

поддаются количественной оценке. По моему мнению, эта проблема должна быть включена в список национальных приоритетов.

И самое главное, нам необходимо изменить подход к фактору «время», чтобы рассматривать его как фактор производства и конкурентоспособности.

Наше отношение ко времени, которое мы можем безоговорочно назвать ретроградным, является дорогостоящим. Несоблюдение сроков контракта, поставок и т.п. – это обычное явление в нашей стране. Безразличие ко времени, как переменной единице, является настоящей бедой, которая может разрушить все наши старания. Мы нуждаемся в подлинной культурной революции и модификации нашего поведения, чтобы пересмотреть некоторые наши стереотипы и национальный марокканский конформизм. Мир меняется и развивается быстрыми темпами, и никто не может остановить часы истории. Мы обязаны уважать время, чтобы прийти к прогрессу.

Таким образом, все вышеперечисленные проблемы требуют от народа Марокко массовой мобилизации, чтобы все участники были полностью вовлечены в развитие нашей страны.

Литература:

1. Дьяков Н.Н. Марокко. История, культура, религия / Н.Н. Дьяков. – СПб.: Изд-во СПбГУ, 1993. – 184с.
2. MarocVert: [Электронный ресурс]//Режим доступа: <http://www.agriculture.gov.ma>
3. Руденко Л.Н. Марокко: продвижение программы реформ способствует экономическому росту // Восточная аналитика №3, М., 2017,– С.72-80.
4. Сергеев М.С. История Марокко/ М.С. Сергеев. М.: Изд-во Ин-та востоковедения РАН, 2001. – 356 с.

Development of future vaccines - current problem of medicine

Тунчел Вейчел (Турция)

Научный руководитель – ст. преподаватель Н.Н. Кальниченко

ХНУ им. В.Н. Каразина

Infectious diseases at all times were the main enemies of mankind. History knows many terrible examples of the consequences of smallpox, plague, cholera, typhoid, dysentery, measles, flu. These epidemics have destroyed a third of

Europe's population. Fifteen years after the discovery of America, less than 3 million people remained from 30 million Indians of the Inca tribe. The influenza pandemic "Spaniard" in the years 1918-1920 killed about 40 million people.

People all the time sought remedies against these terrible diseases. They tried a lot – from spells and conspiracies to disinfectants and quarantine measures. And only with the advent of vaccines began a new era of infection control.

The term "vaccine" was first introduced by Louis Pasteur. He applied his concept of infectious pathogens to create a vaccine against rabies. The composition of the vaccines include microorganisms (weakened or killed) or their individual components. They are not able to cause disease. Thanks to the vaccine, the immune system remembers the characteristic signs of the pathogen, recognizes it and destroys it.

The creation of new vaccines began to develop at the beginning of the 20th century. There are more than 100 different vaccines. These vaccines protect against more than forty infections caused by bacteria, viruses, and protozoa.

Vaccines yielded positive results in the fight against infections. In the world, smallpox has been eradicated. This is one of the most outstanding events of the twentieth century. Poliomyelitis has practically disappeared, the global eradication of measles continues. The incidence of diphtheria, rubella, whooping cough, mumps, viral hepatitis B and many other dangerous infectious diseases has been reduced.

Vaccine preparations can be divided into three groups:

1. Live vaccines. They contain weakened microorganisms that cannot cause disease. These are vaccines against measles, rubella, polio, mumps and flu.

2. Inactivated vaccines. Contain killed pathogens or their fragments. These are vaccines against influenza, tick-borne encephalitis, rabies, typhoid fever.

3. Anatoxins (toxoids) – bacterial toxins in a modified harmless form. These include vaccines against diphtheria, tetanus, whooping cough.

With the beginning of the development of molecular biology, genetics and methods of genetic engineering, a new class of vaccines has emerged – molecular vaccines. These are hepatitis B vaccines, Lyme disease and detoxified pertussis toxin, which is included in the DTP vaccine.

Immunology issues are now becoming a popular topic of discussion for scientists. Scientists are working on a vaccine against AIDS, chronic fatigue, fever, hypertension, acute respiratory infections or otitis. The main goal of physicians is to reliably provide the human body with a strong immunity by administering universal vaccines. We will talk about some inventions that doctors are currently working on.

- Viruses as helpers for the human body. Scientists have found that a gene taken from a pathogen can be placed in a weakened virus. Such a modified virus after the introduction into the human body will work as a vaccine. For example, the rabies vaccine has been developed on the basis of the smallpox virus.

- Scientists are developing synthetic proteins that fully comply with natural antigens isolated from pathogens of various diseases. Such synthetic vaccines contain the minimum amount of allergens. They are safer and more convenient for manufacturers in the manufacture of vaccines.

- DNA based method. Scientists around the world have long been engaged in the study of various methods of influencing human DNA. This includes DNA vaccines being developed: the genes of a microorganism are inserted into the human genome, which should be responsible for the production of foreign proteins (diseases). Ultimately, the human body must produce antibodies against the disease.

- Suitable vaccines. It can be said that the edible vaccine is a new stage in modern vaccinology. Scientists are currently engaged in the introduction of the genome of the pathogenic organism into plants. According to research results, it becomes clear that immunization of the human body through the oral cavity in the process of eating is the safest method.

Universal vaccine. Modern scientists are developing a comprehensive vaccine against several infections. Scientists are working to ensure that in the future,

physicians could use drugs that will carry out prevention from several diseases and viruses at once.

- Production of the vaccine according to the principle of lozenge technology. Trehalose sugar will be added to the vaccine, which keeps the cells alive even in conditions of severe dehydration. To return the vaccine to a working state, it is necessary to dilute it with water before use, and the protein molecules will return to their normal state.

These vaccines will help beat the worst diseases.

In many countries of the world, children cannot attend schools and preschool educational institutions if they have not been immunized. Vaccination is one of the most promising biomedical industries. Finishing my report, I want to wish everyone good health. Take care of yourself and strengthen your immunity. Thanks for attention.

**Дивовижні властивості мінеральних каменів
у міфах народів світу**

Тягі Анджалі (Індія)

Науковий керівник – ст. викладач В.О. Гура

ХНУ ім. В.Н. Каразіна

В історії розвитку людини мінеральне каміння відіграє велику роль. Спостереження за різнокольоровими блискучими камінцями багато століть передаються у легендах народів світу. Ще у стародавні часи у людини з'явилися амулети, зроблені з мінерального каміння. Такий амулет людина повинна була носити постійно, тому що вірила у його магічну силу.

Археологічні дослідження свідчать про те, що люди прикрашали себе самоцвітами ще 7500-10000 років тому. Які це були камені? Насамперед, халцедони, агати, нефрити, смарагди. Сапфіри та рубіни були відомі за 600 років до н.е., алмази – за 1000 років до н.е. Перші найміцніші знаряддя праці були зроблені людиною з використанням нефриту та жадеїту. Також відомо, що