

Quantification des miRNAs par la technologie EXIQON

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Early detection of colorectal cancer based on RT-qPCR profiling of miRNA in patient blood plasma samples. miRNAs represent a novel and very promising class of biomarkers.

Abstract

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miRNAs have been the subject of intense investigation since their discovery a decade ago. This is due to their central role in regulation in gene expression and their implication in a growing number of important diseases such as cancer, heart failure, diabetes and immune related diseases. Recent discoveries that miRNAs are highly stable in clinical samples such as FFPE and especially serum/plasma make them a new and very promising class of biomarkers. In addition little is known about the role of circulating miRNAs, but there is

speculation that they may represent a novel endocrine system important for transmission of signals in the body

Due to their small size the study of microRNAs is especially challenging. Exiqon has developed several Locked Nucleic Acid (LNA[™]) based technological platforms to detect microRNAs and uncover their functions. In particular our highly sensitive quantitative PCR system that opens new possibilities for genome profiling of miRNAs in limited clinical samples with very low RNA content such as serum/plasma.

We will present recent results from two diagnostic development programmes.

We have identified promising diagnostic miRNA biomarkers of cutaneous T cell lymphoma (CTCL) to distinguish between malignant and benign inflammation. The initial screening was conducted by use of our microarray platform. Subsequently the biomarker profile was transferred to our qPCR platform for validation. In a blinded test set specificity and sensitivity of 97% and 93% respectively were obtained.



We will also present results of our main diagnostic development programme which is focused on the development of an early detection test of colorectal cancer. Our results so far are very promising and suggest that early detection of colorectal cancer based on RT-qPCR

