



SCIENCE & TECHNOLOGY  
CENTER IN UKRAINE

Science and Technology Center in Ukraine

# ANNUAL REPORT

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# 2011

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Welcome Word

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# Statement

*from the Chairman of the STCU Governing Board*



**Kristian Schmidt**  
Chair of the STCU Governing Board

2011 was the second best year in terms of overall funding approved by the STCU Governing Board Members, after the 2006 record exercise. With an overall amount of just above 15 Million USD, the Center further proved its value as a trusted and reliable instrument to channel project funding toward all stages of project implementation.

This once again demonstrated the interest in its activities by the four active Partners, namely Azerbaijan, Georgia, Moldova and Ukraine. A particular effort was made to establish a consultative dialogue resulting in the drawing up of a set of orientations identified by these Signatory Countries. It also led the three Funding Parties; Canada, the European Union and the United States of America to compare and match these expectations with their own set priorities. Encouraging reports on absorption capacity and program ownership were welcomed.

The ongoing dialogue is also addressing major issues where the traditional redirection of Former Weapon Scientists needs to be adapted to the changing political and security-related priorities.

In 2011, regular projects continued to receive their

major share of funding from the European Union, as traditional instrument of scientist redirection and engagement. They involve true collaboration with international scientists and provide permanent sustainability and integration in the international scientific community of the CIS personnel and institutes.

The Partner Program is the United States' main instrument, with a strong involvement from the Department of Energy at a coordination level through its Threat Reduction Programme.

Further progress was made on funding the Targeted R&D Initiative Programme. There, a co-funding mechanism involves one Recipient Country Organization for budget definition and project pre-selection, before being evaluated with a view to prioritize proposals, towards granting a matching contribution.

On behalf of all Members of the Governing Board, I wish to express my gratitude and congratulations to the STCU Executive Director and the other Members of the STCU Management, to the Parties' Delegates, and to STCU staff in Kiev and Representation Offices for their excellent work. We note the departure of Mr. Andrew Hood, and applaud that his dedication to the Centre's mission will further continue in his new professional position. We welcome the arrival of the new Executive Director, Ambassador Michael Einik, and trust that his extensive experience and knowledge will be an important asset for the STCU during and beyond the current transition period.

Finally I wish to express my sincere appreciation to the scientists in Azerbaijan, Georgia, Moldova and Ukraine, who under challenging conditions continue to strive for scientific excellence.



Kristian Schmidt  
Chairman of the STCU Governing Board

# Statement

from the STCU Executive Director



**Ambassador M. Michael Einik**  
**STCU Executive Director**

It was a great professional honor and personal pleasure for me to have the December 2011 Governing Board of the STCU approve my appointment as its fifth Executive Director. Before anything else, let me take a moment to thank Andy Hood for his seven years of devoted service. On behalf of the entire staff I wish him and his family good luck as they start a new period of their lives in Washington DC.

For me, as we look at the years ahead, the challenge will be guiding the organization through its current process of transition. It is a challenge I accept with a sense of optimism and anticipation. There is still a need for what we do. The STCU and its staff can still bring value to the table in support of our stakeholders priorities and objectives. The need is for us to take the best from the past, and use it as a foundation as we define a new future. It is an exciting task, and I fully expect that when I report to you next year that I will be able to say that we have succeeded in defining a new and strong future.

During 2011, several things happened that have focused and accelerated this transformation process. First, the decision by Canada to defer further funding of activities pending a clearer vision on a transformed STCU. While somewhat more dramatic, this decision by Canada does reflect an across the board desire by all the parties to define a transformed STCU in the context of new global priorities and objectives. Let me also say that there is a desire as well for such a process on the part of the recipient partners, particularly, Ukraine to modernize and update the STCU's rule. Second, the GB

decision to end the call process for regular projects in September of 2012, has pushed us to redefine the way we call for, evaluate, and make decisions on new project funding. Third, the GB decision to have the STCU and its sister Center in Moscow, work together to coordinate and integrate operations in the context of the moving of the ISTC out of Russia and into Kazakhstan. Finally, the GB decision that for the first time mandated a staff reduction has pushed us to examine what our people do and how they do it. Addressing these issues will set our transformation agenda in 2012.

This year did see a dramatic up tic in GB approved project funding, from the 12.9 million dollars approved in 2010 to a high of 18.2 million dollars this year. Drilling into this number however, we see that the total number of new approved projects actually declined in 2011. The upswing being a result of a few new large projects particularly in the Bio area. This trend will likely result in less consistency in annual project funding as well as staff skill set requirements at any given time. Adjusting our staff levels and skill sets as well as our operating budget to this new reality is another part of our transformation agenda. Also worth mentioning is the continued important role partner projects played in 2011 funding. Revenue from Government Partners reached an all time high of over 7 million dollars. Similarly, along with our reliance on our Commercial Partners with over 3 million dollars in project activities, these two categories accounted for about two-thirds of our total project income. A phenomenon that I will suspect will continue in the years ahead.

As you look through this years report, you will see that the STCU continues to be an important and active player in the region in terms of holding workshops, seminars and conferences. It is an impressive list of activities. I would like to mention in particular our work in coordination with the ISTC and the US Department of Energy in bringing the experience and lessons learned from the Chernobyl nuclear disaster to support the remediation effort in Japan related to the Fukushima tragedy. 2011 also saw the start-up of the large EU funded project at

the Ukrainian Anti-Plague Station at Simferopol in the Crimea. This project, which accounts for the lion share of the increased 2011 funding, is our highest priority. It is a challenge, but doing it and doing it correctly again is part of the transformation we are undergoing. We also saw the expansion of the US Department of Energy GIPP program to support technology outreach officers at an additional nine institutes, a program that will help to shape our efforts in the sustainability area. All parties see the need for a sharper focus on technology transfer, commercialization, and sustainability. I see this field continuing as one of our key priorities. We will need to improve and deepen our cooperation in this area with other governmental, academic, and private partners.

