Uniwersytet Gdański
Centrum Transferu Technologii

biology

Looped UVEx Probe for detection of thick-borne pathogens

About the invention

Lyme disease is a disease affecting a growing segment of the population. The number of ticks found in nature is increasing dramatically every year, resulting in a massive increase in the incidence of Lyme disease. Depending on the stage of the disease, the spirochete infection can cause adverse skin symptoms, dangerous joint, neurological and even cardiac complications. Existing treatments using antibiotics from the penicillin, cephalosporin and tetracycline groups are effective, but in order to avoid complications it is extremely important to detect the disease as early as possible.

The subject of the invention is a **Looped UVEx Probe** and its use together with a pair of appropriately selected primers in an optimized PCR reaction (with Taq DNA polymerase of the "Hot Start" type). **The aim** of **the method is to enable rapid detection of the product** formed in **the PCR reaction** to be performed by observing **the color change** of **the reaction mixture**, directly in the tube, **after exposure to UV light**. The applied technology also allows improving the specificity of the PCR reaction and reducing the number of false positives obtained during tests aimed at detecting the presence of specific DNA fragments in the tested sample.

The described technology finds application in the diagnosis of Lyme disease **and** other tick-borne diseases, particularly in the comprehensive detection and identification in patients of various tick-borne microorganisms.

Authors

prof. dr hab. Grzegorz Węgrzyn
dr hab. Bożena Nejman-Faleńczyk, prof. UG
dr Sylwia Bloch

Implementation progress

TRL 4 – Technology validated under laboratory conditions

IP protection

The invention is protected by patent in Poland **Pat.237729** and European patent **EPO.3312294**.

Possible cooperation

- Licensing agreement
- Transfer of ownership
- Partnership in order to further research or commercialization

Sectors

- Biotechnology market
- Pharmaceutical market

tel. 58 523 33 74 / 75
biuro@ctt.ug.edu.pl
ul. Wita Stwosza 63, 80-308 Gdańsk
www.ctt.ug.edu.pl

Judyta Gawryś
+48 725 991 257