

IDENTIFICATION OF a RAPID STD TEST

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BREAKING NEWS

“STD’S HAVE BEEN ON THE RISE FOR SIXTH CONSECUTIVE YEARS IN THE UNITED STATES”

CDC Reports as of 2021

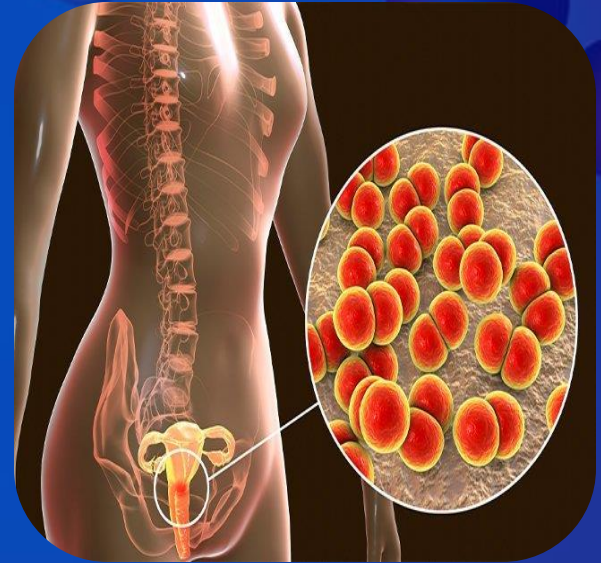
STD EPIDEMIC at Large

STD- sexually transmitted disease

- 1 million STDs acquired every day
- ***Chlamydia trachomatis*** and ***Neisseria gonorrhoea*** topping the list annually
- 1 in 5 people have an STD

Symptoms and Consequences of Chlamydia and Gonorrhea:

- Painful Urination
- Discharge in men and women
- Infertility
- Infections to Newborn
- Increased risk of HIV/AIDS
- Pelvic Inflammatory Disease



Chlamydia in Uterus

An abstract graphic featuring a cluster of glowing spheres in various sizes and colors, including deep blue, teal, and purple, set against a dark blue background. The spheres have a soft, ethereal glow and are arranged in a somewhat chaotic but balanced pattern. The text "RAPID POINT OF CARE TESTING" is overlaid in the center in a white, sans-serif font.

RAPID POINT OF CARE
TESTING

RAPID POINT OF CARE TESTING

- POC- point of care diagnostic tests one can administer on themselves
- Lateral Flow Devices are common POC Tests

Examples:

- Pregnancy Test
- At Home COVID-Test
- HIV and Syphilis Finger Poke Test

Faster Detection



Faster Intervention



Decrease in STD Rates





1ST RAPID POC CHLAMYDIA
AND GONORRHEA TEST

SCIENTIFIC

- What part of the bacterial Infections to target?
- What is the procedure to target them?
- How can we reproduce this study in urine?

ENTREPRENEURIAL

- Who are my competitors in the industry?
- What are the current challenges in the industry?
- Who are the stakeholders and what is the best implementation plan for the product?

ENTREPRENEURIAL LENS



Fierce Competition



ICARE FLUID LFD

Most Competitive

- Urethra Swab and Endocervix Swab LFD
- Results in 10-15 Minutes



BINX HEALTH ASSAY

Competitive

- Rapid PCR Test
- Results in 30 Minutes



EVERLYWELL HOME TEST

Least Competitive

- Urine samples sent to labs
- Results in 5-10 days



EVERLYWELL HOME TEST

~~RAPID~~



BINX HEALTH ASSAY
~~AFFORDABLE~~
~~AT-HOME~~



ICARE FLUID LFD
~~EASY TO USE~~

VALUE PROPOSITIONS



RAPID



AFFORDABLE

EASY-TO-USE

An abstract graphic featuring a cluster of interconnected spheres in various sizes and shades of blue and purple. The spheres are arranged in a complex, organic pattern, with some overlapping and others connected by thin, dark lines. The background is a solid, deep blue color. The word "STAKEHOLDERS" is centered in the middle of the image in a white, sans-serif font.

