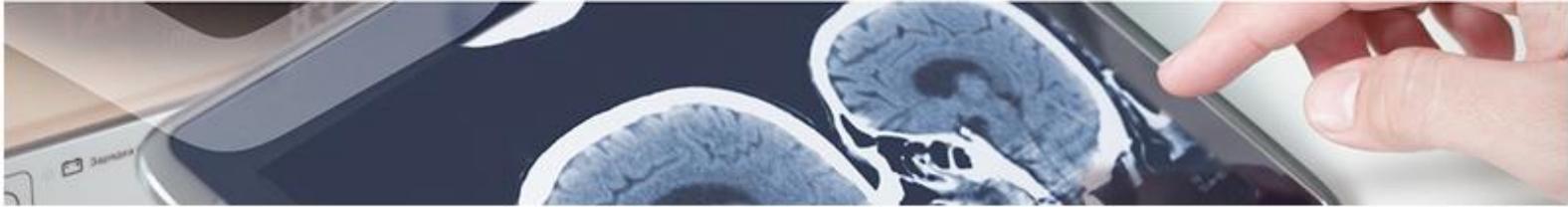


Diagnostics

Method and kit for early diagnosis of pulmonary tuberculosis

A research group from the Andalusian Public Health System (SSPA) has developed a new method and kit for early diagnosis of pulmonary tuberculosis in humans.



Description

Tuberculosis is an infectious disease subacute or chronic course that affects 12 million people worldwide. With more than 8 million new cases each year and almost 1 and a half million deaths.

Some traditional methods for the diagnosis such as smear microscopy, culture and phenotypic identification, among others, have drawbacks related to the low levels of sensitivity and specificity obtained and to the time taken for the diagnosis (days to weeks).

Another method, called Xpert MTB / RIF, despite being more expensive than the previous ones, is also used to diagnose tuberculosis, since it is a fully automated technique that provides rapid (2 hours) and efficient diagnosis by RT-PCR.

An early etiological diagnosis of pulmonary tuberculosis is essential for its appropriate treatment and reducing morbidity and mortality associated with diagnostic delay. Furthermore, unnecessary risks for patients arising from the applied treatments are avoided.

Despite the existing methods, is still necessary to find simpler, faster and less expensive alternatives.

Therefore, the research group has developed an RT-PCR system based on SYBR Green I, able to quickly identify the tuberculosis mycobacterium complex that causes the disease. Thereby, early diagnosis of pulmonary tuberculosis is allowed.

Validation studies have been carried out in 66 patient samples, with sensitivity results of 93.3% and a specificity of 100%.



Advantages

1. Allows fast, easy and less expensive diagnosis of pulmonary tuberculosis.
2. Allows simultaneous testing of a large number of samples.
3. Is capable of being automated and can be used in any clinical laboratory.
4. Does not require using toxic agents such as ethidium bromide to identify PCR products.
5. Avoids the risk of manipulation of microorganisms by staff.
6. Results suggest that could be even more efficient than the technique Xpert MTB / RIF.



Intellectual Property

This technology is protected by patent.



Aims

The research group is looking for a license or a collaboration agreement.



Classification

Area: Diagnostic

Pathology: Pulmonary and respiratory system