Antiviral Biologic for Influenza & Respiratory Viruses

VirionHealth Ltd is a spinout company from the University of Warwick with a prophylactic and therapeutic platform targeting a wide range of respiratory diseases. Its lead candidate, VH244 is at the preclinical stage, with in vivo data indicating efficacy against multiple respiratory viruses and, in particular, against all influenza A strains (which include seasonal flu and potential pandemic threats such as H5N1 and H7N9).

INVENTION

VH244 is a RNA-based antiviral biologic active against a wide variety of respiratory viruses and, in particular, all influenza A viruses. It is delivered by a non-infectious influenza virus particle and combats infections in several different ways. It is a prophylactic with therapeutic effects.

- **It protects against all influenza A viruses** using a small RNA molecule (VH244) to block the replication of infectious virus
- **It protects against other respiratory viruses**, including influenza B and viruses like respiratory syncytial virus (RSV) by inducing interferon production in the respiratory tract
- **It allows a specific immune response against any infecting virus** by limiting virus replication to prevent disease while allowing natural immunity to develop

KEY BENEFITS

- A prophylactic with therapeutic effects
- Single, broad spectrum treatment for multiple respiratory viruses and especially influenza
- Retains activity and efficacy regardless of antigenic shift and drift with no annual re-engineering needed for seasonal influenza
- Potential to address pandemic threats from new influenza A viruses (e.g. H5N1 & H7N9)
- Immediacy of protection and reduced severity of clinical disease in the elderly immunocompromised
- Therapeutic effect reduces disease from an established infection
- Less frequent and lower dose regimen (a single, small intranasal weekly dose) compared with current antiviral drugs (twice daily dose for five days) delivered direct to the respiratory tract
- Long term stability in standard industry storage conditions with the potential for stockpiling
- Emergence of resistance calculated to be extremely low

TARGET MARKETS

VH244 is a treatment for anyone vulnerable to infection by a variety of respiratory viruses and, especially, influenza. Market segments include:

- General public seeking short term prophylaxis when potentially exposed to influenza outbreaks and effective treatment once exposed.
- Healthcare providers seeking additional treatments to seasonal flu vaccines and improved, lower cost outcomes for vulnerable patients young and old.
- Governments seeking treatment options for seasonal influenza and pandemic threats.

PATENTS & PUBLICATIONS

Two large patent families form the IP asset base.

WO2007135420 Defective interfering virus; priority date: May 2007; patent status: granted in AU, CN, UK, IN & US; under examination in CA, EU, IN divisional, US continuation.

WO2010067109 Anti-viral protection with viruses containing defective genome segments; priority date: Dec 2009; patent status: Granted in EU (14 designated states); under examination in AU, CA, CN, IN & USA.


CONTACT

Substantial further information is available. For partnering or investment enquires please contact Dr Laura Lane, Tel: +44 (0)2476 575745 or +44 (0)7880 175404 or email: l.lane@warwick.ac.uk. Warwick Ventures Ltd, is the technology commercialisation company at the University of Warwick.