STAKEHOLDERS

A PRODUCT FOR THE PEOPLE

Identified Stakeholders:

- Customers: college students, disenfranchised communities, minorities, and sexually active individuals
- Indirect/External Stakeholders: Health Clinics, College Health Departments, Governmental Health Agencies

Is this Product Valuable?

- City Wide Survey with Colleges and Health Clinics
- Surveyed Institutions:
 - Florida State University
 - Florida Agriculture and Mechanical University
 - Neighborhood Medical Center
 - Planned Parenthood
 - Florida Department of Health



100%
OF SAMPLE BELIEVE
PRODUCT IS VALUABLE



Response Summary

WHY DO INDIVIDUALS REFRAIN FROM ROUTINELY STD TEST?

- Lack of Sexual Health Knowledge
- Costly: sliding scale services, insurance payment, or cash payment
- Fear, Shame, and Embarrassment

“Some students feel they can never catch a STD even though they are sexually active”

COULD THIS STD TEST BE OFFERED IN YOUR INSTITUTION?

- Overwhelming Support
- Fast accurate results helps with contact tracing

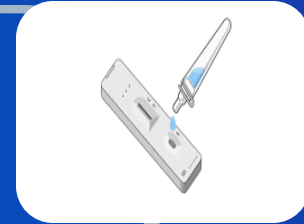
“The faster we have results the faster we can help provide proper treatment”

Financial and Outreach

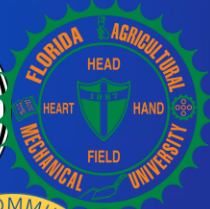
- Most beneficial at an affordable price or free
- Offered in universities, health clinics, outreach programs, and health stores
 - Examples: Mobile Health Units, College Health Departments, Pharmacy Stores

