Technology Offer Number 032020

TECHNOLOGY OFFER

Prediction of Response to Treatment and Prognosis of Patients with B Cell Leukaemia and Lymphoma Using miRNA Expression Determination

TECHNOLOGY SUMMARY

Method for reproducible determination of absolute copy number of specific miRNA in samples from patients with B cell leukaemia (CLL) and lymphoma (follicular lymphoma etc.) which can help physicians predict whether and how patients will respond to therapy.

INVENTION

The invention provides a method for the absolute quantification of miR-34a and/or miR-150. The expression of miRNA is determined in a biological sample taken from the patient, along with the expression of endogenous control, and at the same time expression of the miRNA synthetic standards, and endogenous control of the known number of molecules is determined.

BACKGROUND

Chronic lymphocytic leukaemia (B-CLL) is one of the most common types of leukaemia of adults. The prognosis of this disease and the response to treatment is very different for each patient. Current empirical methods are insufficient. Patients are often diagnosed at a very early stage of CLL, and there is no way how to distinguish patients with the rapid progress of the disease.

FIELD OF APPLICATION

- In-vitro diagnostics of CLL and other B-cell malignities
- Prognostics of CLL and prediction of the response to treatment
- Disease progression monitoring and early detection of aggressive variants

FEATURES & BENEFITS

- A method based on qRT-PCR
- Determination of miR-34a and miR-150 as biomarkers
- Better prognosis and prediction than current methods available

IP PROTECTION

Patent no. CZ306080B6

STAGE OF DEVELOPMENT

TTRL 4 – Technology validated in the lab

INVENTORS PROFILE

Name of the Research Group & Inventor:
Research Group: Microenvironment of Immune Cells
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PUBLICATION LINK

- miR-150 downregulation contributes to the high-grade transformation of follicular lymphoma by upregulating FOXP1 levels
- MicroRNA miR-34a downregulates FOXP1 during DNA damage response to limit BCR signalling in chronic lymphocytic leukaemia B cells

TECHNOLOGY TRANSFER

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