If I may, let me close as I started, on a personal note. I would like to thank the STCU staff, particularly the Deputy Executive Directors and my Executive Assistant for the strong support they have given me in my break in period. In my case this is particularly critical since I continue to hold concurrent responsibilities as the US DED at the ISTC in Moscow.

Finally 2011 was the year that many of the transformation seeds have been sown . It was an important and necessary part of the change process. What was done, has laid the ground work for defining a path forward. I fully expect that in 2012 we will see these seeds take root, sprout, and grow.



Ambassador M. Michael Einik  
STCU Executive Director

# 2011 Milestones



*STCU 16 Years Working  
For a Better and Safer World...*

*Since the first STCU Governing Board meeting in 1995, STCU has sponsored over 1,400 cooperative science research projects amounting to over \$227 million (USD) in research grant funding to Ukrainian, Azeri, Georgian, Moldovan, and Uzbek scientists and engaged nearly 18,000 scientists, of which approximately 10,000 were former weapon scientists during the Soviet era and now is moving down a new path of transformation to better integrate this scientist pool into the evolving international, national and regional research and business communities.*



### Canadian Aerospace Partnering Mission



On 7-18 February, the STCU hosted a mission of Ukrainian aerospace R&D representatives to Canada, to develop meaningful partnerships between Canadian and Ukrainian aerospace organizations. This mission aimed to link Ukrainian organizations with Canadian corporations, so as to develop further value-added benefits of these partnerships via the STCU Partner Program.

STCU was assisted in this targeted partnering mission by technical expertise, advice, and insight of Canada's National Research Council, along with political and financial support from the Department of Foreign Affairs and International Trade Canada, as well as invaluable local support from the Canadian Embassy in Kyiv and the National Space Agency of Ukraine.

### STCU participated in AUTM Annual Meeting



STCU participated in AUTM (Association of University Technology Managers) Annual Meeting (Las Vegas, NV February 27 – March 2). STCU sent three CTCO's from Azerbaijan, Georgia and Ukraine to develop partner relations with western companies and to establish meaningful cooperation with their western colleagues. This mission aimed to teach our CTCO's best practices in technology transfer performed by leading Technology Transfer Offices of US Universities. During the mission, our CTCO's representatives met with a number of leading Bio and Pharma companies, such as Merck, AstraZeneca, Pfizer, etc. Prior to this AUTM Annual Meeting, training courses on Technology Marketing and Technology Valuation were held.

2011

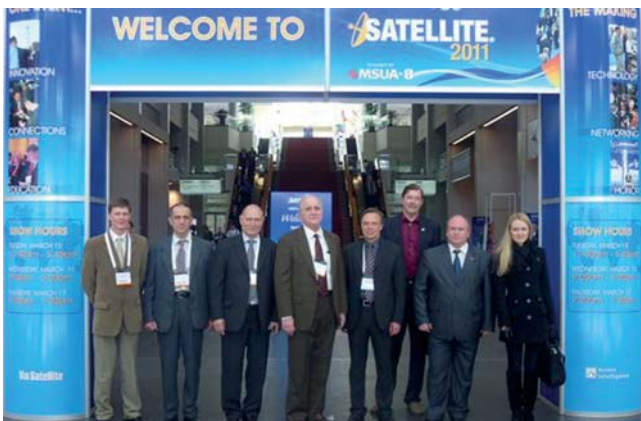
February 7-18

February 27-March 2



# 2011 Milestones

## STCU delegation at SATELLITE 2011



On March 14-17 STCU with 6 scientists from Ukraine participated in SATELLITE 2011 Exhibition and Conference (Washington DC, USA). Among members of the STCU delegation were satellite experts from the State Design Bureau “Yuzhnoe”, Institute of Technical Mechanics, Dnipropetrovsk, Kharkiv Aerospace University “KHAI”, Institute of Radiophysics and Electronics in Kharkiv, Lviv Center of Institute of Space Research. The SATELLITE 2011 Exhibition was celebrating its 30 year anniversary and brought together the world's top satellite companies and experts. Numerous useful contacts and business leads were established during the event. Ukrainian space scientists learned about current satellite market needs and trends, which will help them in their future work. STCU's booth offered technology profile forms and other promo materials on CD disks and in printed form.

## STCU Participated in USIC Annual Meeting



On March 16, STCU delegation with 6 scientists from Ukrainian space institutes took part in the US Industry Coalition (USIC) Annual Meeting. General presentations about current capabilities and opportunities for cooperation were made by representatives from State Design Bureau “Yuzhnoe”, Kharkiv Aerospace University “KHAI”, Institute of Technical Mechanics, Dnipropetrovsk, Institute of Radiophysics and Electronics and Lviv Center of the Institute of Space Research. A similar presentation about STCU activities and Partner Program was delivered as well. Partner Projects were highlighted as cost-effective mechanisms for US companies, which conduct R&D outsourcing projects in CIS countries. A number of useful contacts with current and potential STCU Partners were established. As a first result, discussions about two new STCU Partner Projects are currently ongoing.

