

CORONASYS INNOVATION SHEET 39

OCTEA TEST

Background

PCR tests are still the gold standard for detecting a SarsCoV-2 infection. However, especially against the background of the testing strategy recommended by the EU Commission¹, novel and reliable rapid tests are increasingly coming into focus. Rapid antigen tests show within a few minutes whether infection with the coronavirus is present, but they are generally considered somewhat less reliable than PCR tests². The German Startup GNA Biosolutions³ has now developed a promising new technology.

Features

Unlike the antigen rapid tests commonly used so far, the new rapid test is a PCR test that directly detects the genetic material of the COVID-19 pathogen but unlike the PCR tests used so far, it can deliver results within an hour. The testing device is portable and can process eight samples simultaneously.⁴ The technology, called Pulse Controlled Amplification (PCA[®]), combines sample preparation and nucleic acid amplification processes, reducing time and material requirements for the test⁵.

Potentials

The test could help to scale up testing capacities. GNA Biosolutions plans to apply for EU-wide approval in March. Due to its speed and its relatively low price (around 20 Euros), it might be particularly valuable for testing at hospitals, nursing homes and airports, for example.⁶

Points to consider

The German state of Bavaria has already secured the purchasing privilege for 1000 testing devices and one million tests⁷. It remains to be seen how fast the manufacturer can scale up their production capacities to serve other countries as well.

Conclusion

The test could help to increase testing capacities after approval in the respective country. Especially in busy places like airports, care facilities and hospitals, it could contribute to a much anticipated "return to normality".

State of information: 01/07/2021

Authorization in Germany: 12/29/2020

Country: Germany

Focus area: Detection and Diagnostics

Developers: GNA Biosolutions

Beneficiaries: General population

¹ Deutsches Ärzteblatt. “Millionen Schnelltests Für Europa: EU-Kommission Empfiehlt Strategie,” December 18, 2020. <https://www.aerzteblatt.de/nachrichten/119590/Millionen-Schnelltests-fuer-Europa-EU-Kommission-empfeHLT-Strategie>.

² European Centre for Disease Prevention and Control. “Options for the Use of Rapid Antigen Tests for COVID-19 in the EU/EEA and the UK.” European Centre for Disease Prevention and Control, November 19, 2020. <https://www.ecdc.europa.eu/en/publications-data/options-use-rapid-antigen-tests-covid-19-eueea-and-uk>.

³ GNA Biosolutions. “GNA Biosolutions | Beyond Molecular Boundaries,” 2021. <https://www.gna-bio.com/covid19/>.

⁴ Deutsches Ärzteblatt. “Bayerischer PCR-Schnelltest erhält Sonderzulassung.” Deutsches Ärzteblatt, December 30, 2020. <https://www.aerzteblatt.de/nachrichten/119746/Bayerischer-PCR-Schnelltest-erhaelt-Sonderzulassung>.

⁵ GNA Biosolutions. “GNA Biosolutions | Beyond Molecular Boundaries/ Technology,” 2021. <https://www.gna-bio.com/technology/>.

⁶ Deutsches Ärzteblatt. “Bayerischer PCR-Schnelltest erhält Sonderzulassung.” Deutsches Ärzteblatt, December 30, 2020. <https://www.aerzteblatt.de/nachrichten/119746/Bayerischer-PCR-Schnelltest-erhaelt-Sonderzulassung>.

⁷ Deutsches Ärzteblatt. “Bayerischer PCR-Schnelltest erhält Sonderzulassung.” Deutsches Ärzteblatt, December 30, 2020. <https://www.aerzteblatt.de/nachrichten/119746/Bayerischer-PCR-Schnelltest-erhaelt-Sonderzulassung>.

Background on Innovation Sheet Series

As part of a real-time evaluation of the SARS CoV 2 pandemic (with focus on epidemiological, medical, economical, societal, technical, and cultural developments in Germany and Armenia) the CoronaSys research team, under the leadership of Prof. Dr. Martin Voss, is conducting a continuous monitoring of developments and medical, technical, and social innovations concerning Covid-19.

Multiple national and international media outlets, research platforms, and scientific and organizational guidelines, briefs, and updates are screened to feed into this outlet. The rationale behind this is to support the projects' network partners in Armenia and Germany with short summaries of key developments and promising innovations that are shaping the global, German, and Armenian outbreak response and recovery.

The aim of these short briefs is to give condensed and structured information on selected innovations emerging out of the conducted horizon scanning. This could be mainstream big-ticket items or fringe subjects that are easily overlooked in the global flood of information. Some innovations will be followed through their evolution in time while others may only appear once. While subjectively selected, the briefs are descriptive in nature and leave analysis and critical interpretation to the reader. Network partners in both countries are invited to provide feedback on their interest areas and suggest particularly relevant topics for the CoronaSys Workshop series.

The CoronaSys Innovation Sheet Series is published by the [Academy of the Disaster Research Unit](#), which is, as a non-profit limited liability company, a spin-off of the [Disaster Research Unit](#) at the Free University of Berlin. The series is part of the research project "[CoronaSys](#): Addressing the corona pandemic in Armenia through systemic risk management", sponsored by the German Federal Ministry of Education and Research.

If you have any questions, suggestions, or if you wish to be taken on (or off) the project mailing list for CoronaSys updates, innovation sheets, and workshop invitations, please send a message to Janina Schäfer (schaefer@a-kfs.de). For general project inquiries, you may contact the team lead Sara Merkes (merkes@a-kfs.de) or the project lead Martin Voss (voss@a-kfs.de).

Previous CoronaSys Innovation Sheets

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- 2 "Dyphox" Surface Coating
- 3 MOVES SLC Portable ICU
- 4 Portable TRI- KLEEN 500UV
- 5 Convalescent Plasma Therapy
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- 7 BinaxNOW Antigen Test
- 8 Corona Traffic Light
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All previous CoronaSys Innovation Sheets are available online:

<http://coronasys.a-kfs.de/category/innovation-stream/>

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