

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ
ЦЕНТР**

**МАТЕРІАЛИ
Х ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ
КОНФЕРЕНЦІЇ СТУДЕНТІВ, АСПІРАНТІВ ТА
ВИКЛАДАЧІВ
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО
ЦЕНТРУ КАФЕДРИ ІНОЗЕМНИХ МОВ**

**“WITH FOREIGN LANGUAGES TO MUTUAL
UNDERSTANDING, BETTER TECHNOLOGIES AND
ECOLOGICALLY SAFER ENVIRONMENT”**

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BIOPRINTER

*M. Bezdidko – Sumy State University, group: IT-32
S.G.Zolotova – E L Adviser*

Printer is a peripheral which makes a persistent human readable representation of graphics or text on paper or similar physical media.

At last the bioprinter has been created. The printer that costs \$200,000 has been developed as a result of cooperation between two companies: Organovo and Invetech. First working samples of the printer soon will be delivered to the research groups. They will explore the ways to create artificial tissues and organs.

According to Keith Murphy (manager Organovo), only simple tissues will be created at the beginning, such as skin, muscles and small areas of blood vessels. But, only after completing the tests with sample printer people will be able to produce more complex organs.

Surgeons who are engaged in human organ transplantation, hope that one day they will be able to receive all the necessary organs for transplantation on the first request. Now the patient can spend a few months, and even years waiting for a suitable organ. During this time he can get worse. Even he may die. Thanks to artificial organs could not only alleviate the suffering of patients, but also save their lives. Now, with the advent of the first commercial 3D bioprinter this possibility can become a reality.

Despite the fact that industry of printing human organs is in its infancy, scientists can already show successful examples of the creation of human organs “from scratch”. So, in 2006 Anthony Atala and his colleagues from Wake Forest Institute for Regenerative Medicine in North Carolina, USA, created bladders for seven patients. All of them are still functioning.

In the nearest future we will see printed liver, kidney and heart. Some researchers believe that a machine like this, will be able to print tissues and organs directly into the human body.