Maximum Outreach: Approved by FDA and administered by Department of Health

Implementation Plan



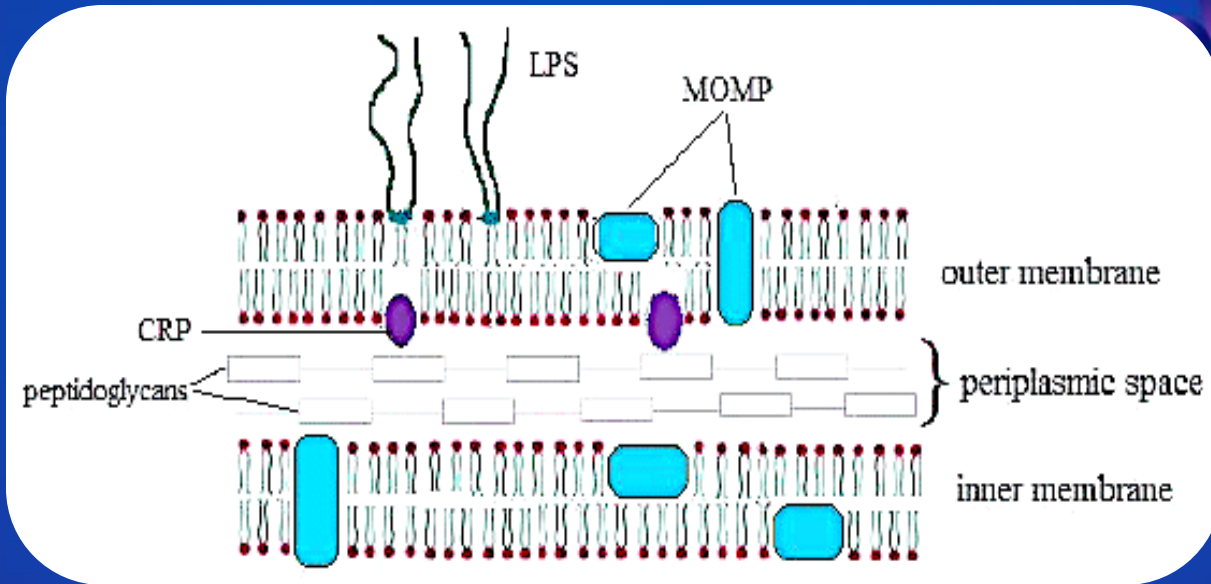
FDA



SCIENTIFIC LENS



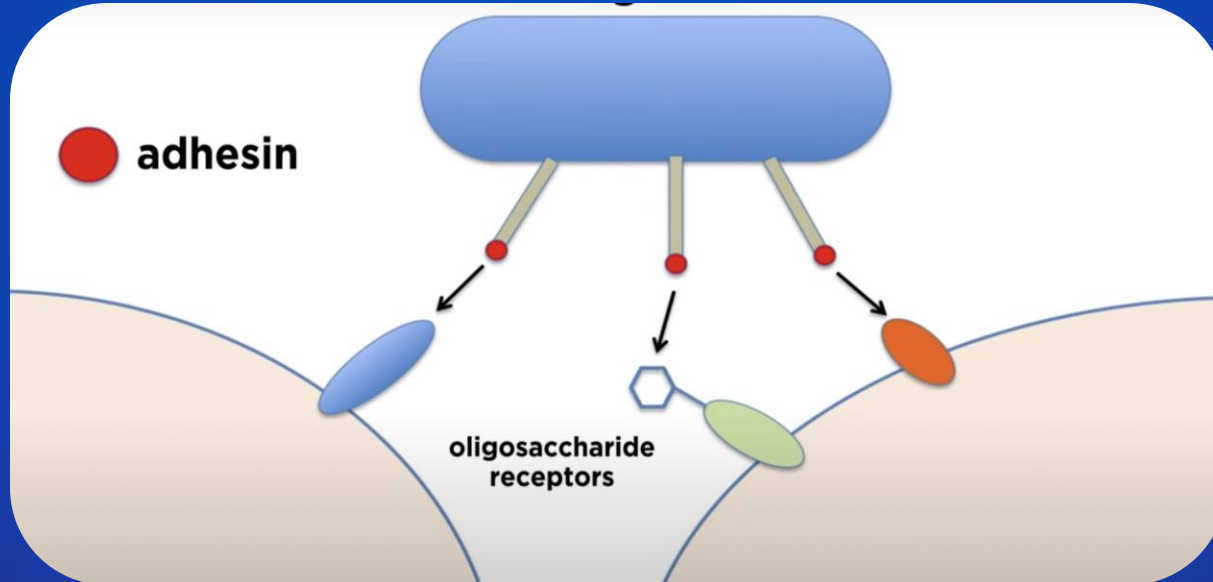
IDENTIFYING OUR TARGET



SECURING THAT SPECIAL BOND WITH MOMP

Initial Idea:

- Oligosaccharides- carbohydrates containing 3-10 sugar units
- Adhesins on MOMP protein will bind to oligosaccharides to infect epithelial cells
- Drawbacks: One can not prove binding will occur in a laboratory experiment

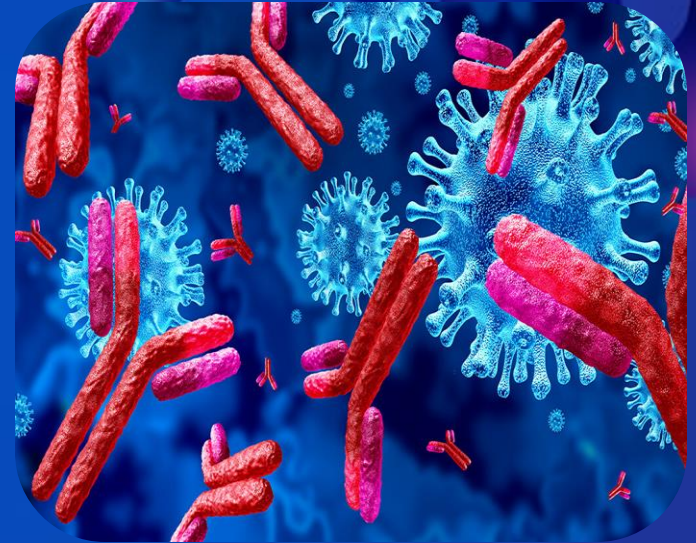


ANTIBODY AND MOMP TOGETHER FOREVER

- Antibody- proteins that bind to antigens and provide protection for immune system
- Strong affinity to their targets
- Can be expensive and binding may not occur

