Abstract of thesis: **Rheopheresis for the cholesterol depletion and its immunological impact on patients with Age-related Macular Degeneration**

This thesis was focused on quantitative analysis of selected immunological-rheological parameters in the patients with age related macular degeneration employing ELISA based and immuno-nephelometric techniques. This disease is the most frequent reason of the blindness among the population alder than 60 years. The hemorheopheseris proved its statistically significant impact on the serum levels of α-2-macroglobuline (57%), P-selectine (17 %) and endogline (more than 15 %). The serum level of IL-10 was observed decreased about only 8,07 % and was characterized by the lower level of statistical significancy (p=0,0017). However, the decrease of the serum levels of hsCRP (22,11 %), IgM (62,14 %) and CMP-1 (14,15 %) was observed as highly statistical significant. All parameters correlate with the positive influence of the rheopheretic intervention and are in the concordance with the current literature. Finally, the results of the study showed the positive effect of the rheopheresis on the immunological parameters and support the application of this technique for the patients with age related macular degeneration.