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A*STAR & partners roll out breakthrough COVID-19 test

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The joint RESOLUTE 2.0 and RAVE system will be distributed by Advanced MedTech Holdings



DSO National Laboratories and A*STAR's Diagnostics Development (DxD) Hub in Singapore have jointly developed RESOLUTE 2.0, a breakthrough Direct-Polymerase Chain Reaction (PCR) diagnostic test kit for COVID-19.

This initiative was part of a strategic partnership between DSO and A*STAR that was inked earlier this year to tighten the defence-civilian research nexus.

RESOLUTE 2.0 does not require the need for extraction of viral RNA from patient test samples. This minimises potential human errors and halves the test delivery time, compared to a conventional PCR test which takes 2.5 hours or longer.

To further expedite the testing process, A*STAR also developed a robotics lab system called Rapid Automated Volume Enhancer (RAVE) that complements RESOLUTE 2.0. The system automates some of the manual steps usually required in sample processing, such as uncapping of tubes and pipetting.

Researchers from A*STAR’s Advanced Remanufacturing and Technology Centre (ARTC), the Singapore Institute of Manufacturing Technology (SIMTech), and the DxD Hub co-developed RAVE.

The joint RESOLUTE 2.0 and RAVE system will be distributed by Advanced MedTech Holdings, which was also granted Provisional Authorisation from Singapore’s Health Sciences Authority (HSA) to manufacture and supply the RESOLUTE 2.0 tests. To date, the joint solution is being deployed to three hospitals in Singapore.