

STI POC DIAGNOSTICS

BIRGITTA GLEESON, SENIOR SCIENTIST, AMR, FIND NOVEMBER 2024



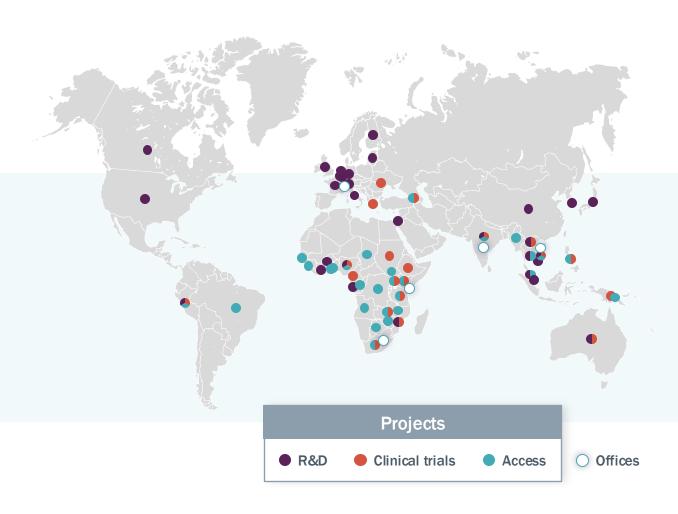


FIND, THE GLOBAL ALLIANCE FOR DIAGNOSTICS, SEEKS TO ENSURE

EQUITABLE ACCESS TO QUALITY DIAGNOSIS AROUND THE WORLD

We connect countries and communities, funders, decisionmakers, healthcare providers and developers to spur diagnostic innovation and make testing an integral part of sustainable, resilient health systems

- Established in 2003 as a product development & delivery partnership
- Co-convener of the Access to COVID-19 Tools (ACT) Accelerator Diagnostic Pillar
- WHO Collaborating Centre for Laboratory Strengthening & Diagnostic Technology Evaluation
- WHO SAGE-IVD member















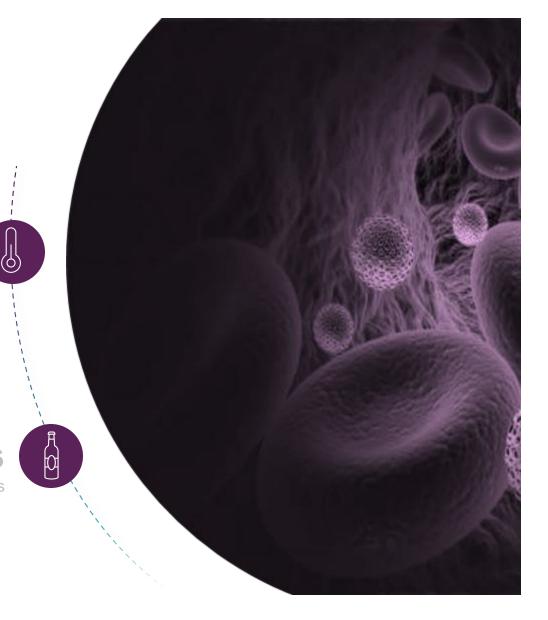
POC STI DIAGNOSTICS

FIND Lateral Flow Assay

Identification of NG and guide antibiotic treatment

POC molecular NG/CT Tests

New LMIC opportunities for multiplex molecular platforms





FIND NG LFA ASSAY DEVELOPMENT 2018-2026

PLOS ONE

RESEARCH ARTICLE

Developing target product profiles for Neisseria gonorrhoeae diagnostics in the context of antimicrobial resistance: An expert consensus

Landscape review NG/CT diagnostics 2018

Target Product Profile

2019 -2020



Partner DCN

> Oct 2019



LFA design freeze

Mar 2021



LFA included in WHO guidelines

Jul 2021



Manufactured product Verification and Validation of design locked LFA

Regulatory approval Go to Market strategy

Procurement

2025-26























Technology

2024

tansfer



Expert meeting (FIND,WHO, GARPD)

2018 & 2019

Request for Proposal

2019

University of Alabama 2021

1ST Clinical evaluation

THE UNIVERSITY OF ALABAMA^{*}

2nd Clinical evaluation; field study South Africa (Symptomatic)

