The Serological Sciences Network (SeroNet)

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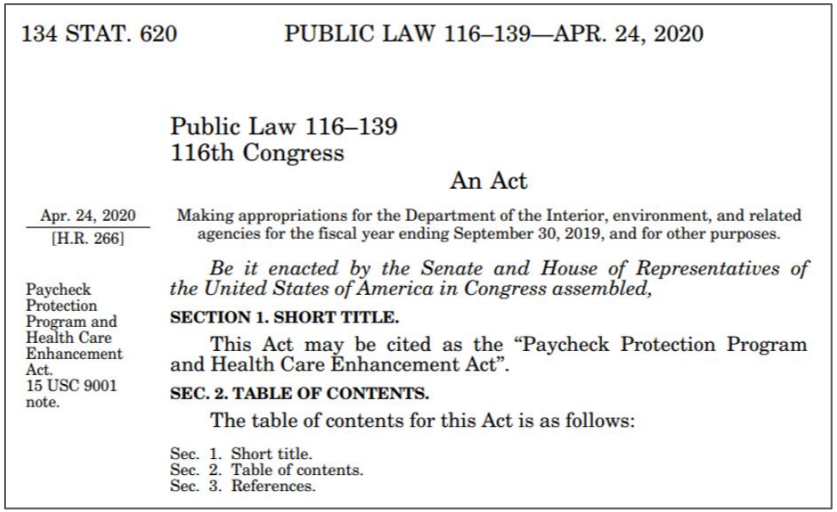
NIH NATIONAL CANCER INSTITUTE

October 14, 2020

Supplemental funding from Congress

- Enacted April 24th
- $306M for NCI to **develop**, **validate**, **improve**, and **implement** serological testing and associated technologies
- COVID-19-focused and distinct from annual appropriation



134 STAT. 620 PUBLIC LAW 116–139—APR. 24, 2020

Public Law 116–139
116th Congress

An Act

Apr. 24, 2020
[H.R. 266]

Making appropriations for the Department of the Interior, environment, and related agencies for the fiscal year ending September 30, 2019, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Paycheck Protection Program and Health Care Enhancement Act.
15 USC 9001 note.

SECTION 1. SHORT TITLE.

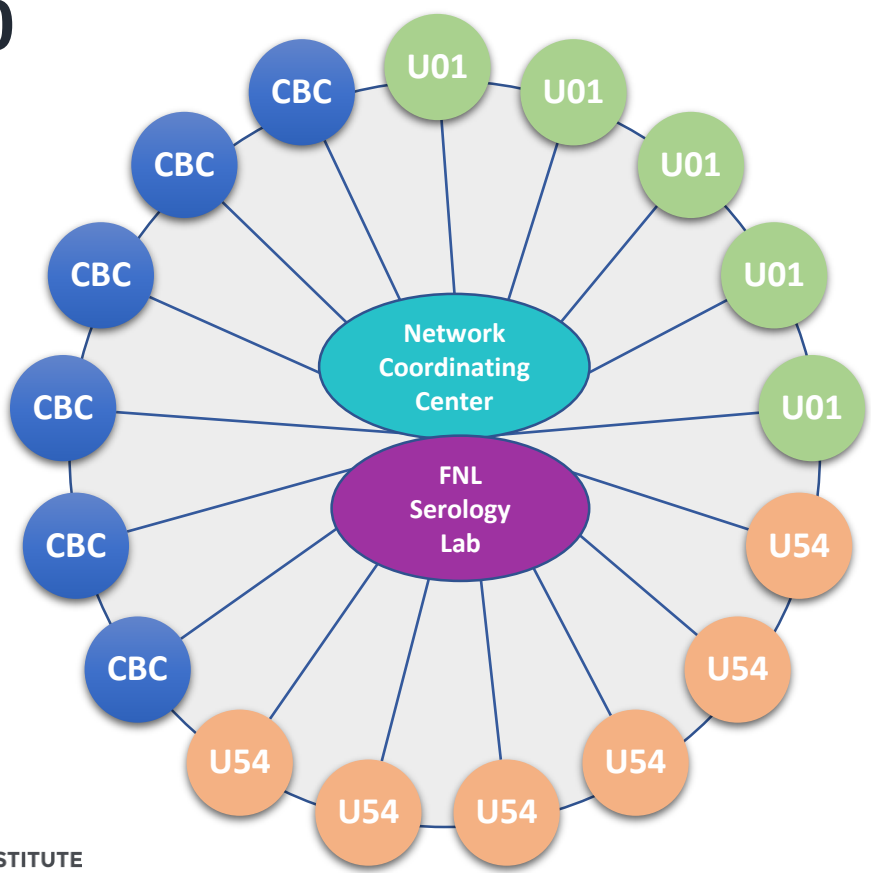
This Act may be cited as the "Paycheck Protection Program and Health Care Enhancement Act".

