



ReNewVax Ltd.

Protecting Our Future

Developing the first universal vaccine for invasive pneumococcal diseases and other antimicrobial resistant bacterial infections

www.renewvax.com

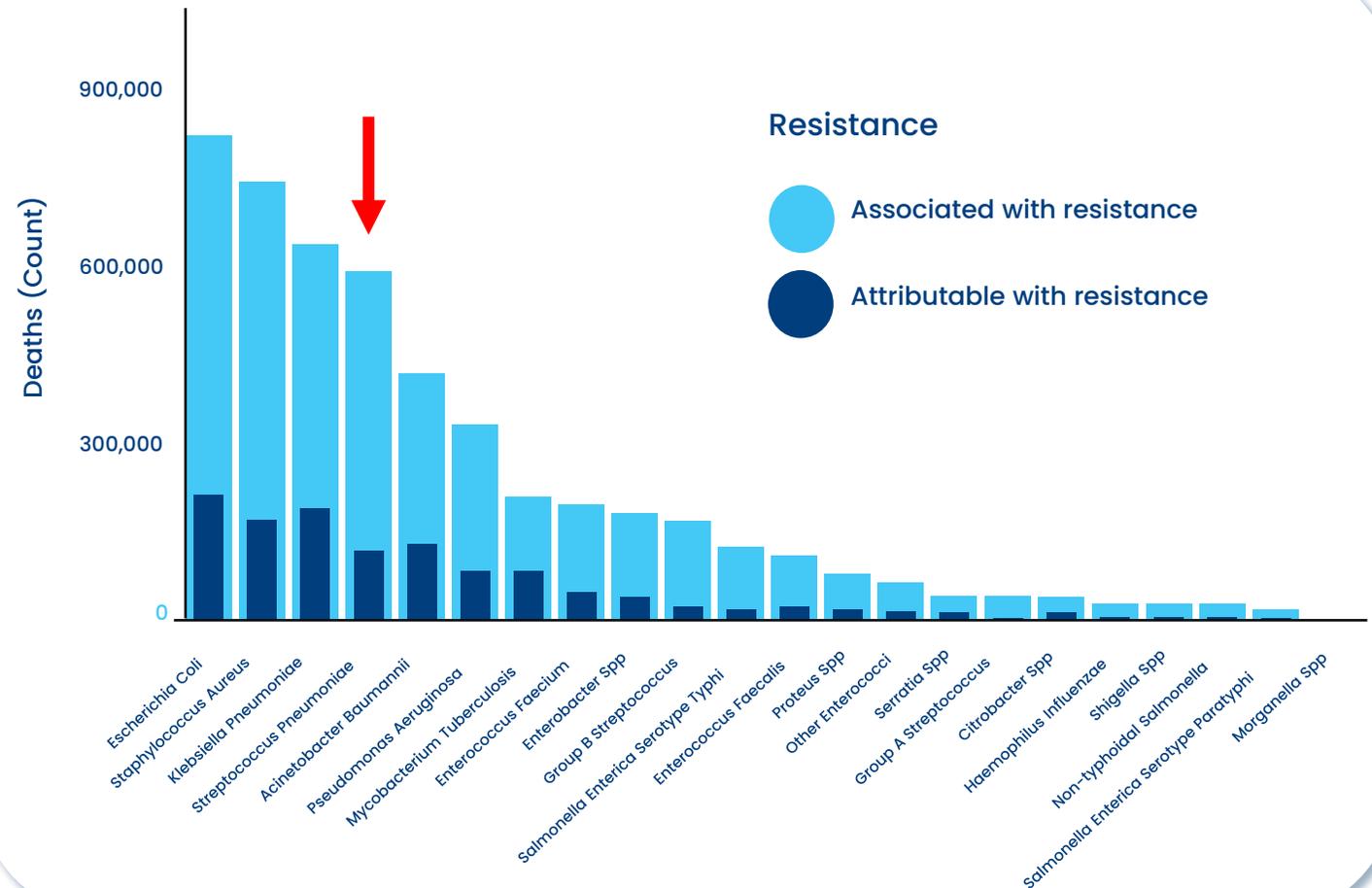


Next-generation universal bacterial vaccine for all variants of pneumococcal bacteria

