

## The capabilities and potential of lateral flow assays

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During COVID-19 Pandemic the SARS-CoV-2 virus took many lives around the world. The need of a diagnostic tool able to provide fast response, in situ, easy to deploy and of low cost was clear. Rapid diagnostic tests, a.k.a. lateral flow tests, fit with those requirements. Made of paper, a cheap and sustainable material, these types of tests are portable, easy-to-use (by any user, without any previous training), affordable and equipment/battery-free. Also, the inclusion of nanomaterials can enhance the capabilities and potential of lateral flow technology.

The objective of this talk is to show how nanomaterials can enhance in different ways the performance of lateral flow assays, and the potential these biosensors have for many different diagnostic applications. Viruses, bacteria, extracellular vesicles and DNA are some of the biomarkers which can be recognized by using this technology.