

# Nostics

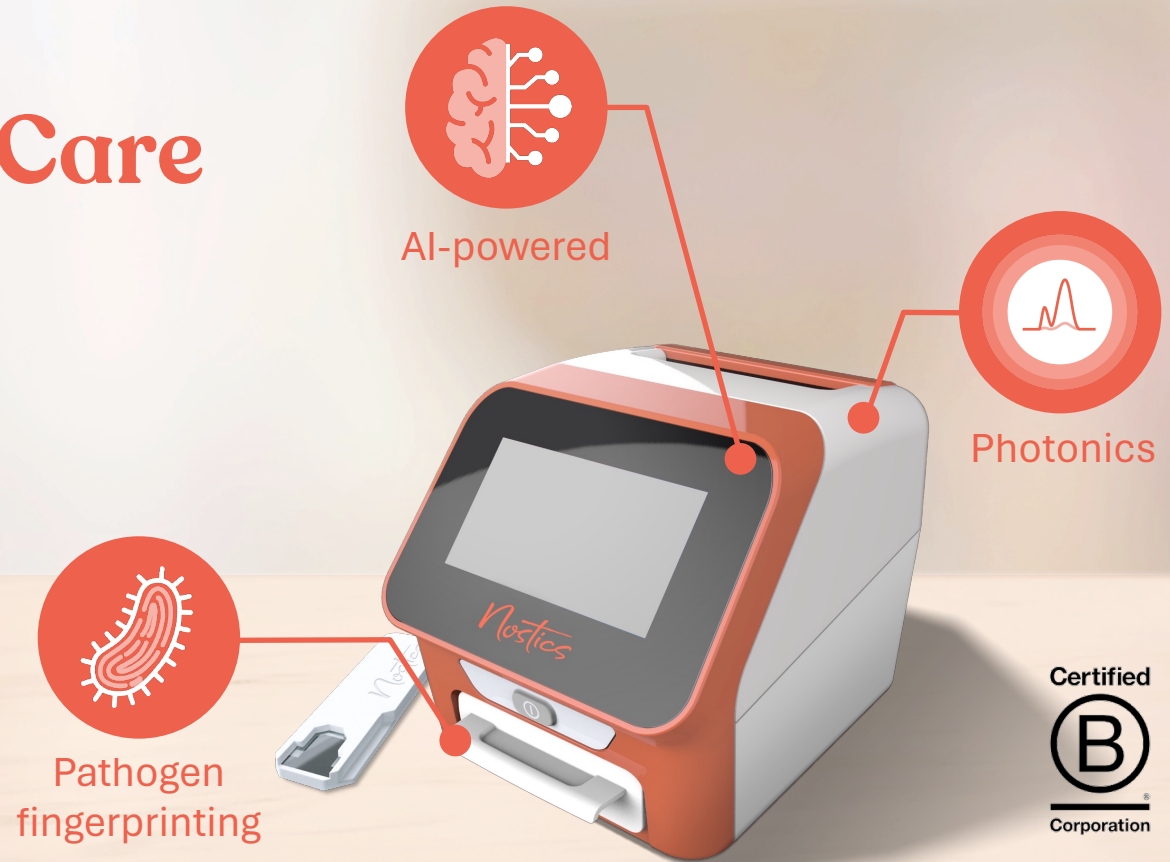
## 10min to Id – Novel Point of Care Dx platform – UTIs