- ReNewVax is a next-generation bacterial vaccine company developing the first universal vaccine targeting all c.100 existing variants of *S. pneumoniae*, or pneumococcal, bacteria
- Data-led, rational approach that uses reverse vaccinology, identifying novel vaccine antigens that are highly conserved across all variants of the bacteria
- By targeting all serotypes, with multiple antigens, any new variants that may arise in the future are also addressed, and long-term efficacy is maintained, overcoming the problem of waning efficacy faced by current pneumococcal vaccines
- Produced in *E. coli*, making vaccine relatively low-cost to manufacture
- Expect to enter clinical trials in 2026, with a clear regulatory pathway and the potential for accelerated approval

Growing resistance to antibiotics an increasing risk

- 3rd leading cause of death from bacterial infection globally (Lancet 2020) and 4th leading cause of deaths associated with AMR (Lancet 2022)
- Existing vaccines lack coverage against all *S. pneumoniae* variants & cost of existing vaccines limits their use globally
- WHO leading the call for a universal vaccine that will provide protection against all *S. pneumoniae* variants
- **→ Due to its rational design, RVX-001 is potentially the first universal vaccine to *S. pneumoniae***



Limitations of existing pneumococcal vaccines



Limited coverage

Cover only a fraction of the 100+ pneumococcal serotypes → Promotes serotype replacement and emergence of AMR



Near saturation

Highest valency vaccine investigated to date is PCV-31 (Vaxcyte) – approaching limit for PCVs



Heterogeneous immunity

Immune hindrance/tolerance, due to multiplicity of antigens



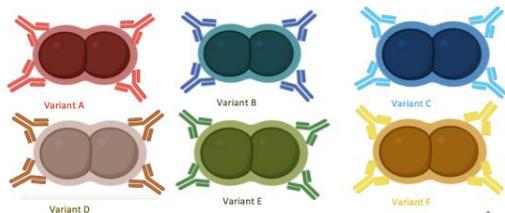
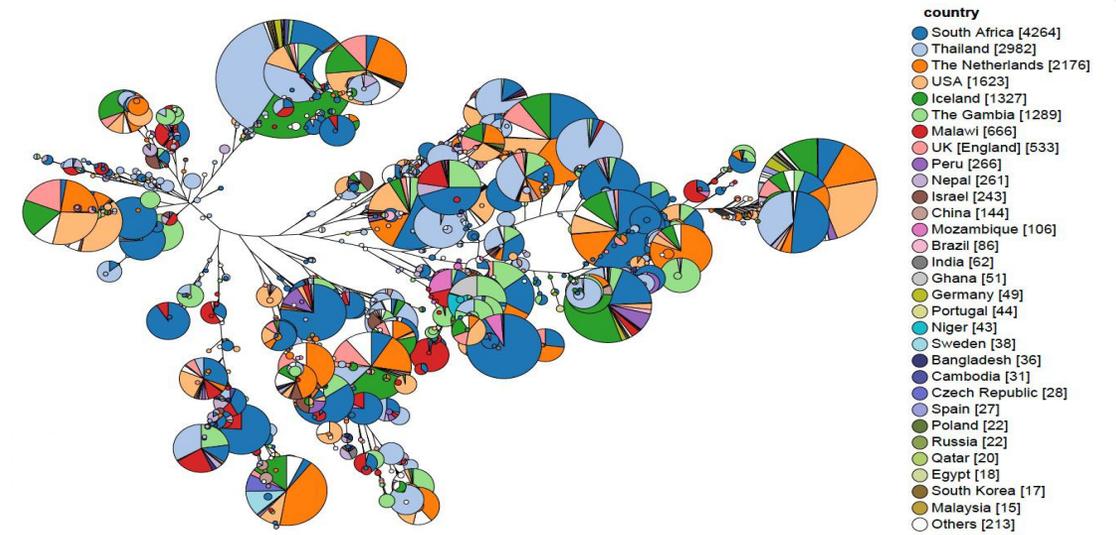
Complex chemistry

Leading to high manufacturing costs with most recently licensed products >US\$200/dose