## 2011

March 14-17

March 16

## STCU Participates in the Hannover Messe 2011 Exhibition



On 4-8 April, STCU participated in the one of the world's largest technology events, the Hannover Messe 2011 International Fair Exhibition (Germany), sponsoring a delegation of 4 representatives from the Ukrainian State Design Office "Yuzhnoye" Company and the directors of three Georgian scientific research institutes.

The STCU delegation was a co-exhibitor in the European Space Agency booth, and presented Ukrainian and Georgian technical capabilities in the areas of material sciences and "space to earth" applications. Located in the Research & Innovation Exhibition Hall, the booth was sponsored by the European Space Agency Technology Transfer Program, as represented by MST Aerospace GmbH (the ESA contractor in charge of promoting its adaptable technologies to everyday applications).

## The 14<sup>th</sup> Annual Conference of the European Biosafety Association



On 13-15 April, 2011 a STCU-sponsored delegation of Ukrainian bioexperts participated in the 14th Annual Conference of the European Biosafety Association, held in Estoril, Portugal. The STCU delegation consisted of specialists of advanced Ukrainian institutions working with especially dangerous pathogens, in particular Ukrainian Anti-Plague Station (Simferopol), Ukrainian Anti-Plague Research Institute (Odessa), Central Sanitary-Epidemiological Station of the MOH of Ukraine (Kiev). Oral and poster presentations of the STCU delegation participants demonstrated the achievements of STCU projects in the area of biosafety and biosecurity.

April 4-8

April 13-15

# 2011 Milestones

STCU participated to the 8th International Conference on Nanosciences & Nanotechnologies



A STCU delegation including 7 scientists and 3 staff representatives participated to the 8th International Conference on Nanosciences & Nanotechnologies (NN11), as well as the 1st International Exhibition NANOTECHNOLOGY EXPO 2011, which took place 11-16 July, 2011 in Greece (Thessaloniki). The NN11 is part of NANOTEX 2011, the annual international multi-event to explore opportunities in the emerging fields of Nanotechnologies & Organic Electronics. NANOTEX 2011 combines other well-established events within a large Nanotechnology Exhibition NANOTEX 2011 Expo that unites innovators from Academia, Research Institutes and Industry to bring nanotechnology from lab to market.

STCU signs a Memorandum of Implementation with the Ministry of Health of Ukraine



On 19 July 2011, Minister of Health of Ukraine Mr. O. Anischenko and Science and Technology Center in Ukraine (STCU) Executive Director, Mr. A. Hood, signed a Memorandum of Implementation for cooperation and coordination of activities in the framework of the project "Bio-safety and bio-security Improvement at the Ukrainian Anti-Plague Station in Simferopol". This action is aimed at facilities' reconstruction in accordance with modern international bio-safety and bio-security standards. The project funded by the European Union (EU) through the STCU is scheduled to last 36 months. Intensive preparative work preceded project start from January 2006 when during a Troika meeting on Non-proliferation and Global Disarmament, Ukraine requested support from EU to enhance bio-safety to prevent contamination and spread of dangerous infections pathogens and improve physical protection of stored pathogen agents handled at the UAPS.

## 2011

July 11-16

July 19

## STCU Delegation meets with the Authorities of the Autonomous Republic of Crimea



On 10 August 2011, a range of meetings of a STCU delegation with officials of the Autonomous Republic of Crimea was held within the framework of the implementation of the project “Bio-safety and bio-security Improvement at the Ukrainian Anti-Plague Station in Simferopol” started on 1st of August. In particular, STCU staffers met with the Speaker of the Parliament of the Autonomous Republic of Crimea V. Konstantinov and Deputy Prime Minister - Minister of Resorts and Tourism G. Psarov.

The sides discussed the beginning of the “Bio-safety and bio-security Improvement at the Ukrainian Anti-Plague Station in Simferopol” project implementation in Ukraine and the cooperation between the STCU and Crimea Authorities in the framework of the project.

## International Environmental Forensics Workshop



On 13-15 September, the STCU and the International Science & Technology Centre (ISTC), in partnership with Canada’s Department of Foreign Affairs and International Trade and Environment Canada, organized an expert’s workshop on environmental forensics, in Tbilisi Georgia (13th – 16th September 2011). The workshop held in Tbilisi, brought together more than 80 participants. Mr. Cliff Isaak, Honorary Consul of Canada to Georgia made the opening address.

Participants included leading scientists and governmental officials from Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, Russia, Tadjikistan and Ukraine as well as international experts from Canada, the European Union and the USA. The workshop goal was to inspire development of joint initiatives addressing global and growing environmental problems.

August 10

September 13-15

# 2011 Milestones

## Biosecurity & Biosafety Training Conference in Poland



On 4-6 October, the Military Institute of Hygiene & Epidemiology (Poland) hosted a biosafety/biosecurity training event in Warsaw. STCU sponsored a delegation of Ukrainian bioscientists from the Ukrainian Anti-Plague Station (UAPS, Simferopol, Crimea), along with STCU Deputy Executive Director (EU) Michel Zayet and other STCU staff.

The conference, titled “Biosecurity & Biosafety in Natural and Deliberate Infectious Diseases”, was open to law enforcement officers, medical doctors, customs officers, emergency response and crisis management services, and other national agency officials working in the biosafety/biosecurity area.

## STCU Chemical Safety and Security Training Meeting for Ukrainian Chemical Industry



Science and Technology Center in Ukraine, along with US Department of Energy’s Sandia National Laboratories’ International Chemical Threat Reduction Program (ICTR), in association with the U.S. Department of State’s Chemical Security Engagement Program (CSP) and with the help of the Union of Chemists of Ukraine has provided training on industrial chemical safety and security. This 5 – day training meeting was held in Alushta, Crimea, Ukraine (October 31 – November 4) for 24 Ukrainian chemical industry managers representing the Ukrainian chemical industry. Most participants were heads of department for safe working conditions from ammonia industry, fertilizer plants and coke-processing plants.

