

**Stock Data**

Share Price:	34.25p
Market Cap:	£59.2m
Shares in issue:	172.9m
52 week high/low:	70.0p/7.0p

**Company Profile**

Sector:	Healthcare
Ticker:	DVRG
Exchange	AIM

**Activities**

Deepverge plc ('Deepverge', 'DVRG', 'the Group'), (formerly Integumen plc) is an environmental and life science group of companies that develops and applies AI and IoT technology to analytical instruments for the analysis and identification of bacteria, viruses and toxins.

[www.deepverge.com](http://www.deepverge.com)

**1-year share price performance**



Source: [ProQuote](#)

Past performance is not an indication of future performance.

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## DeepVerge plc

Deepverge has published initial data from its ongoing Phase III clinical studies for the detection of SARS-CoV-2 from samples of breath condensate and identification of confirmed COVID-19 positive patients. The studies demonstrated detection and identification of the virus S-Protein in quantities as low as 40 femtogram per millilitre ('Fg/mL') at close to 100% sensitivity and specificity on DeepVerge's Microtox® BT nano-optofluidic chip. Capable of being confirmed within 60 seconds and indicating a nine-times increase in the digital spectrum signal when using Microtox® BT, compared to controls of nano-optofluidic chips with binding agents, this represents the passing of a significant technological milestone. Although additional supervised breath test clinical trials from a larger group of patients now need to be completed, Deepverge's management consider these will provide sufficient data to meet the 'desired' and 'acceptable' criteria specified in the UK Target Product Profile ("TPP") that should, in turn, enable the product to secure its CE marking followed by a broad roll-out for COVID-19 (and other pathogen) breath tests which might be expected before the end of 2021.

### Required UK Target Product Profile

Taking guidance from a publication by MHRA of the 'Target Product Profile Rapid Breath Tests for the direct and indirect detection of SARS-CoV-2', it is significant that early data from Microtox® BT appears to satisfy many of the specified detailed criteria. Under the clinical trial supervision of the Royal College of Surgeons in Ireland, 16 patients from a sample of 40 that had been independently confirmed as being COVID-19 positive using PCR tests, were similarly identified on the Microtox® BT nano-optofluidic chip surface through elementary provision of breath condensate samples that were then tested using Affimers and Optimers (together the 'Binding Agents'). Subject only to any limitations in the Binding Agents' ability to capture the virus, Microtox® BT breath test therefore appears capable of both eliminating false positives while tracking patient progress as they move through the various stages of infection:

- Asymptomatic and non-infectious,
- Asymptomatic and infectious,
- Symptomatic and infectious, and
- Symptomatic and non-infectious

Importantly, the exceptional specificity that Microtox® BT breath test is capable of delivering is critical for mass screening given that a high number of false positives would significantly burden alternative testing resources while potentially forcing people to isolate unnecessarily. Similarly also, the high level of sensitivity in the infectious range of viral loads is particularly relevant, as it offers potential for favourable comparison with data collected from the Liverpool Covid-SMART pilot evaluation which assessed the suitability of lateral flow tests ('LFTs') for mass COVID-19 screening.

### Seeking full clinical validation

Deepverge intends to secure Microtox® BT full clinical validation through its enlarged patient group as rapidly as possible. Being capable of delivering a final product manufactured at scale through its own facilities, the Group is expected to generate validation data sufficient to support a CE marking application of the test for professional use, followed by the opportunity to bring it to market before the end of this year. Assuming the additional trials compare well with the initial data, its elementary 'foolproof' application suggests Microtox® BT has potential to become a favoured

product for use across the international community.

Compared also with most other prospective suppliers of COVID-19 mass screening products, it is important to note that Deepverge distinguishes itself in respect of being not only in control of its own production, sales and marketing, but also that it operates its own distribution channels across multiple geographical locations. Not only should this enable a rapidly and effective international roll out of Microtox® BT, but also allow the Group to retain a larger share of the margin.

### Extending application of breath condensate to detect multiple other diseases

Point-of-Care makes it possible to track and trace the progress of the stages of any infection, subject to the type of pathogen (bacteria, virus, fungi or parasite) or biomarker of a disease being targeted by the Binding Agents. AI algorithms are designed to assess the risk of steric hindrance (the prevention or retardation of intramolecular interactions as a result of the spatial structure of a molecule) which, in the case of SARS-CoV-2 for example, would be by the capture of one S-Protein and one viral particle which blocks the binding of other viral particles in the immediate vicinity.

With ability to detect and identify the binding of individual S-Proteins at Fg/mL using nano-optofluidic chips, the viral particle can be calculated to generate a bigger shift in the digital signal. Using AI, it is possible to identify the viral load for each test subject at any given point in time.

Having in-licensed a patented breathalyser from PulMoBioMed Limited, Deepverge's joint development program focussed on the PBM-HALE™ breath condensate device is ongoing using multiplex biomarker binding agents to analyse sample breath condensate from a variety of different patients with a view to detecting as many as 40 other diseases, including neurodegenerative, respiratory and metabolic conditions.

### Anticipating an exceptional 2021 for Deepverge

Current year expectations for Deepverge are already high. On 11 January 2021, the Group confirmed that Q4 2020 was its first ever profitable (at the EBITDA level) quarter, during which time order books had built strongly with the signing of 12 new contracts for Labskin Services. At the same time, the Board also provided revenue guidance of £10m for 2021 (representing 127% annualised growth on the full year 2020 figures), while noting that several large projects, including two 'multi-million pound opportunities' due for decision in coming months offer potential to drive this figure substantially higher still. Today's news not only reinforces such expectations, but potentially offers to dramatically reset targets. Recognising that the current year will likely see the world transition from one that has struggled to contain the catastrophic effects of a global viral pandemic, to one that needs to urgently understand how to provide rapid, ongoing detection, containment, monitoring and response in a post-Pandemic environment whose principal challenge must be to ensure such outbreaks cannot undermine humankind's future well-being, Deepverge's seemingly ideal range of core competences, technologies, innovative skillsets and global reach potentially positions it to enjoy years of exceptional, high margin growth. On 11 January 2021, TPI updated its valuation for Deepverge, indicating a revised figure of £140.6m, or share price target of 84.8p. For now, this remains current, although TPI recognises that Microtox® BT's full clinical validation followed by rapid progress toward its CE marking in the coming months could lift this substantially higher.

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