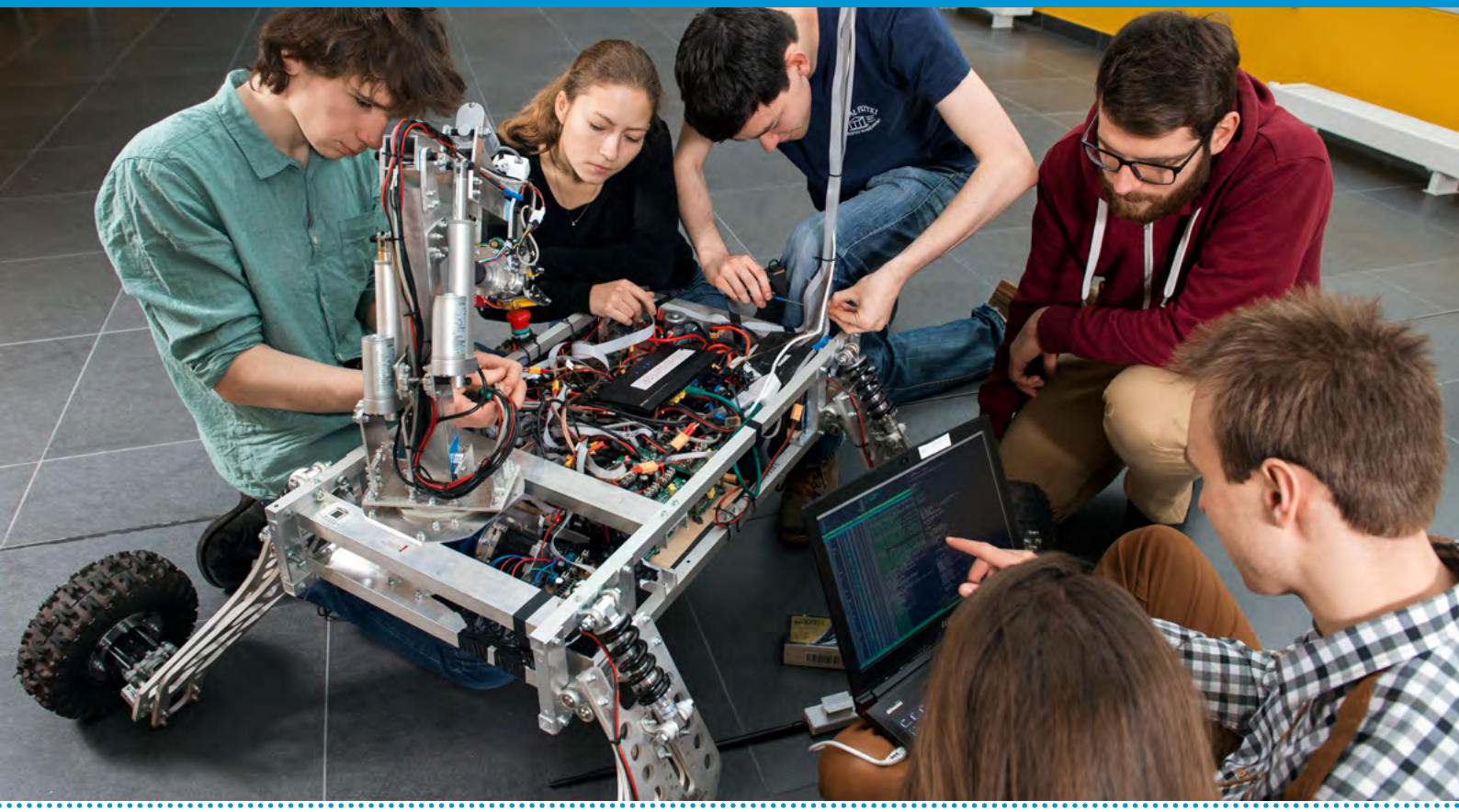
FROM **SCIENCE** TO **INNOVATION**



UNIWERSYTET WARSZAWSKI

UNIWERSYTECKI OŚRODEK TRANSFERU TECHNOLOGII
UOTT

Important information about Poland

Poland's tradition of striving for academic excellence begins in the mid-14th century.

