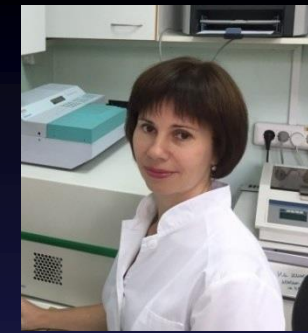


# Laboratory of Clinical Biochemical and Hormonal Studies on Internal Diseases



**Head of Lab.  
PhD Kashtanova E. V.**

## **The Purpose is:**

Study of pathophysiological and biochemical markers and therapeutic diseases development mechanisms in the Siberian region and new biochemical and biophysical methods development of therapeutic diseases diagnosis and risk assessment. The scientific vector of laboratory research is aimed at studying atherosclerosis etiopathogenetic biochemical markers and mechanisms, search and development of new technologies for early atherosclerosis diagnosis and treatment.

## **The Objectives of the Laboratory are:**

On the basis of modern spectrophotometric, fluorimetric, colorimetric methods, enzyme immunoassay method, magnetic protein separation method, immunohistochemistry, electrophoresis, ultracentrifugation and other biochemical and biophysical methods to study the following:

- disorders of lipid metabolism (primary and secondary hypercholesterolemia, combined hyperlipidemia, lipoproteinemia);
- disorders of lipoprotein metabolism (structural heterogeneity of the main blood lipoproteins and their subfractions, lipoprotein (a));
- oxidative-antioxidant disorders in the blood and in lipoproteins (oxidatively modified lipoproteins and proteins, fat-soluble antioxidants, antioxidant enzymes, natural polyphenolic compounds, antibodies to oxidized low-density lipoproteins);
- hemostatic disorders (modern range of hemostatic system indicators);
- endothelial dysfunction (homocysteine, endothelin-G, nitric oxide and its metabolites, brain natriuretic propeptide, von Willebrand factor, tissue and urokinase plasminogen activators, asymmetric dimethylarginine, cardiac markers such as protein, binding fatty acids, adhesion molecules, ligand of CD40 receptor and others);
- inflammatory and destructive disorders (a wide range of interleukins and other cytokines, C-reactive protein, chemoattractants, metalloproteinases and their activators/inhibitors);
- disorder of the microelement composition;
- hormonal, endocrine disorders.