CDX2 is a transcription factor relevant to the intestinal organogenesis. CDX1 process involved in the proliferation and CDX2 – in epithelial differentiation. It is shown that CDX2 serves as many intestinal transcription factor genes. Loss CDX2 may signal tumor progression in cases of early gastric cancer and cancer of the intestinal phenotype. Reducing the expression of CDX2 full intestinal metaplasia, with gastric dysplasia and gastric cancer suggested that CDX2 plays anticarcinogenic role.

A receptor of epidermal factor of height of man (HER2) is an important biomarker and one of key elements of carcinogenesis at the cancer of stomach. Disturbance of a regulation of the alarm ways can result from hyperexpression HER2 – receptors. It in turn results in a failure in the processes of cell proliferation, apoptosis, angiogenesis, and as a result – to progress of tumour process.

Hyperexpression Ki-67 is characterized only for proliferating cells. This marker characterizes aggression, malignant tumor process flow and probability of the response to the carried-out therapy. In the analysis of a prognostic significance of an index of proliferative activity it is shown that the high level of proliferative activity predicted worsening of disease-free and overall survival of patients with gastric cancer.

RUNX3 is a gene, which codes the protein, which relates to the family of transcription factors. The loss or considerable reduction in the expression RUNX3 of protein with GC is meant associated with the low survival of patients.

COX-2 is the key enzyme participating in formation of prostaglandins from arachidonic acid, and also involved in process of carcinogenesis. Thus, COX-2 plays a role in development of intestinal GC form, and its hyperexpression is associated with metastases in the lymph nodes and the negative outlook of a course of a disease.

Patients suffering from gastric cancer with the detected phenotype: hyperexpression HER/2, Ki-67, COX-2 and the absence of any hypoexpression CDX2, RUNX3, is observed most aggressive course of the disease and the adverse forecast. Thus, as a result of the study of molecular and genetic characteristics of the tumor GC, it is possible to predict the course of a disease, and also to individualize tactics of treatment of patients.

Kuznetsova E., Sinelyova M.

International Sakharov Environmental Institute of Belarusian State University, Minsk, Republic of Belarus

THE STATE OF MEDICAL AND SANITARY CARE FOR THE RURAL POPULATION OF THE REPUBLIC OF BELARUS

The human health is the most important priority of national policy of the Belarusian state. The state pays special attention to system of health protection, strengthening of its material and technical resources. In recent years the Belarusian

medicine shows considerable progress in the development of perspective methods of prevention, diagnostics and treatment. Advanced technologies are accustomed, new medicines are created.

Medical care for a rural population is built on the basic of the principles of the organization of health care, however the nature of resettlement, the features of rural economics, the specifics of working conditions and life, and also other factors that influence nature of medical care and demand care of application of special organizational forms and methods of work in the village from health-care agencies.

The purpose of present work is to give an assessment to a condition of the medical and sanitary help to country people of Republic of Belarus.

The analysis of data of National statistical committee of Republic of Belarus and Sector of methodology and medical statistics of the Ministry of Health of RB about a condition of health system in the village has been carried out.

The number of the health workers having the higher medical education in Republic of Belarus has increased from 1995 to 2014 by 7,8% has made 57,8 on 10 000 population. The number of health workers with secondary education has increased from 1995 to 2014 by 1,6% and has made 131 on 10000 population.

The number of the hospital organizations in city settlements remains practically at one level from 2010 for 2014 (for the end of 2014 – 388) while in rural areas the number of the hospital organizations has decreased from 2010 to 2014 by 10,1% and for the end of 2014 has made 238.

There is a growing outpatient – polyclinic organizations in urban areas from 2010 to 2014. (6% at the end of 2014. The number of 649 organizations). In rural areas, there was decrease in the number of out-patient – polyclinic organizations (decreased by 1.9% at the end of 2014 amounted to 810.). The number of first-aid and medical stations in rural areas, which are the main link in the health care system in rural areas decreased from 2010 to 2014 by 7%.

Lobay M.[1], Ikonnikova N.[1], Puchkova T.[2]

[1] International Sakharov Environmental Institute of Belarusian State University, Minsk, Republic of Belarus;
[2]Belarusian State University, Minsk, Republic of Belarus

BIOCHEMICAL CHARACTERISTICS SUBMERGED MYCELIUM OF FUNGI OF THE GENUS *CORDYCEPS*

Fungi of the genus *Cordyceps* are a traditional medicament and solution of prevention West medicine for many centuries. The combination included in the composition of this medicinal fungus, improve the immune system, increase resistance to various pathogenic microorganisms, have anti-tumor effect, increase the adaptive possibilities of the body, have antioxidant activity, prevent premature aging. In nature, fungi of the genus *Cordyceps* are found in remote areas, therefore, at now for the production preparation on their basis is used