- Rural development and food security require stronger coordination to ensure development of products that will give higher economic yield. Such development as well as development of different small-scale farming systems would require a sustainable management of the water resources.

- Capacity building, including institutional capacity are key issues in the water sector.

- There is a need to integrate water and development issues including their environmental effects in trade and development issues.

WILLEBRAND'S FACTOR

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Willebrand's factor was at first described in 1926 by Eric A. fon Willebrand, who investigated the diseases of inhabitants of Arland Island in Finland, displaying by bleeding.

Willebrand's factor is a high-molecule glycoprotein, which is produced in endothelium and in megakariocytes and its synthesis represents many-staged process. At the first stage, so-called Willebrand's factor precursor, which is polypeptide consisting of 360 kDa. In its structure one can distinguish four types of dominos. At the second stage post-relaying modification of Willebrand's factor takes place, which is based on the connection cub units pre- Willebrand's factor in dimmer and then in the process of glycogenesis in multimer. Final product has a very high mass from 500 kDa to 10000 kDa. While synthesis Willebrand's factor by endothelium cells its excretion takes place, as in plasma, so as in subendothelium space, in which it is in close contact with fibrils of collagen. Availability of subendothelium depot of Willebrand's factor is one of the most important conditions, ensuring effective adhesion of thrombocytes and hemostasis in the case of endothelium layer injuring. Besides, Willebrand's factor molecules contain α-granules thrombocytes. Willebrand's factor is considered to be the subunit of VIII factor (F VIII Ag) and stengthen thrombocytes sticking to vascular wall, probably forming molecular bridges between them and subendothelium of injuring vessels, and also carrying out connection between thrombocytes hemostasis and coagulant hemostasis.

Willebrand's factor carries out two main functions in hemostasis: takes part in the process of original hemostasis (adhesion and aggregation of blood thrombocytes) and in the process of secondary hemostasis (taking part in blood settling). Willebrand's factor influences the process of bleeding braking, and that's why it is named a new hemostatic factor diseases risk, which are developed on the background of arteriosclerosis, artery injuring, and which are closely connected with the process of thrombosis. Thrombosis displaying in the result of antigen Willebrand's factor level increasing during the diseases, which are developed on the arteriosclerosis background becomes more expressed, if they are accompanied by another risk factor, such as, the disorder of lipid exchange, especially by hypercholesterolemia, arterial hypertension and smoking.

Besides endothelium cells, subendothelium and thrombocytes. being the main source of Willebrand's factor, take the direct part in realization as inflammatory, so as and uninflammatory changes with vessels walls. The Willebrand's factor increasing is observing under different clinical conditions, associated with vessels injuring, including diabetes mellitus, acute disorder of brains blood circulation, arteriosclerosis vessels injuring. Willebrand's factor increasing is not specific for vasculitis and can be met under other forms of vessels pathology (venous thrombosis, and stasis after surgical operation). The facts existing that Willebrand's factor is a very sensible marker of vessels endothelium injuring.

When studying donor blood serum it was established, that the normal concentration of F VIII Ag fluctuates from 0,54 to 1,86 ME/ml (in general 1,06 +- 0,05 ME/ml), under another data it is concentration is 5 – 10 mcg/ml. At naming pathologic conditions remarkable increasing of Willebrand's factor concentration takes place.

Thus, as clinical and experimental investigation showed, Willebrand's factor plays an important part, both in hemostasis and in thrombosis processes. The difference is that at hemostasis it plays a positive part, saving organism from bleeding in the time vessels mechanical injuring, and at the thrombosis it plays a negative part, occluding vessels, injured by different pathologic processes.

ELLIPSOMETRIC INVESTIGATIONS OF INFLUENCE OF PARAMETERS OF HETEROGENEOUS LAYERS ON THEIR OPTICAL PROPERTIES

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Investigation of physical and chemical properties of heterogeneous near-surface layers is connected with ambiguity of the results obtained.It depends on their structure features. For amorphous alloys the nonuniform structure in depth or in chemical composition and areas of excess unconfined space, change of concentration of atoms into near-surface layer are typical. It is well-known that optical properties depend on the structural qualities. To describe structure of amorphous alloys one can use a model: “amorphous substrate – effective film”. Analysis of near-surface layer structure explains the structure of amorphous alloys. Therefore, it is necessary to integrate as methods studying volumetric properties of amorphous alloys as their near-surface layers for correct interpretation of experimental results.

In this paper near-surface layers $Fe_{80}AM_5B_{15}$ (AM = Ti, V, Cr, Mn, Fe, Co, Ni) have been investigated by spectral ellipsometric method. The executed modeling of density energy spectrum of electronic conditions and optical conductivity $\sigma(h\nu)$ explains experimental spectral dependences of optical conductivity of alloys. Values of temperatures of crystallization AMAs and values of $\sigma(h\nu)$ in range of energy from 1 to 2 eV have opposite character of dependences. Alloys will have the greatest thermal stability, when they have the least value of $\sigma(h\nu)$ that confirms Nagel-Tauka criterion.

Characteristics of near-surface layers of alloys with different admixture material were obtained by solution of inverse task of ellipsometry for model of optical structure: a thin film plus a homogeneous substrate. Comparison of the actual measured data with predictions of the assumed model allows making conclusions about