



# Book of Abstracts

of the 3rd International Technology  
Transfer Conference  
Jožef Stefan Institute  
7th - 8th October 2010

## ORGANIZING COMMITTEE

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Robert Blatnik, JSI

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Javna agencija  
Republike Slovenije  
za podjetništvo  
in tuje investicije



Ministrstvo za gospodarstvo



The conference has been organized by the Jožef Stefan Institute and the TechnoCenter of the University of Maribor,



Jožef Stefan Institute, Ljubljana, Slovenia



and co-organized by the National Institute of Chemistry, University of Ljubljana, the Regional Development Agency of North Primorska, and the National Institute of Biology.

Univerza v Ljubljani



NACIONALNI INŠTITUT ZA BIOLOGIJO



Univerza v Mariboru

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# WELCOME

## INTRODUCTION

On behalf of the Organizing Committee, it was our pleasure to invite you to participate in the 3<sup>rd</sup> Technology Transfer Conference, which was held in Ljubljana and Maribor, Slovenia on the 7<sup>th</sup> and 8<sup>th</sup> of October 2010. The conference was organized by the Jožef Stefan Institute (JSI), in cooperation with the TechnoCenter of the University of Maribor, the National Institute of Chemistry (KI), University of Nova Gorica (RRA SP), National Institute of Biology (NIB) and the University of Ljubljana with the support of TIA, ARRS, JAPTI, YEAR and the European Commission.

## AIM

The conference targeted the researchers of public research organizations in Slovenia with the aim of increasing the awareness and knowledge of technology transfer processes and their necessity. It was also targeted at enterprises seeking collaboration with the Jožef Stefan Institute as the biggest and most interdisciplinary institute in Slovenia and with other public research organizations. The Workshop on Technology Transfer & Spin-off Creation was subdivided into three modules:

- Theoretical views on technology-transfer principles – Technology Transfer as a scientific discipline;
- Collaborative research between JSI and Slovenian enterprises;
- Spin-off procedures.

At the Workshop on Technology Transfer & Spin-off Creation, particular attention was given to the implementation and applications of the above-mentioned technology transfer principles in collaborative research and spin off creation with a special focus on the implementation of these principles in Slovenia and at JSI in particular.

This was realized through presentations and workshops which focused on real TT cases from JSI, NIB and KI.



## PRIZE

A special prize for INNOVATION FOR ECONOMY was awarded in the amount of EUR 15,000.



# THE SEA AND A MULTITUDE OF CURIOUS PEOPLE

Curiosity is a driver of - children's questions - creations in the garage - research in public research organizations. Curiosity gives birth to questions, and questions to answers, whose purpose is simply to answer the questions raised by curiosity. Responses are like the sea, with its high tide and low tide, but with the surface generally staying within the average deviation. Occasionally, waves are raised above the sea, several are low, high waves are rarer. These are the *inventions and are or will become a driver of the society. Sooner or later.*

*This is a **view of the researcher on the invention.***

*Anyone can see or feel imperfections in the world around them every day. Some wave their hand and try to forget, since any improvement or amendments require (unnecessary) effort. But some do not know how to forget; failure presents them with an opportunity to improve (something), and brings vitality and challenge to their lives. Between two known categories that offer different benefits, there is always room for a category which has the features of both. And when you find that place, you can find a niche market and (it) is sold/sell (it).*

*This is a **view of the marketer on the invention.***

*And on the **path to innovation.***

*Innovations are related to growth. They refer to the differentiation and anticipation of what the buyer is looking for - as opposed to thinking about what can be done easily with the ideas that are generated within the business or science. An inventor has to make sure that innovation is driven from the outside to the inside, although it takes place from the inside out.*

*In Slovenia we have inventors who socialize in associations of innovators. We have a system of public servants, who could support inventions much more actively. Small businesses that*



*in a struggle for existence cannot find the time to think about the strategy and tactics for increasing the inventiveness and innovation. Individual economic entities with internal policies and reward systems that encourage the creation and application of inventions and innovation implementation. Inventors who struggle with the law, the judicial and tax system, and inventors who blame the state for the undefined "all". Researchers and marketers and too few hands shaken.*

*All of us step towards the future with great ambitions and hopes. Since we are a multitude of curious people who understand the importance of invention, and are at the same time ready to embark on the difficult path from invention to innovation - onto the market: because no other will and can take on the responsibility for this path than the one whom the slightly wavy curious sea has lifted high above the sea level. Right?*

*Thank you friends and fellows for having supported us and participated in organizing this 3rd International Conference on Technology Transfer, and thanks to all the brave participants.*

*And good luck.*

*An introduction to the Book of Abstracts by Dr. Špela Stres, TT Conference President,  
5th November 2010*





## PRESS RELEASE

**The “Jožef Stefan” Institute and the TechnoCenter of the University of Maribor**, in cooperation with the National Institute of Chemistry, University of Nova Gorica (RRA SP), National Institute of Biology and the University of Ljubljana with the support of TIA, ARRS, JAPTI, YEAR and the European Commission, ended a two-day conference on technology transfer – **3<sup>rd</sup> International Technology Transfer Conference**. The conference agenda was defined through the basic rules, such as demanding the presentation of the transfer of knowledge to the economy. Lecturers were international experts in the field of Technology Transfer from renowned institutions, such as the **University of Copenhagen, London School of Business, EIF**, etc.

The conference was held at the “Jožef Stefan” Institute in Ljubljana on **7<sup>th</sup> October 2010** and at the University of Maribor on **8<sup>th</sup> October 2010**. As part of the conference, a special **prize for Innovation for Economy was awarded** on the first day. The conference commission (Iva B. Vukelja, MBA, EMC Boston, USA; Dr. Thomas Bereuter, TTO, TU Graz; Andrea Di Anselmo, Meta Group, Italy; Dr. Jon Wulff Petersen, TTO, Denmark; Paul Van Dunn, K.U. Leuven R&D, Belgium; Nazmin Alani, Development Bank, Canada) awarded the prize for the most inventive and innovative ideas with applications of interest and use in the economy.

A total of **EUR 15,000** of prizes went to: Dr. Matjaž Koželj, Prof. Dr. Boris Orel, Dr. Ivan Jerman, Miha Steibucher and Marjanca Vodlan from the National Institute of Chemistry (1), Assist. Prof. Dr. Đani Juričič, Dr. Janko Petrovčič, Bojan Musizza, Aleš Svetek, Pavle Boškovski, MSc, Matej Gašperin and Stanislav Černe from the “Jožef Stefan” Institute (2), Blaž Fortuna, Marko Grobelnik and Dr. Dunja Mladenich from the “Jožef Stefan” Institute (3), Assist. Prof. Dr. Matjaž Kunaver, Nataša Čuk and Sergej Medved from the National Institute of Chemistry (4), Dr. Aleš Berlec, Prof. Dr. Borut Štrukelj, Matjaž Ravnikar, Mojca Lunder and Boris Čeh from the “Jožef Stefan” Institute and UL FFA, UL FKKT (4).