Eva Rennen

Novel Diagnostics for Infectious diseases – 25<sup>th</sup> March 2024

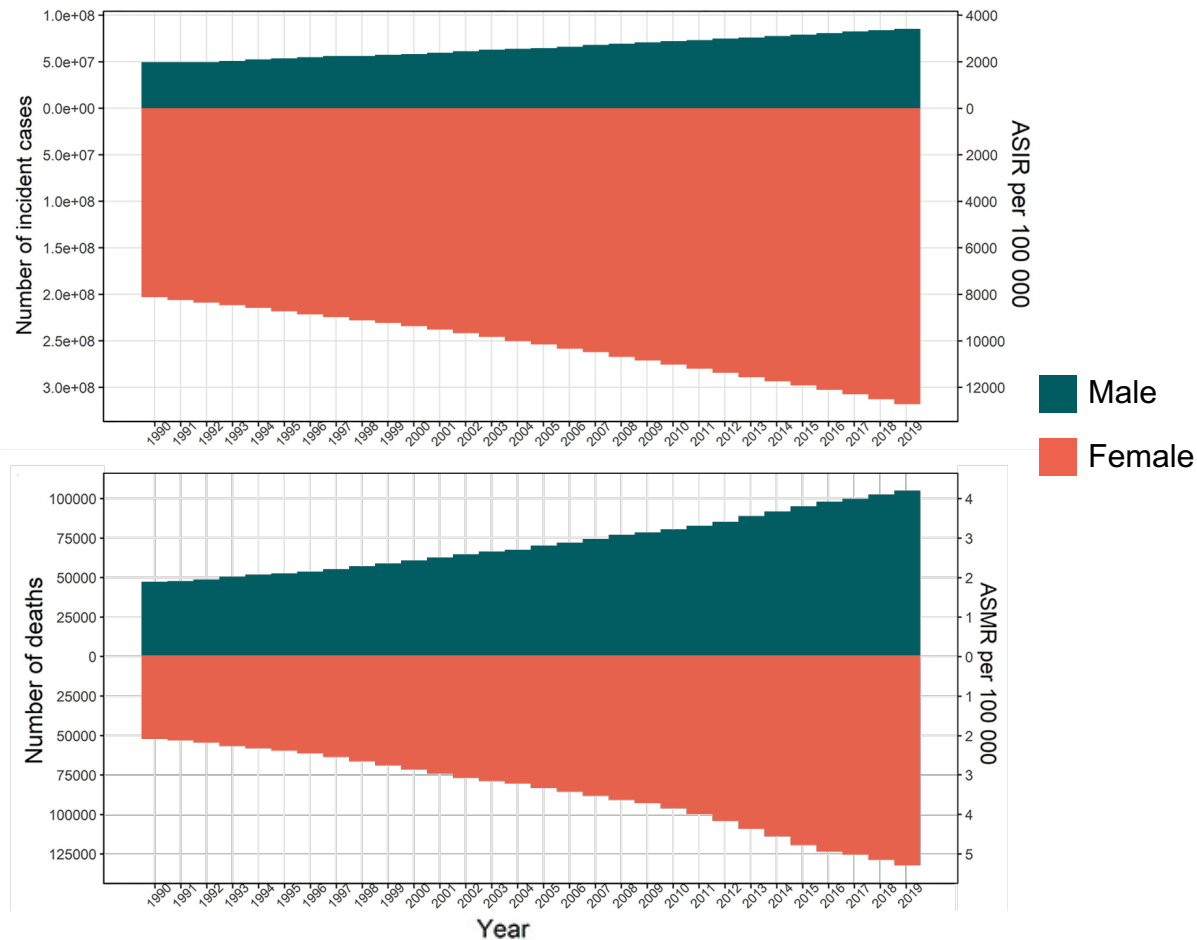
🚩 Nostics B.V.  
Amsterdam, NL

🚩 Nostics Inc.  
Cambridge, USA



# The example of urinary tract infections (UTIs)

Global trends of UTIs incidence cases and deaths



Adapted from Yang, X., et al., *Frontiers in Public Health* (2022)



