

NCATS OpenData Portal: Open Science Speeds Therapeutic Answers



When the COVID-19 pandemic struck, there were no effective treatments. A new therapeutic typically takes up to 15 years to travel from early development to the medicine cabinet. Using existing drugs in new ways — called drug repurposing — could reduce that time to just 1–2 years. To tap the power of drug repurposing in an open and timely way, the National Center for Advancing Translational Sciences (NCATS) created the COVID-19 [OpenData Portal \(ODP\)](#).

The ODP offers real-time information about how individual SARS-CoV-2 variants may respond to known therapeutics. The platform also focuses on NCATS' broader drug repurposing findings and other pandemic threats.

How the ODP Works

The NCATS ODP includes SARS-CoV-2 screening data on more than 10,000 drugs and compounds, including nearly 3,000 approved drugs in the [NCATS Pharmaceutical Collection](#). It's a one-stop shop and easy-to-understand resource for COVID-19-related drug repurposing and therapeutic activity data.

The ODP has evolved with the SARS-CoV-2 virus to feature new data types and resources. Scientists across the public and private sectors collaborate through the ODP to share data, identify promising treatments, and discard therapeutic dead ends. The ODP amasses all industry tests of new and existing COVID-19 therapeutics and catalogs all research sources, with more than 10,000 sources collected to date.

The ODP is open and free to everyone. By sharing this immense data set publicly, NCATS has enabled scientists to build and refine models that predict how therapies will work against SARS-CoV-2.

Delivering Shared Solutions

The ODP is a proven data-sharing tool that has become a primary SARS-CoV-2 data hub and decision-making tool for public health organizations as viral variants arise.

- The public-private partnership known as Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) Tracking Resistance and Coronavirus Evolution (TRACE) collaborates with the ODP to track emerging variants and help predict how well vaccines and treatments might work against these new threats.
- Pharmaceutical companies have used the ODP to share prepublication data on therapies' effectiveness against omicron and other SARS-CoV-2 variants.
- The ODP integrates data from the [National COVID Cohort Collaborative \(N3C\)](#) to offer new insights on therapeutic usage and real-world effectiveness.
- Federal agencies use the ODP to monitor drug impact over time. For example, the Centers for Disease Control and Prevention used the ODP's data to estimate omicron's impact on approved antibody therapies before experimental data on that variant had emerged.
- Future ODP releases will feature a glossary of SARS-CoV-2 therapeutics, detailed vaccine booster data and more. This will help create a sharper picture of treatment options for SARS-CoV-2.

The scalable, open-science ODP model could meet similar challenges posed by other viruses — such as [monkeypox](#) and influenza — and be ready for future pandemics. [Learn more](#) about how the OpenData Portal can help your organization find COVID-19 treatment solutions faster.

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