SEC. 2. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

Sec. 1. Short title.
Sec. 2. Table of contents.
Sec. 3. References.

Proposed Serological Sciences Network(SeroNet)
May 2020



CBCs: Serological Sciences Capacity Building Centers (RFP)

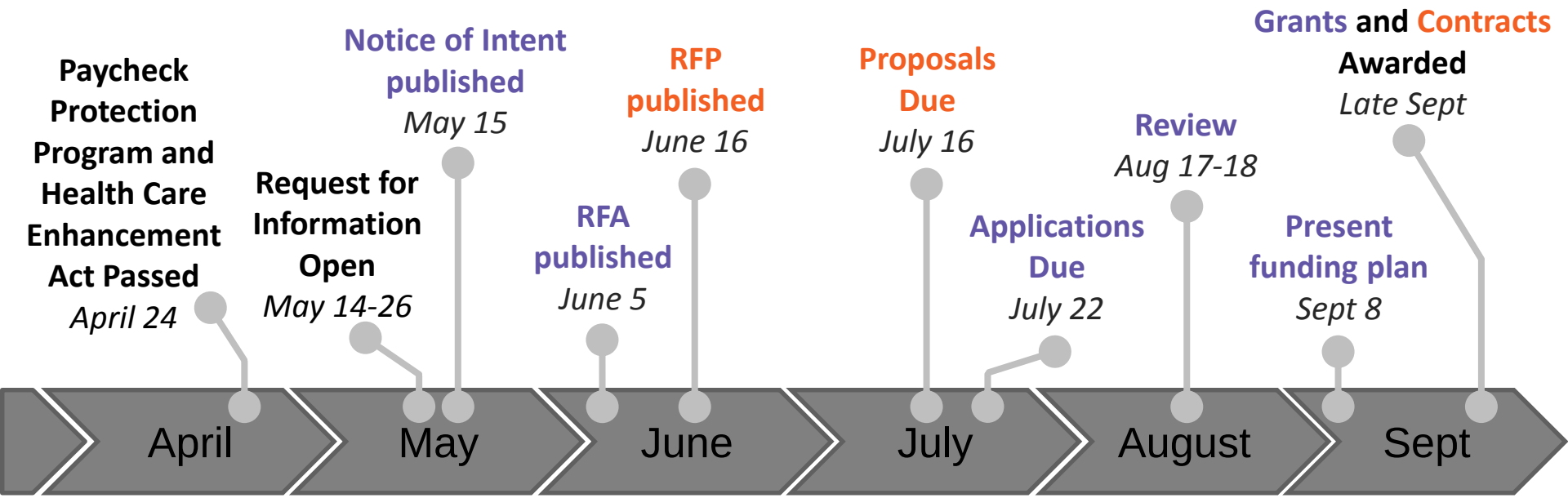
U54s: Serological Sciences Centers of Excellence (RFA)

U01s: Serological sciences projects (RFA)

Goal of SeroNet

Increase national capacity for serological testing and advance our understanding of all aspects of the immune response to SARS-CoV-2.

