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Similar Projects

T cell analysis of COVID infection and vaccination

Project Number
1ZIAAI005155-01

Contact PI/Project Leader
KOUP, RICHARD A

Awardee Organization
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Description

Abstract Text

We have identified and recruited over 30 local volunteers who have recovered from **COVID**-19 infection. Their disease characteristics have been recorded and blood samples have been drawn for comprehensive T cell analyses. Multiple longitudinal samples have been collected on most volunteers, and several have undergone leukopheresis. The T cell response to **COVID** 19 has been studied in 20 of the volunteers so far. PBMC were stimulated with overlapping peptides covering the SARS-CoV2 proteome, and their CD4 and CD8 response was evaluated by intracellular cytokine staining. Eight of the individuals to date are having their T cell response mapped to the epitope level by ELISPOT using matrix pools of peptides. Once the individual epitope responses are known their T cells will be stimulated by individual peptides and viably sorted for genomic analysis. We will determine the T cell receptor usage of the epitope-specific responses and the transcriptomic profiles of the individual T cells. These studies will be repeated on longitudinal samples to determine the evolution of the T cell response over time.

Public Health Relevance Statement

Data not available.

NIH Spending Category

Coronaviruses Emerging Infectious Diseases Immunization Infectious Diseases Prevention Vaccine Related

Project Terms

2019-nCoV Blood specimen CD8B1 gene **COVID**-19 Characteristics Disease Epitopes Evolution Future Genomics Goals Individual Infection Intervention Maps Peptides Peripheral Blood Mononuclear Cell Proteome Sampling Stains T cell response T-Cell Receptor T-Lymphocyte Therapeutic Time Vaccination Vaccines coronavirus disease cytokine enzyme linked immunospot assay recruit response transcriptomics volunteer

Details

Contact PI/ Project Leader

Name
KOUP, RICHARD A

Title

Other PIs

Not Applicable

Program Official

Name

Contact
Email not available

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Awardee Organization
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

ALLERGY AND INFECTIOUS DISEASES

City

Country

Organization Type
Unavailable

Congressional District

Other Information

FOA

Study Section

Fiscal Year
2020

Award Notice Date

Administering Institutes or Centers
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

DUNS Number CFDA Code

Project Start Date

Project End Date

Budget Start Date

Budget End Date

Project Funding Information for 2020

Total Funding
$150,000

Direct Costs
$0

Indirect Costs
$0

Year	Funding IC	
2020	NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES	$150,000

NIH Categorical Spending

Click here for more information on NIH Categorical Spending

Funding IC	FY Total Cost by IC	NIH Spending Category
NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES	$150,000	Coronaviruses; Emerging Infectious Diseases; Immunization; Infectious Diseases; Prevention; Vaccine Related;

Sub Projects

No Sub Projects information available for 1ZIAAI005155-01

Publications

No Publications available for 1ZIAAI005155-01

Patents

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KOUP, RICHARD A

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The Project Outcomes shown here are displayed verbatim as submitted by the Principal Investigator (PI) for this award. Any opinions, findings, and conclusions or recommendations expressed are those of the PI and do not necessarily reflect the views of the National Institutes of Health. NIH has not endorsed the content below.

No Outcomes available for 1ZIAAI005155-01

Clinical Studies

No Clinical Studies information available for 1ZIAAI005155-01

News and More

Related News Releases

No news release information available for 1ZIAAI005155-01

History

No Historical information available for 1ZIAAI005155-01

Similar Projects

No Similar Projects information available for 1ZIAAI005155-01

Thank you for your feedback!