On the second day of the conference, **the Association of Slovenian Technology Transfer Professionals (SI-TT) was established**. Dr. Špela Stres from JSI, SI-TT President: “The establishment

of the association SI-TT is a logical result based on the informal network of professionals of technology transfer in Slovenia that was established last year. The establishment of the association allows the professionals to move forward and as far as the other European states have already gone.”

Director of the TechnoCenter of the University of Maribor, **Assist. Prof. Dr. Anton Habjanič**:  
“It is very important that we have learned the benefit and the breadth of our work when acting together. Indeed, we can be interesting and competitive in the international space, but only as united Slovenian professionals.”

Tanja Zdošek  
Communication and Technology Transfer  
Jožef Stefan Institute



Photo: M. Smrke  
Grand opening - Prof. Dr. Lenarčič Jadran



Photo: Mediaspeed

**Members of the Association of Slovenian Technology Transfer Professionals (SI-TT)**

## LIST OF SPEAKERS AND THEMES IN ALPHABETICAL ORDER

ALANI Nazmin; Role of a Development Bank in Commercializing IP, Workshop Commission Member

DI ANSELMO Andrea; Workshop Commission Member

BEREUTER Thomas; Support within TTO Networks, Workshop Commission Member

BLATNIK Robert; Workshop Leader (Innovation for the Economy prize)

BLAZINA VUKELJA Iva; Innovation and Product Development, Workshop Commission Member

Prof. Dr. COLNARIČ Matjaž; Short presentation of the scope and aims of the I3E Project, I3E Workshop Leader

FRANKO Jurij; Experiences from Technology Broking (Carving Skis)

Dr. GRADIŠAR Dejan; Presentation of the I3E Strategic Research Agenda

Dr. HABJANIČ Anton; Welcome speech, Establishment of the Association of Slovenian Technology Transfer Professionals (SI-TT)

Dr. JOVAN Vladimir; Short presentation of the scope and aims of the I3E Project, I3E Workshop Leader

LAIGAARD Karen; Support within TTO Networks

Prof. Dr. LENARČIČ Jadran; Grand opening

Von MEIJENFELD Fritz H.; Innovation Vouchers for SMEs

PETERSEN Jon Wulff; Systems and Tools for Running a Successful TTO Operation, Workshop Commission Member

Prof. Dr. ROZMAN Ivan; Welcome speech

SALONEN Jarno; TT Theory & Youth

SKALAR KOMLJANC Mojca; TIA and Start-up Companies

SKINNER Jeff; Best Ways to Commercialize Academic and Research Inventions

STOCKER Franziska Maria; TT Theory & Youth

Dr. STRES Špela; Establishment of the Association of Slovenian Technology Transfer Professionals (SI-TT)

TSAKIRIS Yannis; EIF's Role in the Tech Transfer Market

VAN DUN Paul; Workshop Commission Member

ZUPANČIČ Danijel, MSc; Development and Technology Transfer – Experience of Trimo

## **MENTORS AT THE “WORKSHOP ON TECHNOLOGY TRANSFER & SPIN-OFF CREATION” ON THE BASIS OF 15 SUBMITTED CASES FROM PUBLIC RESEARCH ORGANIZATIONS IN SLOVENIA**

ALANI Nazmin, Development Bank, Canada

B. VUKELJA Iva, EMC Boston, USA

BEREUTER Thomas, TTO, TU Graz, Austria

DI ANSELMO Andrea, Meta Group, Italy

LAIGAARD Karen, ASTP observer

PETERSEN Jon Wulff, TTO, Denmark

SALONEN Jarno, YEAR observer

VAN DUN Paul, K.U. Leuven R&D, Belgium

## **COMMISSION FOR SPECIAL PRIZES FOR INNOVATIONS FOR ECONOMY**

ALANI Nazmin, Development Bank, Canada

B. VUKELJA Iva, EMC Boston, USA

BEREUTER Thomas, TTO, TU Graz, Austria

DI ANSELMO Andrea, Meta Group, Italy

PETERSEN Jon Wulff, TTO, Denmark

VAN DUN Paul, K.U. Leuven R&D, Belgium

## SECTION 1 (THURSDAY, OCTOBER 7<sup>TH</sup>, 2010)

### Speakers:

Mr. ALANI Nazmin

Mrs. B. VUKELJA Iva

Mr. TSAKIRIS Yannis

ZUPANČIČ Danijel, MSc



Photo: M. Smrke  
TT Conference, 7th October 2010, Section 1

THEME:  
**ROLE OF A DEVELOPMENT BANK IN  
COMMERCIALIZING IP**

ABSTRACT:

The Business Development Bank of Canada (BDC) is a Crown corporation, wholly owned by the Government of Canada. It promotes entrepreneurship by supporting small and medium-sized enterprises. It does this by offering complementary financing, consulting and venture capital services to about 30,000 entrepreneurs across the country. There are several processes with which the Bank estimates the value of its potential investments. Mr. Alani presented some of them and their relation to the European market.

**Nazmin Alani** joined BDC Venture Capital in 2004. He focuses on early-stage investments in mobile, digital media, broadband and infrastructure. Nazmin is the current Director of OneChip Photonics, and Mobidia Networks. He sits as an observer at Seawell Networks and BLINQ Networks. Nazmin has 25 years of experience in the communications industry. He has worked with incumbent and new service providers involved in wireline, wireless, and satellite communications. His work experience includes assignments in Canada, the U.S., Mexico, Argentina, Asia, and Australia. His professional experience includes business development, product planning, product management, strategic planning, market strategy, and strategic sales support. He joined BDC in 2004. Prior to BDC, Nazmin spent 6 years with Gartner Consulting as Vice President of the Broadband Practice. Nazmin holds a Bachelor of Applied Science (BASc) degree in Electrical Engineering from the University of Waterloo, Ontario, Canada, and an MBA from the University of Ottawa, Ontario, Canada. Nazmin also completed the Executive Telecommunications Program at Duke University in Durham, North Carolina, and the Entrepreneurship Development Program at MIT.



THEME:

## INNOVATION AND PRODUCT DEVELOPMENT

### ABSTRACT:

Corporations are product factories, tuned to achieving positive business results at optimum cost, using known measurable business processes. Few companies consider innovation as something that can be managed, sustained and organized as a business process. Yet without innovation, they cannot stay competitive. How do companies look to solving this gap? What are some of the ways businesses leverage new technology developments? This presentation will explore the subject matter through the lens of a hi-tech corporation. On the flipside, corporations often build up a war chest of cash to be leveraged in acquisitions. What is the type of investments that they usually consider? What drives the need to invest? Finally, corporations are like organisms, with highly differentiated tissue. Your success in partnering, collaborating or being acquired by a corporation depends on talking to the right people within the corporation. What are some of the important things to keep in mind when planning to approach a corporation with regard to a new technology?