Timeline

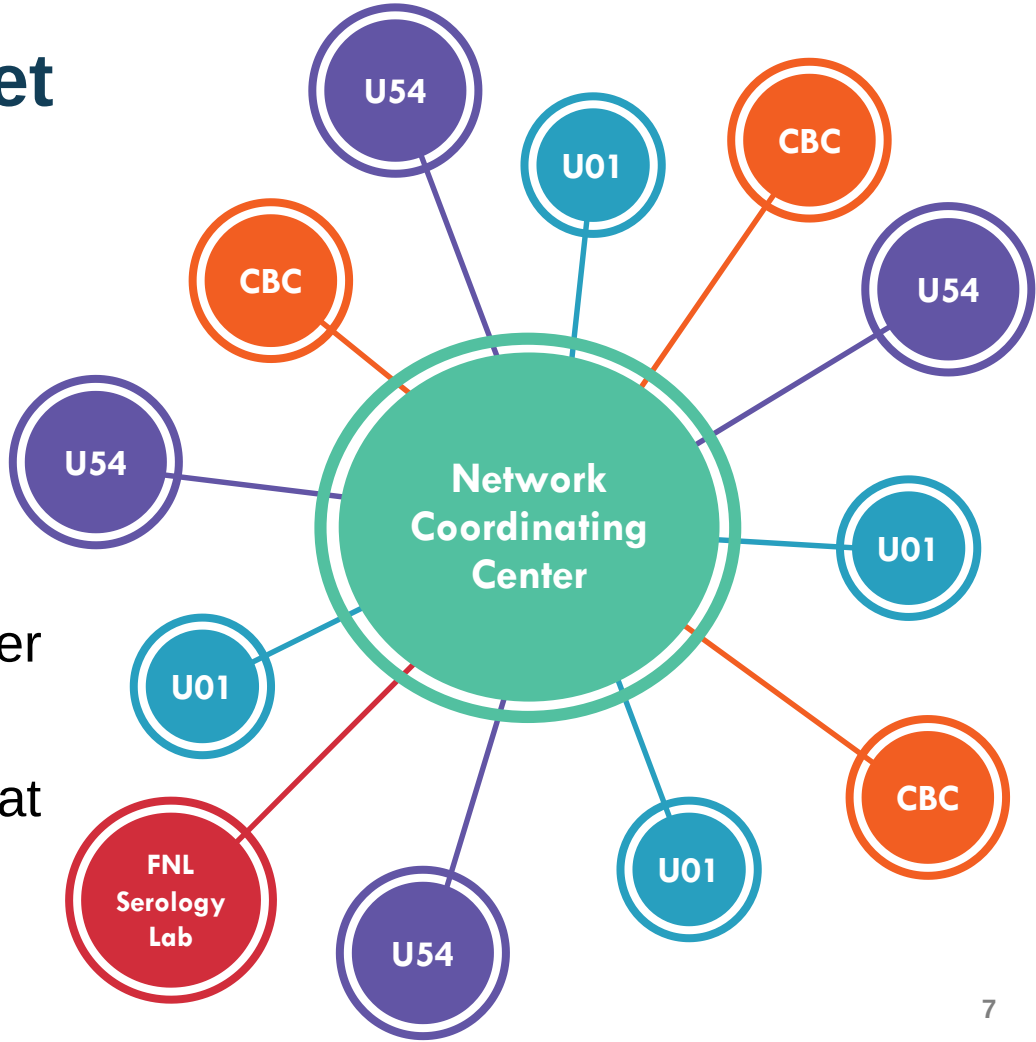

Paycheck Protection Program and Health Care Enhancement Act Passed
April 24
Request for Information Open
May 14-26
Notice of Intent published
May 15
RFA published
June 5
RFP published
June 16
Proposals Due
July 16
Applications Due
July 22
Review
Aug 17-18
Present funding plan
Sept 8
Grants and Contracts Awarded
Late Sept
April
May
June
July
August
Sept

SeroNet Objectives

- Develop novel serological assays and deploy them broadly
- Characterize the biological mechanisms driving the innate, cell-mediated and humoral to SARS-CoV-2
- Determine factors that modulate the immune response
- Determine the serological correlates of disease pathogenesis and protection against future infection
- Identify and address barriers to testing