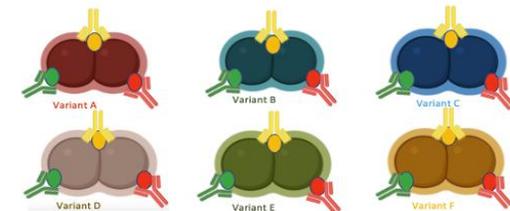
Genomic-driven vaccine antigen discovery platform built on over 26,000 clinical samples

- Large-scale high-throughput genomic studies covering clinical samples sourced globally (6 continents, 36 countries) from all age groups (0-99 years old) spanning period 1980s-2020s
- Antigens universally conserved across all serotypes
- Multiple screens to confirm antigen suitability as vaccine candidates



Classical vaccines target specific markers on each bacterial variant

- New variants likely to express new markers
- Promotes serotype replacement



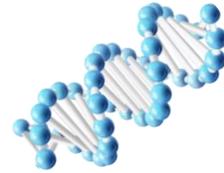
Genomic studies identify protein antigens common to all variants

- Antigens are IP protected
- Any new variants likely to express at least 1 marker
- Prevents serotype replacement

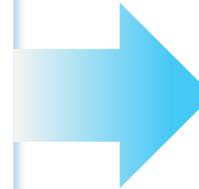
RVX-001 : Genomic-led rational design delivering a low-cost trivalent universal vaccine



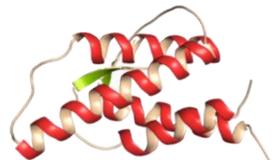
- 25,000+ genomes
- 96 serotypes
- 36 countries
- 6 continents
- 1-day to 99 years of age
- Period 1980s-2020s



