

NVBL Symposium Closing Remarks

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#NATLABSINTHEFIGHT

NVBL: Looking Back and Moving Forward

DOE's expertise in **high performance computing** provides unparalleled tools for development of medical therapies and for tracking the spread of the virus

These capabilities can accelerate the pace to develop **therapeutic treatments**, and to make our nation's **response to the pandemic much more efficient**

DOE maintains the world's leading **characterization capabilities – X-ray and neutron sources, cryo-electron microscopy, and genomics facilities**, for determining pathogen protein structure

These have been **absolutely essential** for understanding SARS-CoV-2

DOE's world-leading capabilities in **materials development and manufacturing scale-up** have addressed **crucial supply-chain** problems

The capabilities will continue to contribute to the fight against COVID from **personal protective equipment (PPE) to testing supplies and vaccine manufacturing**

DOE's complex-wide capabilities in **biological and environmental sciences**, building on biological and national security expertise, can be quickly leveraged to address pandemic response – supporting the **national infrastructure for testing** for disease as well as for understanding how **novel pathogens spread**

The **NVBL has been supporting CDC, FDA, and other federal agencies in standing up COVID-19 testing**

NVBL: Lessons Learned

Getting ALL the National Labs to the table from the start is important

- Coordination with DOE Headquarters on funding/subject matter expertise

Enablers of NVBL success include:

- Strong consensus between DOE and the Labs on the problem statement
- Clear understanding of the problems and stakeholders for a given effort
- Rapid selection of projects and allocation of funding
- Timely access to unique DOE capabilities and staff
- Weekly interactions to share issues and ideation of solutions

Future vision

- Leverage NVBL collaborations and successes to enable national architecture for biosecurity and future pandemic preparedness
- Build alliances with universities, private sector, and other federal agencies to significantly increase the pipeline of talents for innovation
- Expand NVBL modality to the opportunity space of next-generation biology, biomanufacturing, and the bioeconomy



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National Virtual Biotechnology Laboratory

COVID-19 R&D for the nation



<https://science.osti.gov/nvbl>