POLAND is:

7th largest country in Europe (population of 38 million people, 1.4 mln students)

A member of European Union (28 countries)

In the European Higher Education Area (48 countries) – the international integration of education systems between academies has made it possible to compare education levels and as a result has contributed to an increase in student and scholar mobility.

Important information about the University of Warsaw

UNIWERSYTET WARSZAWSKI

Founded in 1816

47 600 undergraduate and doctoral students

University of Warsaw alumni have won 5 Nobel Prize awards:

- Nobel Prize in Literature: Henryk Sienkiewicz, Czesław Miłosz,
- Nobel Peace Prize: Menachem Begin, Joseph Rotblat,
- Nobel Prize in Economic Sciences: Leonid Hurwicz.

The University of Warsaw has over **800 international partners** and is a member of **over 100 international societies and research networks.**

The University of Warsaw is among the **top 3% of universities** in the world.

Science needs business
Business needs science

ROBERT DWILIŃSKI

Director of the Technology Transfer Center at the University of Warsaw

The University of Warsaw is dynamically developing one element of its activities; the commercialisation of scientific discoveries.

The University operates the University Technology Transfer Centre (TTC), in Polish Uniwersytecki Ośrodek Transferu Technologii (UOTT), which provides students, PhD candidates, and researchers with comprehensive support at every stage of the development of innovations - from pre-incubation of ideas, to international patent protection, company start-ups, and initiating business contacts.

An important element of our activity is attracting investors interested in innovative solutions and companies seeking cooperation with the world of science. Thanks to this the University of Warsaw is becoming a real partner for business development. We implement MoUs, R & D agreements, PACTT, joint research projects, investments, partnerships, licensing agreements, IP, etc.

Our main research streams are cancer prevention, mRNA improvement, environmental protection in the fuel sector, quantum optics, catalyst development, and drug development.
The discoveries made by Prof. Jacek Jemielity's team resulted in the largest commercialisation success story in Poland to date. This technology for increasing mRNA stability and enhancing its productivity in the production of therapeutic proteins has been licensed to German biotech company BioNTech and subsequently sub-licensed to Roche and Sanofi with deal value totaling 610 million USD .

The research potential of the University of Warsaw is reflected in the results of the 2016 Nature Index of Rising Stars. The University was ranked 3rd among the institutions of South Eastern Europe and globally it occupied 96th place.

We cordially invite you to enter cooperation agreement discussions with us!

Robert Dwiliński
Director of the Technology Transfer Center at the University of Warsaw

How the **University Technology Transfer Center** operates.

Complete cooperation

We provide comprehensive support at every stage of the process of commercialisation of research and inventions. We support students, PhD candidates and researchers in:

- implementing ideas
- providing IP protection
- market launching the developed solutions

From idea to final product & market success

PRE-INCUBATION PHASE → **INCUBATION PHASE** → **IP PROTECTION** → **ENTERING THE MARKET** → **SETTING UP A COMPANY** → **COMMERCIALISATION PHASE**

We create space for **science to meet business**

University of Warsaw Incubator

The incubator fulfils an important role in the first stage of creating ideas and projects. It is the key organisation that has influenced our academic education methods - here we teach entrepreneurship, perfect ideas, and build market strategies.

In the Incubator we focus on:

- interdisciplinary cooperation with other universities
- participation in workshops and mentoring programs with business professionals
- arranging mutual support with large companies

University Technology Transfer Center

The UTTC is responsible for the comprehensive support of the commercialisation and practical implementation of the results of scientific work.