## 2011

October 4-6

October 31- November 4

## S2B: Science to Business Networking Road Show and Training Workshops



S2B: Science to Business Networking Road Show and Training Workshops conducted in three cities in Ukraine. Approximately 180 participants took part in the events. The Conference was divided into 2 days in each city: On day 1 the focus was on matchmaking between scientists and Ukrainian and CIS investors, business owners and company directors. There were up to 13 selected scientists making presentations in each of the cities. At the end of Day 1 there was a selection of the Best Presentation and Business Opportunity. Networking and matchmaking discussions between scientists and business leaders occurred during the Coffee Breaks, Lunches and Reception. On day 2 interactive training sessions were provided by Dr. Annemarie Meike from Lawrence Livermore National Laboratory, including personal consultations and by Dr. Judson R. High-tower from National Oak Ridge Laboratory provided additional training material.

## The STCU Governing Board held its 33<sup>rd</sup> Plenary Meeting



The STCU Governing Board held its 33rd Plenary Meeting on 14 December 2011, highlighted by the appointment of Ambassador Michael Einik as the new STCU Executive Director. Following STCU tradition, the outgoing STCU Executive Director, Mr. Andrew Hood (center), passed the ceremonial STCU "bulava" to Ambassador Einik (left) after his appointment. Ukrainian Governing Board Member, Dr. Boris Grynyov (right) was among the many GB participants to congratulate both Ambassador Einik and Mr. Hood. Ambassador Einik becomes STCU's fifth Executive Director since its inception, and the second American to hold this chief executive position. Mr. Hood leaves the STCU after more than 7 years as the Executive Director to return to work for the U.S. government in Washington DC.

2012

November - December

December 14

# 2011 Financial Activity

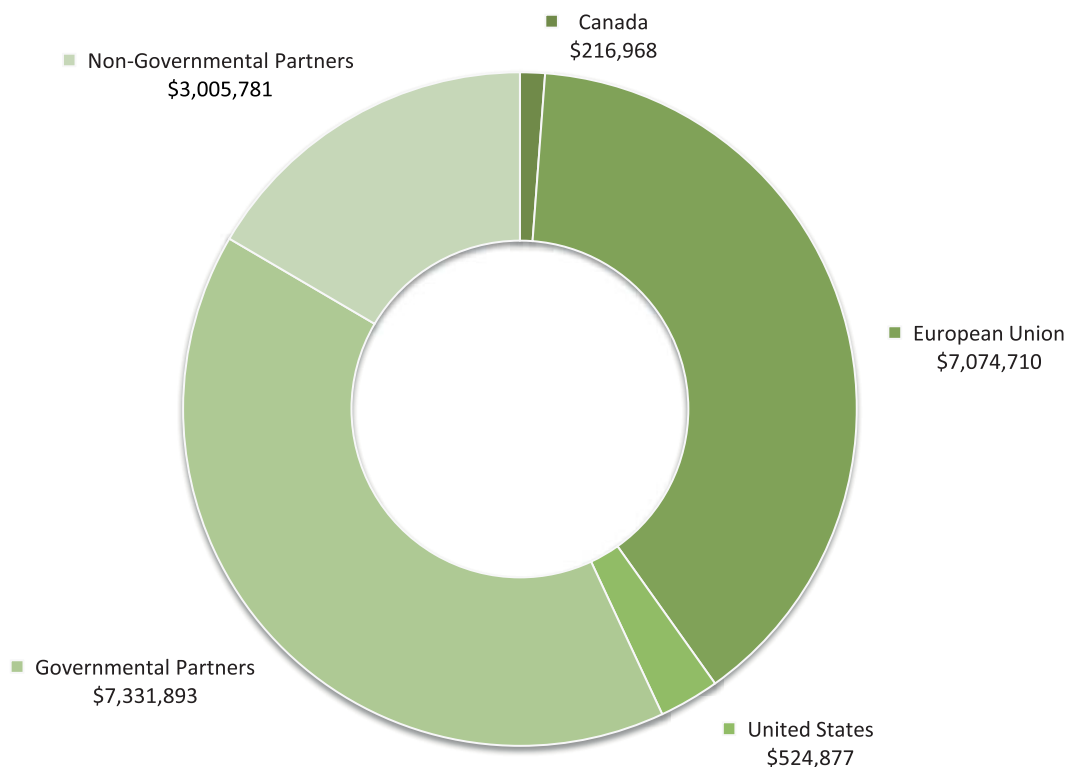
The year 2011 saw a substantial increase in the amount of new STCU project funding. In 2011, the STCU Governing Board approved over US \$18.2 million in new projects, an increase of approximately US \$5.3 million in total new project funding compared with 2010. Total new project funding in 2011 was the second largest in STCU history, and was second only to the record \$19.8 million approved in 2006. Funding in 2011 reversed the downward trend in total new project funding that began after the 2006 high.

New partnership project funding in 2011 saw an increase in levels as compared to that in recent years, with 2011 turning out to be the second largest year in STCU history (again second only to 2006). In 2011, new project funding from all partner organizations represented 57.2% of the total amount of new STCU project funding approved in 2011. This is a

slight decrease compared with 2010, which saw new partnership project funding representing 68.2% of new project funding. At just over half of new project funding in 2011, the role that partners play in project funding at the STCU continues to be extremely important.

