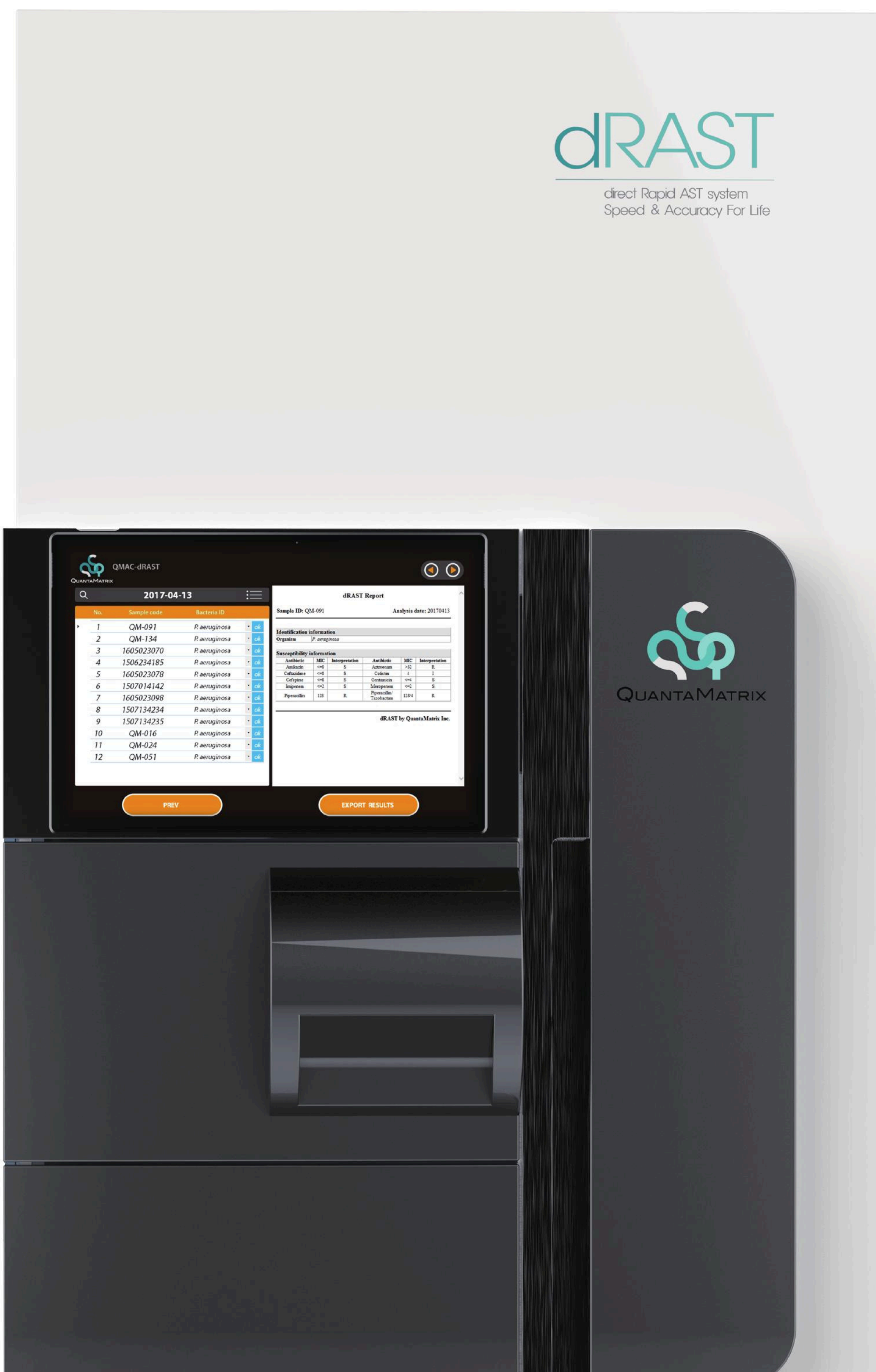


# New Product Launched

## dRAST™

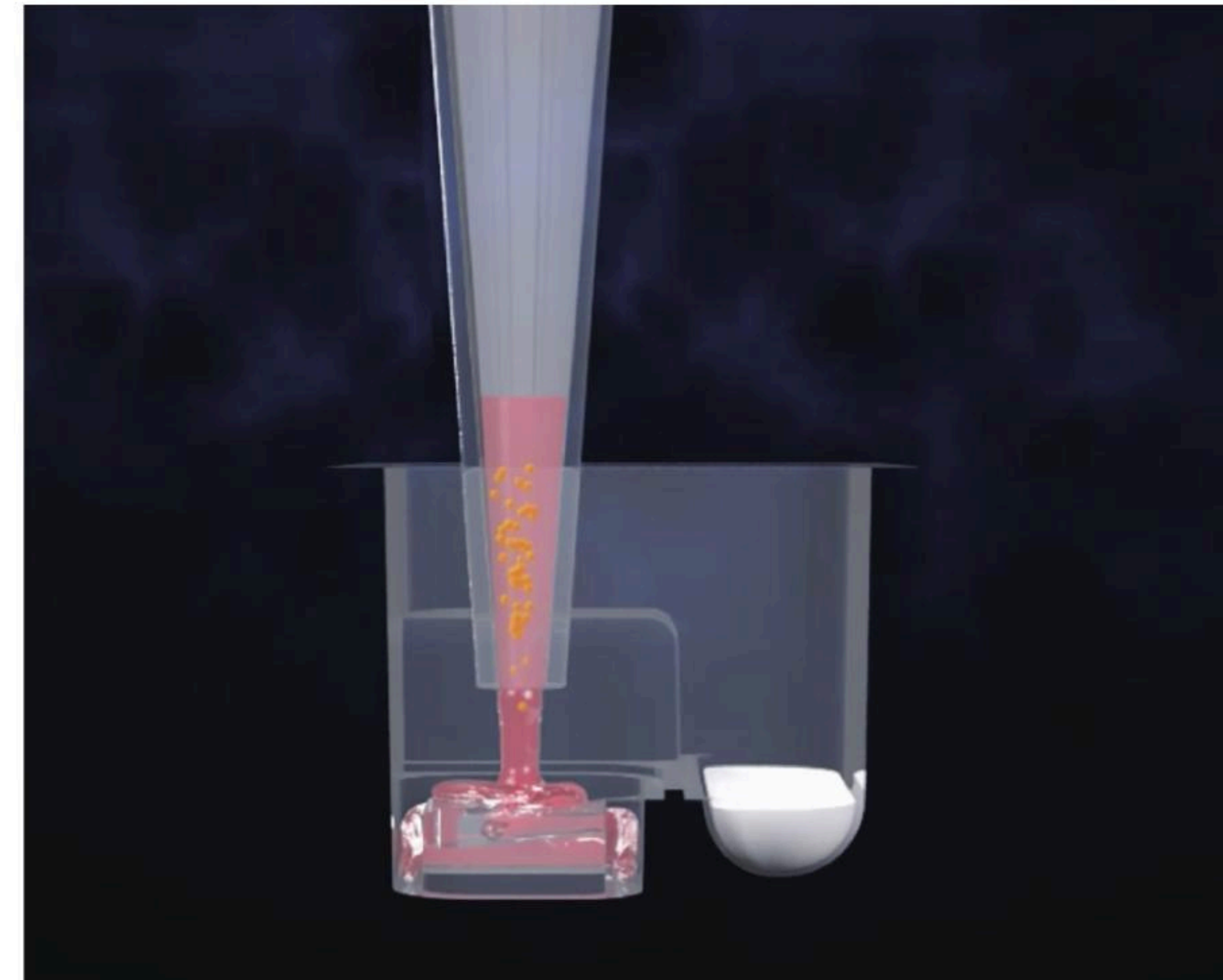
### 5-7 hours\* AST from PBC



# Single bacterial cells under various antimicrobial concentrations in microfluidic channel

Bacteria immobilization in a thin agarose channel suitable for

- Microscopic imaging for cellular analysis
- Diffusion of media for bacteria growth and antibiotics for susceptibility testing