**Iva Blazina Vukelja** is the Director of Product Management at RSA, the Security Division of EMC. She has over 15 years of a stellar track record in leading software engineering projects and teams, business development, product management and strategic planning roles, and bringing established and emerging products successfully to the market. She is a lifelong software aficionado, with a passion for running a successful software business, as measured by the return on investment. Her technology expertise lies in the areas of storage, information management and security. In her current role, she is responsible for the strategy, operational planning and execution of plans for a portfolio of products. Her role is defined through the close collaboration with Engineering, Product Marketing, Sales and Business Development. She participated in acquisitions on the acquirer side, including some for the products she now manages. She has a hi-tech MBA from the Northeastern University in Boston, and a BSc in Computer Science from the Faculty of Computer and Information Science in Ljubljana.





## THEME: THE EUROPEAN INVESTMENT FUND

### ABSTRACT:

The European Investment Fund (EIF) is an EU institution for Small and Medium-sized Enterprises (SMEs), Risk Financing, Venture Capital and Mezzanine (fund of funds). Since 2005, EIF has invested resources into understanding Technology Transfer, creating awareness and developing new TT initiatives with the leading research universities. Its focus is on the research organizations that are leaders in their respective fields and act in an entrepreneurial environment.

**Yannis Tsakiris** holds an MSc in Mining Engineering from the National Technical University of Athens, followed by an MBA degree from Imperial College London. He started his career in S&B Industrial Minerals, a major European industrial minerals producer, where he spent 5 years in production and consequently in marketing and sales, in charge of new products. He also has experience in Customer Relationship Management (CRM) consulting from IBM Greece. From 2000 onwards, he was a partner in Vectis Capital, a venture capital firm based in Athens with an investment focus on Greece and the Balkans. In 2006, he joined the European Investment Fund in Luxembourg as a Senior Officer involved in the eco-innovation venture capital market and in the mid-market buyout sector. He was also focusing on certain European venture capital markets in the development phase. He is currently Head of the SE Europe Region within the Regional Business Development Division of EIF.

THEME:

## DEVELOPMENT AND TECHNOLOGY TRANSFER – EXPERIENCE OF TRIMO

### ABSTRACT:

“Trimo is an international company with the vision of becoming the leading European company for offering a complete solution in steel building. Trimo provides original and complete solutions through the entire process from creating ideas to the after-sales service. Trimo's main values are responsibility, partnership, innovation, passion, reliability, and trust. Trimo has developed a special approach to developing its own culture of innovativeness. Many special projects have been implemented to involve all the stakeholders in the process of innovation. Such projects have connected a great number of different people and subjects in molecular organizational structures. Such a model of involvement and communication between different members of the R&D team (internal and external) has accelerated the process of developing new products, systems and technologies. In the beginning of the nineties, Trimo decided to cover the entire development process in the niche of fire resistance and environmentally friendly building envelope. Fire resistant sandwich panels have been developed with very high performance on the new computer controlled line, developed at Trimo.

This technology has been created by a Trimo team and is based on high quality, productivity and flexibility. This technology has been patented on the leading markets around the world. In 2003, the Trimo R&D team for developing new technologies has, together with partners, improved the first version of the production lines and established one additional high-tech line. Later on, the Trimo team transferred this technology to two foreign countries (closer to the customers). This decision was based on the desire to be closer to the market and on the fact that the costs of the distribution of sandwich panels (voluminous components) had been reduced, as well as to better support local investors and the main contractors. It is important to always have new technologies in the pipeline for new products and systems, because the civil engineering branch and producers have to face big challenges, especially in time of recession. Patent protection is OK and we at Trimo see it as a prestige and short-term protection. But there is always the possibility that someone could find a way to avoid patent protection. So Trimo has to accelerate

new products and technologies quicker than others. And through this process, Trimo is taking into account sustainability as one of the main factors of success and social responsibility."

**Danijel Zupančič**, MSc in Mechanical Engineering, in the position of Deputy GM at Trimo, Slovenia. He graduated from the Faculty of Mechanical Engineering in Ljubljana in 1977 and obtained a master's degree in 2005. In the last 17 years he has worked as a project manager in many projects for developing new technologies for fire resistant sandwich panels and other products to envelop buildings. He is the holder of 5 international patents. He is active in national and international associations – member of the Steering Committee of Panama International (European Association of Sandwich Panels and Insulation Materials), member of the ECCS technical working group, as well a member of the Slovenian Academy of Engineering (IAS), etc.



Photo: M. Smrke

**Mr. Danijel Zupančič, Trimo Trebnje, Slovenia, and Iva B. Vukelja, EMC Boston, USA**



## SECTION 2 (THURSDAY, OCTOBER 7<sup>TH</sup>, 2010) WORKSHOP I3E

“Presentation of the Current Results of the SEE Project – I3E Promoting Innovation in the Industrial Informatics and Embedded Systems Sectors through Networking”

Speakers:

BIČEK Andrej, MSc


Prof. Dr. COLNARIČ Matjaž

Dr. GRADIŠAR Dejan

Dr. JOVAN Vladimir

STEINER Igor, MSc

Assist. Prof. Dr. VRANČIĆ Damir



The workshop on the presentation of the current results of the project “I3E-Promoting Innovation in the Industrial Informatics and Embedded Systems Sectors through Networking”

Section 2 was organized as a **workshop** on the presentation of the current results of the international project “**I3E-Promoting Innovation in the Industrial Informatics and Embedded Systems Sectors through Networking**”. The I3E project is funded under the Interregional IV South-East Europe Initiative with the aim of helping towards the transformation of the South-East Europe area into a knowledge-based, innovation-driven economy. The project places emphasis on two leading-edge technology sectors that may create a competitive advantage for the area, namely **industrial informatics** and **embedded systems**. The main technical deliverables include a Strategic Research Agenda in the aforementioned sectors, making the alignment of research efforts in the area possible, and a Methodology Guideline for Innovation stemming from the best practices relevant to the transformation of research into innovation.

After the presentation of the general scope and aims of the I3E project, the main ongoing activities and results of the two projects' work-packages were presented. The first presentation dealt with the current results of the **Strategic Research Agenda (SRA)** definition for the industrial informatics and embedded systems sectors. A **transnational SRA** is the major output of the I3E project, which is dedicated to the improvement of innovation transfer between researchers and the industry relevant to the industrial informatics and embedded systems sector in the SEE area. The purpose of the SRA is to show the directions in which the industrial informatics and embedded systems technologies and their related markets are moving and to present the potential technologies and products that will be relevant in the foreseen future. It will help developers and researchers to focus their research plans on the relevant topics, as well as to avoid barriers in transforming their ideas and research results into innovations. After the presentation of the strengths and potentials of the SEE region, the identified



Photo: M. Smrke  
I3E Workshop



research domains relevant to the SEE region were presented: Flexible Manufacturing, Green Energy, Health Support, Monitoring, Diagnostics and Living Assistance, and Public Infrastructures. Each of the relevant research domains has a number of application areas which were also briefly presented. The next presentation was a description of the selection of the “best practice” projects on the industrial informatics and embedded systems sectors, chosen from the set of the 120 good practice projects collected in I3E. Briefly described were the methodology, allocation, and the process of the final ranking of the list of good practice projects.

