



BugSee

Allowing same-shift antibiotic susceptibility
tests for sepsis

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Blood stream infection (sepsis)

20%

of all deaths

1/3

of all harm from
misdiagnosis

€53B

cost to medicare



The difficulty of treating sepsis



Death in less than 24h



Thousands of varieties

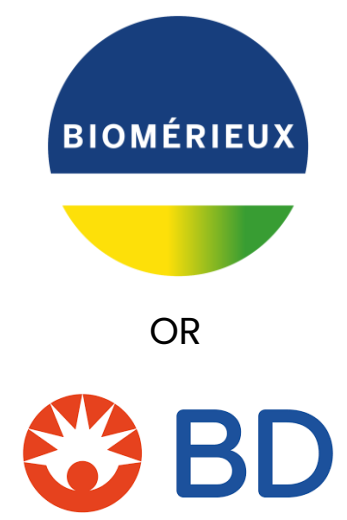


Long detection time

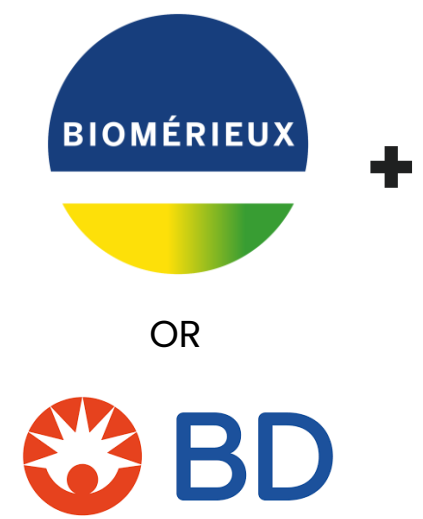
up to **6 days** to targeted treatment, while
40–75% spent on blood culturing