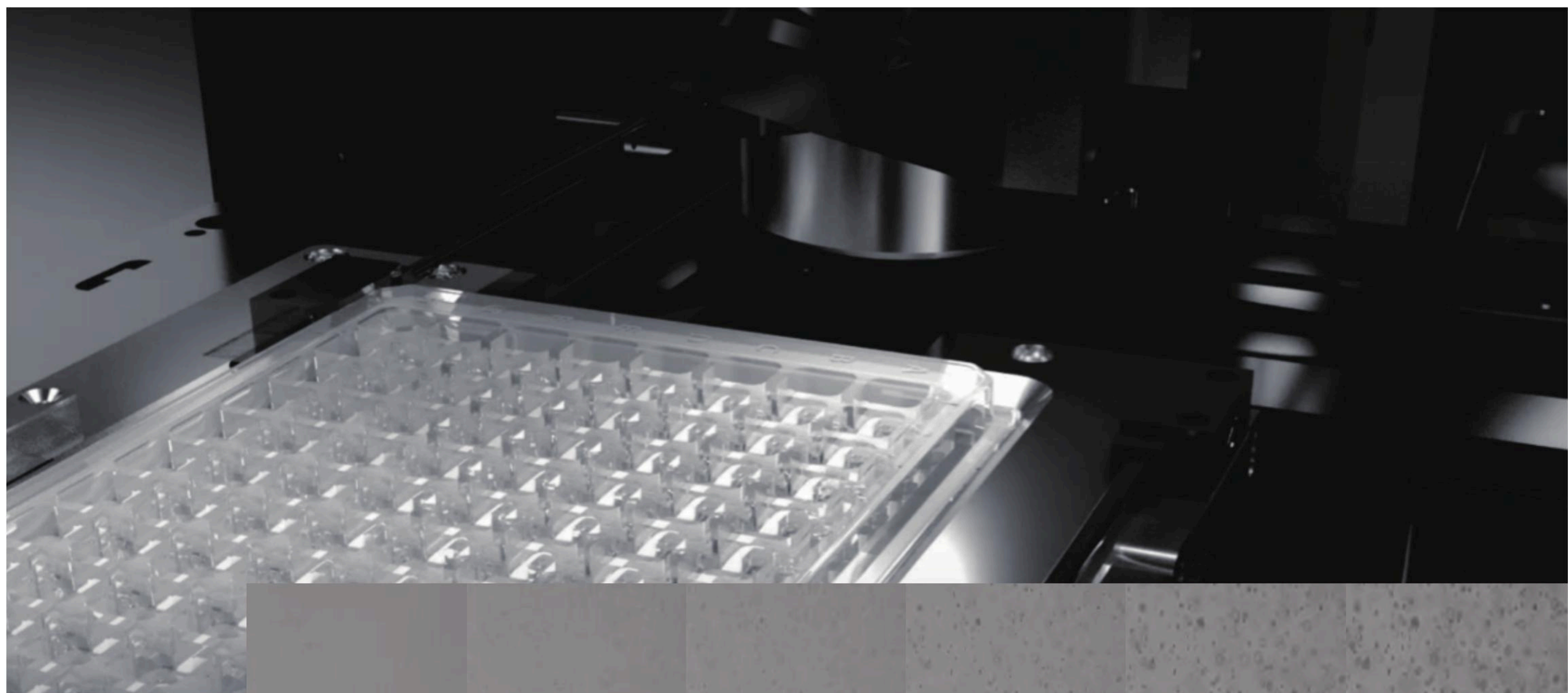


Microfluidic agarose channel technology is implemented in multi-well plate formats with dried antibiotics as ready-to-use kits for susceptibility testing

## Imaging each well every hour

We can determine MIC and SIR for antimicrobial while observing bacterial growth in real time using a patented microfluidic chip.

