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# FIGHT INFECTIONS! DIAGNOSE EARLY.

Cube Dx GmbH focuses on the development, production and distribution of multiplex tests for in-vitro diagnostics in clinical practice.

Cube Dx has developed a complete and entirely new multiplex technology based on the principle of microarrays. The hybcell – the only cylindrical microarray available anywhere – delivers speedy and reliable results with minimal effort. The hyborg – a completely automated device – processes the samples fully independently and without any intervention by the user.

## MOLECULAR MICROBIOLOGY

# EARLY IDENTIFICATION OF PATHOGENS

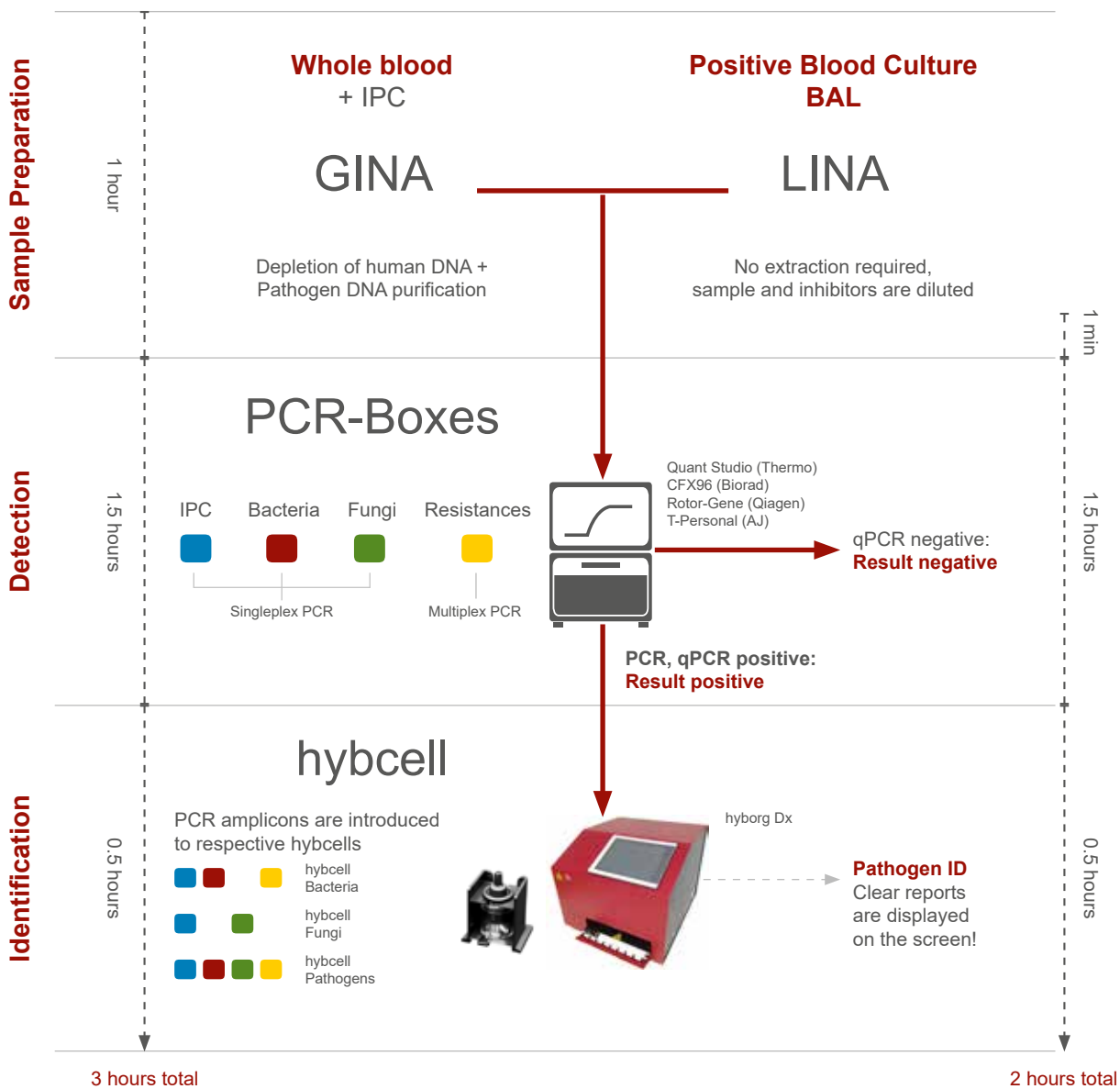
## AIM + SCOPE

Sepsis and other severe infections are mainly caused by bacteria or fungi. Early identification of the causative pathogen is crucial for effective and successful treatment with antibiotics, antimycotics, supporting medication and other treatments.

Cube Dx molecular pathogen tests support microbiologists and infectious disease clinicians in providing very early indication of a pathogen in whole blood and other

sample types. This is particularly relevant for microorganisms that have been weakened by antimicrobial treatment or which demonstrate slow growth in or on microbiological nutrient media.

The multiplex technology employed in Cube Dx is ideally suited to allow for identification in parallel of a wide spectrum of possible pathogens.