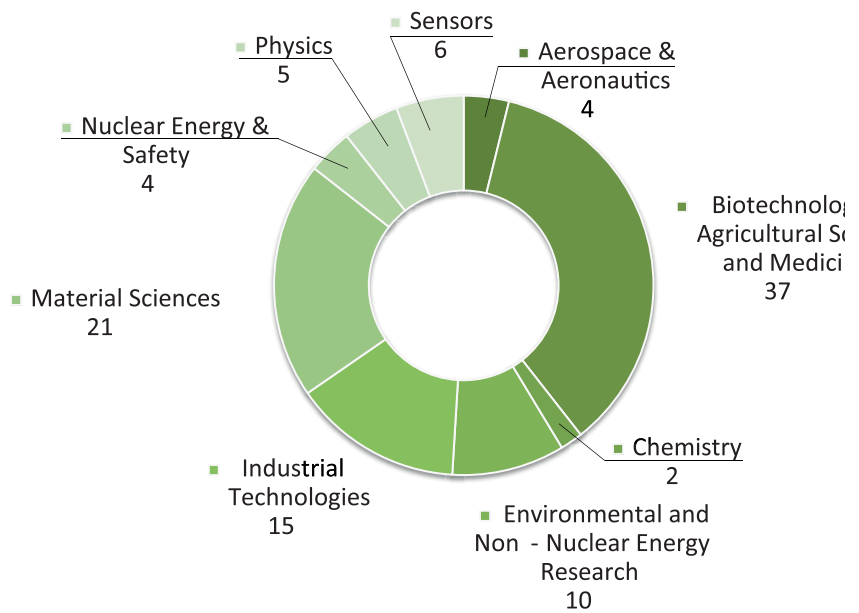
As in previous years, external auditors from Lubbock Fine Chartered Accountants audited the financial management and accounting systems, as well as the system of internal controls for both the operations of the STCU administration and STCU-funded projects. The results of this audit can be found on the STCU's website at: [www.stcu.int/documents/stcu\\_inf/reports/audit/2011/](http://www.stcu.int/documents/stcu_inf/reports/audit/2011/). Some weaknesses were identified in conjunction with the December 31, 2011 financial statement audit and will be corrected during the course of 2012.