The I3E workshop was concluded with three presentations of Slovenian good practice projects, which illustrated the successful transformation of research into innovations in industrial practice. The first presentation was a description of a diagnostic system for the end-quality assessment of vacuum cleaner motors that relies on innovative mechatronic solutions, which combine the custom-designed handling of units under test, vibro-acoustic and electrical measurements, as well as advanced signal processing. The processing of the measured signals results in the so-called features that serve to detect and localize the faults, either in the electrical or in the mechanical part of the motor. Thus, the accurate, reliable, and sensitive diagnostic procedures allow for entirely fault-free final products. The implementation part of the project was funded directly by the customer Domel d.d., the largest European producer of vacuum cleaner motors. However, the necessary research activities applied to the new control system were co-funded by the Slovenian Ministry of Higher Education, Science and Technology via the research projects of the Department of Systems and Control. So far, the system has been installed in three technological lines at Domel d.d., and in one company owned by Domel d.d. in China. The project has been classified as a “good practice” mainly due to the following reasons: Firstly, the innovative ideas were implemented during every stage of its life cycle, resulting in an adaptable and high-precision measuring system. Secondly, the interdisciplinary approach allows the system to be easily adopted in various types of electric motors. The transformation of the research results into an innovative final quality control system has proven to be a success as by now more than 10 million motors have been tested



on-line by these systems and, according to the report by Domel's representatives, the number of delivered motors with parameters outside the prescribed values has lowered drastically since the implementation of the final control systems in Domel's production lines.

The next "good practice" project was a project of the development of a new generation of motor-driven valves used for HVAC applications. The project was initiated by the customer, Danfoss Trata, and carried out by the Jožef Stefan Institute, Department of Systems and Control. The implementation part of the project was funded by the customer, while the research activities were co-funded by the Slovenian Ministry of Higher Education, Science and Technology. In comparison with the existing solution, there were four key objectives and expected improvements from designing a new generation electronic controller for motor-driven valves. Firstly, the new system should utilize an efficient, versatile, and inexpensive type of motor. Secondly, the valve positioning should be as precise as possible. Thirdly, the switch-off force on the valve should be detected by measuring the motor current instead of relying on mechanical components. Finally, the new controller should enable the implementation of advanced control algorithms. Overall, the designed system meets all the requirements and has successfully passed all of the customer evaluation and qualification tests. The development and implementation of the described product was classified as a "good practice", mainly because of the following reasons: Firstly, new technology and improved materials are used for the new generation of valves. Additionally, innovative ideas were implemented during the development of advanced control algorithms. Overall, the main benefits of the new product are enhanced reliability and energy efficiency.

The third presented "good practice" was a SW solution for batch process control, named PLCBatch. The purpose of the development of the PLCbatch tool is to simplify the batch process control systems without the loss of expressive power and to move the execution of the recipes from the PC to the more reliable programmable logic controllers (PLC) platform. The properties of the tool are two-level recipes, general unit-class-based recipes, concurrent execution of several recipes and the execution of an extended and flexible phase state machine. Innovative

elements are the tabular presentation of the SFC chart, allowing the execution of recipes with parallel phases on the PLC platform, and the concept of the extended state machine phase behavior model. The effect of the development is the availability of a simple, yet powerful tool for batch process control on a PLC platform, which enables a better mastering of the batch control systems development and increases the reliability of these systems. This product has qualified as a "good practice" because of its simple concept, reliability, and the supportability of the widely accepted S88.01 standard. The programming tool PLCBatch is sufficiently powerful for the majority of the batch process control cases.

Dr. Vladimir Jovan, E2, IJS



Photo: M. Smrke  
I3E Workshop



SECTION 3 (THURSDAY, OCTOBER 7<sup>TH</sup>, 2010)

## WORKSHOP ON TECHNOLOGY TRANSFER & SPIN-OFF CREATION

Speakers:

Von MEIJENFELD Fritz H.

SKALAR KOMLJANC Mojca

COMMISSION FOR SPECIAL PRIZES FOR INNOVATIONS FOR ECONOMY:

ALANI Nazmin, Development Bank, Canada

B. VUKELJA Iva, EMC Boston, USA

BEREUTER Thomas, TTO, TU Graz, Austria

DI ANSELMO Andrea, Meta Group, Italy

PETERSEN Jon Wulff, TTO, Denmark

VAN DUN Paul, K.U. Leuven R&D, Belgium

See more in the section Innovation for Economy Prize.



## THEME: INNOVATION VOUCHERS FOR SMEs

**Frits H. von Meijenfeldt** is the Head of Division on International Innovation Affairs at the Ministry of Economic Affairs, and the Chairman of the Zoetermeer branch at CDA. He graduated from the Rijksuniversiteit Groningen in General Economics. Before becoming the Head of Division on International Innovation Affairs at the Ministry of Economic Affairs, he was also the Head of Division on Sustainable Development at the Ministry of Economic Affairs, the Head of Division on Safe Transport (interim) at the Ministry of Transport, and the Manager of Trade Policy Division at the Ministry of Economic and Business Affairs.

Frits H. von Meijenfeldt is a generalist, who is also interested in: the management of medium-sized groups of professionals; international negotiations; international trade policy; issues at the margin of the environment and economy; sustainable development; chemicals policy (REACH); safe transport policy; emissions trading policy.

## THEME: **TIA AND START-UP COMPANIES**

### ABSTRACT:

TIA is an independent public agency responsible for the enhancement of technology development and innovation in the Republic of Slovenia. Its main activities are grant programs aimed at technology development and fostering the cooperation of R&D institutions and universities with the industry. An important part of its activities are international projects. Through the cooperation with partners abroad, it strives to develop new policies in technology development and services for the Slovenian industry. TIA supports various companies through various programs. Two programs in particular are focused on young companies and their innovative environment. The first one is INO, a tender that offers grants to supportive companies for improving the innovative environment in Slovenia; it helps create new innovative companies, advises in different fields of innovative entrepreneurship and, most of all, organizes all kinds of events for helping companies create partnerships and promote themselves. The second one is VALOR, a tender which directly supports young/new companies that are willing to transfer the technology from the university to the market.

**Mojca Skalar Komljanc**



## SECTION 4 (*FRIDAY, OCTOBER 8<sup>TH</sup>, 2010*)

Speakers:

STOCKER Franziska Maria

SALONEN Jarno



## THEME: **ACTIVE KNOWLEDGE TRANSFER**

### ABSTRACT:

The Department for Economic Development of the city of Graz is an independent contact point for all the companies in Graz, whether already existing or planned for the future. As a service provider with the goal of making things happen, the Department is an interface between commerce and the authorities with the aim of achieving the best possible conditions in Graz as a location. The Department's approach is to foster the knowledge transfer between universities and companies. In order to improve cooperation, start discussions or give people the chance to meet, several services are offered or special meetings organized.

