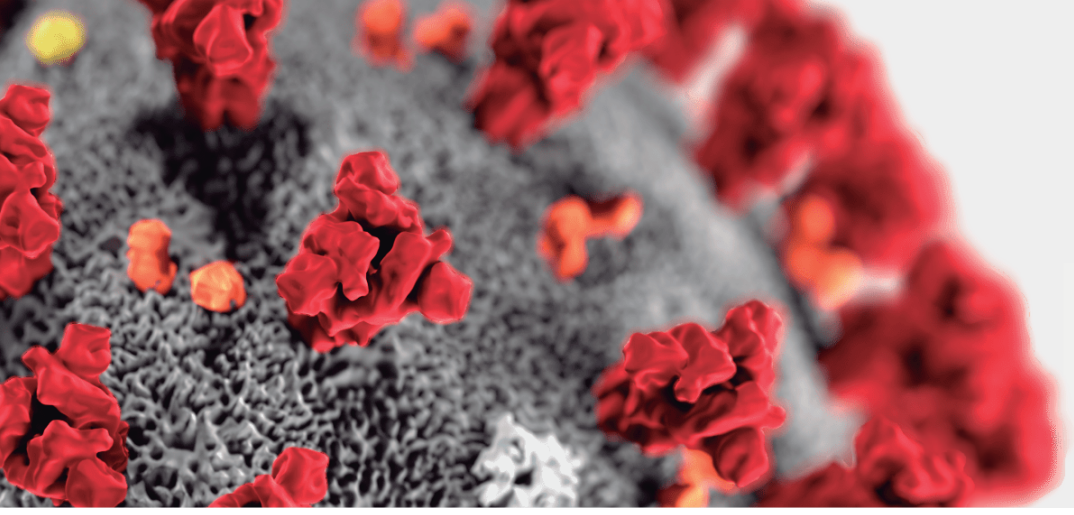

INNOVATIONS IN COVID-19

Bridging opportunities
at Oswaldo Cruz Institute

MULTIFACTORIAL IN VITRO STUDY OF A NEW POTENTIAL IMMUNOMODULATORY TOOL TO FIGHT COVID-19: THE BCG VACCINE

(CÓD. 2020.025)

COORDINATOR	Paulo Renato Zuquim Antas
RESEARCH AREA	Prevention and Reduction of Contagion
DEVELOPMENT STAGE	Level 1 - TRL - Basic principles observed and reported. MRL - Basic principles observed and reported
PROPOSITION / APPLICATION	The hypothesis of this project is that the BCG vaccine is potentially capable of orchestrating the excessive cytokine storm triggered by the SARS-COV2 infection. This immunomodulation would greatly encourage the acquisition of effective anti-viral properties. This proposal should also offer opportunities for the use of this vaccine, intended to interfere in acute viral infection, aiming at the treatment of diseases with intense inflammatory episodes, such as COVID-19. The aforementioned hypothesis has already been described in scientific articles, such as the articles: (1) "O'Neill LAJ, Netea MG. BCG-induced trained immunity: can it offer protection against COVID-19? Nat Rev Immunol. 2020 Jun;20(6):335-337. doi: 10.1038/s41577-020-0337-y. PMID: 32393823; PMCID: PMC7212510." ; e (2) Redelman-Sidi G. Could BCG be used to protect against COVID-19? Nat Rev Urol. 2020 Jun;17(6):316-317. doi: 10.1038/s41585-020-0325-9. PMID: 32341531; PMCID: PMC7184546.
INNOVATION	This proposal should also offer opportunities for the use of this vaccine, intended to interfere in acute viral infection, aiming at the treatment of diseases with intense inflammatory episodes, such as COVID-19. Ataulpho de Paiva Foundation (FAP-RJ) has produced the BCG Moreau vaccine and a second use of this nature can provide significant economic development for the State of Rio de Janeiro.
OPPORTUNITY	The use of the BCG strain exclusive to Brazil with a protection panorama for COVID-19. The main approach will be the use of the BCG vaccine not only for the immunological memory of mycobacterial antigens, but also as a boost to the immune system, which can lead to non-specific protection against other pathogens or a milder course of infection caused by SARS- COV2.
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