*AST = Antimicrobial Susceptibility Test

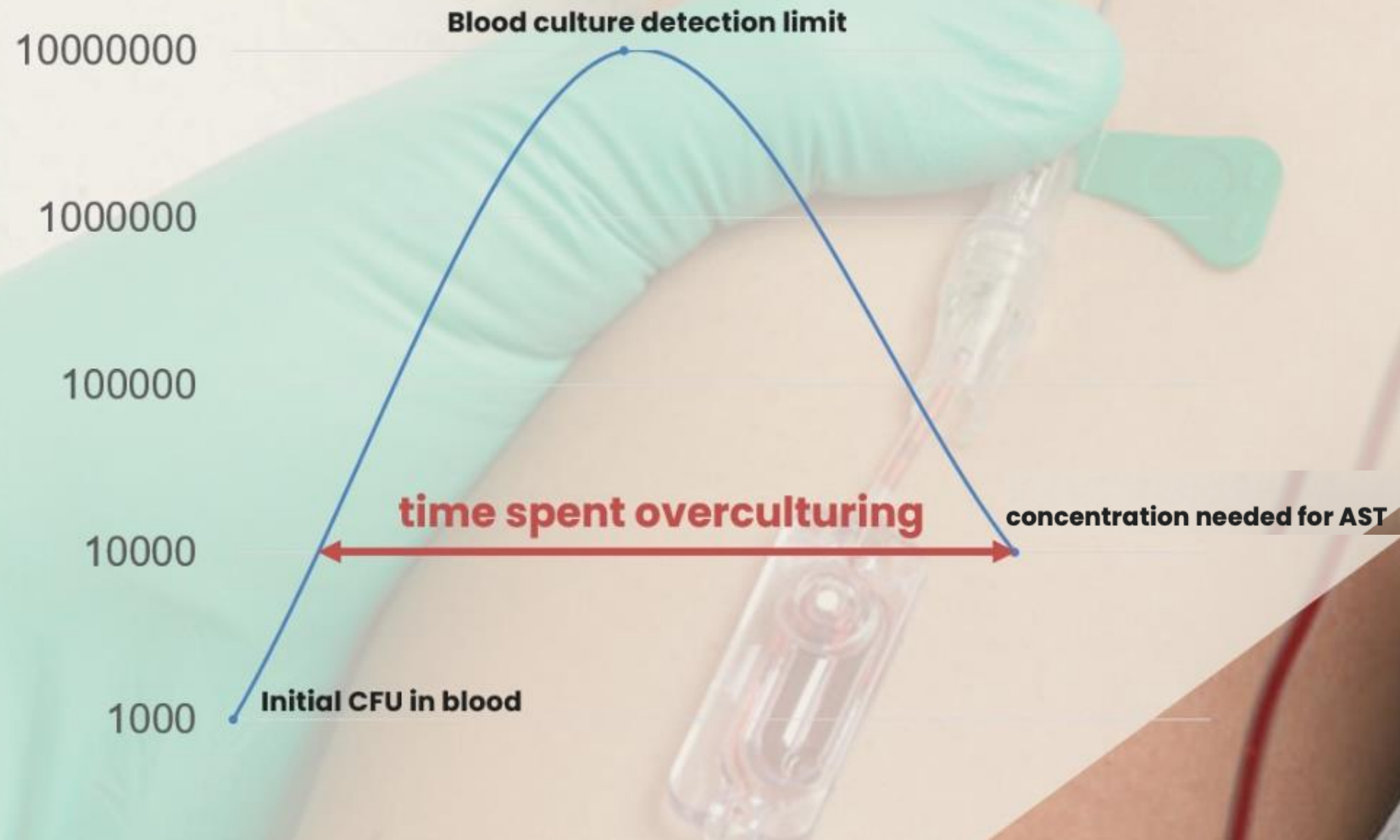


Gram = gram staining of bacteria



1 – 5 days

Blood culture speed is constrained by bacterial growth and detection limits in the bottles