Components of SeroNet

- **4 CBCs**: Serological Sciences Capacity Building Centers
- **8 U54s**: Serological Sciences Centers of Excellence (RFA)
- **13 U01s**: Serological Sciences research projects (RFA)
- Frederick National Lab for Cancer Research **Serology Lab**
- **Network Coordinating Center** at Frederick National Lab



Geographical Distribution of SeroNet Sites

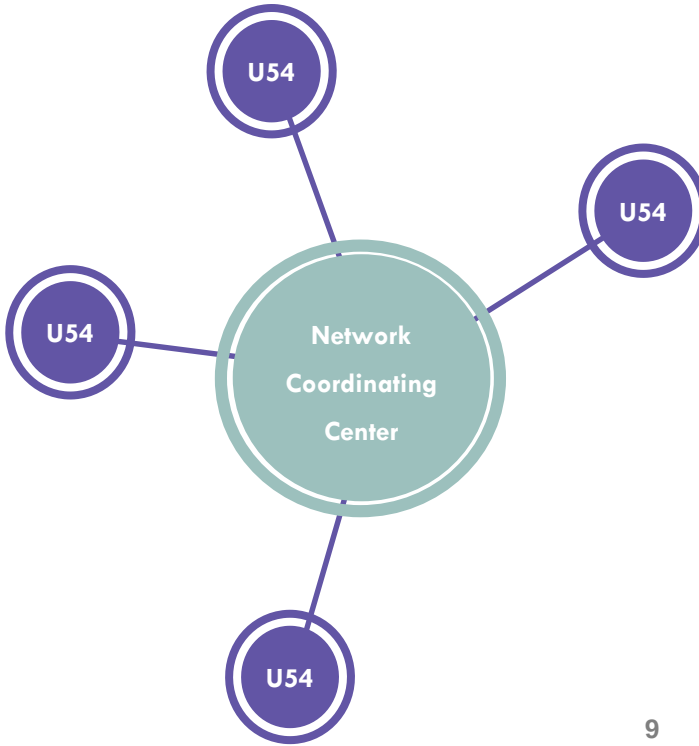
U54 Site

U01 Site

CBC Site

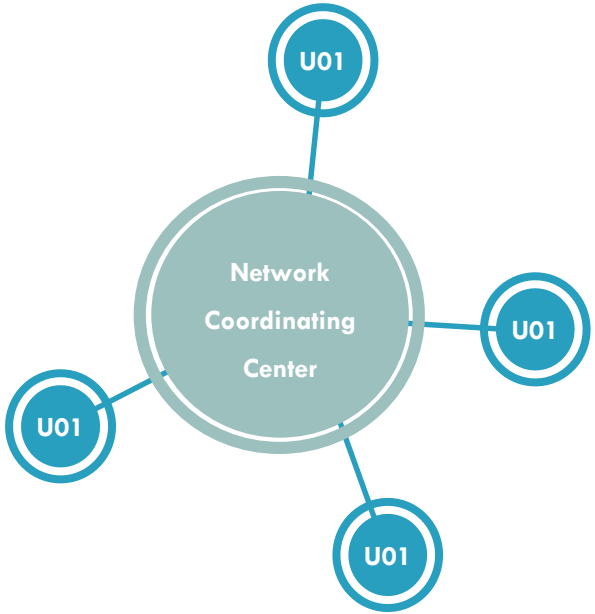
8 Centers of Excellence (U54 grants)

Ohio State University	Center for Serological Testing to Improve Outcomes from Pandemic COVID-19 (STOP-COVID)
University of North Carolina Chapel Hill	North Carolina SeroNet Center for Excellence
Cedars-Sinai Medical Center	Diversity and Determinants of the Immune-Inflammatory Response to SARS-CoV-2
Johns Hopkins University	Johns Hopkins Excellence in Pathogenesis and Immunity Center for SARS-CoV-2 (JH-EPICS)
Tulane University	Tulane University COVID Antibody and Immunity Network (TUCAIN)
Stanford University	Mechanisms and Duration of Immunity to SARS-CoV-2
Emory University	Immune Regulation of COVID-19 Infection in Cancer and Autoimmunity
Icahn School of Medicine at Mount Sinai	Vulnerability of SARS- CoV-2 Infection in Lung Cancer Based on Serological Antibody Analyses



