

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
ФАКУЛЬТЕТ ІНОЗЕМНОЇ ФІЛОЛОГІЇ
ТА СОЦІАЛЬНИХ КОМУНІКАЦІЙ**



**СОЦІАЛЬНО-ГУМАНІТАРНІ
АСПЕКТИ РОЗВИТКУ СУЧАСНОГО
СУСПІЛЬСТВА**

**МАТЕРІАЛИ V ВСЕУКРАЇНСЬКОЇ НАУКОВОЇ КОНФЕРЕНЦІЇ СТУДЕНТІВ,
АСПРАНТІВ, ВИКЛАДАЧІВ ТА СПІВРОБІТНИКІВ**

(Суми, 20-21 квітня 2017 року)

**Суми
2017**

speed, efficiency and security. In effect, distributed ledgers replicate the peer-to-peer exchange of value, although on a remote basis over the internet.

There are different ways in which these systems might develop: either in isolation, as an alternative to existing payment systems and schemes, or in combination with existing systems or providers. These approaches would have different implications, but both could have significant effects on retail payment services and potentially on financial market infrastructures. There could also be potential effects on monetary policy or financial stability of the world.

References: Digital currencies

Committee on Payments and Market Infrastructures, Bank for International Settlement (BIS) Basel, Switzerland.

MODERN METHODS OF ANTI-AGING

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In ancient times people were looking for ways to extend or restore youth. Scientific methods in this direction started only at the beginning of the XIXth century.

Aging is an inevitable, genetically determined process that depends on the exhausting of the biological resource of an organism and accumulation of toxic products in the cells and tissues, which prevents the regeneration of cells.

Rejuvenation is a process of regeneration of new body cells at the same rate as in youth.

These are the rejuvenation techniques, which are used on the outside, allowing you to run the metabolic processes in the skin and muscles:

Chemical peels are superficial burns of the skin;

Photorejuvenation is applying an intense beam of light on the layers of the skin;

Laser resurfacing is laser treatment for surface layers of the skin;

Microcurrent therapy is a therapeutic effect on the skin's tissue, muscle tissue and lymph caused by pulsed current of weak voltage;

Phonophoresis is a process of inputting cosmetic stuff under the skin with the help of ultrasound.

In 2009 the enzyme telomerase was discovered.

The first experiment of intravenous genetic constructions started in September of 2015. To create the injection a human gene and a virus were used. The gene regulates the production of necessary protein and the virus is deprived of the ability to spread the disease. Viral vector penetrates inside the cells, integrates a gene in their nucleus.

Telomerase is activated by these vectors and constructions which stimulate the synthesis of follistatin.

AAV virus is a small virus infecting nondividing cells by integrating itself into the host genome at specific sites (AAVS1) in the nineteenth chromosome.

Follistatin is a glycoprotein in blood plasma, which has the ability to suppress the hormone FST. The elevated levels of follistatin lead to increased muscle mass of certain main muscular groups. Single injection of follistatin in combination with growth factors VEGF and KGF causes hair growth, without requiring re-injection.

Telomerase is an enzyme that adds a special repetitive DNA sequences to the 3'end of the DNA chain to sites of telomeres, which are located at the ends of chromosomes.

The division of the cell starts with the doubling of its chromosomes containing the genetic material, and is provided by the enzyme DNA polymerase. Its function is to synthesize a new DNA moving along the DNA chain, stepping back from the beginning of the chain. Telomeres are non-coding areas, which are located at the ends of chromosomes. They have the ability to shrink while the cells dividing. From the time when the shortening of telomeres becomes impossible, the process of aging of cells begins.

Telomerase consists of protein and RNA molecules. Telomerase RNA is a template according to which protein attaches new areas of the telomeres. As a result, the newly lengthened telomeres appears, and aging at the cellular level stops. The cell equipped with telomerase has the ability to unlimited dividing.

Telomerase is active only in germ and embryonic stem cells. Also, this enzyme shows its activity in most tumors, which provides them the opportunity of endless dividing.

Throughout existence of mankind people have been looking for ways to stop the aging process. Most of these methods of rejuvenation were

not humane and only in the XVIII-XIX century the searching for remedy for aging belongs to scientific field.

The discovery of telomerase made it possible to explain the nature of aging. The first experiments on the implementation of genetic designs in human body allowed deferring the aging process to almost a quarter of a century.

We can only guess what the consequences would be...

THE ADVANTAGES OF DOCUMENT MANAGEMENT SYSTEM FOR THE ELIT FACULTY

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Nowadays everybody interacts with different kinds of documents. Everyday job of companies' and universities' staff involves a huge paperwork. Janitors, delivery staff, trips guides and others deal with paperwork when they apply for a job and quit it. But most of them don't even think about the possibility to make their everyday work much easier and more effective. A student of the ELIT faculty can come to the dean's office with a document that needs to be signed by the dean, and this student may wait for response for more than one month. This is more than inefficient and time-consuming, but it's not the fault of the deanery staff. Paperwork is expensive and takes a lot of time, because there are hundreds of other students with their documents to be handled. Document Management System (DMS) will be an effective solution to the problems of students and deanery staff. Document Management System is an electronic system designed to store, manage and organize paper documents using software. There are some benefits of DMS that can help our faculty departments to work more productively. DMS stores the scanned files on servers, but not in physical archives. These servers contain all e-documents and take less storage space than the paper documents in the archive of faculty departments. A well-designed DMS will work correctly on different platforms such as computers, tablets, smartphones etc. The software interface should be simple and easy to navigate. Not everyone is technologically educated, so the simpler the software is, the better it is. Security is one of the most critical aspects of a document management system. The good DMS software will provide a high level of documents encryption and role based access. DMS can be used by every university, because each university deals with a huge number of student documents every day. Universities also store confidential data of their students, and DMS provides high security level of data storages. The