**Maria Franziska Stocker, MSc**, received her master's in Business Education and Business Administration (International Business) in 2006 from the University of Graz, Austria. After that she worked as a project manager in the field of technology transfer by setting up the technology transfer on a local, regional, and national level, and by opening up new contacts between the university and the industry. She also represented the University of Graz at various conferences and meetings dealing with transfer issues. She also worked as an Operations Manager in the Frank Stronach Institute. Since April 2010, she has been employed by the city of Graz at the Department for Economic and Tourism Development as a project manager, responsible for "active contacts" with local companies and for the support of the transfer of knowledge between universities or polytechnics and companies.

THEME:

## TT THEORY & YOUTH / YEAR ASSOCIATION

### ABSTRACT:

According to the 2009 briefing note “Cross-Border Mobility of Young Researchers” by the Directorate-General for Internal Policies of the European Parliament, mobility is important for the career development of young researchers, together with the scientific and economic performance. The ‘People’ Specific Programme of the FP7 ‘Marie Curie Actions’ lists technology transfer and entrepreneurship as part of the initial training activities for young researchers.

The general challenges for the research mobility of young professionals are, among others:

- lack of experience,
- lack of networks,
- lack of economic safety.

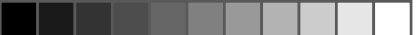
This presentation will introduce the activities of the Young European Associated Researchers (YEAR) network in the area of technology transfer. Since its establishment, YEAR has organized training courses with topics ranging from creativity and information dissemination to technology transfer; conferences that provide useful information on research funding, patenting, etc.; and other events that support the networking of young (and senior) researchers.

In addition, YEAR provides news and other information on member Research & Technology Organizations (RTOs) with the objective of initiating cooperation between them. YEAR also works with the RTOs in order to enhance the mobility of young researchers and support them in issues restricting the successful technology transfer.

YEAR is a network established in 2007 by six European RTOs to encourage cross-border and interdisciplinary creativity and alliances among young European researchers. YEAR aims at facilitating the exchange of ideas, best practices, and people to help break down national

and cultural barriers and structure the European Research Area (ERA). Currently, the network comprises ten member organizations, having a total of over 13,000 employees, which strive to support their young professionals in their research careers.

**Dr. Jarno Salonen** is a Research Engineer at VTT Technical Research Centre of Finland, specialized in electronic services development, information security and different identification technologies, e.g. Near Field Communication (NFC), and RFID in general. Of his recent projects, Jarno has been the project manager and key researcher of the national insurance project that had the objective of developing novel, innovative electronic insurance services. He was also the key person responsible for the security and privacy work package in the SmartTouch project (ITEA NO 05024, <http://www.smarttouch.org>) in 2006-2008, which was the largest effort on piloting Near Field Communication technology in the European Union. He has also been the primary representative of VTT in several working groups (2006-2008) and the secretary for the Security Working Group (2007-2008) of the Near Field Communication Forum (<http://www.nfc-forum>). Currently, Jarno is the project manager of VTT in the Role-ID project (ITEA2 no 08007), which plans to develop an organization-oriented identity extension based on a role-centric vision. Of the other professional affiliations, Jarno was responsible for the projects and activities at YEAR for 2007-2009 (<http://www.year-network.eu>) and has also been an active member of VTT Young Professionals, VTT's internal network for young researchers and other professionals, since its foundation.



## SECTION 5 (*FRIDAY, OCTOBER 8<sup>TH</sup>, 2010*)

### Speakers:

Prof. Dr. ROZMAN Ivan; Welcome speech

Dr. HABJANIČ Anton; Welcome speech

PETERSEN Jon Wulff





THEME:  
**SYSTEMS AND TOOLS FOR A SUCCESSFUL TTO  
OPERATION**

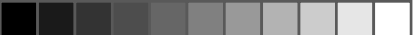
ABSTRACT:

Technology transfer is a complicated many-in-few-out process that is hard to manage, and in which you can invest your time and resources in many different ways. This frequently leads to an overload situation in the tech transfer office, and we ask ourselves: Why does this happen? Can we organize ourselves better? Can we use better tools?

Since 2005, **John Wulff Petersen** has been the CEO of the company TTO, which facilitates the technology transfer between universities and companies, as well as between companies. He is specialized in the commercial and technical evaluation of early-stage technologies. He was a member of the Board of the Danish Council for Strategic Research, as well as a member of the board of ASTP, the leading European organization for tech transfer professionals.

He also has a deep personal interest in the knowledge exchange between the public and private sector, and is particularly interested in how to integrate the perspectives of management, tech trans officers, and the researchers on the floor.

John Wulff Petersen is a materials scientist by training, educated at Aarhus University. He worked in Switzerland, at the University of Zürich, and at CERN in Geneva for six years. In 1992, he joined the newly founded Microelectronics Center (MIC) at DTU as Vice Director. It established state-of-the-art clean room facilities relevant for micro- and nanotechnologies. From 1995 to 2002, he acted as Director of MIC. There he had extensive collaborations with the industry and facilitated between 10 and 20 start-up companies. In 2002, he joined Risø National Laboratory as Deputy Director, responsible for the commercialization of Risø's research.



## SECTION 6 (*FRIDAY, OCTOBER 8<sup>TH</sup>, 2010*)

### Speakers:

BEREUTER Thomas

LAIGAARD Karen

Dr. STRES Špela

Dr. HABJANIČ Anton

FRANKO Jurij

SKINNER Jeff



## THEME:

**SUPPORT WITHIN TTO NETWORKS - PRACTICAL  
STEPS IN SETTING UP TECHNOLOGY TRANSFER  
OFFICES**

## ABSTRACT:

Technology Transfer Offices (TTOs) at publicly-funded research organizations (PROs) face the challenge of commercializing very early-stage technologies. After the economic crises this is yet more difficult as potential business partners are even more risk sensitive than before. Common timelines for patenting, partnering, deal closing, and payback due to running royalties result in a case of very long-term oriented businesses. Nevertheless, short-term influences have a major impact on financing and thereby on the implementation of strategies. Consequently, TTOs are most often determined to go on a roller coaster ride. TTOs need to be understood and accepted as being part of the innovation cycle - the third pillar of universities, besides teaching and R&D. Practice has shown that, in addition to the implementation of a sound commercialization process, the critical success factors are implemented processes for the selection of technologies, secured financing of the TTO resources, and proactive stakeholder relations for keeping all involved on board. Practical aspects in setting up TTOs, such as responsibilities and services, performance criteria, staffing issues, will be discussed. As the requirements are rather complex, obtaining critical mass is of the highest priority. A clear focus on the essential internal duties, on certain technical fields and markets is very helpful. As most TTOs are far from achieving critical mass by themselves, complementing their own resources with external cooperation is crucial. The formation of networks with TTOs, private commercialization companies and patent agents creates synergies and secures quality by specialization.