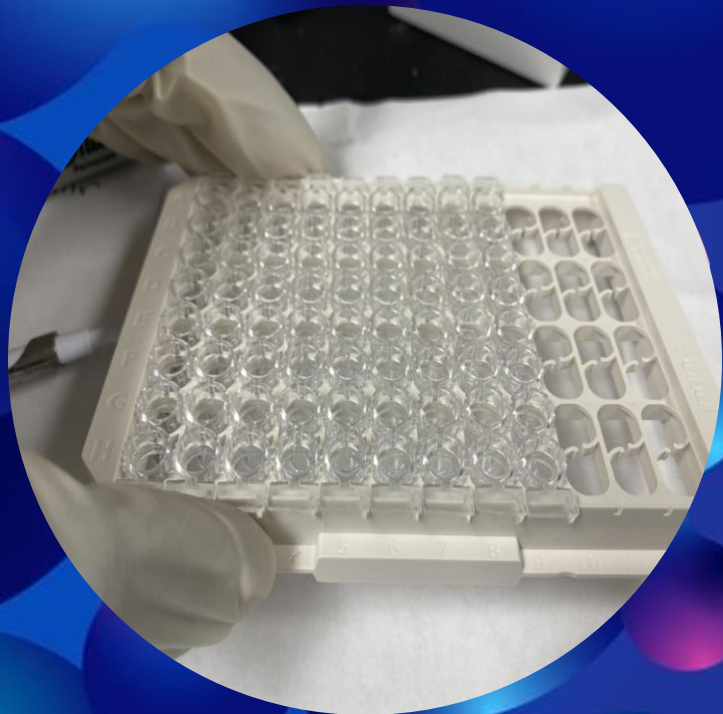
Purchases for each STD:

- 2 Monoclonal Antibodies: high specificity to epitope
- 1 Polyclonal Antibodies: affinity for antigen but different epitopes