- Time-lapse tracking of bacterial growth in a MAC chip
- Expertise cellular image analysis and algorithms for determine minimum inhibitory concentration
- S/I/R interpretation based on breakpoint and expert rules



Resistant  
Susceptible

1h

2h

3h

4h

5h

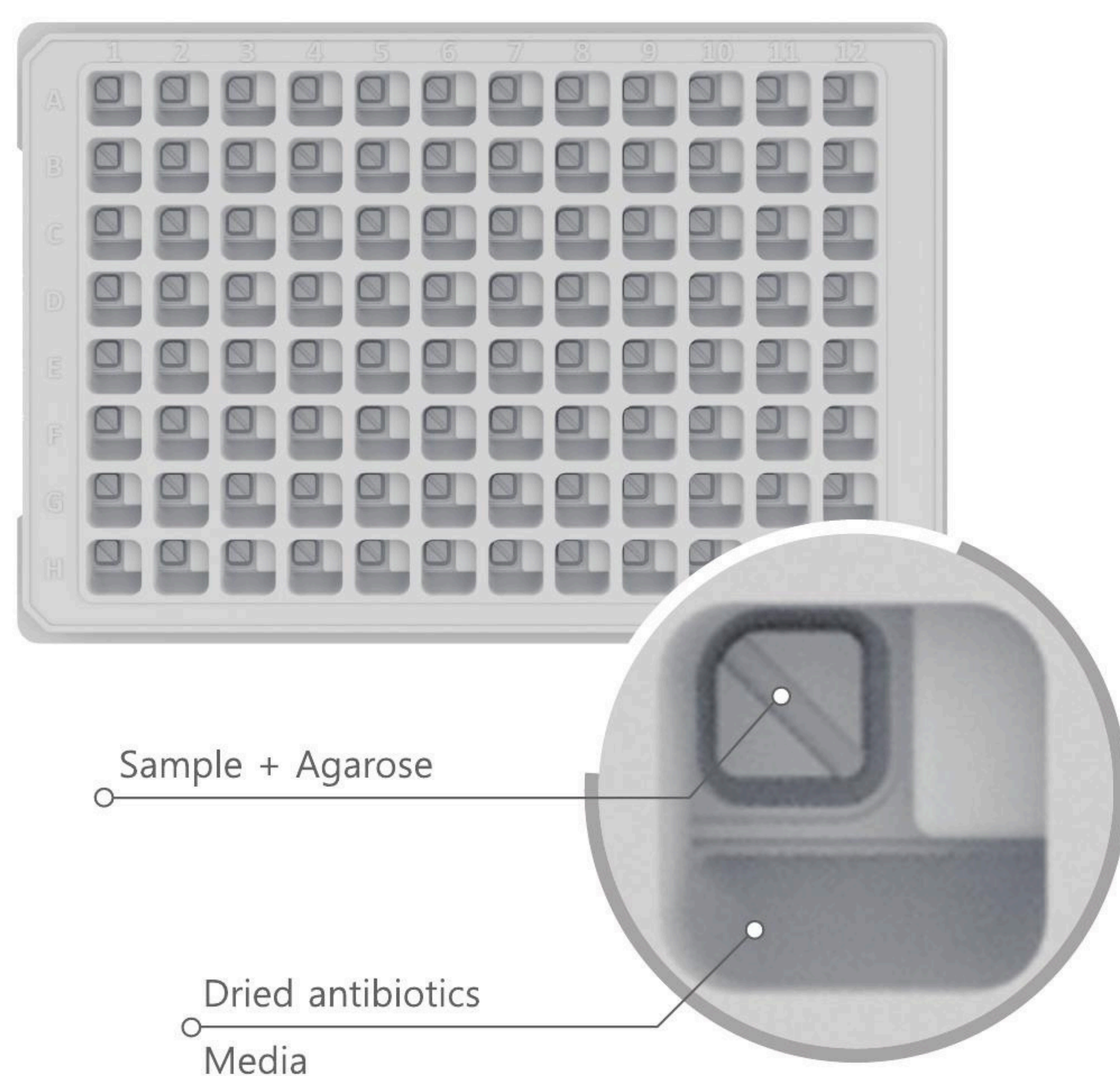
6h

# dRAST™ Kit

GP/GN Panels/Gel/Broth

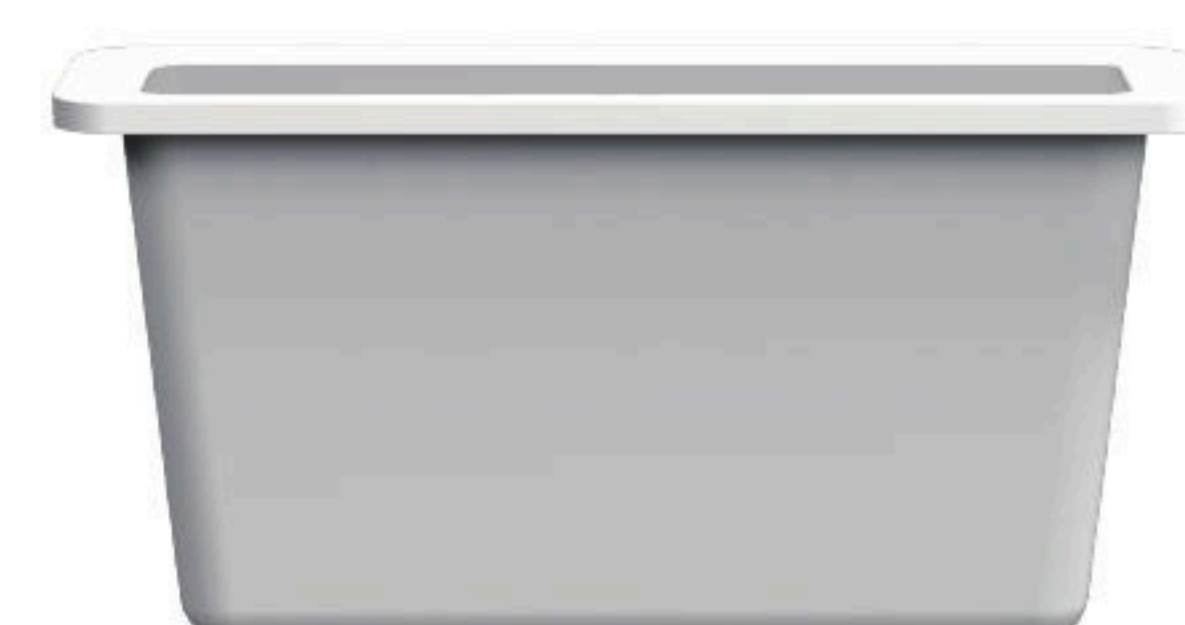
## 1 Panels

- GP/GN panels for positive blood culture
- Patented micro-patterned 96 wells with dried 17 GP / 19 GN antibiotics