# Antibiotic misuse at the point-of-care: causes

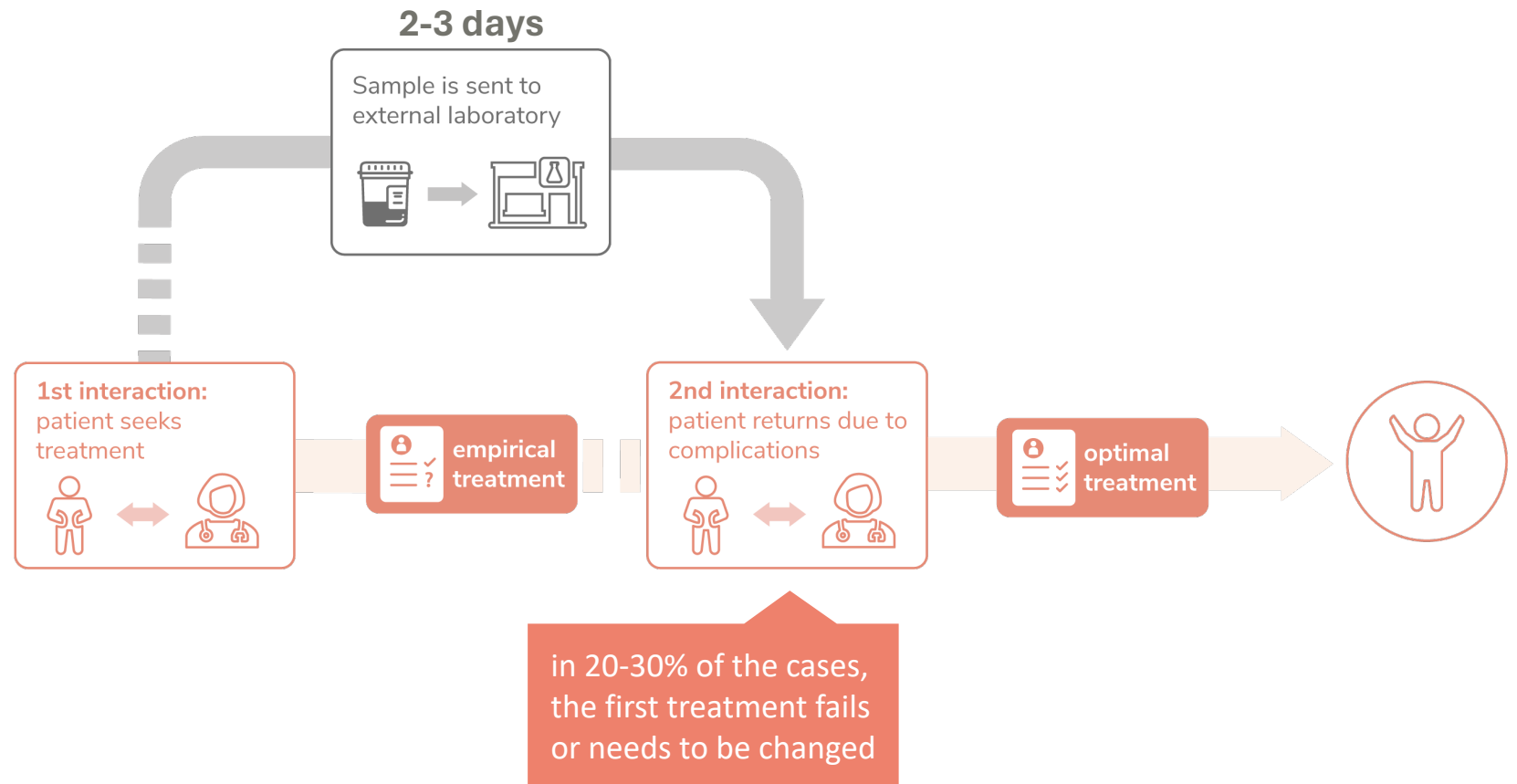
Patients are treated empirically because lab results are not available in time

