

MoD spin-out Presymptom Health raises £1.5m to develop AI-driven sepsis and infection tests for the NHS

- Funding round will help accelerate time to market, with UKCA accreditation of the first product planned for mid-2025. Clinical trials are already underway with NHS hospitals
- The funding round includes investment from UKI2S, Ploughshare and MedtechToMarket, and a grant contribution from InnovateUK
- Based on research to save lives on the frontline, Presymptom Health's technology can detect infection and sepsis days before symptoms appear or clinical diagnosis is possible, while also helping tackle the global AntiMicrobial Resistance (AMR) crisis.



UK start-up Presymptom Health has raised £1.5m in follow-on seed and grant funding that will help accelerate time to market of its AI-driven sepsis and infection tests - with the company aiming to roll-out its technology to the NHS from mid-2025. Presymptom's infection test was recently earmarked by the UK Government as a 'breakthrough' medical device under its £10m Innovative Devices Access Program.

The funding round includes investment from UKI2S, an investment fund that provides seed funding to science & technology start-ups and SMEs, Ploughshare, the company that finds new and inspiring uses for government inventions and MedtechToMarket. Innovate UK provided additional funds through an Investor Partnership Grant.

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The funding will help accelerate product development, support clinical trial activity and allow the company to secure UKCA accreditation by mid-2025.

As well as entering the UK market, Presymptom also plans to break into the global infectious disease diagnostics market that is **estimated to be worth USD 31.5 billion by 2028** and **the global sepsis diagnostics market which is projected to reach USD 1.4 Billion by 2030**.

Presymptom Health's technology provides early and reliable information about infection status and severity in patients with non-specific symptoms, helping doctors make better treatment decisions. The company's tests can be run on NHS PCR platforms, which were widely deployed during the COVID pandemic and are now often under-utilised. By detecting true infection and sepsis earlier, it's possible to save lives and significantly reduce the incorrect use of antibiotics.

When it comes to sepsis, Presymptom's technology could revolutionise treatment. **According to The UK Sepsis Trust**, every 3 seconds, someone in the world dies of sepsis. In the UK alone, 245,000 people are affected by sepsis with at least 48,000 people losing their lives in sepsis-related illnesses every year. This is more than breast, bowel and prostate cancer combined. When diagnosed at a late stage, the likelihood of death increases by 10% for every hour left untreated. Yet, for many patients, with early diagnosis it is easily treatable.

Dr Iain Miller, CEO of Presymptom Health, said:

*"We're confident that our first product can play a big part in tackling Anti-Microbial Resistance (AMR), which has been identified by the World Health Organisation as one of the **top 10 global public health threats**. By understanding the presence, or absence, of infection as early as possible, doctors can be more confident in their diagnosis and avoid unnecessarily prescribing antibiotics - something that is a growing concern in the NHS and globally.*

"If we take Sepsis as an example. Sepsis diagnostics hasn't moved on in more than a century, and currently doctors can only diagnose it when advanced symptoms and organ failure are present - which is often too late. Our technology enables doctors to diagnose both infection and sepsis up to three days before formal clinical diagnosis, radically transforming the process and preventing unnecessary deaths.

"This funding round will help us enter the market by 2025 and, ultimately, save lives sooner. We will initially roll-out in the UK, but have plans for the US and beyond in the following years. We are hoping to raise further funds over the course of this year and next to accelerate our plans even more."

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The science behind Presymptom's technology is based upon 10-years' of work conducted at Defence Science and Technology Laboratory (Dstl) and originated from £16 million of sustained Ministry of Defence investment in a program of research designed to help service personnel survive infection from combat injuries.

The company was created by scientists working at government laboratories, initially researching how to tackle biological threat infection, such as anthrax, plague and ebola, all of which can cause death from sepsis. **Ploughshare** - the company that finds new and inspiring uses for government inventions - identified the innovation as having potential societal impact and spun it out from the UK Ministry of Defence in 2019.

The technology is currently undergoing clinical trials at nine NHS hospitals in the UK, with results anticipated later in 2024. In addition, Presymptom is working on additional UK and EU trials.

