

Faster results, better outcomes.

MagChipR™

POC LOC MDx Platform

Infectious Disease POCT

The MagChipR is the First-of-its-Kind Point-of-Care (POC) Lab-On-Chip (LOC) Molecular Diagnostic (MDx) Analyzer

Ultra-fast PCR combined with DNA detection on a single giant magnetoresistance (GMR) biosensor chip provides simultaneous results for pathogens and antimicrobial resistance (AMR) within 20 minutes (assay dependent), enabling definitive and resistance-guided therapy leading to better outcomes.

Advancing diagnostics by enabling definitive and resistance-guided therapy during the initial clinic visit!

- ✓ Identify causative pathogen and its resistance profile.
- ✓ No laborious phenotypic determination of antimicrobial susceptibilities in microbiology labs.



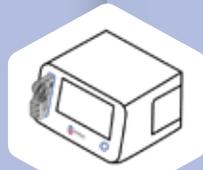
Why wait for results?
Just Chip It™

* In development

Clean, Simple, Minimalistic Sample-to-Results Workflow



1) Load Sample



2) Insert Into MagChipR



3) Results < 20 Minutes

Benefits:

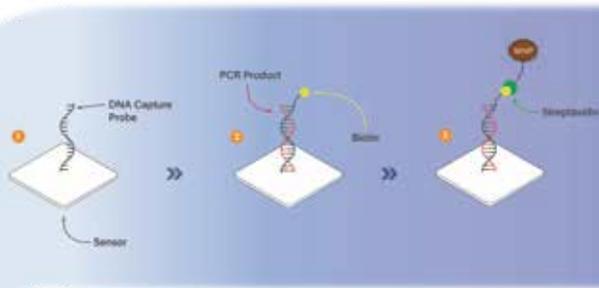
- Ease of use (intuitive + animated prompts)
- Touchscreen (18cm; 7")
- Built-in barcode scanner
- Affordable (low-cost analyzer and cartridges)
- Fully integrated and automated sample-to-results
- Fast time to results (< 20 minutes – assay dependent)
- Lab quality sensitivity and specificity (≤ 10 cp/mL)
- Ultra-fast PCR amplification
- High multiplexing capability (up to 64 targets in a single sample)
- Compact design (small footprint; scalable vertically)
- No calibration required
- No specialized training required
- Network connection capabilities
- Data management (via USB + network connectivity)

MagChip™

CT/NG^{R+}/TV/MG^{R+} Cartridge Pathogen + AMR

The first MagChip cartridge is for CT/NG^{R+}/TV/MG^{R+} detection, addressing the undervalued Sexually Transmitted Infection (STI) pandemic. Providing simultaneous STI + AMR actionable results in < 20 minutes for the four pathogens, fluoroquinolone-resistant *Neisseria gonorrhoeae* and macrolide-resistant *Mycoplasma genitalium*, enables earlier and better triage and treatment decisions that lead to definitive, resistance-guided, and expedited partner therapies; thereby reducing transmission, reinfection, and adverse reproductive health complications.

Novel Detection Method: GMR Biosensors



- Giant Magnetoresistive
- 64-sensor array
- Substrate for multiplex DNA hybridization
- Similar to DNA microarray
- Local proximity magnetic sensor

Specifications

Weight	2 kg; 4 lb
Dimensions	15 cm H x 30 cm W x 24 cm D; 6" H x 12" W x 9.5" D
Power Supply Input	110-220 VAC, 50-60 Hz with battery backup
Display	Touchscreen 18 cm (7"), 1024 x 600 pixel resolution, 15 ° viewing angle
Operating Environment	10-35 °C; up to 90% humidity, up to 2500 meters
Ports	USB, Printer port, and bi-directional interface network connection

This first-of-its-kind GMR technology enables an all-in-one workflow of performing multiplexed PCR and DNA detection on a single GMR sensor chip.

— Elaine Ng, PhD,
CSO MagIC Lifescience

Ultra-Fast Detection and Differentiation of DNA from:

- *Chlamydia trachomatis* (CT)
- *Neisseria gonorrhoeae* (NG)
- *Trichomonas vaginalis* (TV)
- *Mycoplasma genitalium* (MG)
- Fluoroquinolone-resistant NG (NG^{R+})
- Macrolide-resistant MG (MG^{R+})

MagChip

- Single-use, disposable cartridge
- Cartridge contains all reagents, including internal control
- Room temperature storage
- Self-contained
- Minimizes cross-contamination

MagChipR + MagChip performs:

- Sample lysis
- PCR amplification
- Nucleic acid hybridization
- Detection of target sequences
- Simple, clean, and minimalistic user workflow



* In development