The problem; finding a needle in a haystack



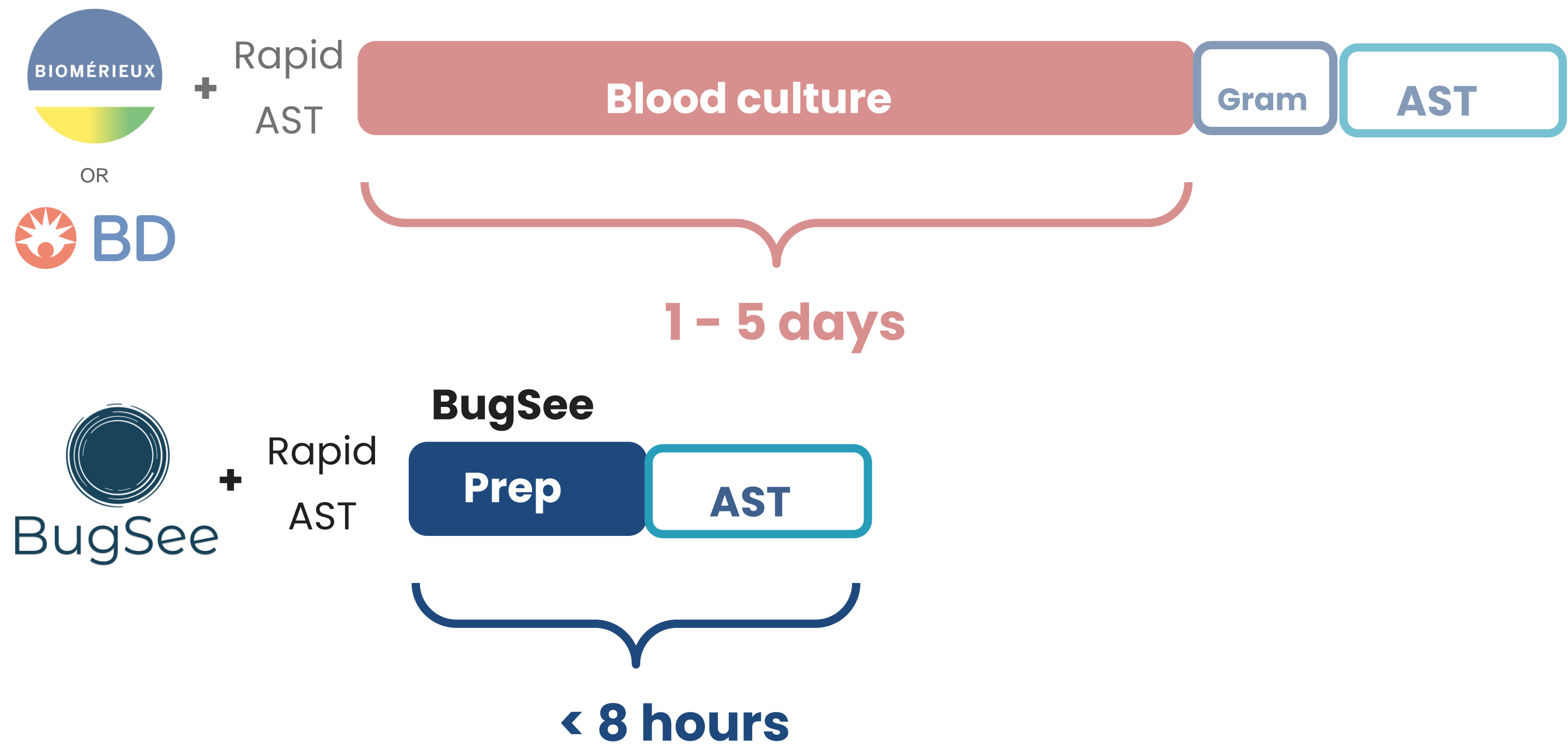
1 mL blood contains

- 5×10^9 Red blood cells
- $(2-5) \times 10^8$ Platelets
- $(5-10) \times 10^6$ White blood cells

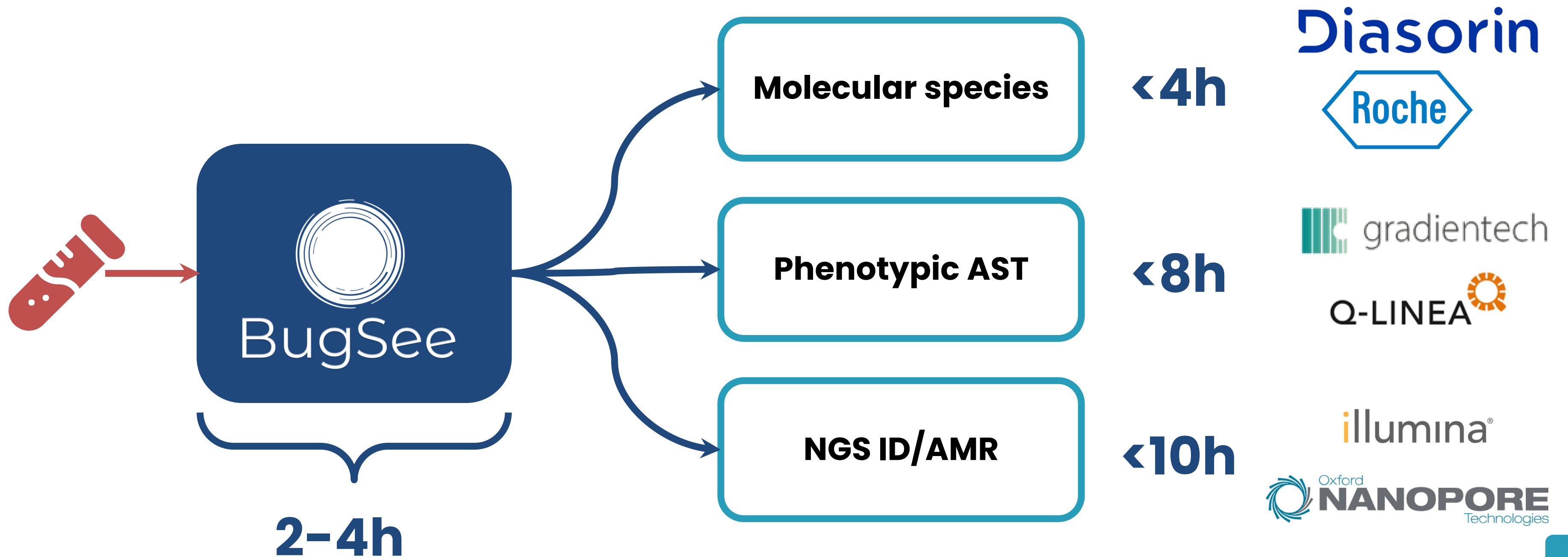
Sepsis: 100 CFU bacteria

CFU = Colony Forming Units -unit used to estimate the number of viable bacteria or fungal cells in a sample

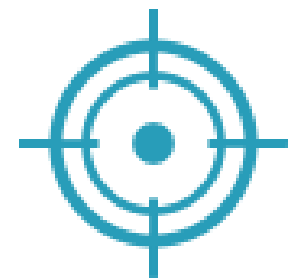
BugSee's macro-to-micro solution unlocks 10.000x more sensitivity, saving days of culturing



