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## An epitope-focused nanoparticle vaccine for anthrax

Project Number Contact PI/Project Leader 4R44AI142939-02 WHITACRE, DAVID C

Awardee Organization VLP BIOTECH, INC.

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#### **Abstract Text**

Abstract We have successfully developed a highly immunogenic, optimized and lyophilizable epitope-focused, bivalent anthrax vaccine, referred to as LND-LF-VLP, using our novel proprietary platform technology which incorporates the vaccine target sequence into highly immunogenic virus like particles. This new vaccine targets two distinct neutralizing determinants, which are not targeted by Biothrax, the currently approved vaccine for anthrax. When formulated with human use adjuvants, this new vaccine has potential to elicit very rapid protective immunity with only one or two injections. Our proposal will focus on two overarching aims: 1) to demonstrate the efficacy of two immunizations with the LND-LF-VLP in human use adjuvants for protection of rabbits from high dose aerosol spore challenge with Bacillus anthracis Ames strain and 2) to optimize and develop standard operating procedures for the expression, purification and quality assurance of the LND-LF- VLP vaccine in a manner enabling eventual scale-up production by a contract manufacturing organization. This new epitope-focused, VLP vaccine promises to be a highly stable, safe and strategic new vaccine for anthrax.

#### **Public Health Relevance Statement**

Spores of B. anthracis, the causative agent of anthrax, can be weaponized and represent a threat to our armed forces and civilians at large. We are developing a new highly potent vaccine for anthrax that will be a valuable addition to the immunopreventatives in the Strategic National stockpile

#### **NIH Spending Category**

Anthrax Biodefense Bioengineering Biotechnology Emerging Infectious Diseases Immunization

Infectious Diseases Nanotechnology Orphan Drug Prevention Rare Diseases Vaccine Related

# **Project Terms**

**Address Animal Model Anthrax Vaccines Anthrax disease Antibodies** Adjuvant **Aerosols Antigens Bacillus anthracis Biothrax** Category A pathogen **Cold Chains** Contracts **Data** Dose **Freeze Drying** Incidence **Engineering Epitopes** Human **Immunity Immunization** Inhalation Injections Institute of Medicine (U.S.) **Lethal Dose 50** Macaca fascicularis Mediating Oryctolagus cuniculus **Performance Phase Procedures Production Protocols documentation** Qualifying **Reproduction spores Specificity** Study models **Technology Toxin** Virus-like particle **United States National Institutes of Health Vaccines** Work aerosolized neutralizing antibody clinical candidate design immunogenic immunogenicity nanoparticle **Read More** 



Contact PI/ Project Leader Other PIs Program Official

Name

WHITACRE, DAVID C

Title SENIOR VP

Contact

dwhitacre@vlp-biotech.com

Not Applicable

Name

ZOU, LANLING

Contact

lanlingz@niaid.nih.gov

#### **Organization**

Name **VLP BIOTECH, INC.** 

San Diego

Department Type
Unavailable
Organization Type
Domestic For-Profits

State Code **CA** 

Congressional District

E0

Thank you for your feedback!

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## An epitope-focused nanoparticle vaccine for anthrax

**Project Number Contact PI/Project Leader Awardee Organization** 4R44AI142939-02 WHITACRE, DAVID C VLP BIOTECH, INC.

PA-18-574 AND INFECTIOUS DISEASES Study Section

Special Emphasis Panel ZRG1-IMM-**DUNS Number** <u>R(12)B</u>]

Fiscal Year Award Notice Date 2020 26-May-2020

NATIONAL INSTITUTE OF ALLERGY

CFDA Code 160242579 855

Date

**Project End Date Budget Start** 

31-May-2022 01-June-2020

Date

**Budget End Date** 31-May-2021

#### **Project Funding Information for 2020**

**Total Funding Direct Costs** Indirect Costs \$998,145 \$0 \$0

**Funding IC FY Total Cost by IC** Year 2020 NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES \$998,145

## **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	\$998,145	Anthrax; Biodefense; Bioengineering; Biotechnology; Emerging Infectious Diseases; Immunization; Infectious Diseases; Nanotechnology; Orphan Drug; Prevention; Rare Diseases; Vaccine Related;

# 品 Sub Projects

No Sub Projects information available for 4R44AI142939-02

### **Publications**

No Publications available for 4R44AI142939-02

## **Patents**

No Patents information available for 4R44Al142939-02

#### Outcomes

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 4R44Al142939-02

## **Clinical Studies**

No Clinical Studies information available for 4R44Al142939-02

# News and More

Thank you for your feedback!

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# An epitope-focused nanoparticle vaccine for anthrax

**Project Number** 4R44AI142939-02

**Contact PI/Project Leader** WHITACRE, DAVID C

**Awardee Organization** VLP BIOTECH, INC.



No Historical information available for 4R44Al142939-02

# **Similar Projects**

No Similar Projects information available for 4R44Al142939-02