## 2 Gel

Agarose for immobilizing bacteria

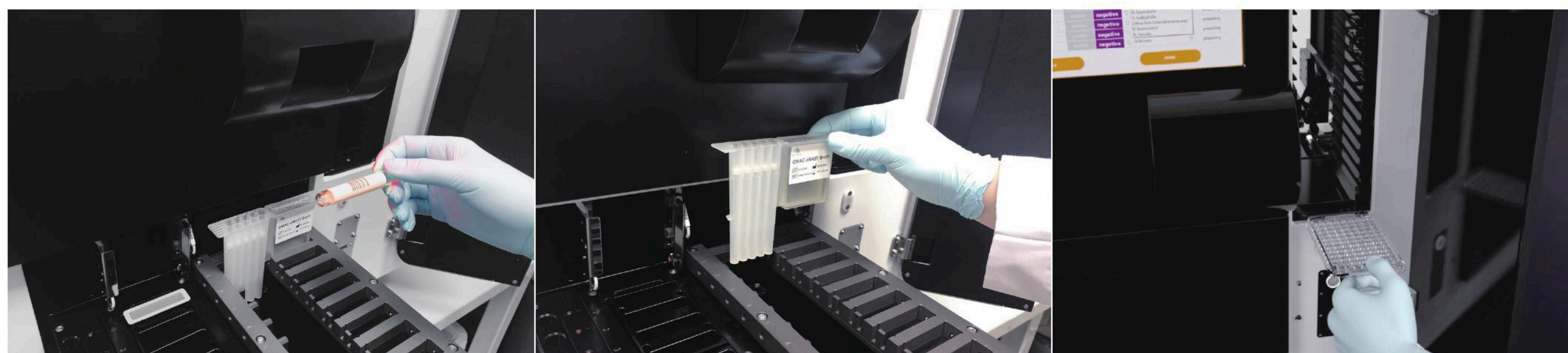


## 3 Broth

Growth media & pipette tips



1 min hands-on time



Scan sample barcode

Load cartridge

Load panel

No sub-culture

No Turbidimetry

# Fully automated dispensing, incubating, imaging and analyzing

- 15 capacity (12 Batch)
- Random access
- Ready to use consumable and reagents
- Automated dispenser for sample, agarose and growth media
- Microscopic optics to check cell growth via time-lapse imaging
- Temperature control system for incubation
- Reporting susceptibility results by proprietary algorithm and database

## Image processing and analysis software

- Automated image processing for growth measurement
- MIC determination and SIR interpretation based on database and expert rules
- Reliable and seamless integration of LIS

Susceptibility information		
Antibiotic	MIC	Interpretation
Amikacin	≤8	S
Ceftazidime	≥32	R
Colistin	≥4	R
gentamicin	≤2	S
	<1	

**Result reporting**  
Automatic MIC determination and SIR interpretation

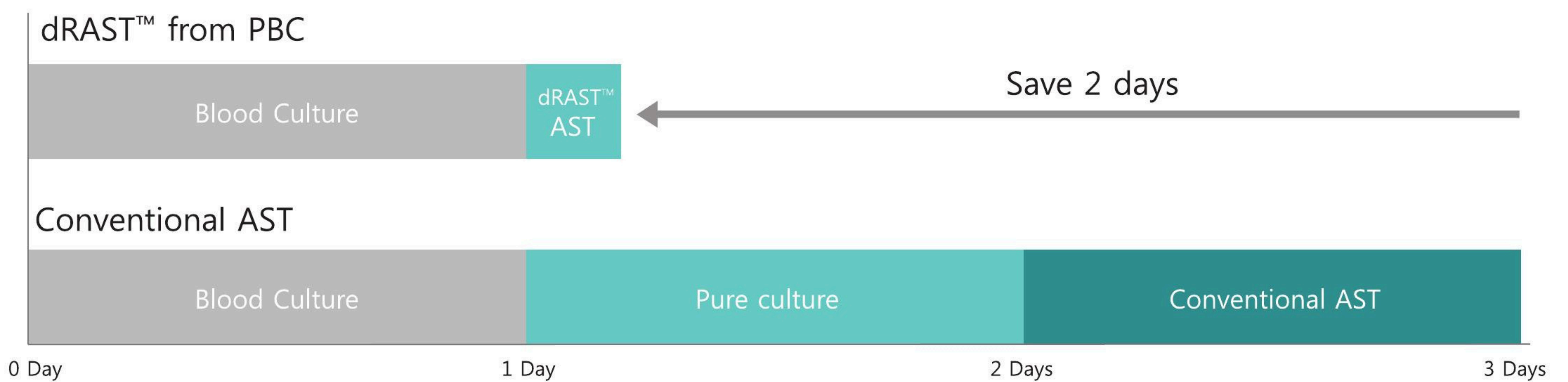


# dRAST™ in 5-7 hours

The timely and optimal antibiotic treatment is essential for saving lives of patients with serious infections and for reducing the use of broad-spectrum antibiotics in antibiotic resistance era.

dRAST™ performs rapid antimicrobial susceptibility testing directly from positive blood culture, enabling early stage optimal targeted treatment with the speed that no one ever provided.

dRAST™ reports optimal antibiotics with MIC (Minimum Inhibitory Concentration) in 5-7 hours from positive blood culture, while other conventional systems take 2-3 days.



