

ABSTRACT

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Biophysics and Physical Chemistry

Author of Diploma Thesis: Bc. Barbora Kuříková

Supervisor of Diploma Thesis: Mgr. Monika Kuchařová, Ph.D.

Consultant: prof. MUDr. Zdeněk Zádák, CSc.

Title of Diploma Thesis: Determination of the fatty acids spectrum in patients undergoing treatment with taxanes

The diploma thesis deals with the determination of fatty acids spectrum in erythrocytes in patients treated with taxanes.

The theoretical part describes general features of fatty acids, their synthesis and degradation. Then it is focused on the topic of breast cancer, taxane treatment and negative side effects associated with taxane treatment, especially polyneuropathy. The gas chromatography, which is commonly used in practice, is also described in this part.

The experimental part is divided into three parts. The first part describes working process, chromatographic analysis and evaluation of this analysis. In the second part there is comparing of spectrum of fatty acids of patients without and with polyneuropathy. And in the last part there is a comparing of spectrum of fatty acids of patients before taxane treatment, closely after treatment and about month after the treatment. Results of the experimental part are evaluated at the end of the thesis.

Key words: taxanes, polyneuropathy, essential fatty acids, omega-3 and omega-6 fatty acids, polyunsaturated fatty acids