13 Research Projects (U01 grants)

University at Albany, Wadsworth Center High-Throughput Dried Blood Spot (HT-DBS) Technologies in SARS-CoV-2 Serology and Vaccinology	**University of Arkansas for Medical Sciences** DISCOVER: Disparities in Immune Response to SARS-CoV-2 in Arkansas
Beth Israel Deaconess Medical Center Immunologic Signatures of SARS-CoV-2 Vaccination and Disease	**La Jolla Institute for Immunology** SARS-CoV-2-reactive tissue-resident in memory T cells in health and cancer subjects
Harvard School of Public Health Leverage Serologic Data in Mathematical Models to Control COVID-19	**University of Puerto Rico, Medical Sciences** SARS-CoV-2 correlates of protection in a Latino-origin population
Kaiser Foundation Research Institute SARS-CoV-2 Serological Antibody Testing for Disease Surveillance and Clinical Use	**University of Alabama at Birmingham** Adaptive Immunity and Persistent SARS-CoV-2 Replication
Yale University Immuno-Serological Assays for Monitoring COVID19 in Patients with Hematologic Malignancies	**University of Massachusetts Medical School Worchester** Enhancing racial and ethnic diversity in COVID-19 research participation through storytelling (COVIDstory)
Case Western Reserve University Pre-exposure Immunologic Health and Linkages to SARS-CoV-2 Serologic Responses, Endothelial Cell Resilience, and Cardiovascular Complications: Defining the mechanistic basis of high-risk endotypes	**Michigan State University** Culturally-targeted communication to promote SARS-CoV-2 antibody testing in saliva: Enabling evaluation of inflammatory pathways in COVID-19 racial disparities
Case Western Reserve University Early Drivers of Humoral Immunity to SARS-CoV-2 Infections	



SeroNet Grants by Area of Investigation

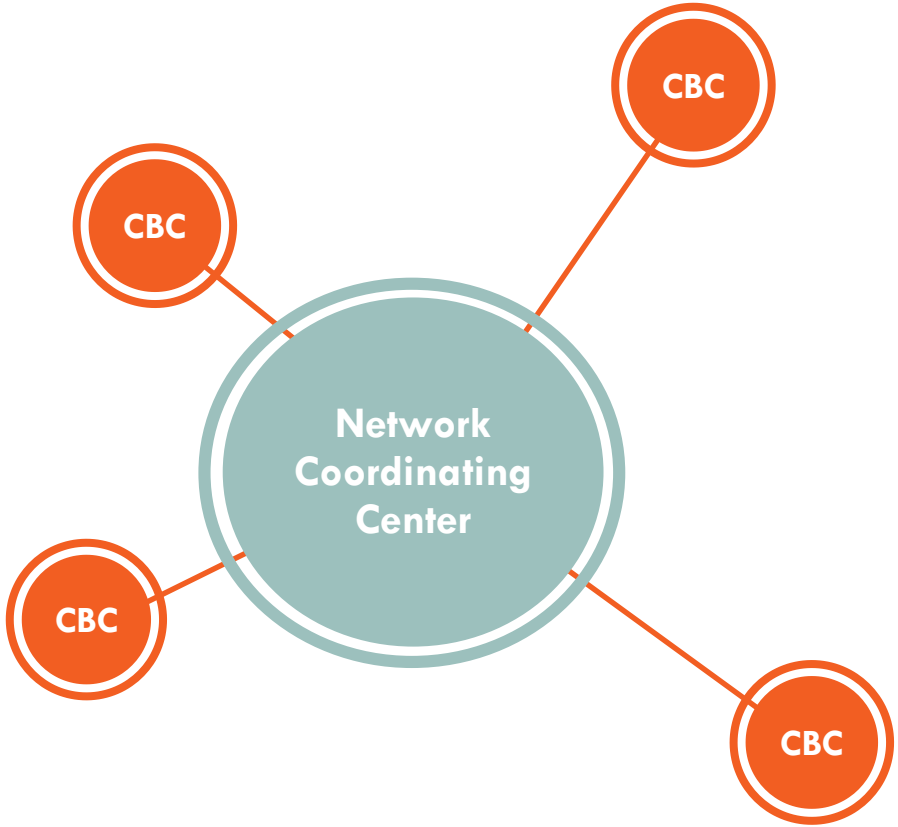
		Assay Development	Understand IR	COVID therapies on IR	Natural infection vs Vaccine	Genetic/ Epigenetic determinants	Comorbidities	Cancer	Social Determinants	Access	Comms and Education
U54	Ohio State										
	UNC Chapel Hill										
	Johns Hopkins										
	Cedars-Sinai										
	Stanford Univ.										
	Tulane Univ.										
	Emory Univ.										
	Mt. Sinai										
U01	U. Massachusetts										
	Harvard SPH										
	Wadsworth Ctr.										
	Beth Israel/Deaconess										
	Case Western Reserve										
	Kaiser Fdtn.										
	Yale Univ.										
	Michigan State										
	Univ. Arkansas										
	La Jolla Inst.										
	Case Western Reserve										
	Univ. Puerto Rico										
	U. Alabama Birmingham										