### FAST

Reporting optimal antibiotics with MIC in 5-7 hours from PBC

### SIMPLE

- Minimal hands on time to operate
- Stand alone with embedded PC

### DIRECT

- No sub-culture for blood AST
- No McFarland for inoculum size



### RANDOM ACCESS

Additional access function with emergency samples

### FLEXIBLE

Easy to add new antibiotics due to technology principle

### LIS

Reliable and seamless integration with the hospital information system

# dRAST™ Gram positive & negative panel

GP/GN panels for positive blood culture

## 17 antibiotics in Gram positive panel

Antimicrobial agent	Concentration (µg/ml)	<i>Staphylococcus</i> spp.	<i>Enterococcus</i> spp.
Ampicillin	0.25, 2, 4, 8		•
Ciprofloxacin	0.12, 1, 2	•	
Clindamycin	0.03, 0.25, 0.5, 1, 2	•	
Erythromycin	0.5, 1, 2, 4	•	
Gentamicin	1, 2, 4, 8, 16	•	
Levofloxacin	0.12, 1, 2	•	
Linezolid	0.5, 2, 4	•	•
Oxacillin	0.06, 0.25, 0.5, 1, 2	•	
Penicillin	0.12, 0.25, 0.5, 1, 2, 4, 8	•	•
Rifampin	0.06, 0.12, 0.25, 0.5, 1, 2, 4	•	
Tetracycline	1, 2, 4, 8, 32	•	
Trimethoprim/Sulfamethoxazole	0.5/9.5, 2/38, 4/76	•	
Vancomycin	0.5, 2, 4, 8, 16	•	•
Cefoxitin screen	0.5, 4, 8	•	
Gentamicin high level	128, 256, 500		•
Streptomycin high level	512, 1000		•
Inducible Clindamycin resistance	0.5/4	•	

## 19 antibiotics in Gram negative panel

Antimicrobial agent	Concentration (µg/ml)	<i>Enterobacteriaceae</i>	<i>P. aeruginosa</i>	<i>Acinetobacter</i> spp.	<i>Burkholderia cepacia</i> complex	<i>S. maltophilia</i>	Other Non- <i>Enterobacteriaceae</i>
Amikacin	0.5, 4, 8, 16, 32	•	•	•			•
Amoxicillin/Clavulanate	2/1, 8/4, 16/8	•					
Ampicillin	1, 8, 16	•					
Ampicillin/Sulbactam	1/0.5, 8/4, 16/8	•		•			
Aztreonam	1, 2, 4, 8, 16	•	•				•
Cefazolin	0.5, 2, 4	•					
Cefepime	0.25, 1, 2, 4, 8, 16	•	•	•			•
Cefotaxime	1, 2, 4, 8, 16, 32	•		•			•
Ceftazidime	0.5, 1, 2, 4, 8, 16	•	•	•	•	•	•
Ciprofloxacin	0.06, 0.12, 0.25, 0.5, 1, 2	•	•	•			•
Colistin	0.12, 2		•	•			
Ertapenem	0.5, 1, 8	•					
Gentamicin	0.25, 2, 4, 8	•	•	•			•
Imipenem	0.5, 1, 2, 4, 8	•	•	•			•
Meropenem	0.12, 1, 2, 4, 8	•	•	•	•		•
Minocycline	0.12, 1, 4, 8			•	•	•	
Piperacillin/Tazobactam	4/4, 8/4, 16/4, 32/4, 64/4	•	•	•			•
Trimethoprim/Sulfamethoxazole	0.5/9.5, 2/38, 4/76	•		•	•	•	•
ESBL		•					