PROBES, USES AND METHODS FOR DIAGNOSIS, MONITORING AND TREATMENT EVALUATION FOR FILARIASIS

SUMMARY

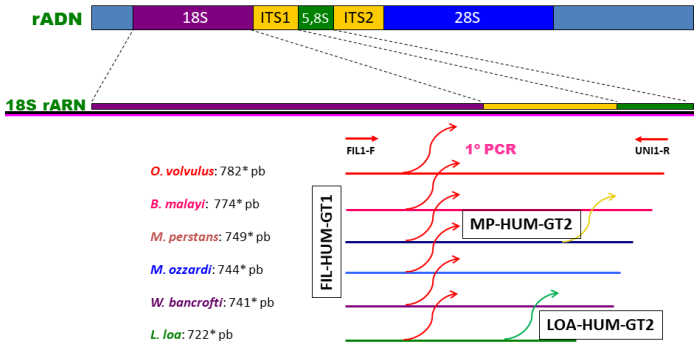
The present invention relates to probes comprising a nucleotide sequence capable of hybridising specifically to nucleotide sequences comprised in the 18S rDNA and ITS1 regions of the genome of filarial parasites causing filariasis such as *Loa loa*, *Mansonella perstans* or *Wuchereria bancrofti*, among others.

The nucleotide sequence of the probes of the invention is linked to an element capable of emitting a quantifiable signal, namely a fluorophore. Furthermore, this invention includes methods of diagnosing, monitoring, determining filarial load and evaluating treatments for filariasis in a subject, comprising contacting the described probes with the biological sample isolated from the subject and quantifying the levels of fluorescence emitted by the fluorophore of the probes.

DESCRIPTION

A key issue in the study of human filariasis is the development of sensitive and specific, and if possible, easy and inexpensive diagnostic methods that allow better diagnosis of these diseases. The Gold Standard diagnostic method for human filariasis is the identification of microfilariae by microscopy of thick blood smear stained with a dye or skin snip, depending on the species of filariae. However, the disadvantages of these techniques are well known.

Real-time PCR using the FIL-HUM-GT1, Loa-HUM-GT2 and MP-HUM-GT2 probes has shown in validations to date that can replace real-time PCR with Eva®Green. This type of PCR, retain the advantages of real-time PCR (easy to use, faster, less risk of contamination and DNA quantification). When the probes detect a specific DNA fragment, a signal is emitted, which means that the clinical sample is infected with the filarial species to which the probe is specific, thus dispensing with the need for electrophoresis.



COMPETITIVE ADVANTAGES

- Specificity
- Sensitivity

INNOVATIVE ASPECTS

- Multiplex Technique
- Quantification and monitoring of filarial treatment.

KEYWORDS

- onchocerciasis
- lymphatic filariasis
- loiasis, mansonellosis
- real time PCR
- Taqman Probes

MAIN ACTIVITY SECTOR

- Neglected tropical diseases

DEGREE OF DEVELOPMENT

Validated in clinical samples as dried blood spots from African individuals

COLLABORATION EXPECTED

Licensees of the patent application or interested in licensing and collaboration agreements for the development of the technology are sough.

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