Sept 2022



3rd Clinical evaluation (Asymptomatic) Zimbabwe & South Africa

2023-24





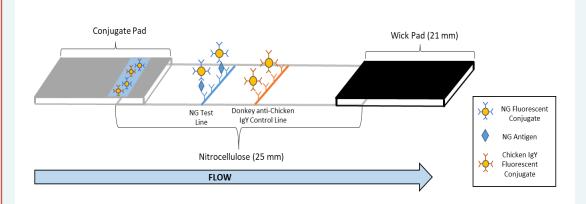
Clinical evaluation (ANC) PNG& South Africa

2024-25



DEVELOPMENT OF THE FIND NG LFA

Lateral flow design:



Gleeson B, et al. Development of a Novel Fluorescent-Based Lateral Flow Assay for the Detection of Neisseria gonorrhoeae at the Point of Care. Sex Transm Dis. 2024 Mar 1;51(3):186-191.

https://journals.lww.com/stdjournal/fulltext/2024/03000/development_of_a_novel_fluorescen_t_based_lateral.8.aspx

FIND has developed a 20-minute, easy to run, POC assay for detection of *N. gonorrhoeae* for **female vaginal swabs** and **male urine**

Antigen target: Outer membrane protein

Analytical sensitivity (LOD): 1x10³ – 5x10³ CFU/mL depending upon NG reference strain

Inclusivity: 31 NG strains (ATCC, NCTC, WHO, ZeptoMetrix), all NG strains detected between 1 and 1x10⁵ CFU/mL.

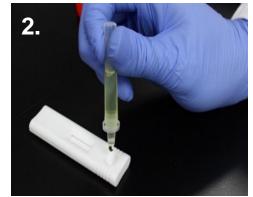
Cross-reactivity: 21 non-*Neisseria* pathogens/ microorganisms negative; 10 *Neisseria* species: cross-reactive with *N. meningitidis, N. lactamica, N. polysaccharea*

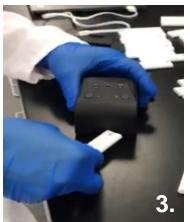
Stability: Shelf-life min. 1 year @ 40C/70%RH



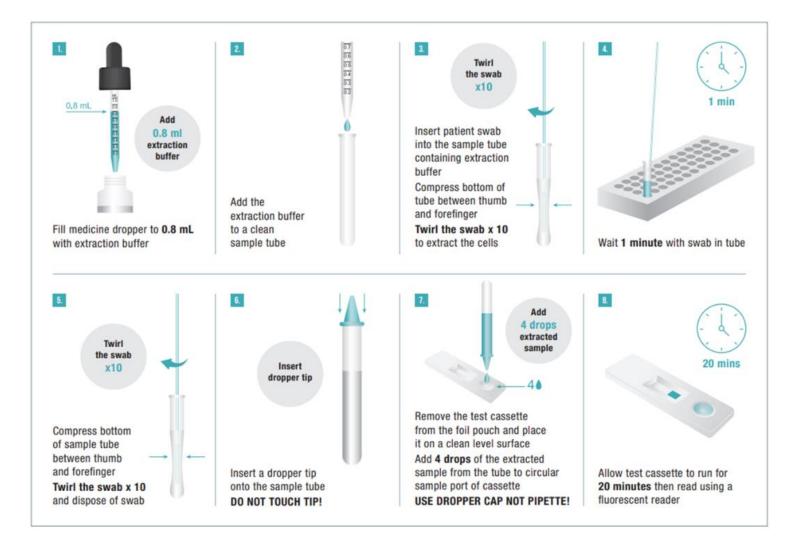
CLINICAL EVALUATION IN SYMPTOMATIC PATIENTS IN SOUTH AFRICA













CLINICAL EVALUATION AMONG SYMPTOMATIC PATIENTS IN SOUTH AFRICA



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Prevalence: 64%

Sensitivity 96% (91% – 98%)

Specificity 97% (90% – 99%)

Symptomatic women

Prevalence: 18%

Sensitivity 92% (78% – 97%)

Specificity 96% (92% – 98%)