## OUR FEATURES

- 1 Identification of 11 bacterial genera and 56 species
- 2 Identification of 4 gram+ and 5 gram- resistance genes
- 3 Identification of 5 fungal genera and 19 species
- 4 Limit of Detection (whole blood): 20 CFU/ml
- 5 Clinical Sensitivity: 74%\*
- 6 Clinical Specificity: 98%\*

## YOUR ADVANTAGES

- 1 Sensitive, parallel identification of bacteria, fungi and resistance genes
- 2 GINA: Early and comprehensive results from **500 µl whole blood (3 hours)**
- 3 LINA: Extraction free testing of highly abundant microorganisms in positive blood cultures, BAL... (2 hours)
- 4 Identification of multiple pathogens/ mixed infections
- 5 Simple handling and optimized workflow with 24/7 availability and immediate results
- 6 Cost effectiveness and high-throughput provided by staged concept (Detection – Identification)

\* ECCMID 2021, presentation 1833: 403 clinical routine samples from 3 European hospitals compared against blood culture + MALDI-TOF

# TESTPANEL

## BACTERIA

Genus	Species	Profile
<i>Abiotrophia</i>	<i>Abiotrophia defectiva</i>	
<i>Acinetobacter</i>	<i>Acinetobacter baumannii</i> <i>Acinetobacter calcoaceticus</i> complex	
<i>Actinobacillus</i>	<i>Actinobacillus pleuropneumoniae</i>	
<i>Anaerococcus</i>		
<i>Bacteroides</i>	<i>Bacteroides fragilis</i>	
<i>Bordetella</i>	<i>Bordetella pertussis</i>	
<i>Borrelia</i>	<i>Borrelia burgdorferi</i>	
<i>Brucella</i>		
<i>Burkholderia</i>	<i>Burkholderia cepacia</i> complex <i>Burkholderia pseudomallei</i>	
<i>Campylobacter</i>		
<i>Citrobacter</i>	<i>Citrobacter koseri</i> <i>Citrobacter freundii</i> complex	
<i>Corynebacterium</i>	<i>Corynebacterium diphtheriae</i> <i>Corynebacterium jeikeium</i> <i>Corynebacterium ulcerans</i>	
<i>Enterobacter</i>	<i>Enterobacter cloacae</i> <i>Enterobacter cloacae</i> complex	
<i>Enterococcus</i>	<i>Enterococcus faecalis</i> <i>Enterococcus faecium</i>	
<i>Escherichia</i>	<i>Escherichia coli</i>	
<i>Finnegoldia</i>	<i>Finnegoldia magna</i>	
<i>Fusobacterium</i>	<i>Fusobacterium nucleatum</i> <i>Fusobacterium necrophorum</i>	
<i>Granulicatella</i>	<i>Granulicatella adiacens</i>	
<i>Haemophilus</i>	<i>Haemophilus haemolyticus</i> <i>Haemophilus influenzae</i>	
<i>Helicobacter</i>	<i>Helicobacter pylori</i>	
<i>Klebsiella</i>	<i>Klebsiella aerogenes</i> <i>Klebsiella oxytoca</i> <i>Klebsiella pneumoniae</i>	
<i>Legionella</i>	<i>Legionella pneumophila</i>	
<i>Listeria</i>		
<i>Moraxella</i>	<i>Moraxella catarrhalis</i>	
<i>Morganella</i>	<i>Morganella morganii</i>	
<i>Neisseria</i>	<i>Neisseria meningitidis</i>	
<i>Pasteurella</i>	<i>Pasteurella multocida</i>	
<i>Prevotella</i>	<i>Prevotella buccae</i> <i>Prevotella intermedia</i>	
<i>Propionibacterium</i>	<i>Propionibacterium acnes</i>	
<i>Proteus</i>	<i>Proteus mirabilis</i>	
<i>Providencia</i>	<i>Providencia stuartii</i>	
<i>Pseudomonas</i>	<i>Pseudomonas aeruginosa</i> <i>Pseudomonas non-aeruginosa</i>	
<i>Salmonella</i>	<i>Salmonella enterica</i>	

<i>Serratia</i>	<i>Serratia marcescens</i>	
<i>Staphylococcus</i>	<i>Staphylococcus aureus</i> <i>Staphylococcus non-aureus</i>	
<i>Stenotrophomonas</i>	<i>Stenotrophomonas maltophilia</i> group	
<i>Streptococcus</i>	<i>Streptococcus anginosus</i> group <i>Streptococcus agalactiae</i> <i>Streptococcus dysgalactiae</i> <i>Streptococcus gordonii</i> <i>Streptococcus mitis</i> group <i>Streptococcus pneumoniae</i> <i>Streptococcus pyogenes</i> <i>Streptococcus salivarius</i> group	
<i>Yersinia</i>	<i>Yersinia enterocolitica</i> <i>Yersinia pseudotuberculosis</i> complex	

## RESISTANCE GENE

Gram	Resistance	Resistance Gene	Profile
+	Vancomycin resistances	vanA vanB	
	Methicillin resistances	mecA mecC	
-	Betalactamase/Carpabenemase	CTX m1/m3 IMP KPC NDM OXA48	

## FUNGI

Genus	Species	Profile
<i>Aspergillus</i>	<i>Aspergillus clavatus</i> <i>Aspergillus flavus</i> <i>Aspergillus fumigatus</i> <i>Aspergillus niger</i> <i>Aspergillus terreus</i>	
<i>Candida</i>	<i>Candida albicans</i> <i>Candida dubliniensis</i> <i>Candida parapsilosis</i> <i>Candida tropicalis</i>	
<i>Nakaseomyces</i>	<i>Candida glabrata</i>	
<i>Clavispora</i>	<i>Candida auris</i>	
<i>Cladosporium</i>		
<i>Filobasidiella</i>	<i>Cryptococcus neoformans</i> <i>Cryptococcus gattii</i>	
<i>Fusarium</i>	<i>Fusarium oxysporum</i> species complex <i>Fusarium solani</i> species complex	
<i>Pichia</i>	<i>Pichia kudriavzevii</i>	
<i>Pneumocystis</i>	<i>Pneumocystis jirovecii</i> <i>Pneumocystis murina</i>	
<i>Saccharomyces</i>	<i>Saccharomyces cerevisiae</i>	
<i>Scedosporium</i>		

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■ Blood Culture ■ Sepsis ■ Pneumonia