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THE ROLE OF MICRO-RNA(miRNA) IN DEVELOPMENT OF LYMPHOMAS

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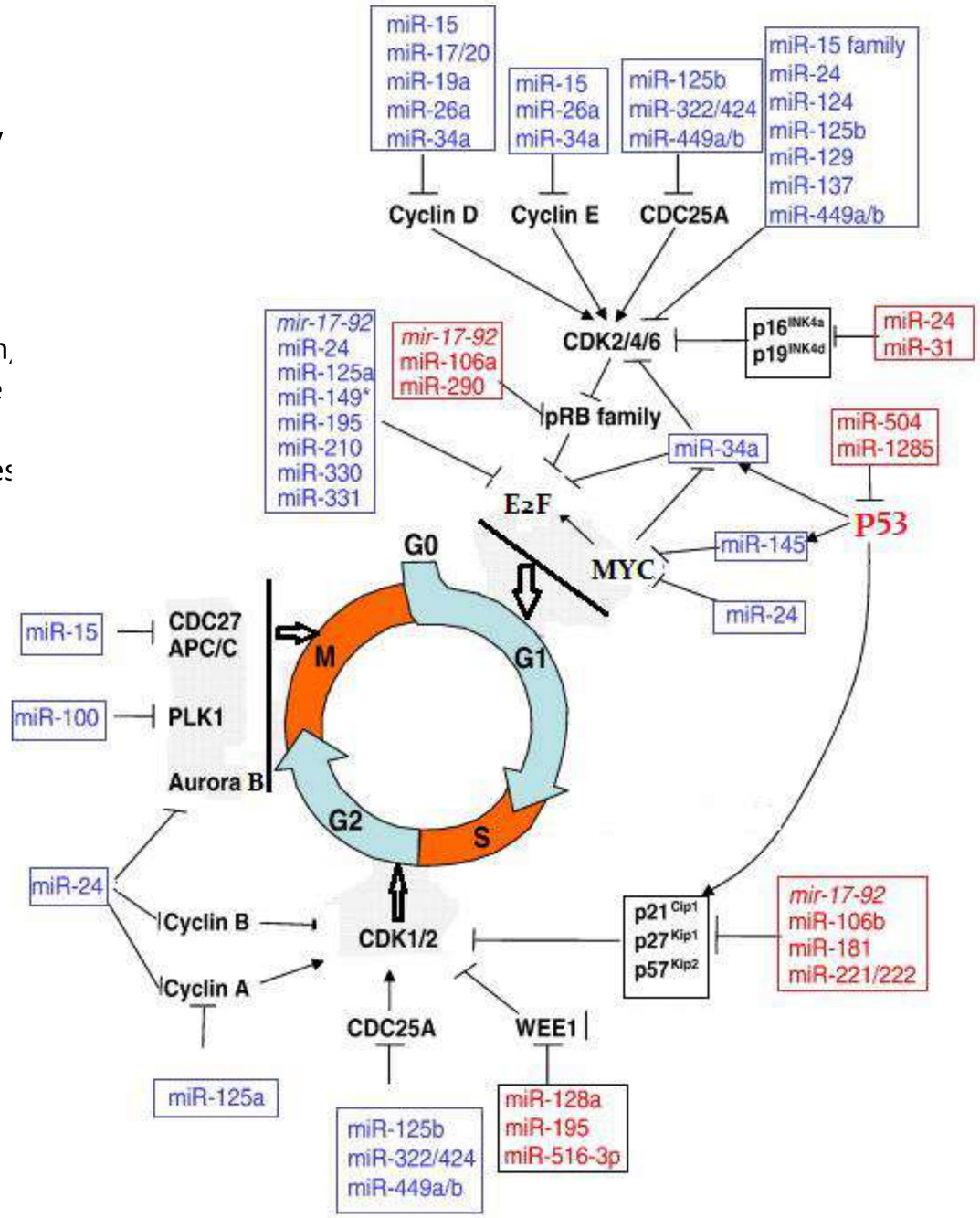
Introduction
Small miRNA molecules, non-coding, regulate the expression of approximately 2/3 of total human genes, most of which are located in cancer-associated genomic regions. Moreover, in all types of cancer an abnormal expression of miRNA has been detected.

Keywords
miRNA, malignancy, biomarker.

Purpose
Study of the mechanism by which changes in miR expression cause malignancy of cells, as well as molecules that disrupt this expression to highlight the markers involved in the early stages of disease development.

Material and methods
The synthesis of medical articles published during 2014-2019, identified by the search engines PubMed, NCBI and Sciencedirect regarding the implications of miR in the development of lymphomas.

Results
Suppression of gene expression for miR-223, miR-181, miR-142 and the miR-15a / 16-1 family causes ectopic increase of B and cytotoxic-T lymphocyte proliferation. Excessive proliferation is also induced by miR-34 deficiency, which normally stimulates the biosynthesis of p53 protein, the main tumor suppressor. A special role is played by miR-155, which directly regulates gene expression for the enzymes of the DNA repairer. Poor growth and apoptosis of malignant lymphocytes is also caused by decreased expression rate of miR-135a, which is normally responsible for inhibiting the proto-oncogenic BCL complex.



Conclusions
Understanding the role of miRNA in the process of cell malignancy offers the prospect of developing a new type of biomarker, both for diagnosis, the possible prognosis of cancer and the response of defective cells to drug treatments.