- Highly conserved
- Surface accessible
- Weak human codon homology



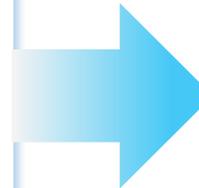
Universal Coverage



Recombinant Proteins
Never previously trialed
as Vaccine Candidates



Adjuvanted Formulation

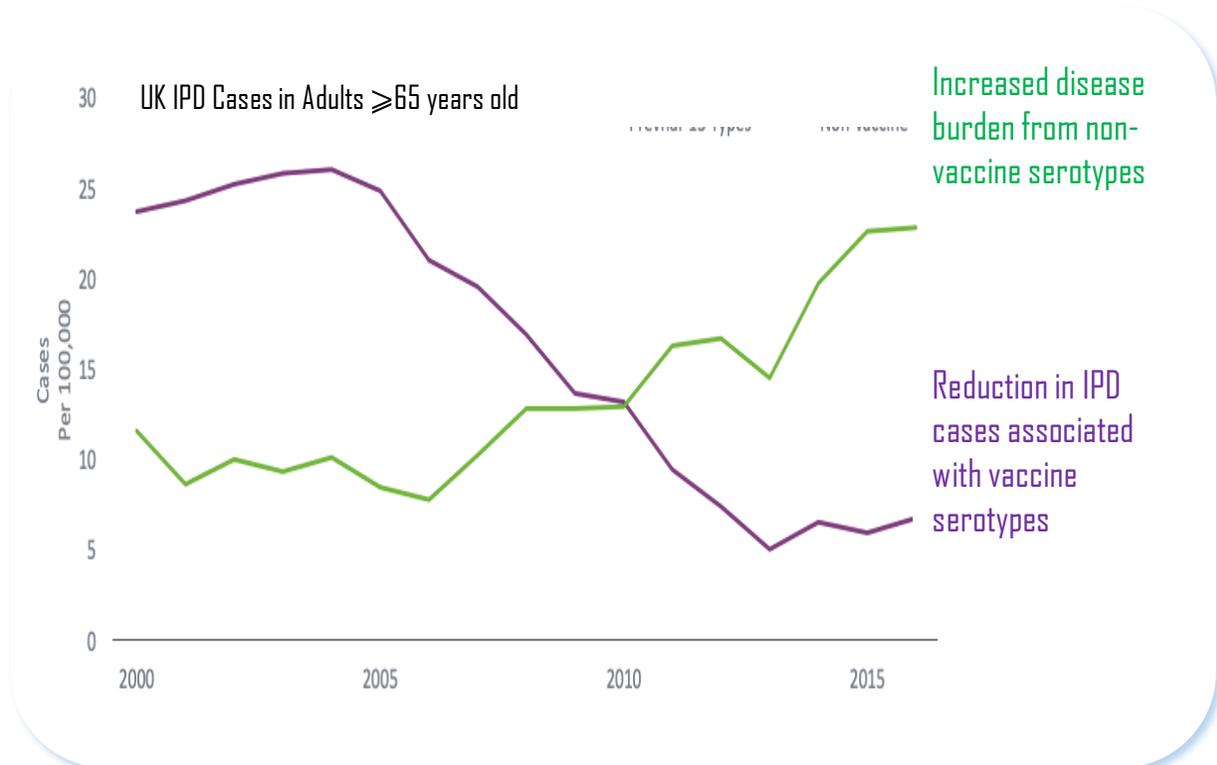


**Simplified & Cost
Effective Manufacturing**

Future proofed vaccine

Existing vaccines drive serotype replacement & increase prevalence of antimicrobial resistant serotypes

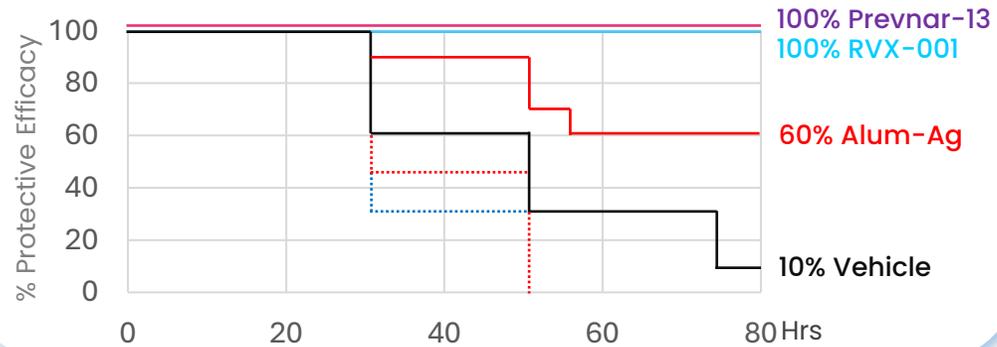
- Because PCV vaccines, including those in development by Vaxcyte and others, only cover a subset of pneumococcal serotypes, these get replaced over time in the clinical population resulting in waning vaccine efficacy
- Arising clinically relevant serotypes are more likely to be resistant to antibiotics
- As the first universal vaccine, RVX-001 overcomes the problem of serotype replacement
- With 3 universal antigens, RVX-001 is future-proofed since any evolving variants are likely to be susceptible to at least one of those antigens



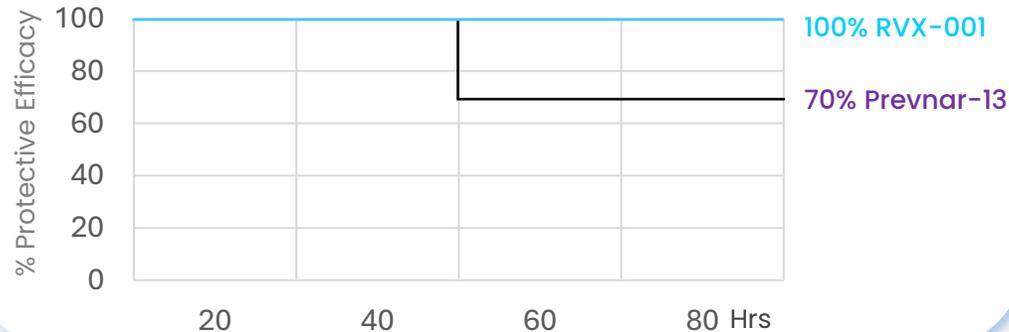
Ladhani et al, *Lancet Infect Dis* 2018 Apr;18(4):441-45