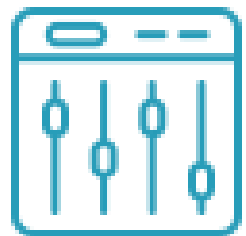
Enabling novel diagnostic platforms to provide same-day results



Our unique components, developed over **15 years** of research, and **4 EU-projects**



Selective lysis of cells



Size-based separation

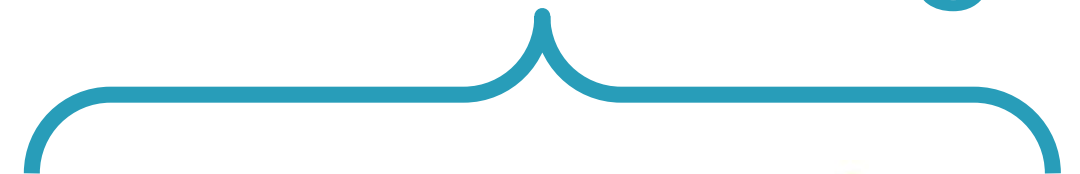


Hypersensitive detection



Automated post-
processing

funded through

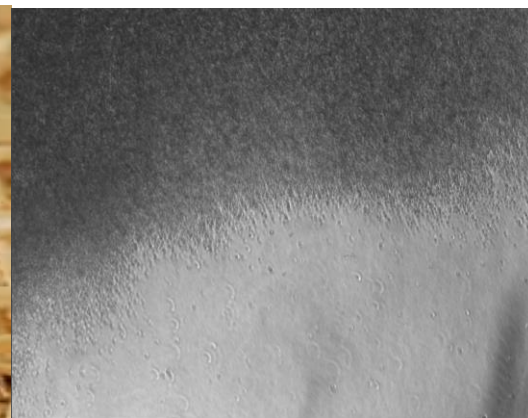


Horizon 2020

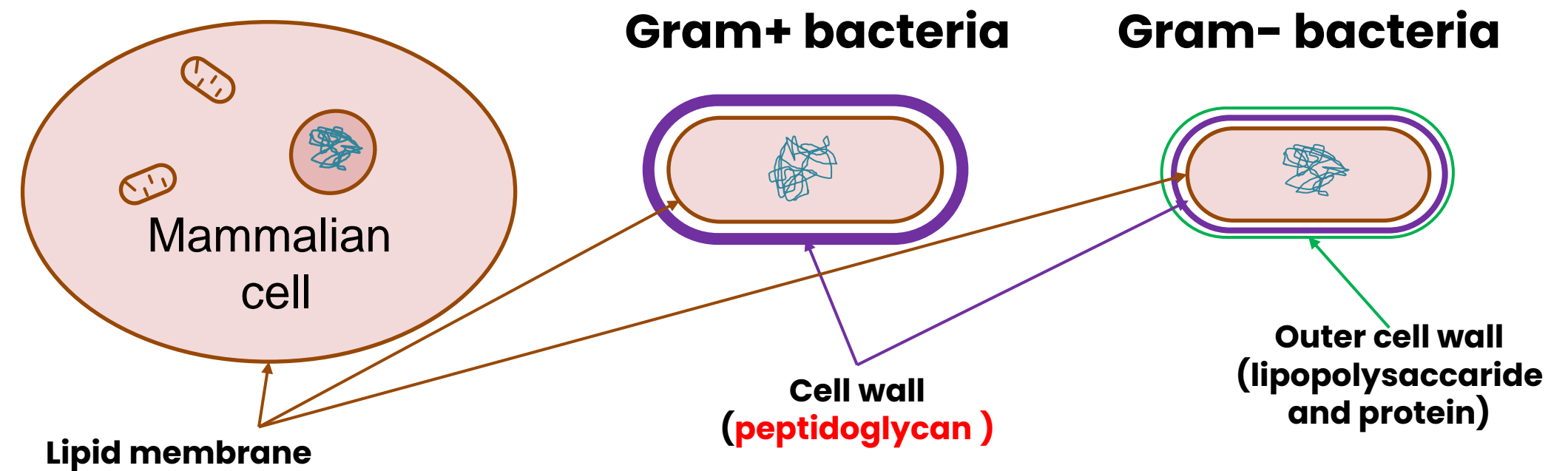


Burning the haystack; selective lysis – breaking down mammalian cells, keeping bacteria **alive**