## Empirical treatment

Rapid tests currently provide only infection yes/no

Complete diagnostic results not available until 2-3 days

Treatment may fail and a 2<sup>nd</sup> visit is required





# Why do we still not have an ideal test?

## Requirements for effective UTI diagnostics

Real-time connectivity

Ease of specimen collection

Affordability

Sensitivity

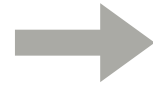
Specificity

User Friendliness

Rapid & robust

Equipment-free

Deliverable to end-users



**Actionable results,  
before antibiotic prescription**





1928

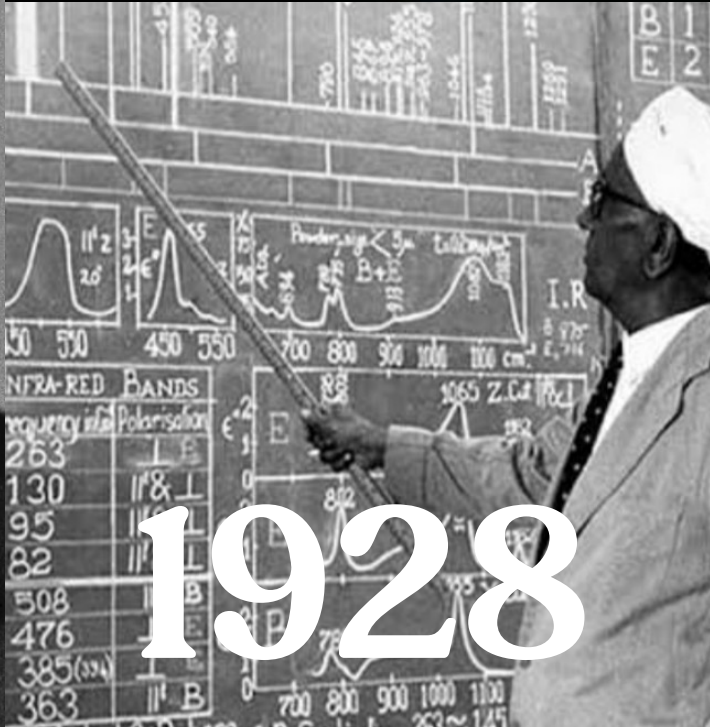
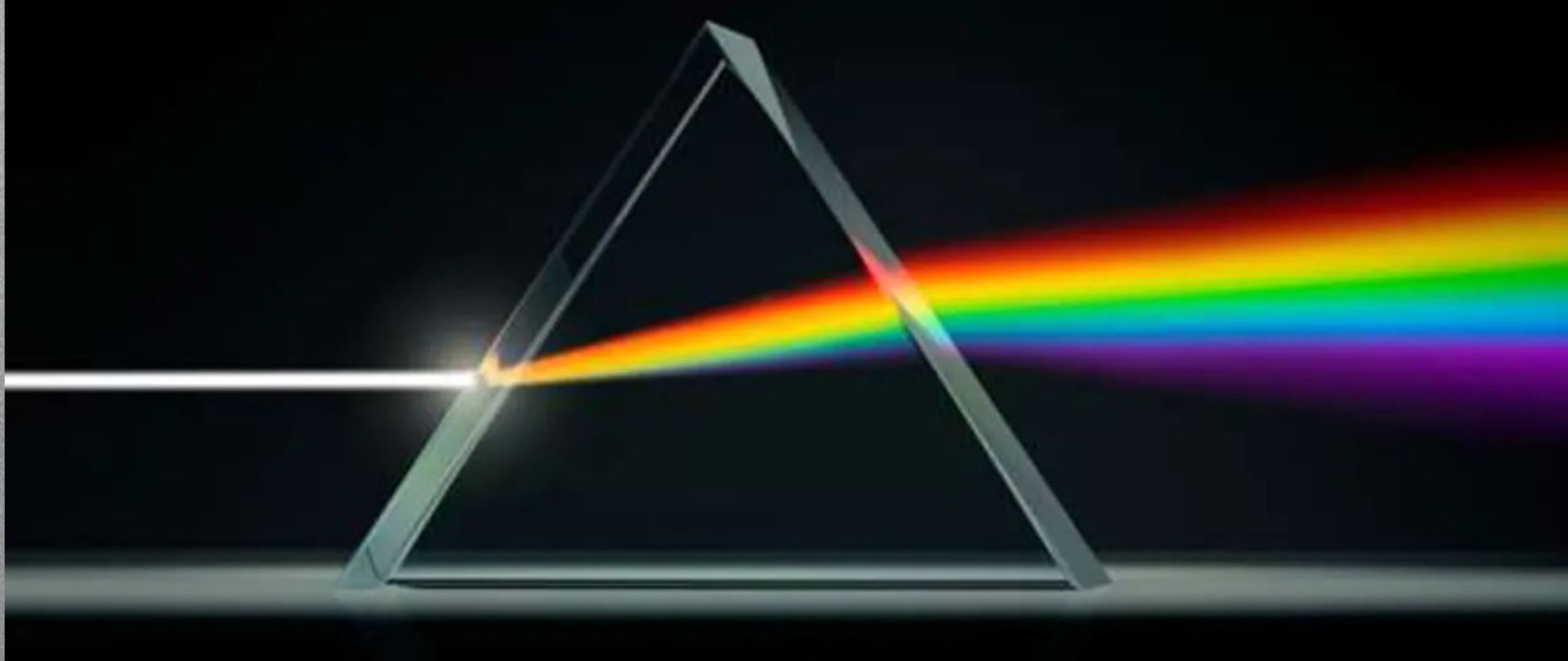