Dr Mark Gostock, VP of Health and Wellbeing at Ploughshare, said:

"At Ploughshare, it's our aim to be the catalyst that propels the UK government's scientific breakthroughs from laboratories to the world, so we're delighted to be supporting Presymptom in this funding round. Hiding in government labs across the UK are inventions that can drive societal benefit and save lives and Presymptom's technology is a perfect example of this. The world is at a critical juncture when it comes to tackling AMR, so it is essential we accelerate the time-to-market of this game changing technology as quickly as possible."

Sakura Holloway, Investment Director at UKI2S, managed by Future Planet Capital said:

"This is an incredibly important use of AI. Being able to diagnose infection before someone shows signs of infection is a mind-blowing example of "tech for good" - and at a time when AI is under such huge scrutiny.

"As early stage investors, we have a huge role to play in backing technologies which can truly improve our lives and it's a big responsibility to open up the route to funding - especially when it comes to emerging tech.

"Here we have an incredible example of a "lab to life" journey that people don't see so much. UKI2S invested in Presymptom because its impact on humanity is immediately obvious and it has the potential to save countless lives.

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“As the first investors in this tech, we are proud to stand alongside Ploughshare who enabled this innovation to emerge from our UK Defence laboratories and to be the “proof of concept” investors – helping to bring Presymptom’s AI infection technology to market and in turn, to the world.”

Simon Earwicker, Dstl Division Head, commented:

“I’m thrilled that the potential of this Defence innovation is a step closer to saving multiple lives. It’s enormously satisfying to have been involved at every stage from the initial government-funded Dstl research through to the cusp of production and getting the product into hospitals.”

About Presymptom Health

Presymptom Health is an innovative medtech company which is developing a portfolio of diagnostic tests and decision support software to enable early diagnosis and optimal care of infection and sepsis to help save lives. Established in 2019, it was founded to exploit transformative innovation to leverage host (body) response signals to detect infection and sepsis in patients up to three days before symptoms appear.

Website: www.presymptom.com

About Ploughshare

Ploughshare is a pioneering company, owned by the Ministry of Defence, that unlocks the potential of UK government inventions, transforming them into impactful solutions that deliver real prosperity to the economy, our society, people’s lives, and our environment. By establishing spin-outs and licensing technology, Ploughshare ensures that UK government’s scientific breakthroughs can move from the laboratories and the frontlines, to benefit the wider world.

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About UKI2S

UKI2S is an early-stage investment fund that nurtures innovative businesses from great UK science to leverage private investment and grow jobs. The fund is backed by the Ministry of Defence and other public bodies.

UKI2S is independently managed by Future Planet Capital, an impact-led global venture capital firm built to invest in high growth potential companies from the world's top innovation ecosystems.

For further information and how to approach for investment funding visit:

www.ukinnovationscienceseedfund.co.uk

About Dstl – The science inside UK defence and security

The Defence Science and Technology Laboratory (Dstl) delivers high-impact science and technology (S&T) for the UK's defence, security and prosperity. Dstl is an Executive Agency of the MOD with around 5000 staff working across three sites; Porton Down, near Salisbury, Portsmouth West, near Portsmouth, and Alverstone, near Gosport.

What we do:

- Research – original research and concepts, creating new capabilities for defence and security
- Requirements and Evaluation – Dstl S&T support to assess, evaluate and deliver current, next and generation after next capabilities
- Specialist Advice & Services – our knowledge and facilities are ready to meet priority needs
- Operational Support – rapid and deployed S&T to meet the urgency of operations
- Dstl gives the UK clear advantage across science, technology, cyber and information.

For more information contact the Dstl press office on 01980 950000 option 2.

Email: Dstlpress@dstl.gov.uk

About Innovate UK

Innovate UK, part of UK Research and Innovation, is creating a better future by inspiring, involving and investing in businesses developing life-changing innovations. We provide targeted sectors with expertise, facilities and funding to test, demonstrate and evolve their ideas, driving UK productivity and economic growth. Join our network and communities of innovators to realise the potential of your ideas and accelerate business growth. Innovate UK: inspiring business innovation.

