

# INNOVATIONS IN COVID-19

Bridging opportunities  
at Oswaldo Cruz Institute

## RAPID MOLECULAR DIAGNOSTIC KIT IN THE POINT-OF-CARE MODEL FOR COVID-19 (COD. 2020.006)

### COORDINATOR

André Nóbrega Pitaluga

### RESEARCH AREA

Diagnostic

### DEVELOPMENT STAGE

Level 6 - TRL -System/sub-system model or prototype demonstration in na operational environment. MRL - Capability to produce a prototype system or subsystem in a production relevant environment.

### PROPOSITION / APPLICATION

In the absence of effective vaccines and drugs against SARSCov-2, WHO suggests mass testing of the population as a tool to control the Covid-19 pandemic. However, there is great difficulty in diagnosing due to reasons such as: high costs, complexity and response time of available molecular diagnostics by RT-PCR, which makes it impossible to test the population on a large scale. To solve such a problem, we have developed a rapid molecular diagnostic kit.

### INNOVATION

Molecular diagnostic kit of low cost and low complexity, maintaining the good efficiency and reliability characteristic of RT-PCR tests, which would allow for large-scale testing of the population.

Compared to existing molecular diagnostics, the kit offers greater speed and sensitivity in the results, combined with its low cost and high precision. In addition, no sophisticated equipments are required, being able to process biological samples from different sources. It can also be stored at room temperature or for long periods in a simple refrigerator. Another advantage is that the result is presented visually. Sample collection until the final result is performed in less than 1 hour with high sensitivity and high specificity.

### OPPORTUNITY

To offer molecular diagnostics quickly, simply and at low cost at the point-of-care model. It is possible to process and diagnose hundreds of samples per day at a simple collection point.

### CONTACT

[nit@ioc.fiocruz.br](mailto:nit@ioc.fiocruz.br)