Serological Sciences Capacity Building Centers

Jim Cherry

4 CBCs (Contracts):

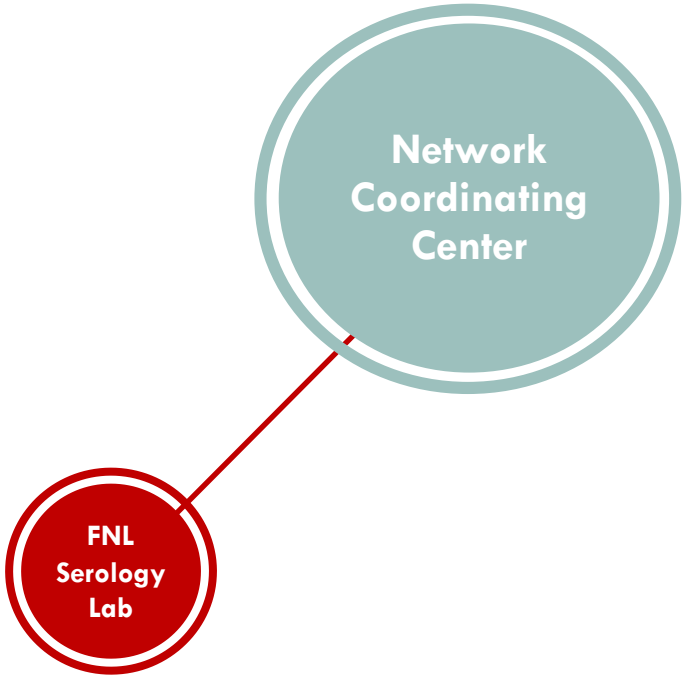
- Arizona State University
- University of Minnesota
- Feinstein Institute for Research
- Icahn School of Medicine at Mount Sinai