**Thomas Bereuter** is founder of the Technology Exploitation Office (TEO) at Graz University of Technology and its subsidiary Forschungsholding TU Graz GmbH. He supports technology transfer by out-licensing, sales, R&D collaboration, and spin-offs. Prior to his engagement in Graz in 2004, he facilitated the commercialization of the IPRs of small and medium enterprises (SMEs) working for a British consulting firm. Thomas started his technology transfer activities setting up the Entrepreneurship Center of the Vienna University of Technology in 2001, as well



as INiTS, Austria's largest incubator for academic start-ups at the major universities in Vienna in 2002. He graduated with merit from the University of Vienna in Biochemistry and was performing bioanalytical research and business in different set-ups in SMEs and the industry. Thereafter he commercialized his own inventions and developments by licensing, venture capital financed start-ups and the selling of technology. Currently, Thomas is the Vice President and International Delegate at LES Austria; he was recognized as a Certified Licensing Professional (CLPTM), is lecturing at 4 universities in Austria, acts as a WIPO- and LES-Trainer, and is a member of The Association of University Technology Managers (AUTM), as well as the Austrian Biotech Industry association.



## THEME: SUPPORT WITHIN TTO NETWORKS

### ABSTRACT:

“It is always crucial for technology transfer professionals to focus on the “people” issue: how to build a personal network; how to manage the very entrepreneurial researcher who engages in many ventures, professionally and privately; finding the right people for spin-outs; and how to deal with difficult people.”

The initiative of a multinational group of professionals to meet and share experiences on a regular basis resulted in the establishment of the non-profit Association of European Science & Technology Transfer Professionals. ASTP is practitioner- and member-focused and is growing rapidly; our association consists of more than 600 members, covering 41 countries. The majority of our members are technology transfer professionals at public knowledge institutions.

In order to facilitate the exchange of ideas and expertise, and to strengthen the network of our members, ASTP organizes meetings with a high standard of presentations and discussions throughout the year. These meetings vary locations within Europe and consist of the annual conference in the spring, a fall meeting, and the training courses in January and September. Additional one-day masterclasses on specific subjects, as well as site visits, are organized throughout the year.

The mission of ASTP is to professionalize and promote technology and knowledge transfer between the European science base and industry.

**Karen Laigaard** (President of ASTP, Vice President for Research & Innovation, Director of Technology Transfer, University of Copenhagen) joined the University of Copenhagen in March 2003 to set up and manage the University's Technology Transfer Office. Since October 2009, Karen has also occupied the post as (acting) Vice President for Research & Innovation.



The University's Tech Transfer Office consists of 7 people working with the identification, protection and commercialization of the research results of Copenhagen University. The Office receives around 60-70 disclosures per year; it entered 13 licensing agreements in 2009 on behalf of the University. The Office also assists academic staff with a considerable amount of research collaboration agreements.

Karen lived and worked in the United Kingdom from 1992 to 2001. She returned to Denmark in 2002 to take up a post with the Danish Ministry of Science, Technology and Innovation and was in particular involved in activities related to biotechnology and commercialization. During her time in the UK, Karen was employed for six years with the University of Glasgow's commercialization office, Research & Enterprise. As the office's International Marketing Manager she was responsible for the international promotion of the University's research expertise. Prior to joining Research & Enterprise, Karen worked at The British Council, Scotland, on an export promotion project funded by the UK Department of Trade & Industry and Scottish Trade International.

Karen has been a member of the ASTP Board since 2007 and was elected President in May 2009. Karen is a member of the Steering Group of the Danish National Network for Technology Transfer and of the Innovation Group of Danish Universities. Reporting to the University's Vice Chancellor/Rector, Karen is part of the University's administrative management group, FA-12, and sits in various national and regional steering groups, advisory boards and working groups related to regional growth, innovation and technology transfer.



THEME:

# THE ASSOCIATION OF SLOVENIAN TECHNOLOGY TRANSFER PROFESSIONALS (SI-TT)

## PROGRAM OF SI-TT (FROM INCEPTION UNTIL FALL 2011)

### 1. Education for All SI-TT Members

In Slovenia, individual training in the field of intellectual property is conducted. On the other hand, training in the field of knowledge and technology transfer that would address the management of intellectual property, its insurance and marketing through contractual cooperation with the industry in joint research with the industry, licensing, and new business formation is not sufficiently available. Therefore, we suggest a series of educational events, covering knowledge and technology transfer issues, be introduced to enable a more professional activity and higher yields in the field of commercialization results.

As the first two seminars organized we proudly introduce the lectures of Dr. Jon Wulff Petersen and Jeff Skinner within this 3rd International Conference on Technology Transfer.

### 2. Suggestions for Legislation Amendments

A performance review of the current legislative status of knowledge and technology transfer and comments received from SI-TT members on this performance can be done in cooperation with various government bodies in order to inform these bodies of any problems observed.

### 3. Overview of the Results of Individual Institutions in the Field of Knowledge and Technology Transfer

The current results of activities in the field of technology transfer are not publicly available, and are collected by individual institutions and at the Ministry. In an effort to establish a transparent system, we would like to conduct a brief survey and publish the results in a short booklet (as



an example of such a brochure, see Appendix, brochure of the Swiss Technology Transfer Association - swiTT, also available on  
[http://www.switt.ch/adminal2/userfiles/CMS/114314\\_swittreport\\_2008.pdf](http://www.switt.ch/adminal2/userfiles/CMS/114314_swittreport_2008.pdf)).

Dr. STRES Špela





## THEME: EXPERIENCES FROM TECHNOLOGY BROKING

### ABSTRACT:

A presentation of one of the most interesting and also controversial technology transfer cases in Slovenia – the carving skis.

**Jurij Franko**, the inventor of the carving skis. Jurij Franko graduated from the University of Ljubljana in 1983, with a degree in engineering, and joined Elan in '87 as a lab manager. In 1988, he had an idea for a deep-sidecut ski, and his colleague Pavel Škofic calculated a suitable flex pattern. They organized a project dubbed Sidecut Extreme – SCX – and set out to build prototypes. (Jurij Franko is often confused with his schoolmate Jure Franko, whose successful World Cup career was capped by a silver medal in slalom at the Sarajevo Olympics.)

Over the next couple of years, some very strange skis emanated from Franko's lab. Former Elan racers were sent wide research skis, slotted along the centerline through the shovel and tail. Across the top of each slot was a jackscrew, so the skier could adjust the width of the shovel and tail and, consequently, the sidecut. It was a crude experiment, but it produced data that helped Franko and Škofic zero in on a new sidecut shape. Franko's calculation was straightforward: "Choose the radius of the turn -- 10 meters, for example. Choose the speed at which you want to ski -- 5 meters per second, for example. Calculate the centrifugal force and the lean angle, as for a bicycle. This is the angulation of the ski. Imagine a ski of constant width, bent to the radius of the turn and penetrating through the snow. 'Cut' the ski with the snow surface, and there you are!"

By 1991, Franko and Škofic had finalized a 203cm mold for a GS race ski with a 110-63-105mm profile – that's a 22.25mm sidecut, three times what most racers were using for slalom at the time. The sidecut radius was merely 15 meters – about 35 percent of Jure Franko's medal-winning Elan skis from '84.