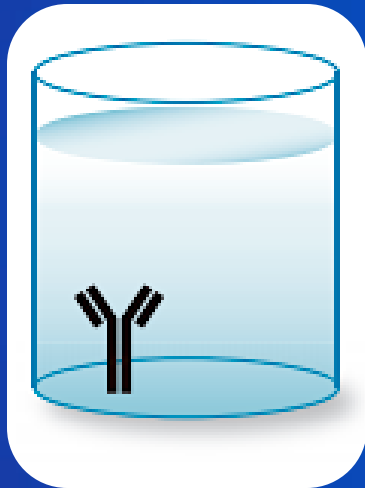


Yale COVID Antibodies

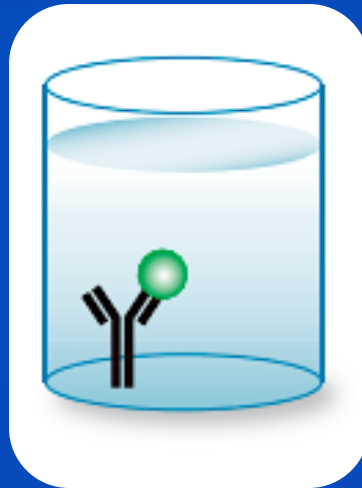
ELISA procedure



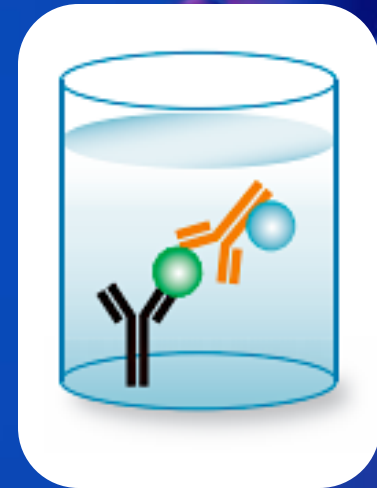
ELISA SANDWICH ASSAY



ANTIBODY
COATED IN WELL



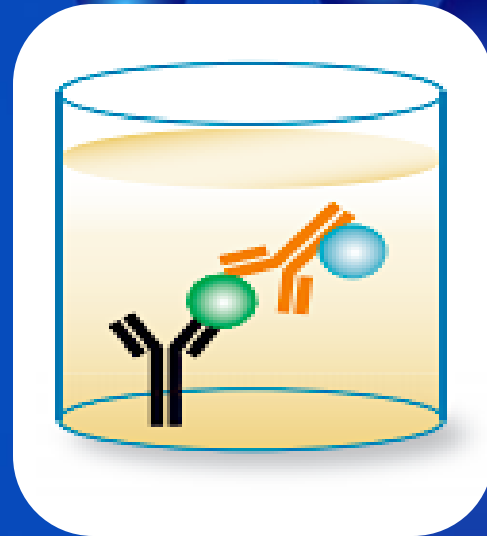
MOMP PROTEIN
BINDS TO ANTIBODY



CONJUGATE ANTIBODY
BINDS TO MOMP

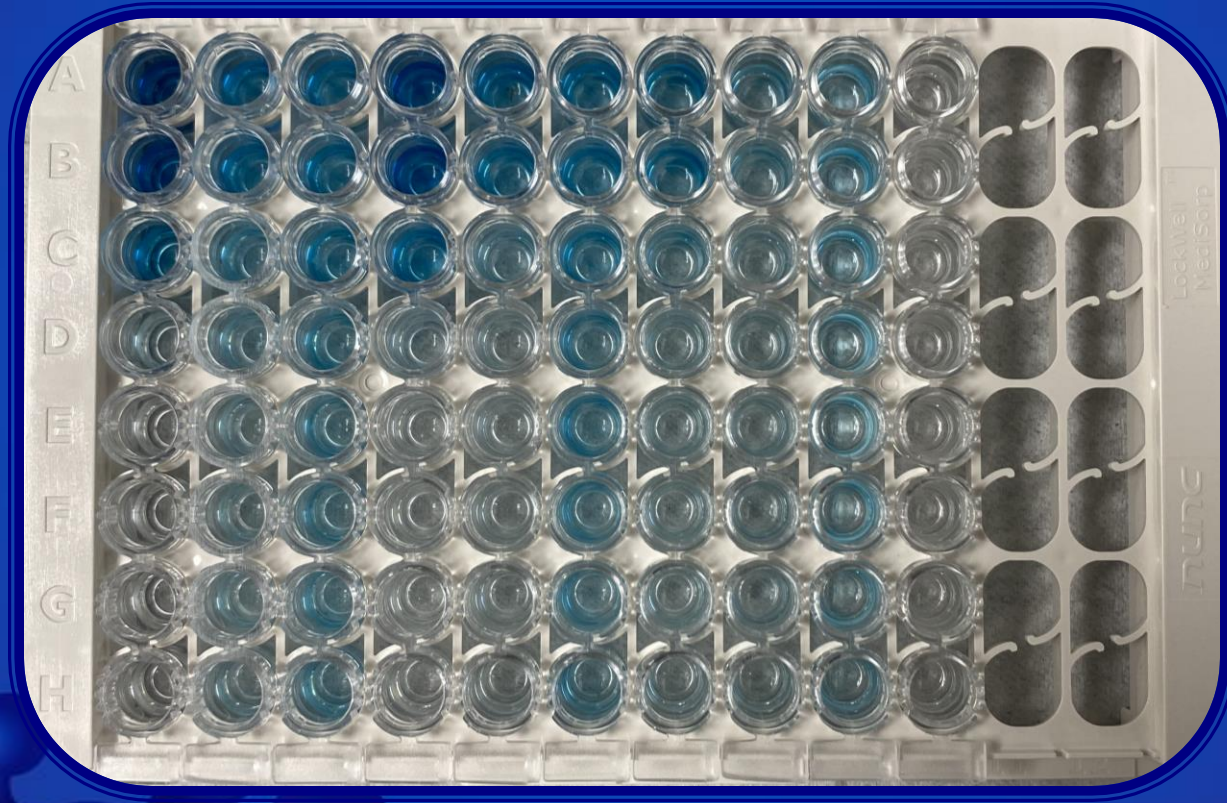