Fleming, Flory, Chain

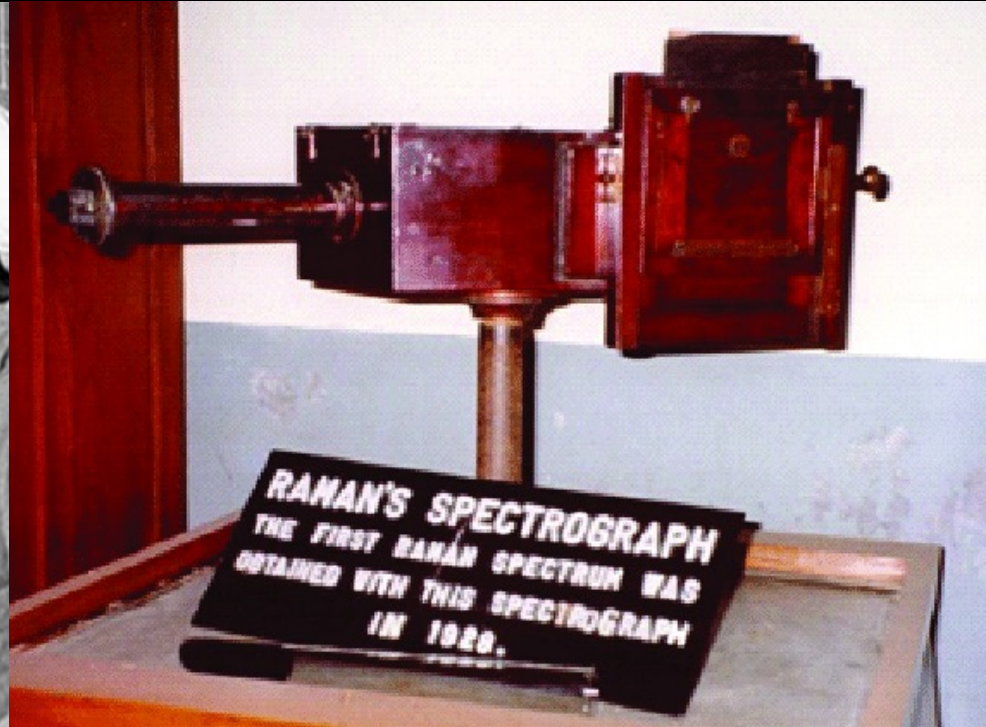




Raman

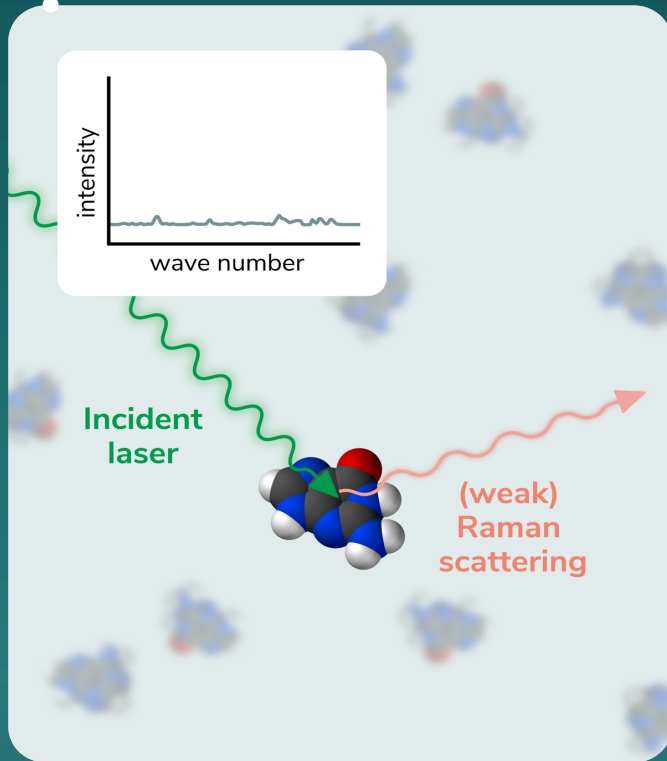


1928

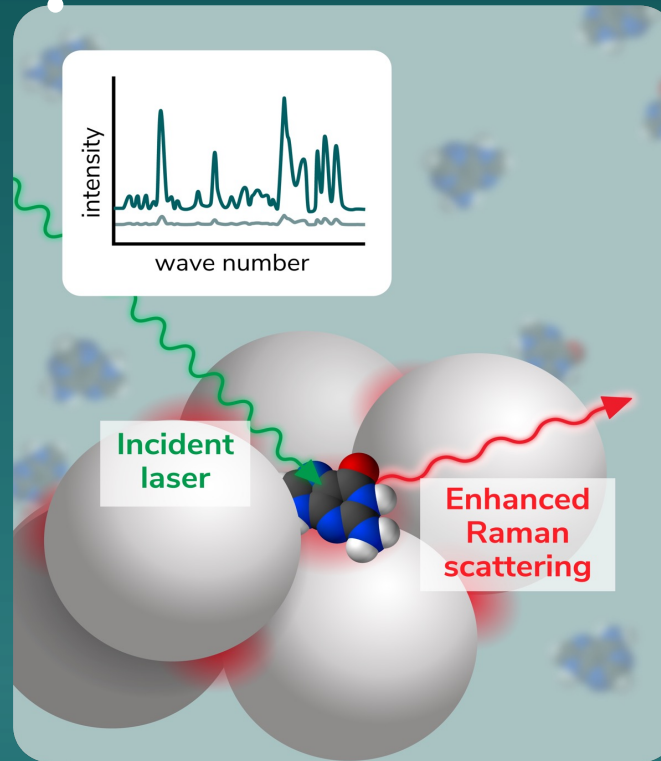