RVX-001 robust POC data de-risks clinical trials

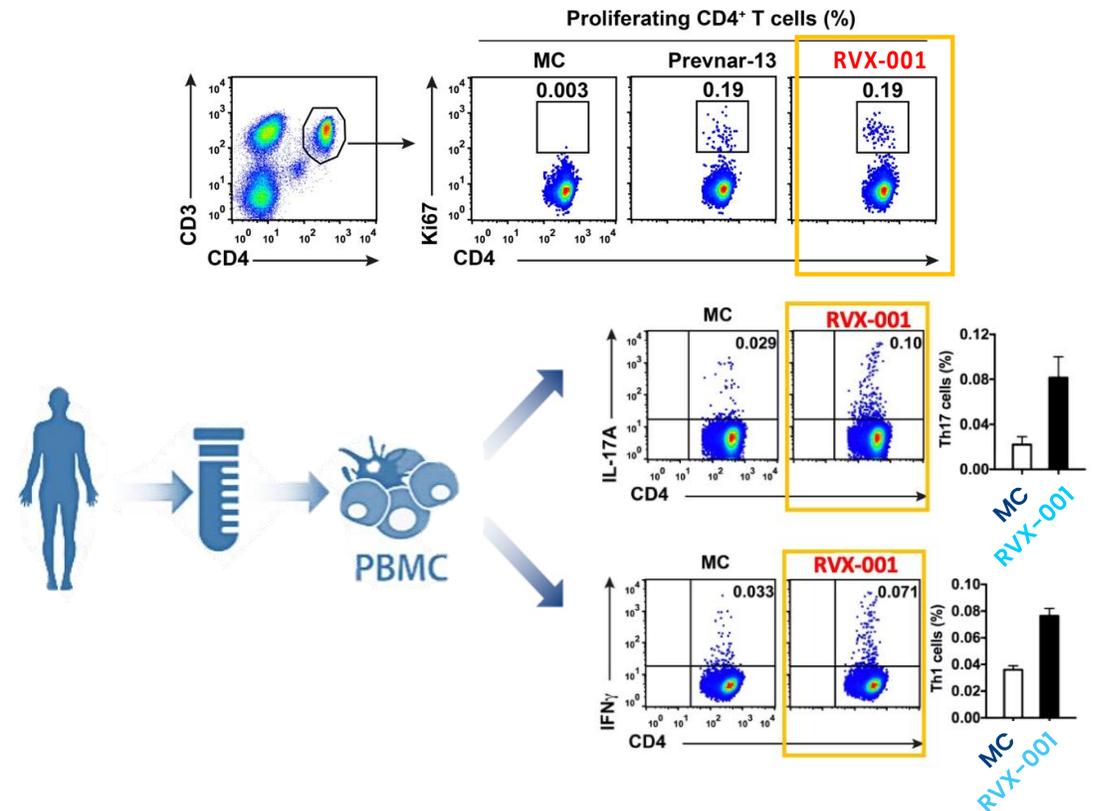
A – Murine Pneumonia Model Hypervirulent African Serotype 1



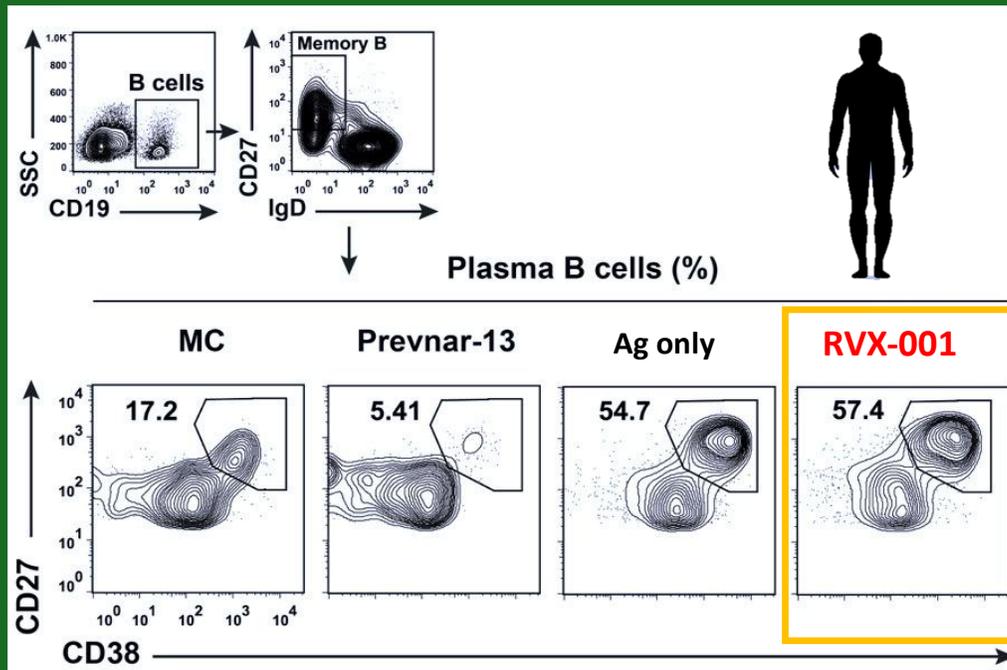
B – Murine Pneumonia Model Non-PCV Serotype 11A



