

Novel cross-kingdom antimicrobials for hard-to-treat infections

A resistance-evading antimicrobial agent with potent activity against both fungal and bacterial pathogens — a topical candidate for frontline management of sight-threatening eye infections.

// TECHNOLOGY OVERVIEW

Growing antimicrobial resistance (AMR) in fungal and bacterial pathogens poses a global public-health threat. Fungal infections are particularly challenging to manage because eukaryotic fungi share greater similarity with human cells than prokaryotic bacteria, complicating the development of host-safe antifungals.

Current antifungal therapies are limited by toxicity, prolonged treatment regimens and increasing resistance — highlighting an urgent need for innovative solutions.

We have developed a novel cross-kingdom antimicrobial therapeutic strategy that targets essential fungal and bacterial cellular components while minimising resistance development — positioning it as a promising candidate for frontline management of hard-to-treat infections, especially where diagnosis is necessary but protracted.

// OUR INNOVATION

- ✓ **Resistance-evading mechanism**
Targets conserved microbial cellular components, minimising the selective pressure that drives drug resistance.
- ✓ **Potent cross-kingdom activity**
Antifungal and antibacterial action against clinically relevant species.
- ✓ **Active against resistant strains**
Demonstrated efficacy against drug-resistant pathogens.
- ✓ **Improved safety profile**
Selective targeting reduces host toxicity.
- ✓ **Easy production & formulation**
Straightforward to manufacture and formulate at scale.

// OUR VALUE PROPOSITION

Targets AMR market painpoints

Addresses the unmet need for safe, broad-spectrum agents against resistant infections.

Production at scale

A few grams already produced in the laboratory.

Ambient stability & autoclave tolerance

Robust to storage and sterilisation conditions.

Topical antimicrobial agent

Suited to multiple clinical segments in eye care.

// TECHNOLOGY DEVELOPMENT STATUS

TRL
4

Validated in preclinical studies — ready for translational development.

BASIC RESEARCH

DEPLOYMENT

- Mechanism of action established through lab validation
- Antifungal and antibacterial activity demonstrated in relevant in-vitro and preclinical studies
- Safety analyses completed
- Technology ready for further translational development and drug optimisation

PATENT

Provisional application filed

PUBLICATION

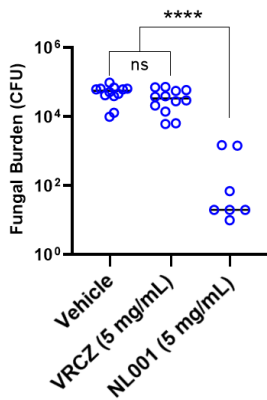
Pending review

CATEGORIES

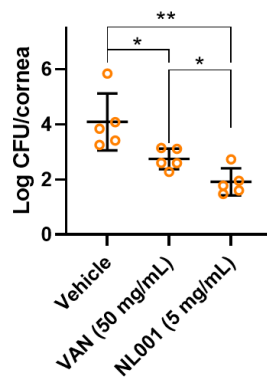
Pharma · Infectious Disease · AMR

// STUDY RESULTS

Reduced Fungal Burden



Reduced Bacterial Burden



Compared with standard antifungal (Voriconazole, VRCZ) and antibacterial (Vancomycin, VAN) drugs, NL001 achieved a superior reduction of fungal and bacterial burden.

Interested in this technology?

Connect with the A*IDL Tech-Biz team to explore licensing, co-development and translational opportunities. Available for licensing, co-development & translational research, and preclinical & clinical development partnerships.



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