FNLCR Serology Laboratory

Ligia Pinto

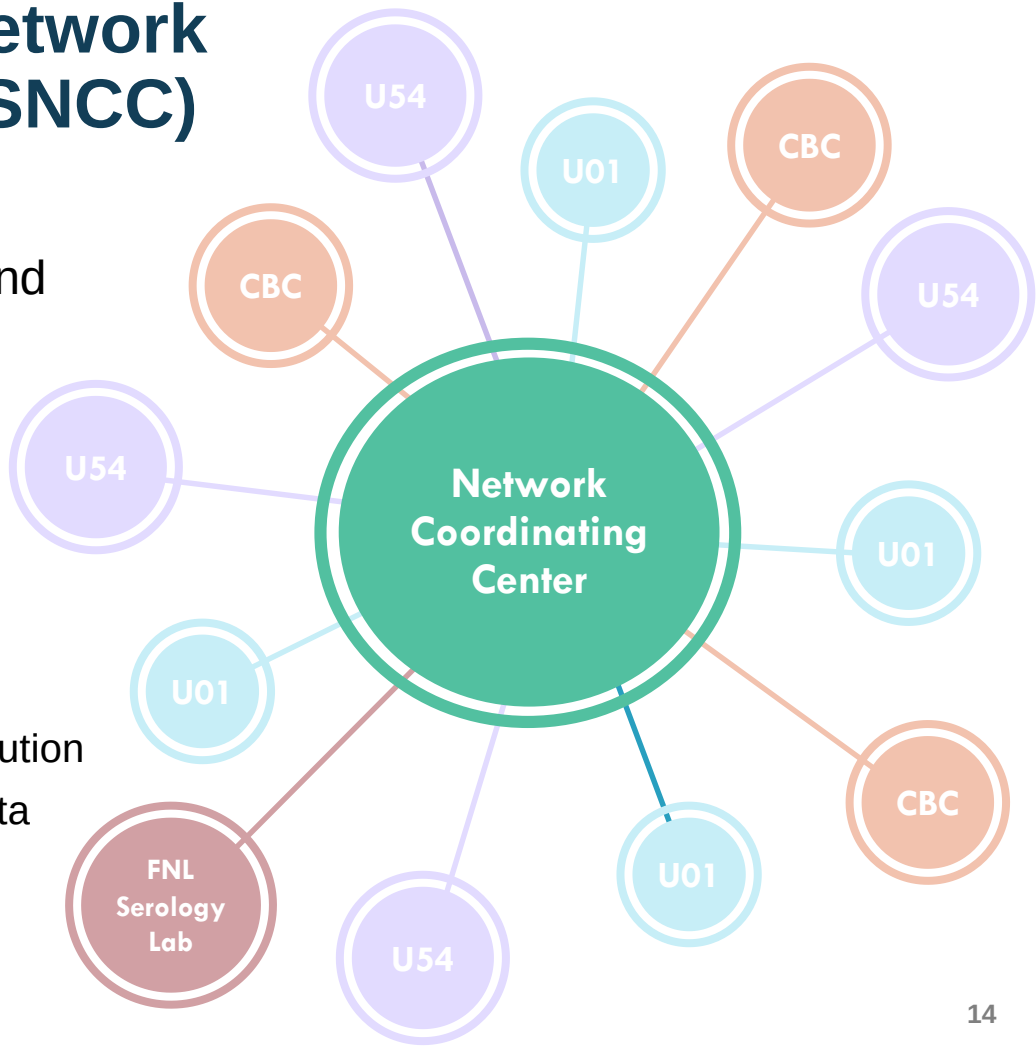
- Implement and qualify SARS-CoV-2 assays
- Develop qualified assay standards, and generate novel reagents
- Procure and characterize serum samples from SARS-CoV-2 patients and controls and establish serum panels
- Share assays, reagents, and standards within SeroNet



Serological Sciences Network Coordinating Center (SSNCC)