BugSee solution – eliminating the need for extended culturing time



Debris size < pore of standard filter



How we fit in the existing microbiology industry

Empowering

molecular
tests

NGS

phenotypic
AST

Replacing

blood culture

blood culture
processing

(+ downstream test) alternative to

early sepsis
indicator

whole blood
genetic tests

Patent portfolio

Technology	Filing date	Patent status	Patent number
Selective lysis of cells	19 May 2021	In EU & US national phase	WO-2022245272-A1
Hypersensitive detection	19 May 2021	In EU & US national phase	WO-2022245272-A1
Size-based separation	28 May 2024	Priority filed	2430301-8
Automated post-processing	2025*	Patent development in progress	tba

**2-in-1
patent**

Go-to-market: 1) sterility test > 2) sepsis sample prep > 3)

integrate AST

Customers



CGT production

Pharma, CMO, QA/QC
labs

Product



Rapid sterility tests

Value proposition



Sterility in <4 hours

Revenue model

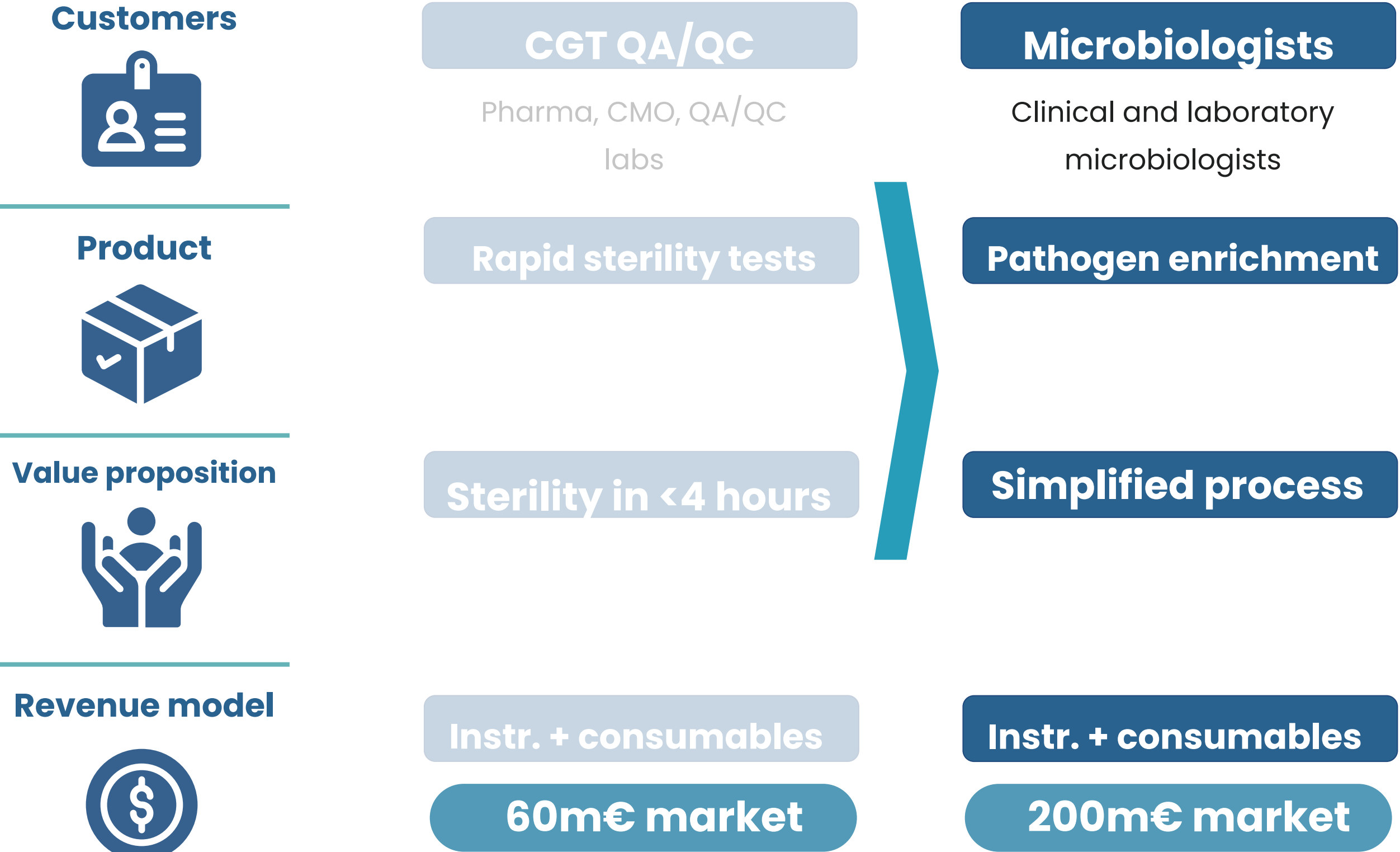


Instr. + consumables

60m€ market

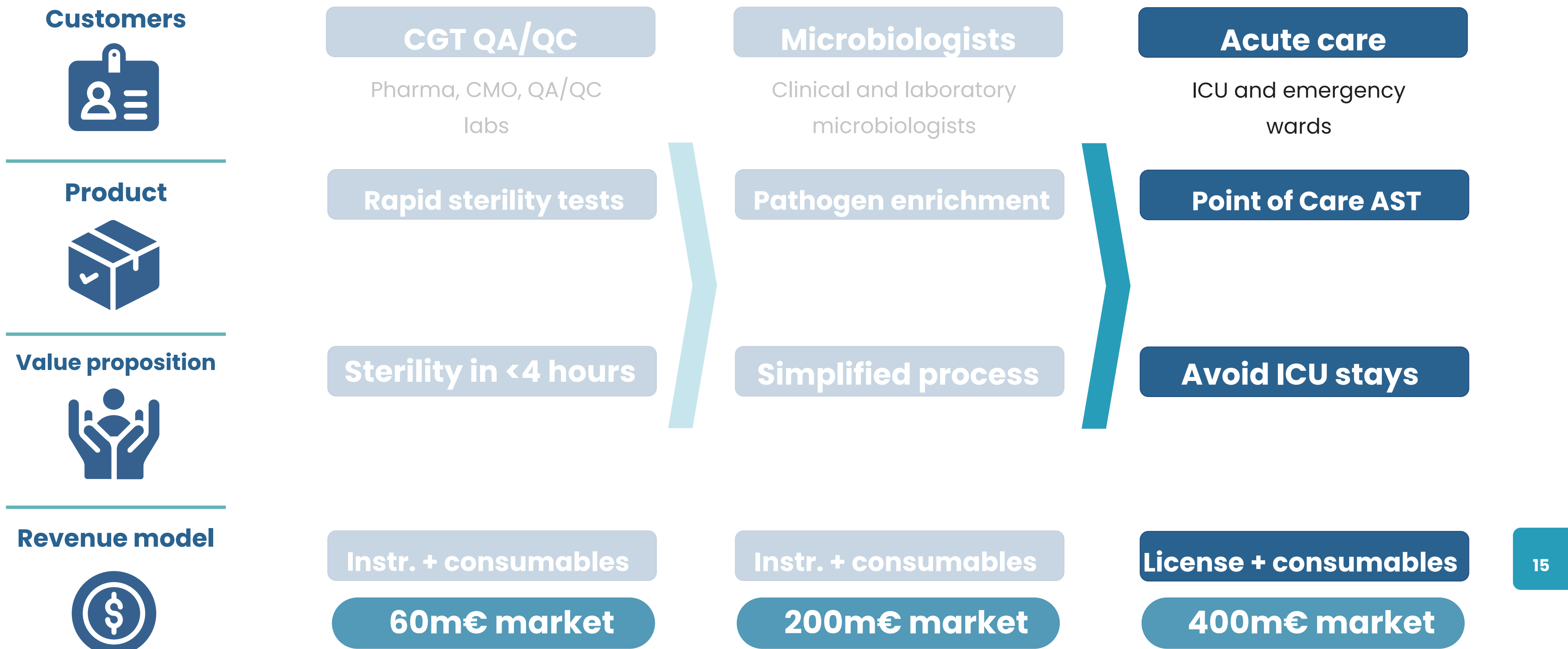
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Team: cross-over between science & business



Aman Russom

CTO, inventor,
sepsis KOL



Gerard van Smeden

CEO



Ana Catarina

COO



Ole Henrik Bang-Andreasen

Financial advisor (investor)



Daniel Carlsson

IP advisor
(investor)



Alex van Belkum

Clinical advisor



Noa Lapins

Lab technician



Kenia Chavez

PostDoc



Nisha Nanya

Research support



Russom Lab



Funding secured for PoC in 2025, raising 1m€ for 2026