# Surface Enhanced Raman Spectroscopy (SERS)

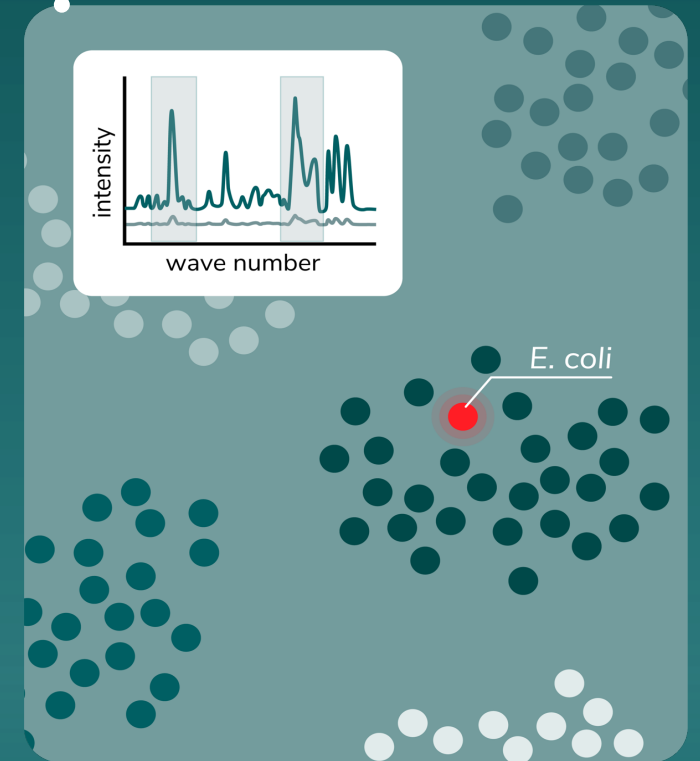
Raman spectroscopy for specificity



Nanotechnology for sensitivity



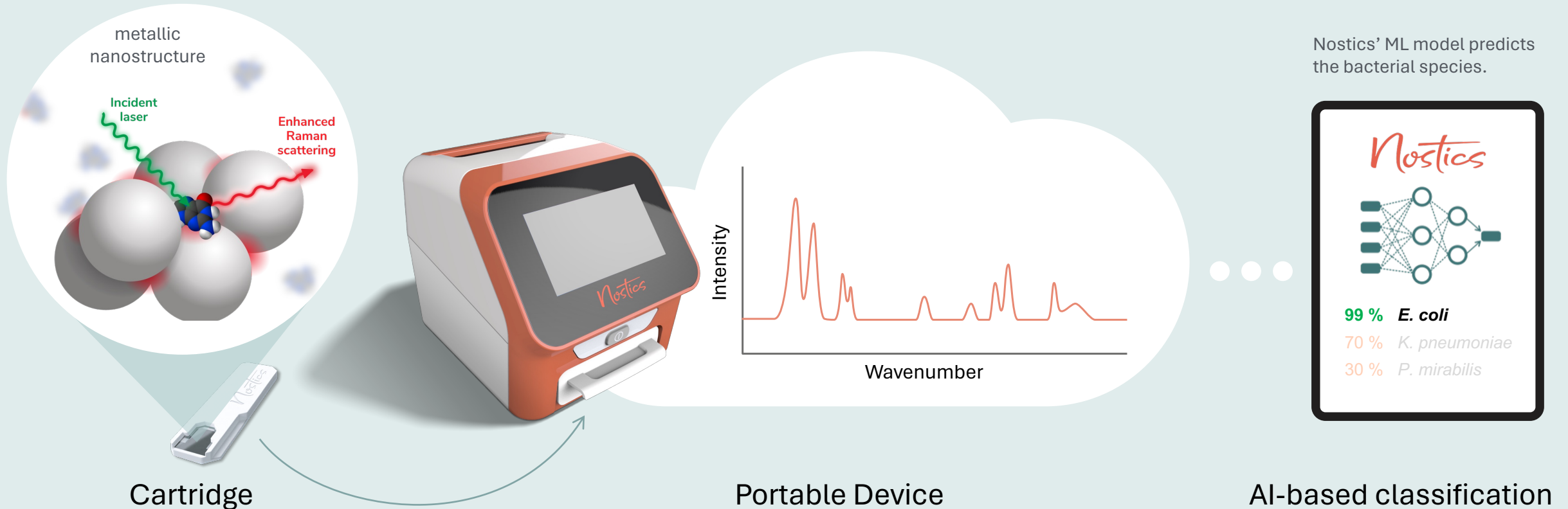
AI for automated and objective identification



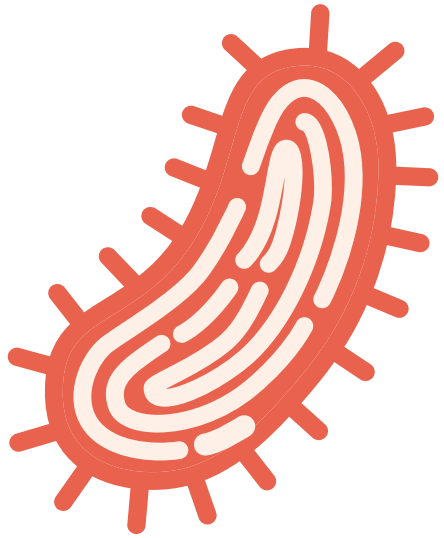


# Creating an ideal POC diagnostic tool

## Ticking all the REASSURED boxes



Why AI?