SUBSTRATE TURNS WELL
BLUE INDICATING BINDING

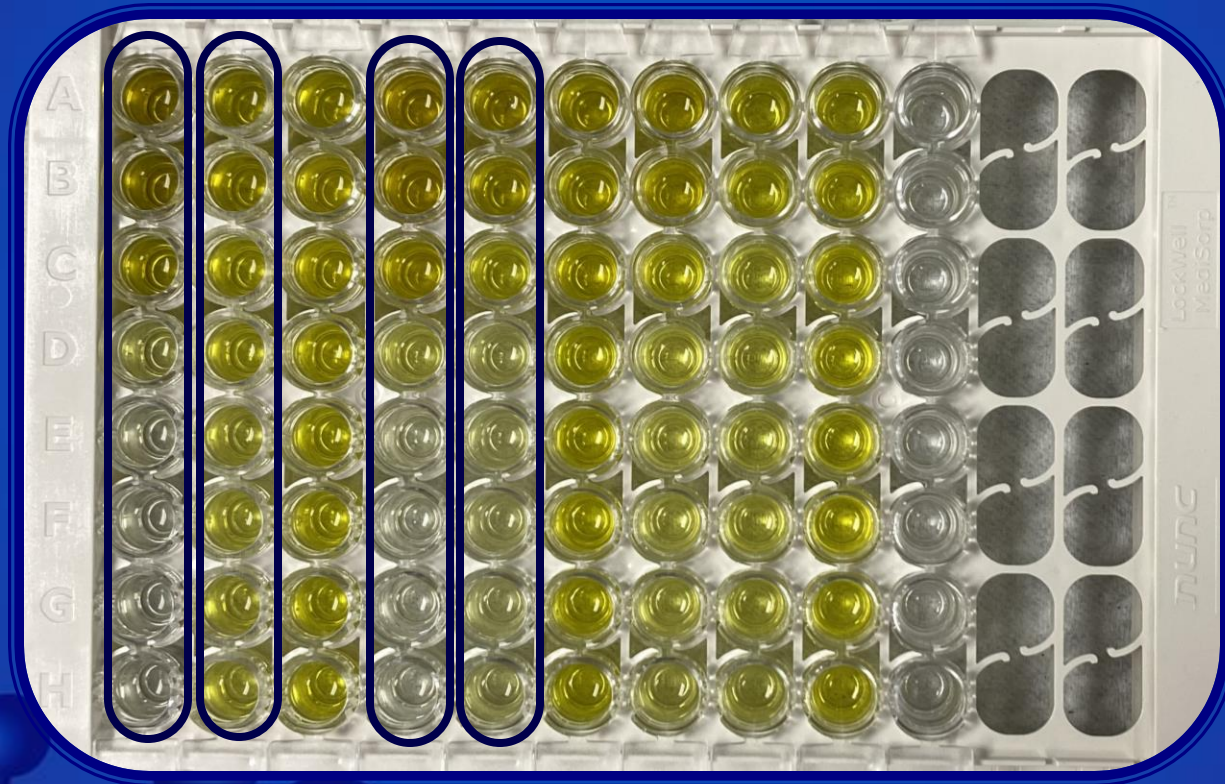


STOP SOLUTION TURNS WELL
YELLOW STOPPING THE REACTION

CHLAMYDIA



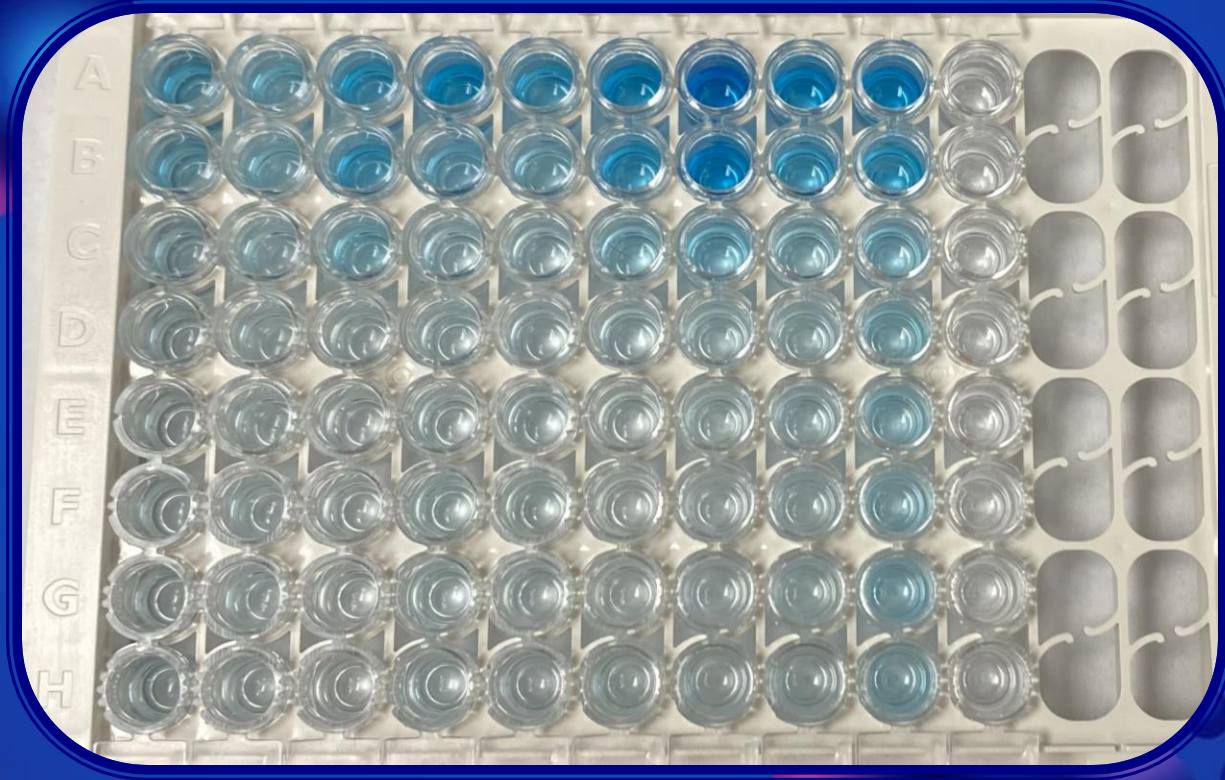
CHLAMYDIA



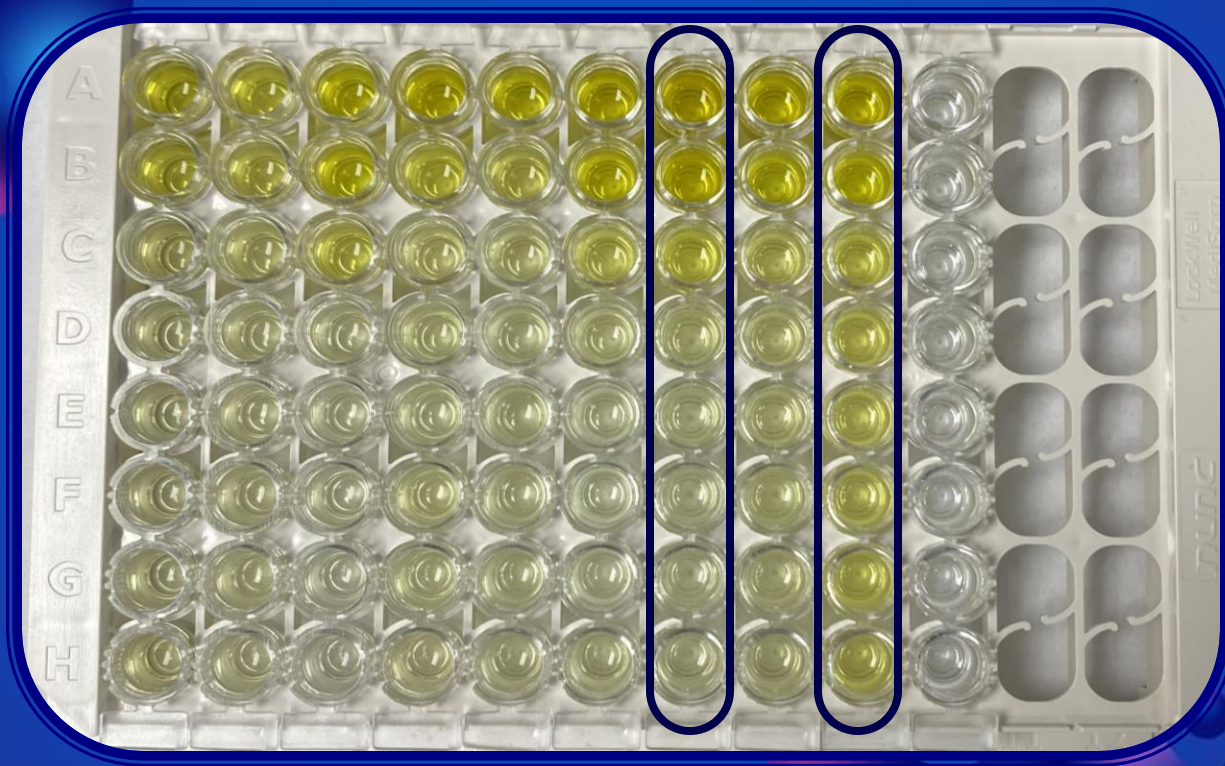
****BEST COMBINATION****

PRIMARY MONOCLONAL ANTIBODY & SECONDARY MONOCLONAL ANTIBODY

GONORRHEA



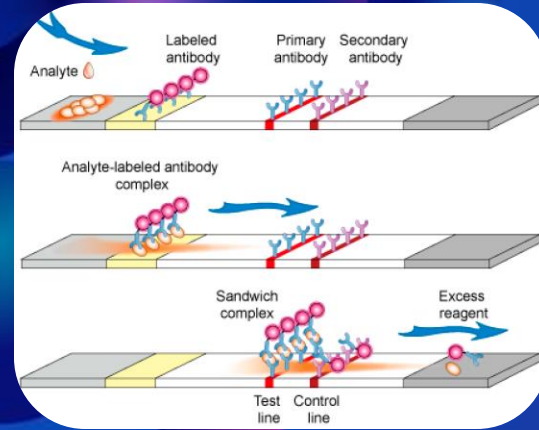
