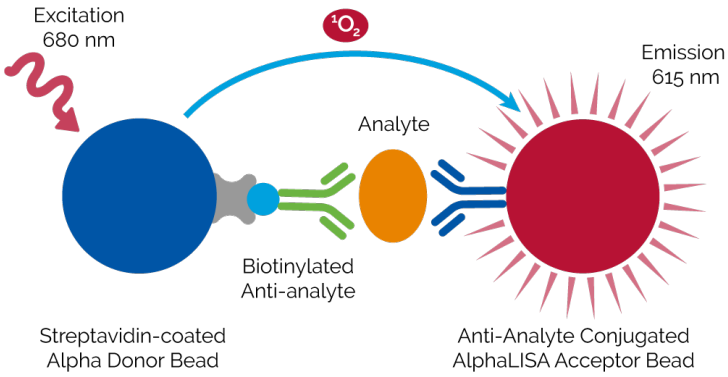
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PerkinElmer's immunoassay disrupts SARS-CoV-2 spike protein/ACE2 interaction

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NIH NCATS team identifies therapeutic compounds and shared it on an open data portal to help in the global pursuit of drug repurposing candidates for COVID-19



PerkinElmer, Inc. has announced that a research team at the National Center for Advancing Translational Sciences (NCATS), an arm of the National Institutes of Health (NIH), in the US, is working with PerkinElmer's AlphaLISA® immunoassay to help support the global search for effective COVID-19 therapeutics.

The NCATS research project is focused on studying small molecule drug compounds that are already approved and in use as treatments but could potentially be repurposed for COVID-19.

The goal of the project is to quickly and reliably identify which small molecule compounds can best disrupt key proteins that bind together to allow for SARS-CoV-2 infection -- the S1 spike protein and the host ACE2 receptor.

Using PerkinElmer's AlphaLISA assay, the NCATS team has been able to efficiently and accurately screen 3,384 molecular entities and narrow them down to a field of 25 quality therapeutic compounds or "hits". The whole process, from assay development and optimization through screening, has been achieved in just a few months.

The AlphaLISA technology is a homogeneous (no-wash) assay that works by generating a light emission in response to a biomolecular interaction that results in proximity of the bead-binding complex. The platform can be used to detect and quantitate biomolecules of almost any size in both simple and complex sample types. Its bead-based, luminescent, signal amplification provides increased sensitivity, a wide dynamic range and potential assay miniaturization.

Speaking to the aim and contribution of the NCATS project, Dr. Quinlin Hanson, co-leader of the research effort and a Postdoctoral Fellow at NCATS said, "Our immediate goal was to develop a sensitive and robust assay platform that scientists could use as a template for screening small molecule compounds that might lead to further drug development. To share our learnings and support collaboration, we've posted our work on the NCATS Open Data Portal. Now our team will conduct additional testing on select molecules and make that information available to the scientific community as well when ready."