The SCX was blazingly fast on the GS course. In its first local races, skiers on the SCX held eight of the top ten places. The new ski conformed more easily to the actual arc required to carve a clean turn on the racecourse. For any given turn, the racer needed less edge angle, and could therefore stand on a straighter, stronger leg. Folks on the World Cup circuit woke up.

In the Austrian Tyrol, Kneissl was trying to scramble back onto the international market. In the late '70s, the Tyrolean factory had tried to streamline production by converting to injection-molded foam-core construction for all its skis. The result was a marketing fiasco and bankruptcy. The company went through several ownership changes, and from 1986 to 1989 was partnered with Olin and Trak as part of Tristar Sports. Kneissl designers may have seen the Albert drawings. By 1990, reduced to being the local Tyrolean brand, Kneissl had resorted to making the "Bigfoot" novelty ski, a strange 80cm snowskate, pitched at casual skiers. The Bigfoot, which featured a tip shaped like a set of toes, could strap on to ordinary shoes as easily as to ski boots, and had a snowboard-style deep sidecut. Early in 1992, designer Wolfgang Wagner thought the deep sidecut might make an interesting recreational ski, and came up with the 180cm Ergo at 100-62-100mm – 19mm of sidecut depth, with a radius of 14 meters. Kneissl took the prototype to ISPO, the European trade show, that spring.

(From: <http://www.skiinghistory.org/sidecut.html>)



## THEME:

**BEST WAYS TO COMMERCIALIZE ACADEMIC AND RESEARCH INVENTIONS**

## ABSTRACT:

The commercialization of academic research is not new – researchers have been doing it for years via both formal and informal mechanisms – and (perhaps most importantly of all) through the students they train. What is new is the belief that we can dramatically enhance the quantity and quality of such activity by creating divisions (Technology Transfer Offices) that are separately resourced and staffed by those who are expert at commercialization and devoted to it. TTOs usually focus on licensing Intellectual Property – but this is just one of the many means by which the university's intellectual assets (expertise and technology) can be commercialized for socioeconomic benefit and may not be the most effective or the most valued by academics. How then should the TTOs scarce resources be deployed for maximum impact?

**Jeff Skinner** is the Executive Director of the Institute of Innovation and Entrepreneurship at London Business School. He also directs a variety of MBA entrepreneurship electives and co-curricula student activities at the School. He is visiting lecturer at University College London and at the Graduate School of Economics in Barcelona. Prior to this, he was Commercial Director at University College London, where he conceived, built, and ran UCL's Technology Transfer Division - including the creation of two early-stage seed funds and separate units managing consultancy, collaborative research, and new ventures.

Jeff Skinner is also the past President of and remains closely involved with both UNICO and ASTP (the leading UK and European Tech Transfer Associations). He was a founding Board Member of PRAXIS (the leading Technology Transfer professional training organization) and talks, trains, and consults widely throughout Europe in the field. He has written numerous teaching case studies.

Before joining UCL, he was Technical Marketing Manager at Hoechst Celanese Corporation in New Jersey and prior to that, Photonics Research Manager at the General Electric Company. His first degree was in physics and he holds a PhD in Thin-Film Photonics (UCL) and an MBA from LBS.

# PUBLIC CALL FOR THE BEST INVENTIVE/ INNOVATIVE PROJECTS WITHIN PUBLIC RESEARCH ORGANIZATIONS (PROS) FOR THE ECONOMY IN 2010

The 3rd International Technology Transfer Conference, which was held on the 7th and 8th October 2010 at the Jožef Stefan Institute and the University of Maribor, with the project PRO TT (Technology Transfer from public research organizations in the economy), which is financially supported by the Slovenian Technology Agency (TIA), also announced a **Public Call for the Best Inventive/Innovative Projects within Public Research Organizations (PROs) for the Economy in 2010**.

The purpose of the call was to support development projects in the inventive and innovative areas of technological ideas/projects, such as Nanotechnology, New Materials, Biotechnology, Management Technology and Production, Communication Technology, Computer Technology and Technology Skills, Environmental Technology, and Reactor Technology.

The aim of the call was to promote inventiveness/innovation from PROs for the economy.

The **criteria** at the Jožef Stefan Institute for evaluating the applications for inventive/innovative projects within public research organizations (PROs) for the economy in 2010 were:

- Innovativeness of the idea
- The possibility of transferring the ideas into practice
- Technological level of the ideas
- Complexity of the knowledge, experiences, scientific methodologies and tools used in the development of the ideas.

The best inventive/innovative projects within public research organizations (PROs) for the economy in 2010 were awarded with prizes in the total value of EUR 15,000.

## THE WINNERS FOR INNOVATIVE IDEAS APPLIED PRESENT THEIR PROJECTS

The prize was awarded to the most inventive and innovative ideas that were interesting and useful with potential applications in the economy. The total value of EUR 15,000 was awarded to:

- **Dr. Matjaž Koželj, Prof. Dr. Boris Orel, Dr. Ivan Jerman, Miha Steibucher, and Marjanca Vodlan** from the National Institute of Chemistry **(1)**,
- **Assist. Prof. Dr. Đani Juričič, Dr. Janko Petrovčič, Bojan Musizza, Aleš Svetek, Pavle Boškovski, MSc, Matej Gašperin, and Stanislav Černe** from the “Jožef Stefan” Institute **(2)**,
- **Blaž Fortuna, Marko Grobelnik, and Dr. Dunja Mladenich** from the “Jožef Stefan” Institute **(3)**,
- **Assist. Prof. Dr. Matjaž Kunaver, Nataša Čuk, and Sergej Medved** from the National Institute of Chemistry **(4)**,
- **Dr. Aleš Berlec, Prof. Dr. Borut Štrukelj, Matjaž Ravnikar, Mojca Lunder, and Boris Čeh** from the “Jožef Stefan” Institute and UL FFA, UL FKKT **(4)**.

### **Dr. Matjaž Koželj, Prof. Dr. Boris Orel, Dr. Ivan Jerman, Miha Steibucher, and Marjanca Vodlan from the National Institute of Chemistry**

The first inventor, Dr. Matjaž Koželj is a former young researcher at the NIC (National Institute of Chemistry) Laboratory for the Spectroscopy of Materials, where he is now a research associate. This invention was created during his PhD studies. Prof. Dr. Boris Orel is well known in solar thermal energy circles; he has a lot of important contacts with the key persons in that field. These contacts enabled a quick technology transfer to the Alanod company. All the inventors are employed at NIC, a public research organization. This invention is very specific, and oriented towards the improvement of an already existing product, therefore, starting a spin-off was not reasonable; all efforts were focused on obtaining a project with Alanod.

**Invention:** the core of the present invention is a corrosion protection layer on top of Sunselect, made by a sol-gel process.



Photo: M. Smrke  
Inventors-researchers

**Assist. Prof. Dr. Đani Juričič, Dr. Janko Petrovčič, Bojan Musizza, Aleš Svetek, Pavle Boškovski, MSc, Matej Gašperin, and Stanislav Černe** from the “Jožef Stefan” Institute.