## New Project Funding in 2011 by SOURCE:

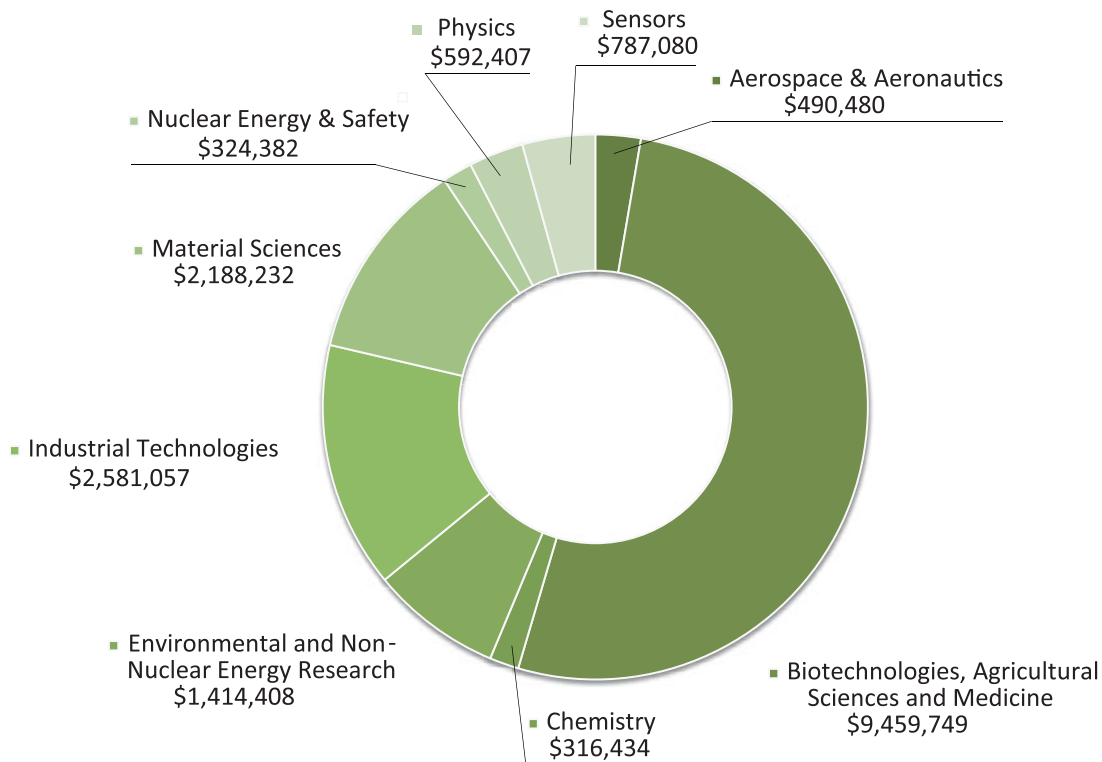


## New Project Funding in 2011 by PRIMARY TECHNICAL AREA:

### Number of Projects



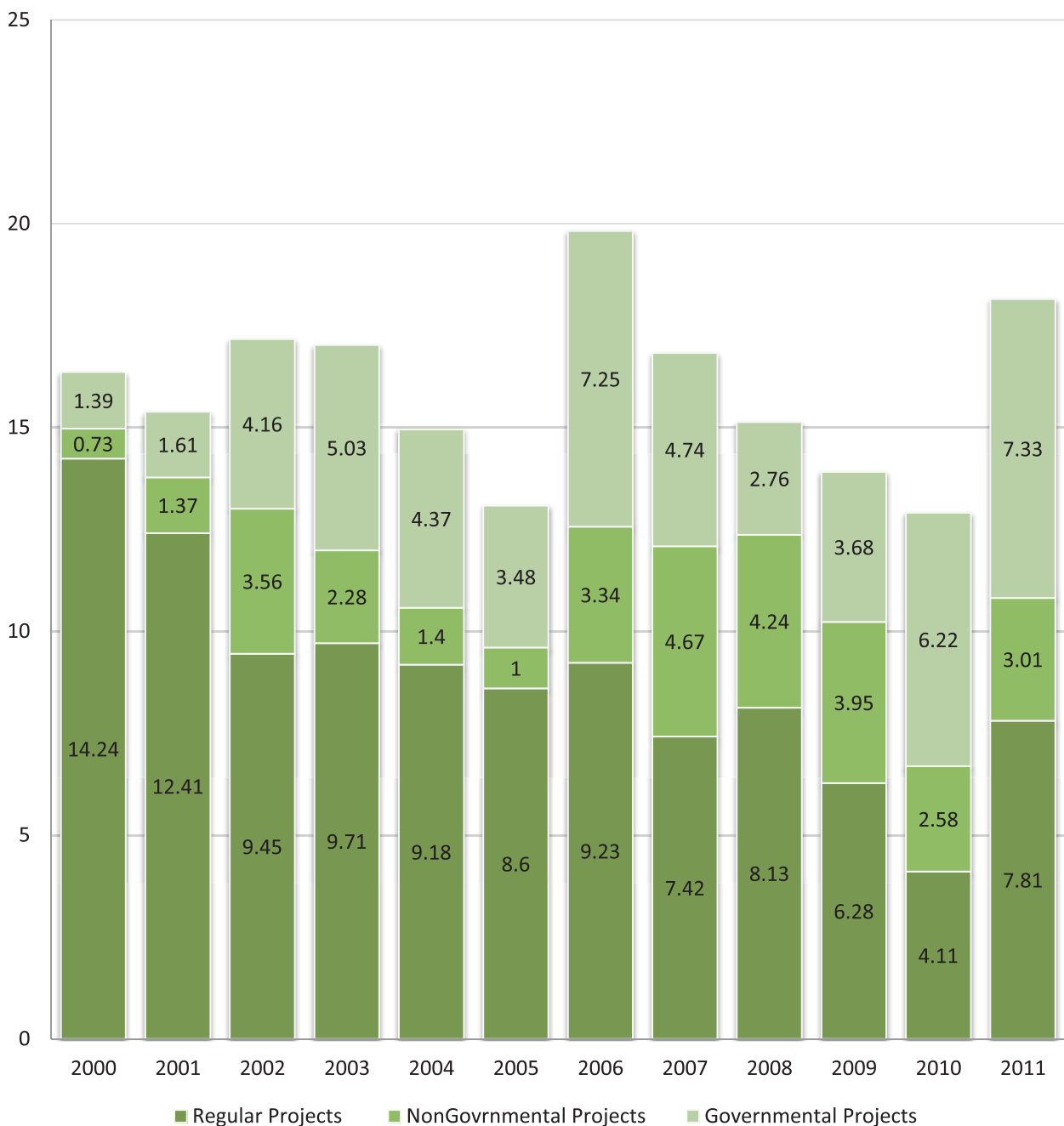
### Funding Amount



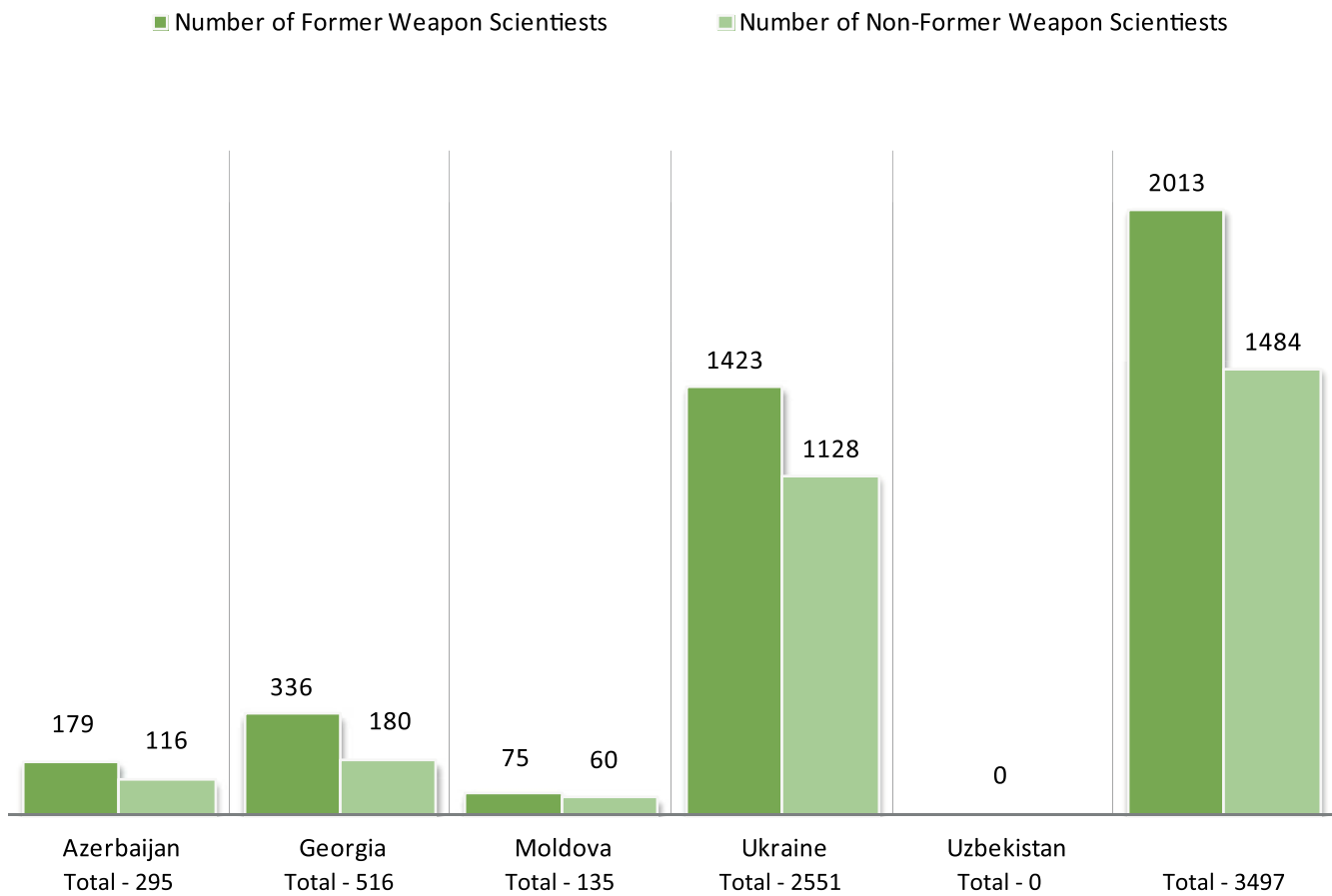


# 2011 Financial Activity

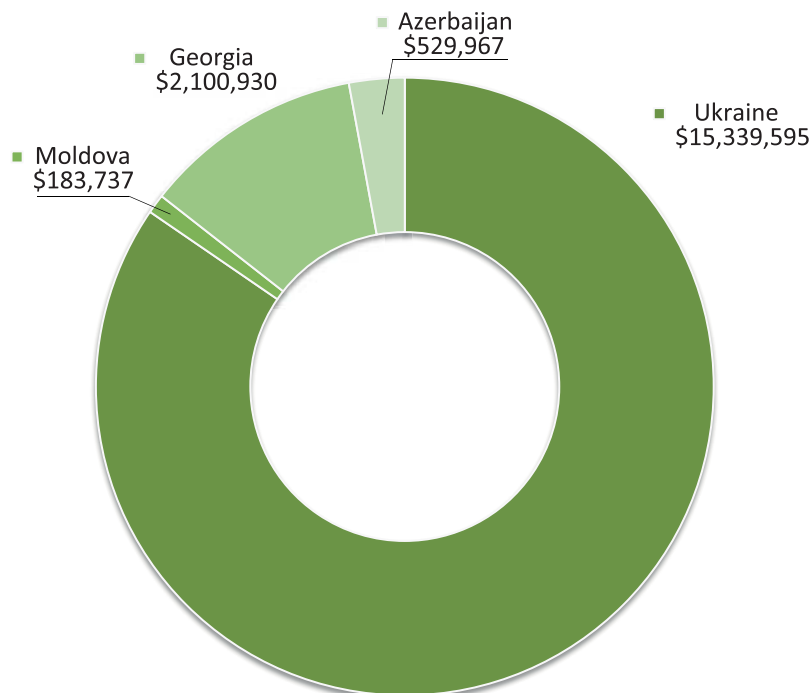
Regular/Partnership Funding, 2000-2011 (funding in USD/year)



## Participants Redirected on STCU Projects in 2011 by LOCATION OF RECIPIENT ORGANIZATION:



## New Project Funding in 2011 by LOCATION OF RECIPIENT ORGANIZATION:



- Welcome Word
- 2011 Milestones
- Financial Activity
- Science Excellence Department
- Technology Advancement Department
- Sustainability Promotion Department
- Public Outreach Department

# 2011 Highlights and Accomplishments

## Science Excellence Department

### Implementation begins of largest ever STCU Regular Project “Bio-safety and bio-security improvement at the Ukrainian anti-plague station (UAPS) in Simferopol”

The origin of this project dates back to 2006 when during a Troika meeting of working parties on non-proliferation and global disarmament, Ukraine requested support from the European Union to enhance bio-safety and bio-security at the UAPS.

The European Commission conducted a mission concluding that UAPS was working with pathogens of I and II groups according to Ukrainian classification and had to be appropriately equipped. The mission concluded on the need to undertake minimal repairs of the existing facility and to build a complete new facility in a new location in accordance with bio-safety and bio-security standards.

After an STCU-EU Contribution Agreement had been signed in late 2010, the Bio-safety and bio-security improvement at the UAPS in Simferopol project was launched with a 4 Million Euros total funding originating from the EU Instrument for Stability under the management of European Commission, Directorate General for Development and Cooperation. At STCU, Michel Zayet, Deputy Executive Director (EU) has overall responsibility for Program management and deliverables.

To comply with STCU Project Management procedures Five Regular Projects were created encompassing the full scope of tasks:

#9800, Securing Existing Facility to Improve Biosecurity Level;

#9801, Conceptual Design of New Laboratory Facility, Work Estimate and New Site Investigation;

#9802, Executive Design of New Laboratory Facility,



ity, Licensing, Construction and Commissioning;

#9803, Laboratory Equipment;

#9804, Set up of Management Structure for the Operational Phase, New Facility Procedures Drafting and Staff Training.

