

IMEM-CNR, Webinar – 06/09/2021, ore 11:00

Seminario su

Development of a Microfluidic based rapid diagnostic kit for SAR COV2

Framework: VIRAD-C19 project FISR 2020 funded by MUR

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The Pandemic related to COVID-19 reveals the Achilles' heel of the current methods of analysis for the early detection and subsequent monitoring of the diffusion of viruses among the population. In the honor of the truth, there is not only one issue, but an addition of factors which complicate the fast and reproducible analysis of COVID-19: its very low concentration in the human sample, the extreme variability of this concentration in dependence of the type and time after the symptoms onset, its persistence over several weeks inside the body and its extreme high contagiousness. Recently, significant researches have demonstrated the enormous potential of virus detection by Lab on a Chip approach. However, the current state of the art in this field proposes standard manufacturing methods, which are hard to integrate with next generation materials as functionalized polymers and nanomaterials. The idea behind this project is to use LOCs in a Point of Care platform to achieve virus isolation, concentration and viral RNA amplification by means of innovative and interdisciplinary approaches involving: microfluidics, nano materials and polymer functionalization.

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