



# Leading the Way in Diagnostics

Case Study

## Unilabs and NZYTech Partner Together in Fighting Infectious Diseases

In the fast-paced world of healthcare, time is of the essence. qPCR is a rapid and highly sensitive molecular testing solution that enables accurate pathogen detection. Amid the pandemic, the demand for diagnostic testing surged, and Unilabs, a leading global provider of diagnostic services, joined forces with NZYTech to co-develop novel qPCR solutions for detecting other infectious pathogens.

Unilabs had a challenge. As a leader in the diagnostic services industry, it encountered a significant hurdle in their pursuit of a more efficient and effective approach to detecting infectious agents. Traditional culture-based microbiological methods proved to be a time-consuming and laborious process that require skilled personnel while taking several days to produce results.

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**NZYTech** | Your Partner for Life Sciences



In-house collaboration R&D NZYTech and Unilabs  
Customized Development for Molecular Diagnostics  
Continuous Supply of > 500.000 tests

NZYTech, spearheaded by its in-house R&D department, provided Unilabs with novel solutions: two CE-IVD qPCR assays specifically designed for the rapid detection and qualitative diagnosis of Methicillin-resistant *Staphylococcus aureus* (MRSA) and Group B *Streptococcus* (GBS). These assays, with their high sensitivity and specificity, can detect low concentrations of pathogen in a sample, allowing for swift detection. The successful collaboration between Unilabs and NZYTech highlights the importance of partnering with innovative biotechnology companies to tackle global health challenges.

Microbiological culture method	→	qPCR test
1-3 days		2 hours

David Ribas PhD, Country Manager for Portugal and USA, was a driving force behind the successful partnership between NZYTech and Unilabs leveraging his expertise and deep knowledge of the industry. As he put it, "Our partnership with Unilabs has been crucial in delivering innovative solutions for pathogen detection, and I'm proud to have played a part in such a groundbreaking collaboration. Finding the right solution takes more than just a good idea. It takes a rigorous process of identifying the needs of the market, testing and validating prototypes, and ensuring regulatory compliance. That's exactly what we did at NZYTech, working hand in hand with Unilabs to develop cutting-edge qPCR assays that enhance the detection of infectious agents. And the proof is in the results: faster, more accurate diagnoses that enabled Unilabs to deliver the best possible care to their patients."



Thanks to the qPCR assays developed by NZYTech, Unilabs was able to detect and diagnose MRSA with unparalleled speed and accuracy, which is crucial for effective treatment and to preventing the spread of this drug-resistant bacteria. On the other hand, the Group B *Streptococcus* detection assay was critical in detecting GBS infections in pregnant women, which led to appropriate preventive measures being taken.

Over the course of two years, NZYTech's qPCR and nucleic acids extraction CE-IVD kits have been the backbone of the fruitful partnership with Unilabs, delivering a supply of over 500.000 tests to multiple countries since the beginning of the cooperation. This landmark collaboration between Unilabs and NZYTech serves as a prime example of how the expertise of industry leaders and innovative biotechnology companies can come together to tackle global health challenges. It underscores the crucial role of partnerships and collaborations in advancing the field of healthcare and improving patient outcomes.

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As mentioned by Carlos Sousa, Molecular Diagnostics Lab Director for Unilabs Portugal, “Laboratories should work in close connection with clinicians, to understand the questions they ask, when sending us a patient sample. Our mission is to provide the correct answers by choosing and creating the best technology to answer those questions. Therefore it's essential a closer connection between laboratories and Biotech companies, and that's precisely what we have done with NZYTech.”

The ongoing threat of emerging infectious agents and new variants highlights the critical need for accurate and precise diagnostics to detect infectious diseases. The COVID-19 pandemic has clarified the urgency of using PCR technology more widely for all kinds of infectious diseases and NZYTech is at the forefront of this fight.

With cutting-edge qPCR assays that enable rapid and accurate detection of pathogens, NZYTech's in-house R&D department and production capabilities allow for the customization of assays to suit specific diagnostic needs,

## Highlights

**Fast turnaround time:** Less than 2 hours

**Clinical performance:** High sensitivity and specificity

**High Precision at three levels:** Repeatability, intermediate precision and reproducibility

ensuring optimal results. The company's dedication to research and development is evident in its ongoing efforts to identify new targets and improve existing assays, positioning it as a valuable partner for healthcare providers seeking to improve patient outcomes through faster and more accurate diagnoses.



Carlos Sousa  
Molecular Diagnostics  
Lab Director  
Unilabs Portugal

Additionally, as Joana Brás PhD, our IVD director says, “We are fully committed to developing IVD products which use state of the art technologies and that meet the highest industry standards. It is through this rigorous research and development process that we ensure the specificity, safety and effectiveness of our qPCR assays, providing healthcare providers with the confidence they need to deliver the best possible service.”

As we gaze towards the future, NZYTech's unrelenting drive towards innovation and research will spearhead breakthroughs in the field of molecular diagnostics. The company's steadfast devotion to keeping pace with the ever-evolving landscape ensures that healthcare providers are bestowed with cutting-edge and dependable diagnostic tools that are unrivalled in the industry.

Pedro Rio, NZYTech's CEO, ardently emphasizes the indispensable nature of the partnership with Unilabs, declaring, “Our partnership with Unilabs has been nothing short of instrumental in delivering groundbreaking solutions for pathogen detection, and I am confident that we will continue to make monumental strides in the ongoing fight against infectious diseases.”

## OEM and Customized Solutions

NZYTech's OEM and Customized solutions offer components and reagents necessary to create specialty solutions for any diagnostic application in research and industry. Thus allowing our clients to leverage NZYTech's robust solutions in their workflow. NZYTech designs bespoke products that help you improve your molecular biology and diagnostics workflows. Ensuring 360° support with technical expertise and logistical proficiency that secures fast turnaround time.



**Besoke  
Packaging &  
Branding**



**Custom Enzymes,  
Master Mixes  
or Kits**



**Dedicated  
Project Manager**

## ISO Certification

ISO 13485:2016

Design, development, manufacture and sales of reagents and IVD kits to detect viral infections by Real-Time PCR.



ISO 9001:2015

Research, development, production and commercialization of biotech products and services to the community



Catalogue number	Product name	Number of reactions	Target pathogen
MD04931	MRSA Multiplex Real-time PCR Kit, IVD	96	Methicillin-resistant <i>Staphylococcus aureus</i>
MD04941	Group B Streptococcus Real-time PCR Kit, IVD	96	Group B <i>Streptococcus</i>