	Minimal requirement	Optimal requirement		
Sensitivity	>80%	>90%		
Specificity	>95%	>98%		
Time to result	≤ 30 minutes	≤ 10 minutes		



CLINICAL EVALUATIONS AMONG ASYMPTOMATIC AND ANC **POPULATIONS**





Asymptomatic men (S. Africa)

Prevalence: 6.2%

Sensitivity 81% (64% - 91%)

94% (92% - 96%) **Specificity**

Asymptomatic women (S. Africa)

Prevalence: 8.3%

Sensitivity 82% (66% – 91%)

98% (96% - 99%) **Specificity**

Pregnant women (Zim, ANC)

Prevalence: 4.2%

66% (49% - 80%) Sensitivity

Specificity 99% (99% – 100%)

FIND>>>

WHAT NEXT?

NG LFA

- Technology transfer ongoing negotiations with potential manufacturers
- Regulatory pathway and go-to-market strategy
- Evidence generation for NG LFA
 - Other geographies and population sub-groups (e.g. symptomatic and asymptomatic key populations)
 - Pilot for self-collection
 - Pilot for extragenital samples
 - Usability and acceptability
 - Modelling of impact and cost-effectiveness
 - Studies to demonstrate impact, cost-effectiveness (in 2026 and after)
- CT LFA feasibility

NG/CT Molecular

low-cost NG/CT molecular POC assay



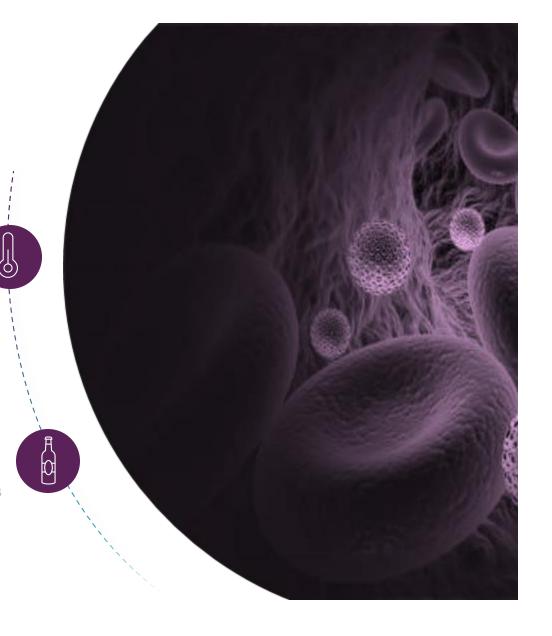
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MANY COMPANIES ANNOUNCED DEVELOPMENT OF POC STI MOLECULAR TESTS













Request for Proposals

Seeking manufacturers of true point-of-care molecular tests for Neisseria gonorrhoeae and Chlamydia trachomatis to accelerate product development/evaluation and market entry in low- and middle-income countries.



















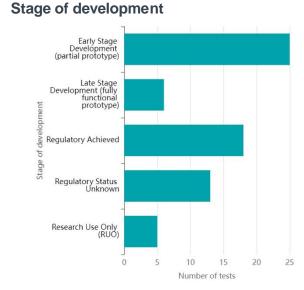


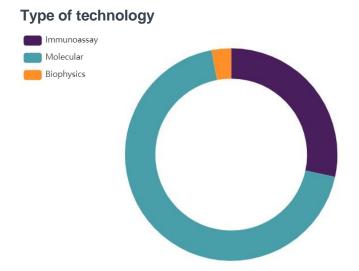


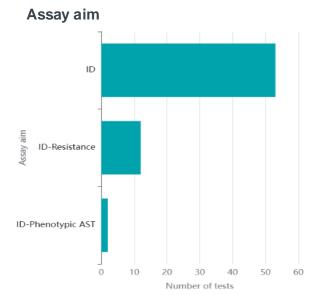
NG POC DX PIPELINE - FIND TEST DIRECTORY



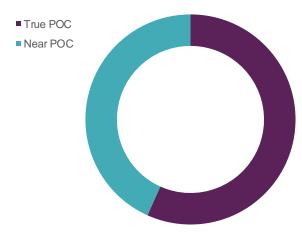












Source: https://www.finddx.org/amr-test-directory/



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THANK YOU



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#DiagnosisForAll