We ensure:

- all formalities related to the protection of patents and intellectual property
- technology brokering
- support in obtaining grants and external financing
- marketing support and formal preparation to enter the market as a company
- negotiations in the commercialisation process

UWRC

UWRC is a special purpose company of the University of Warsaw whose task is to support scientists in introducing inventions, developed solutions, and products to the market. UWRC helps with:

- completing the proof of concept stage
- setting up an independent spin-off company
- launching new products, solutions, and services without setting up a spin-off company

Some of our partners:

The largest commercialisation in the history of Polish science

Researchers have discovered a universal method for stabilising mRNA molecules. Thanks to this invention drug manufacturers can produce anti- cancer vaccines and targeted therapies which can precisely stimulate the production of specific types of proteins in the human body.

The invention relies on changing of 5' mRNA molecule, thanks to which the molecule is more resistant to the activity of degrading enzymes and, has higher affinity for the translation initiating factor which important for protein biosynthesis initiation. The half-life of such modified mRNA is longer and the synthesis of the proteins is more efficient.

The license for the invention is covered by international patent protection (PCT) and was acquired by the German biotechnology company BioNTech and sub-licensed by global pharmaceutical companies - Sanofi and Roche - for a total sum of over 610 million USD.

This Polish invention, stable and productive mRNA, is now the basis for the design of innovative anti-tumour vaccines that are already being tested in the clinical trials.

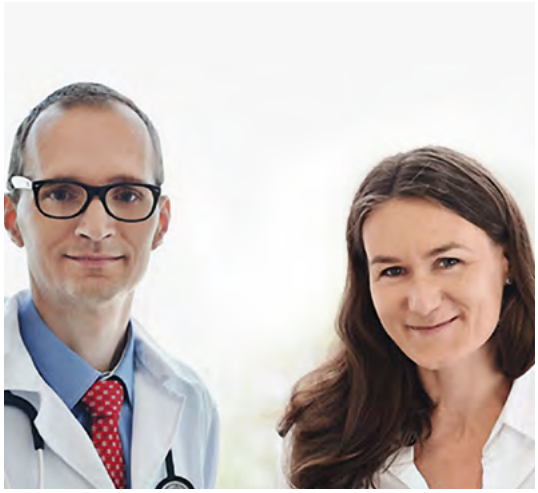
Prof. **Jacek Jemielity** and PhD **Joanna Kowalska**, Centre of New Technologies, University of Warsaw

President of Poland Economic Award (2017)
in the Research and Development category

The National Cancer Risk Screening Program: innovative genetic testing for cancer risk assessment.

Warsaw Genomics, a spin-off of the University of Warsaw, is a genetic testing company. The team has developed a cancer screening program based on multifactor risk assessment models, including the patient's clinical, family and genetic data. The aim of the "BadamyGeny.pl., translated as "WeAnalyzeGenes.pl", program is to give each person an opportunity to know her/his cancer risk. One in four cancer patients develops the disease due to an inborn genetic error. If they only knew it, they could start early screening procedures, which could prevent them from premature death.

Thanks to the proprietary method of next-generation sequencing analysis, the Warsaw Genomics team tests 70 cancer – related genes for the price of 149 Euro, which is approx. 20 times less than the standard European price. As a result of the testing, each patient receives personalised recommendations regarding cancer screening and prevention. Wouldn't it be wonderful to screen the entire population for hereditary cancers and prevent people from premature dying?



Prof. Krystian Jażdżewski and **Prof. Anna Wójcicka,** Center for New Technologies, University of Warsaw

Polska Rada Biznesu Nagroda PRB

Polish Business Council Award (2017) in the Vision and Innovation category

The Polish Promotional Program Foundation "Poland Now"
Very Important Polish Innovator title (2015)

TERAZ POLSKA

Innovation in science

Through the University of Warsaw spin-off companies are established as one of the paths to the commercialisation of scientific achievements:

GeoPulse - this agency provides services based on computer analysis of satellite images of crops. Based on the analysis of many variables farmers receive precise guidelines for optimal field fertilisation, including GPS instructions for tractors that perform spraying. Thanks to the GeoPulse application farmers can increase yields and reduce fertilisation costs by more than 20%.