The inventors are members of the Department of Systems and Control at the Jožef Stefan Institute. They have a strong dedication to designing innovative industrial solutions. The marketing possibilities for the proposed invention encourage the inventors to be highly interested in the commercialization of the product. Rather than selling the intellectual property rights, the inventors are interested in setting up a small company which will take care of the further productization of the invention. The main financial source will be sought in commissioning and maintenance activities. In order to assure a follow-up of the development, the inventors are motivated to being employed in the company part time.

**Invention:** DPP is built upon a state-of-the-art digital signal processor, is easily connectible to a variety of standard sensory equipment, up to microsensors and wireless sensors.

**Blaž Fortuna, Marko Grobelnik, and Dr. Dunja Mladenič** from the “Jožef Stefan” Institute.

Blaž Fortuna is a PhD student and young researcher working for the Text and Web Mining group at the Department of Knowledge Technologies, with his mentor Dunja Mladenič and co-worker Marko Grobelnik. His research work is focused on text and stream mining techniques for ontology learning, fact and template extraction from text, and the cross-lingual search.

**Invention:** OntoGen is a combination of state-of-the-art text mining, machine learning, text visualization techniques, and an innovative user interface, making the application simple enough so it can be used by users without any experience in text mining or machine learning.

**Assist. Prof. Dr. Matjaž Kunaver, Nataša Čuk, and Sergej Medved** from the National Institute of Chemistry.

Assist. Prof. Dr. Matjaž Kunaver has been working on wood liquefaction from 2002 onwards and holds 5 patents in that area of research. He is a senior scientist at the Laboratory for Polymer Chemistry and Technology at the National Institute of Chemistry.

**Invention:** wood and other lignocellulosic materials can be liquefied with a very simple reaction at the temperature of 180°C, with the use of glycerol.

**Dr. Aleš Berlec, Prof. Dr. Borut Štrukelj, Matjaž Ravnikar, Mojca Lunder, and Boris Čeh** from the “Jožef Stefan” Institute and UL FFA, UL FKKT.

Prof. Štrukelj, head of the research group, is an expert in pharmaceutical biotechnology and has rich experience in inventions, e.g. in the field of phage display and biological plant protection from pests, which were developed with his co-workers and in cooperation with industrial partners. The research group also involves young researchers, including Aleš Berlec, who are eager to participate in the further development of the existing invention, in cooperation with the Labena company and the strategic partner.

**Invention:** the group has developed probiotic recombinant lactic acid bacteria, which on their surface display a binding protein, and can alleviate the symptoms of inflammatory bowel disease.



**Dr. Aleš Berlec, Prof. Dr. Borut Štrukelj, Matjaž Ravnika, Mojca Lunder, and Boris Čeh:**

"The Technology Transfer Conference represents a welcome intermediary link, which is, in my opinion, very much needed in Slovenia. It is an intermediary link between good ideas that are created by research institutes and universities, and products on store shelves, which could be produced as a consequence of these ideas. The transition between these two levels is very demanding, full of the unknown, and the goal is not always perfectly clear. That is why advice from experienced people is very important and can make this transition easier. I would like to congratulate the organizers of the conference for bringing a great number of such people together. I am proud that our research group has received the award from the international commission, whose members have rich experience in technology transfer. The award will probably not make our innovation "Recombinant Probiotics for the Treatment of Inflammatory Bowel Disease" appear on pharmacy shelves. It will, however, stimulate our research group to strive toward that goal. I would like to express our thanks for the received award to the international commission, the organizers of the conference, and the sponsors on behalf of the whole group."





## FUNDERS

### **Ministry of Higher Education, Science and Technology (MHEST)**

The Ministry of Higher Education, Science and Technology performs tasks in the field of higher education, research, technology, metrology and promotion of the information society in the areas not covered by other ministries. The ministry also co-ordinates work in the field of the information society.

The Directorate for Technology performs tasks in the field of technological development and innovation by introducing modern concepts that promote technological development and innovation in the Slovenian industry. In its work, it follows four basic orientations: horizontal incentives for the R&D projects of small and medium-sized enterprises (SMEs); technology programs in selected technological fields; R&D infrastructure and human resources development; participation of the economy in the international R&D area.

### **Public Agency for Technology of the Republic of Slovenia (TIA)**

The Public Agency for Technology of the Republic of Slovenia (TIA) was founded by the Republic of Slovenia. TIA is an independent public agency responsible for the enhancement of technology development and innovation in the Republic of Slovenia. Its main activities are grant programs aimed at technology development and fostering the cooperation of R&D institutions and universities with the industry. An important part of its activities is international projects. Through the cooperation with partners abroad, it strives to develop new policies in technology development and services for the Slovenian industry.

(From: <http://www.tia.si>)

### **Public Agency of the Republic of Slovenia for Entrepreneurship and Foreign Investments (JAPTI)**

The Public Agency of the Republic of Slovenia for Entrepreneurship and Foreign Investments (JAPTI) has the primary responsibility of identifying and developing the best solutions and the strategies needed for their effective implementation in the development of entrepreneurship



and competitiveness in Slovenia and of promoting foreign direct investment by administering cost-sharing schemes and market-specific support for company internationalization. JAPTI's mission calls for mainstreaming the pro-enterprise culture and setting up an efficient system that integrates measures designed to improve competitiveness, encourage innovativeness, assist Slovenian companies in capturing foreign markets, expanding the network of the Slovenian business clubs abroad, and setting up an administrative and business environment perceived as friendly to foreign investments. JAPTI deals with the needs of start-up businesses, provides support for developing and growing small and medium-sized enterprises, and provides expert partner matching services for those keen to internationalize their operations. It also offers a roster of services tailored to the needs of foreign investors. JAPTI's staff carries out the tasks by making a series of interconnected steps that create a full suite of customer support services:

- **promotion and animation for the development and growth of the business environment** (aimed at the establishment, operation, development, and growth of companies, and raising the level of entrepreneurial skills in Slovenia),
- **the provision of the “soft forms” of support services** (counseling and information dissemination provided in proportion to the recipient's operations),
- **direct aid (financial incentives) to facilitate business growth and development** aimed at advancing the level of competitiveness of the Slovenian economy and providing incentives for attracting foreign investors.

Mandated to act as an implementation arm of the Ministry of the Economy, JAPTI provides technical support and advisory services, and develops relationships through two divisions: for entrepreneurship development and foreign direct investment generation and company internationalization, and the representative offices of the Slovenian economy in foreign countries. (From: <http://www.japti.si>)



**Slovenian Research Agency (ARRS)**

The Agency performs professional, development, and executive tasks relating to the National Research and Development Programme at every level, as well as other work to promote research and development activities. The Agency carries out its legally determined duties in the public interest, providing permanent, professional, and independent decision-making on the selection of programs and projects financed from the state budget and other financial sources. The Agency is an indirect user of the state budget in terms of the legal provisions that govern public finances and public agencies.

(From: <http://www.arrs.si> Franci Demšar, PhD, Director, ARRS)



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