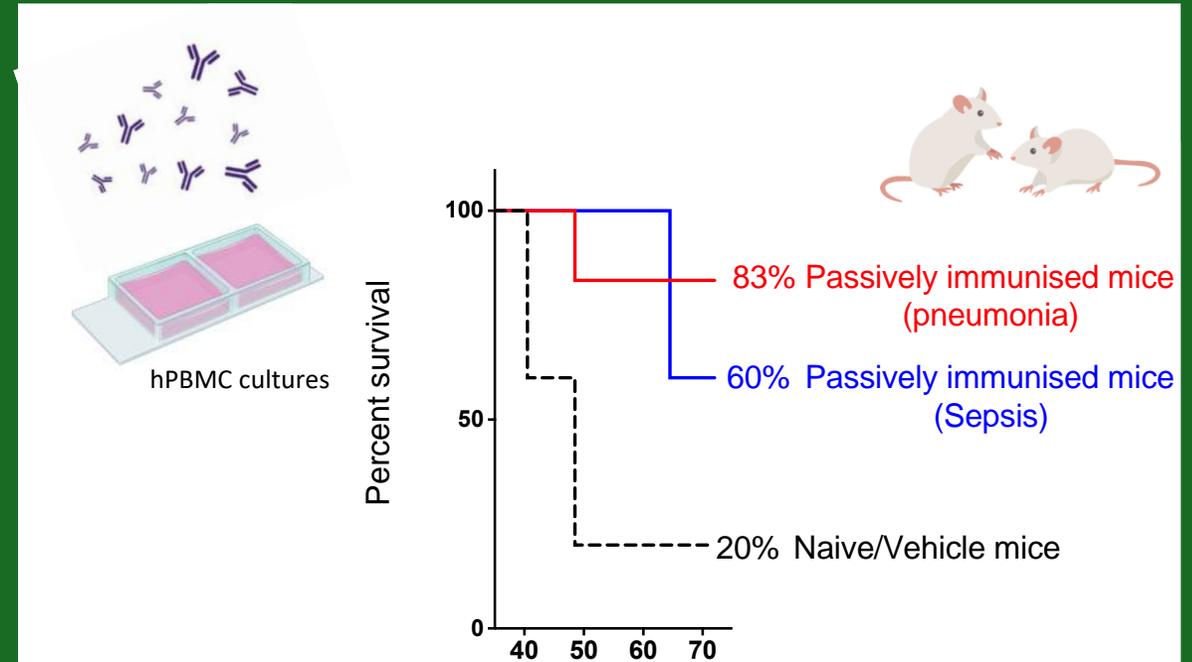
C – RVX-001 activates CD4⁺ T cell responses in human PBMCs



RVX-001 induces antibodies capable of preventing the onset of pneumococcal disease *In vivo*



D – Human PBMCs stimulated with Pevnar-13[®], Adjuvant alone or RVX-001, followed by flow cytometry



E – Passive Immunisation in Sepsis & Pneumonia
Murine Model of Hypervirulent African Serotype 1

ReNewVax Investment Strategy

ReNewVax is seeking to raise **equity capital**, which will support completion of first-in-human clinical studies for RVX-001 and support pre-clinical studies for our other pipeline programs, RVX-002 and RVX-003.

ReNewVax has secured non-dilutive funding through a **£5m interest-free forgivable loan which funds the company through to IND**. Further forgivable loan funding is also available to support future work.

Completion of RVX-001 first-in-human studies will secure data that will trigger a potential commercial exit.



ReNewVax Ltd.

Contact us

www.renewvax.com

Contact: Neil Murray, CEO

Email: neil@renewvax.com