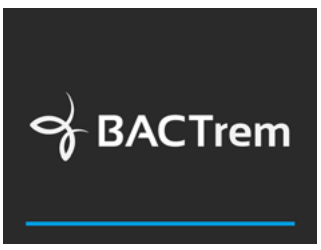
RDLS - implements inventions in the field of bioremediation, biodegradation, restoring environmental balance in soils contaminated with petroleum derivatives, and monitoring environmental conditions. One discovery from RSLS has been implemented to increase the efficiency of sewage treatment plants by approx. 20%. Another - makes possible the treatment of water contaminated with heavy metals.

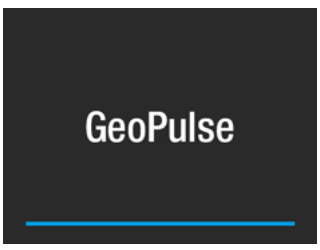
MIM Solutions - this company offers innovative IT technologies based on the analysis of huge amounts of data for creating: predictive models of user behaviour in the network, personalisation of offers and recommendations in search result displays, and optimisation of production processes.

Bactrem - specialises in soil bioremediation and the removal of contamination and adverse effects of chemical spraying (herbicides) used on arable lands. Bactrem is the creator of unique compositions of soil bacteria strains which are able to restore natural soil microflora within 2 weeks. Bactrem has also developed a composition of bacterial strains that completely degrades herbicides of the Glifosat type into non-toxic substances in the soil within the span of days.

Spectrino - creates solutions supporting work in analytical laboratories using NMR spectroscopy tools (new algorithms for experimental data analysis, measurement methodology, and laboratory systems optimisation).

Amerlab - Laboratory of Diagnostics of Parasitic and Zoonotic Infections offers advanced diagnostic tests of infections occurring in humans and animals. The diagnostic methods use, among other things, know-how in the field of molecular biology.





Take advantage of the potential of the best university in Poland:

The University of Warsaw consists of 21 faculties and research centres:

CNBCh (Biological and Chemical Research Centre) – 36 interdisciplinary research teams.
Research areas: new technologies in the fields of energetics, analytics, pharmaceuticals, medicine, biotechnology, new materials, and the conservation of environment and cultural heritage.

CeNT (Centre of New Technologies) – 29 interdisciplinary research teams with focus on biology, chemistry, physics, and information technologies.

Faculty of Chemistry – with a 200-year tradition this is one of the best and most important scientific centres for chemistry in Poland. The faculty conducts research in the fields of computer drug design, crystal structures, new polymers, nanotechnology, energy storage, hydrogen storage, and many other fields.

Faculty of Physics – This is a large research and teaching centre, regarded as one of the top physics departments in the country, and recognised internationally for the quality of its faculty and students. Currently the Department has over 70 professors, and more than 50 professors with post-doctoral degrees.

University of Warsaw as a member of several consortia:

CePT (Centre for Preclinical Research and Technology) – a consortium of 10 research institutions including 3 universities and 7 public research institutes; the largest biomedical project in Central-Eastern Europe. Research areas: lifestyle diseases, new diagnostic methods, new therapeutic approaches, regenerative medicine, nanomedicine.

PACTT (Polish Academic Technology Transfer Centres Aliiance) – an association of more than 50 academic TTOs in Poland. Currently the company Pfizer resolves their technological needs and outsourcing of R&D projects in Poland through the UTTC at UW as a coordinator of the PACTT.

EIT Food – is a part of the European Institute of Innovation and Technology (EIT), an independent EU body which aims at enhancing Europe's ability to innovate by nurturing entrepreneurial talent and supporting new ideas. EIT Food supports innovative initiatives which improve health, access to quality food, and the environment.

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UNIWERSYTET WARSZAWSKI

UNIWERSYTECKI OŚRODEK TRANSFERU TECHNOLOGII

MEMBER OF: **CEPT** • **PACTT** • **EIT FOOD**

UNIWERSYTECKI OŚRODEK TRANSFERU TECHNOLOGII
UNIWERSYTETU WARSZAWSKIEGO

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