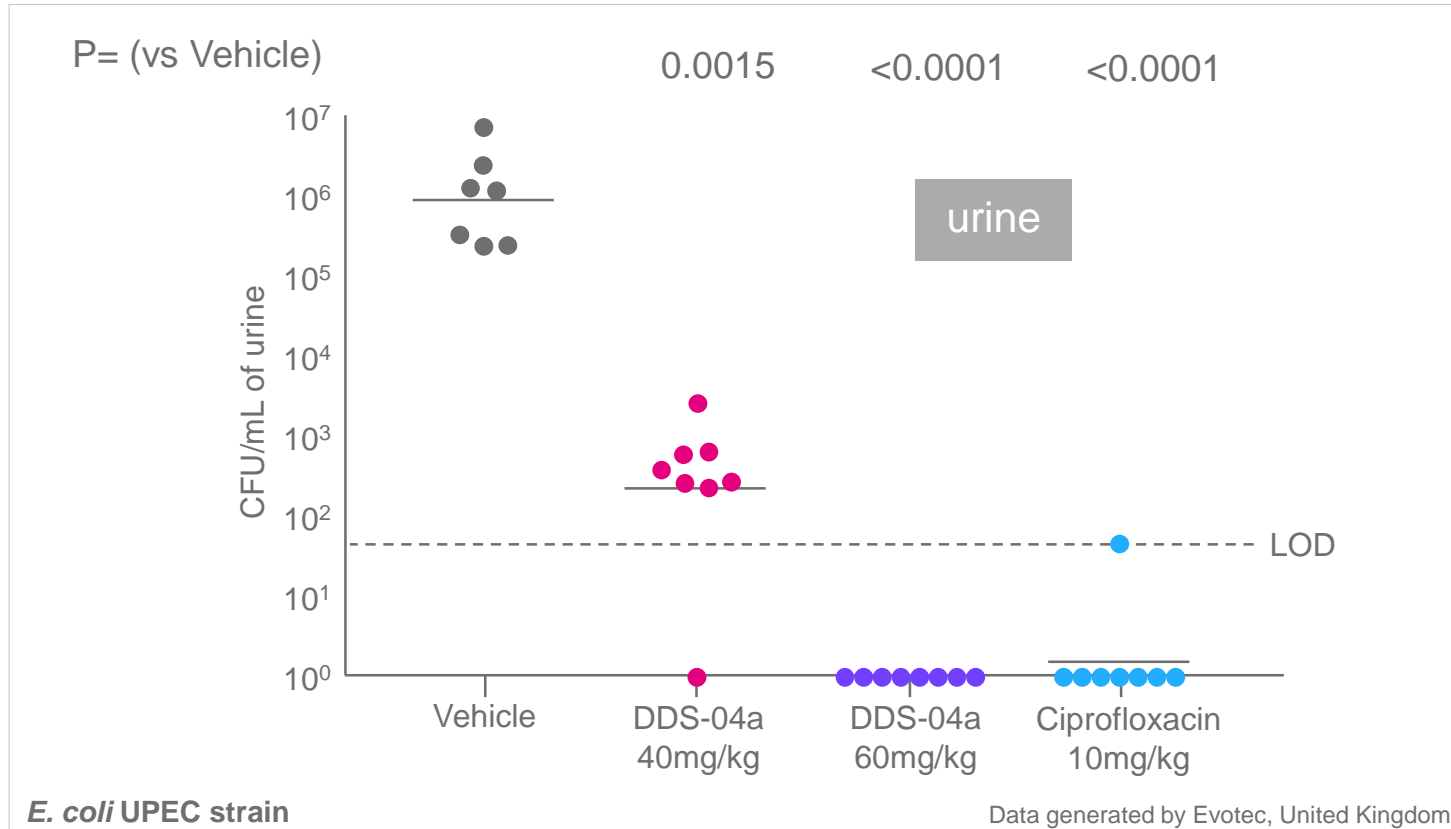
- Addresses particularly challenging pathogens
- Replace reliance on old toxic agents
- Improving outcomes for patients

Potential to treat lung, bloodstream and urinary tract Enterobacteriaceae infections



# In Vivo Proof-of-Concept Achieved in a Murine UTI Model

Route/Regimen – IV TID over 3 days



Significant reduction in bacterial burden in the urine (also kidneys and bladder)

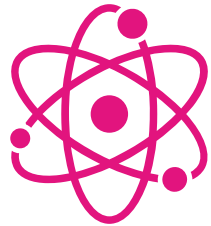
Therapeutic concentrations observed in other major infection sites including lung and bloodstream

Undergoing multi-parameter Lead Optimisation to rapidly identify candidate for preclinical development



# Summit's Strategy: Innovation in Antibiotics

## NEW MECHANISMS



A pipeline of novel antibacterials

*Ridinilazole*  
*SMT-571*  
*DDS-04*

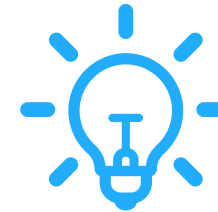
## UNMET MEDICAL NEEDS



Improving patient outcomes

*Recurrence*  
*Resistance*  
*Targeted spectrum*

## INNOVATION & STEWARDSHIP



Developing compelling data packages

*New mechanisms*  
*Innovative development*  
*Stewardship*

## Contact Details

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