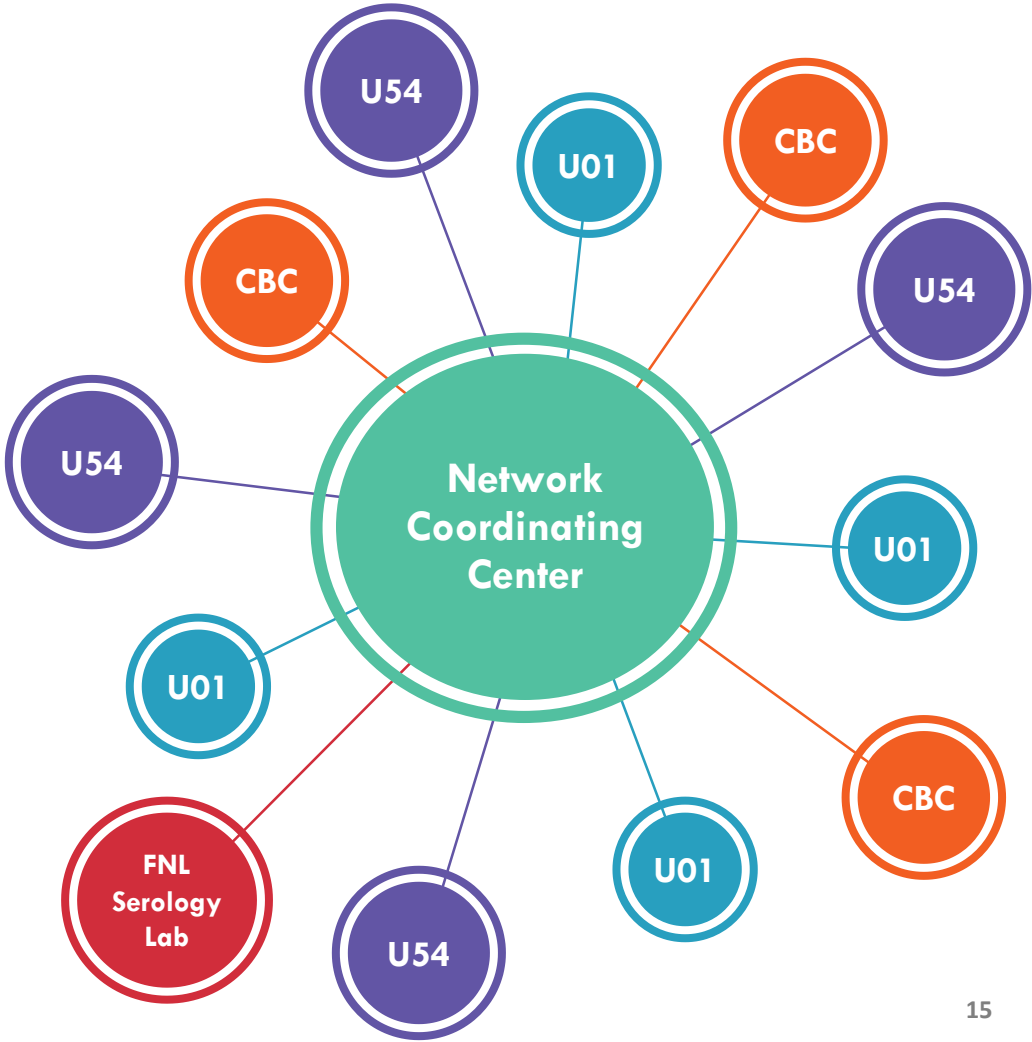
Deb Hope, FNLCR

- SSNCC will work closely with NCI and SeroNet investigators to manage all aspects of SeroNet coordination including:
  - Organizing Steering Committee and Investigator Meetings
  - Managing Network communication and outreach
  - Coordinating reagent sharing and distribution
  - Facilitating and coordinating Network data management



SeroNet Principles

- Designed to be a highly interactive network
- Sharing of data and resources within SeroNet
- Open access publication
- Data and resources made publicly available



Budget Summary

Component	Year 1	Total (5 years)
Centers (U54)	$15.5 M	$77.7 M
Projects (U01)	$9.3 M	$46.4 M
CBC	$16.0 M	$54.5 M
Serology Lab	$5.3 M	$21.6 M
Coordinating Center	$2.7 M	$13.0 M
Total	$48.8 M	$213.2 M

Acknowledgements

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DEA

Shamala Srinivas

Caterina Bianco

Ananda Gupta

Paulette Gray

OGA

Crystal Wolfrey

NCI at Frederick

Jim Cherry

Ligia Pinto

NCI Program Directors

Kelly Blake

Danielle Carrick

Ray Harris

Jacob Kagan

Karl Krueger

Lillian Kuo

Gabriel Lai

Tram Lam

Angela Mariotto

Susan McCarthy

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NIAID

Erik Stemmy

Cristina Cassetti

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