PROJECT OFFER

COVISID

corona virus *in situ* intravital detection

A key prerequisite for controlling corona virus spreading is rapid testing of potentially infectious individuals. We have developed IP for an ultra-fast and user-friendly inhalation test that reliably provides an easy-to-interprete readout without any special technical device.

BACKGROUND

An extremely demanding situation in the current corona test strategy is the lack of a ubiquitously applicable assay that is capable of instantly identifying a virus-carrying individual in situations of particular relevance, (e.g. visitors in a nursing home, passenger plane boarding, care takers in a hospital). Relevant criteria of such an assay are, besides high sensitivity and specificity, easy-to-use applicability with an instant an unequivocal read-out and no need for extra test equipment.

TECHNOLOGY

We have developed IP for a SARS-CoV-2 corona virus *in situ* intravital detection (COVISID) assay, which is based on an enzymatic immune-proximity complementation approach that produces a distinct odor and taste as positive readout. SARS-CoV-2-specific antibodies (or derivatives thereof), conjugated to a substrate-converting enzymatic moiety, will be applied as aerosol via a standard, “asthma spray-like” inhaler to the nasopharyngeal mucosa. No washing step is required, since normal breathing for a few minutes will exhale unbound antibody. Consecutively, a second inhalation delivers an aerosol containing the substrate for the enzymatic activity. By this “flavor & fragrance” strategy the SARS-CoV-2-bound antibody/enzyme conjugate converts an odor- and tasteless substrate into a smell and taste signal, objectively recognizable by both the individual itself and its surroundings. To ensure high specificity we have divided the enzymatic moiety – an esterase activity that cleaves a butyric ester to butyric acid – into two individually inert components that only operate as an enzyme if brought into close proximity *in situ* by binding to SARS-CoV-2. Split-enzyme-conjugated antibodies might also be administered in one single aerosol formulation together with its substrate due to the lack of activity if not placed in close proximity. This platform technology can rapidly be adapted to detect other respiratory tract infectious agents.

OFFER

Under protection of a CDA/NDA we provide you with plans for the next developing steps including a prototype. We prefer to establish the technology jointly with you but can also transfer the IP or offer licences.

EXPERTS

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AVAILABLE FOR

- Joint Research Project
- Contract Research
- COMET Funding call
- IP Transfer
- Licensing

DEVELOPMENT STATUS

TRL 2 (Concept and Application formulated)

IPR

Patent pending

KEYWORDS

- SARS-CoV-2
- COVID-19
- Enzymatic Immune-Proximity Complementation
- Diagnostics
- Point-of-Care
- Instant
- Simple and Self-Applicable
- Analyzer-Free

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