# Acūtis is

## Currently, 22% of urinary tract infections are undetected with traditional culture-based testing

#### Molecular testing is the new gold standard providers can use to precisely diagnose and treat urinary tract infections.

As compared to the standard urine culture, our molecular testing - Acutis Reveal™ UTI - is more accurate and has a shorter turnaround time. An accurate diagnosis is key to treatment.

** ** **	Acutis Reveal <sup>™</sup> UTI	Urine culture
Sensitivity*	96-100%	50-95%
Specificity*	100%	85-99%
Detection turnaround time**	Within 24 hours	72 hours
Tests for bacterial & fungal pathogens	<ul> <li></li> </ul>	~
PCR + Guided AST	~	2 times less sensitive
Polymicrobial infection detection	<b>~</b>	×
Aerococcus urinae and Corynebactirum detected in a short TAT	~	×

#### Slow or non-growing organisms:

some UTI uropathogens simply don't grow in vitro (meaning in a culture or test tube). These are organisms such as *Aerococcus urinae* or *Cornyebacterium riegelii*. Sometimes even common bacteria such as *Escherichia coli* have failed growth in culture.

#### Polymicrobial organisms:

infection caused by multiple relevant UTI uropathogens are missed by culture.

Percentage indicates sensitivity and specificity for the presence of leukocyte esterase and nitrites.
 Results for AST will take longer

### Detection of 31 major pathogens

- Gram negative organisms
   Acinetobacter baumannii Citrobacter freundii Citrobacter koseri Enterobacter cloacae Escherichia coli Klebsiella oxytoca Klebsiella pneumoniae Morganella morganii Pantoea agglomerans Proteus mirabilis Providencia stuartii Pseudomonas aeruginosa Serratia marcescens
- Gram positive Aerococcus urinae organisms Corynebacterium ri
  - Corynebacterium riegelii Enterococcus faecalis Enterococcus faecium Staphylococcus aureus Staphylococcus epidermidis Staphylococcus haemolyticus Staphylococcus lugdunensis Staphylococcus saprophyticus Streptococcus oralis Streptococcus pasteurianus Streptococcus pyogenes Streptococcus agalactiae Streptococcus anginosus
- Fungi Candida albicans Candida glabrata Candida parapsilosis

1 Data based on comparison of Acutis results with the same sample results from an external microbiology laboratory.

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## Acutis Reveal<sup>™</sup> UTI Statistics

### - Profile of UTI organisms detected by PCR Reveal<sup>™</sup> show how much is missed in culture



• Out of 10,000 patient samples tested by Acutis, 6,679 organisms were detected with PCR compared to 2,217 organisms when tested with culture alone.

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## 10,000 Patient Study

• Acutis Diagnostics performed a comparison study of 10,000 samples for patients that were reported as symptomatic for urinary tract infection. All samples were simultaneously tested using the Acutis Reveal<sup>™</sup> UTI PCR and with traditional culture.

The study results illustrate that traditional culture misses a significant number of UTI pathogens due to the inability for some fastidious organisms to grow in vitro in a culture plate and due to the under reporting of polymicrobial infections. UTI organisms such as *Aerococcus urinae* or *Cornybacterium riegelii* are examples of fastidious organisms that are under reported. Our study data further shows that sometimes even common bacteria such as *Escherichia Coli* have failed to grow.

### Percentage of UTI organisms that were detected by PCR but missed with culture:



• The National Institute of Health calls urinary tract infections a pervasive and persistent problem, citing that "urinary tract infections are amongst the most common bacterial infections."