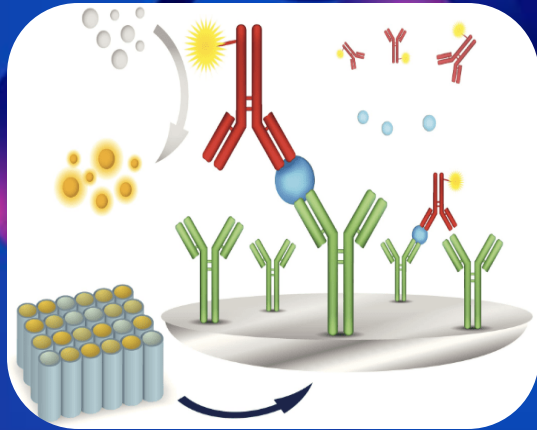
GONORRHEA



****BEST COMBINATION****

PRIMARY POLYCLONAL ANTIBODY & SECONDARY MONOCLONAL ANTIBODY

WHAT COMES NEXT?





KEHINDE'S JIGGY JUICE

An Extraction Buffer that will isolate
the MOMP protein in the urine and
increase the affinity of the protein to
the antibody for LFD Applications

— IN CURRENT DEVELOPMENT —

ACKNOWLEDGMENTS

Jeremiah 29: 11

”For I know the plans I have for you,”
declares the Lord

Angela C. Richardson Award

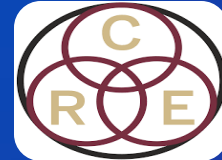
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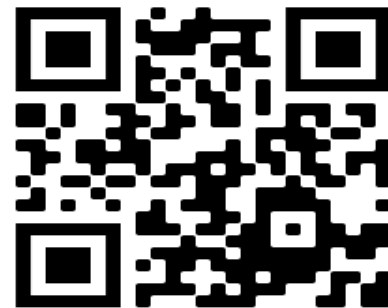
- Friends and Family



FLORIDA STATE UNIVERSITY
JIM MORAN COLLEGE OF ENTREPRENEURSHIP



Many
THANKS!



ALTERNATIVE RESOURCES