*Nostics*

# How SERS can optimize antibiotic use

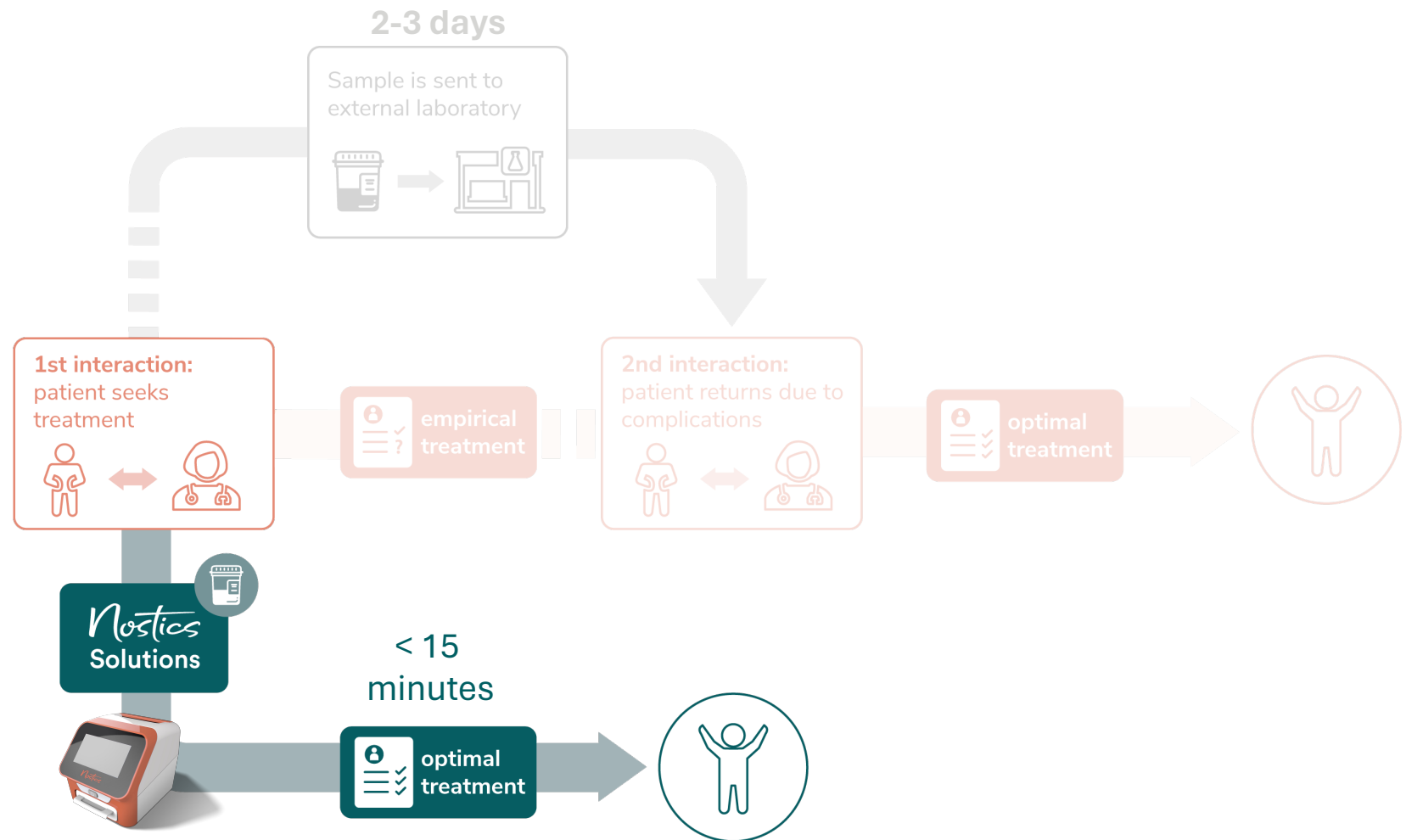
Data driven diagnostics – during first visit

## Nostics-guided treatment

Provide accurate infection  
yes/no and bacterial ID

Test results are available  
during the 1<sup>st</sup> visit and  
before treatment

Make the first treatment  
the effective treatment





# Nostics' SERS Platform approach

## Enabling expansion of application spectrum

*Nostics*

### Rapid

Aiming for direct detection from clinical samples



### Cost-effective

Made affordable for point-of-care and de-centralized settings



### Point-of-care

Available at the point of treatment



### Versatile

Different sample, different consumable but same tech



### User-friendly

No lab expertise required



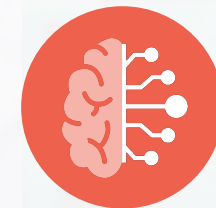
### Expandable

A library that can be extended to multiple pathogen species

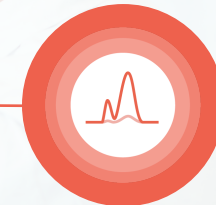


# Thank you!

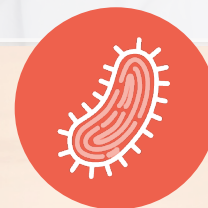
Questions? Suggestions? Reach out to me:  
[eva.rennen@nostics.com](mailto:eva.rennen@nostics.com)



AI-powered



Photonics



Pathogen  
fingerprinting

