The main aim of the dissertation was in patients with acute myeloid leukemia to investigate the impact of favorable prognostic chromosomal aberrations and increased expression of a family of multiple drug resistance genes to achieve a complete remission and overall survival, and identify the potential prognostic factors.

Experiments were focused on the introduction of routine diagnostics of two prognostically favorable fusion genes, AML1/ETO and CBFbeta/MYH11 and multiple drug resistance gene MDR1. This testing was performed by reverse transcription, PCR and subsequent electrophoretic analysis of its products.