On January 25th 2011, in the premises of the Delegation of the European Union to Ukraine in Kyiv, a technical meeting gathered all parties for the implementation part of the project. A series of presentations aimed at briefing all participants on the background, each persons' roles, control mechanisms and expectations were delivered. Representatives of the Ministry of Health, Ministry of Foreign Affairs, and the Anti-plague Station attended.

The European Union recommended the use of expertise made available from the Military Institute of Hygiene and Epidemiology located in Warsaw,

Poland. MIHE Experts attended each of the identification missions and are tasked with project technical supervision, preparing recommendations in collaboration with the UAPS.

At STCU's initiative, a Memorandum in both equally valid Ukrainian and English Languages was developed, specifically defining the level of involvement of Ministry of Health of Ukraine throughout the stages of the 36 months duration of the Action plan. Minister of Health of Ukraine signed the Memorandum of Implementation for the project "Bio-safety and bio-security Improvement at the UAPS" on July 21st 2011.

On the next day, 22 July 2011, STCU Executive Director signed on behalf of the STCU the Five Regular Projects comprising all the Working Packages provided under the Contribution Agreement.

The effective Start Date for all the five projects was set as 1st August 2011 so work could begin on all chapters simultaneously. During first week of August was held the first security expertise assessment. An exhaustive list of security-related actions was jointly prepared (for project first phase).

In order to nurture continuous and open relations with the representatives from the Government of the Autonomous Republic of Crimea, two side meetings were organized on 10 August with Mr. Konstantinov, Speaker of the Parliament, and with Mr. Psaryov, Deputy-Head of the Council of Ministers and Minister for Resorts and Tourism.

The meeting at the Parliament was attended by Mr. Victor Ageev, Mayor of Simferopol, and a representative from the Permanent Commission for Urban Construction, Rational use of Resources, Ecology and Land Regulation.

Following the established calendar, the six-month schedule was respected and the Group met on 11 August at the UAPS facilities to discuss all practicali-

ties related to the beginning of project implementation. The list of Security deliverables was discussed to prioritize action and identify a workable solution in calendar terms as the Station is continuing its operations while improvements will be introduced.

Initially set for a duration of 42 months, the Contribution Agreement was targeted for modifications at the first Contact Group Meeting in January 2011. The addendum 1 was compiled by Mr. Philippe Servais at the end of September, and addressed all the points that required adjustments and clarifications. The main change was the extension in duration only for a period of three additional months, bringing its completion to 22 August 2014.

As a special action during the Polish Presidency of the European Union, a group of Bio Specialists attended a three day Training Conference entitled "Biosecurity & Biosafety in Natural and Deliberate Infectious Diseases" under the guidance of The Polish Military Institute of Hygiene & Epidemiology. The event took place in Warsaw on 04 – 06 October 2011.

This conference attracted law enforcement officers, medical doctors, customs officers, emergency response and crisis management services and many other relevant national agency representatives, working in the area of Biosafety and Biosecurity,

with the use of a laboratory.

Finally, on 6-7 December, the European Centre for Diseases Prevention and Control (ECDC) and Swedish Institute for Communicable Disease Control (SICDC) hosted in Stockholm (Sweden) the Roundtable on Ukrainian Anti-Plague Station Conceptual Design Phase. This event allowed consultation with a broadened group of experts on the best technical approach to follow so the future laboratory would comply with International Standards and also have a future maintenance budget within reasonable budget allocation based on the Ukrainian Ministry of Health capabilities.

After an STCU-EU Contribution Agreement had been signed in late 2010, the Bio-safety and bio-security improvement at the UAPS in Simferopol" project was launched with a 4 Million Euros total funding originating from the EU Instrument for Stability under the management of European Commission, Directorate General for Development and Cooperation.

# 2011 Highlights and Accomplishments

## Science Excellence Department

### Report on use of Swedish Supplemental Budget Line 06.05.

Since 2007 and on a regular basis, STCU specifically monitored all activities with the leading European Country for Innovation, either by linking with contacts made by local scientists, or by seeking more detailed intelligence over specific scientific priority research fields. This permitted the identification of events or clusters, or even just leading individual researchers to be visited with an aim to develop partnerships. In the course of 2011, three major missions were conducted. This financial support offset costs of Recipient Countries selected scientists to travel, in addition, other EU Supplemental budget facilities were mobilized to cover for STCU accompanying personnel.

The first one took place in Linköping, during the period of May 7-13, when Senior Specialist Mrs. Natalia Dudko and Ukrainian scientists Dr. Kliui and Dr. Khripunov attended the World Renewable Energy Congress WREC 2011, an international scientific conference that provides an excellent opportunity for discussion and knowledge exchange for scientists, policy-makers, engineers and other specialists with an interest in issues related to renewable energy. WREC 2011 covered a wide range of topics related to renewable energy technologies, energy efficiency, climate change and sustainable energy systems. Scientific articles submitted by Dr. Kliui and Dr. Khripunov were accepted by the event organizers for presentation and publication. Supported scientists made contacts with relevant experts, from the Functional Organic Materials and Devices Chemical Engineering and Chemistry, Eindhoven University of Technology, Netherlands, the Laboratory of Applied Optics Department of Physics, Chemistry and Biology, Linköping University, the Solar Energy Materials and Device Laboratory of POO, U.A.E, Dr. Gerrit Boschloo of Uppsala University and representatives of the Scatec Solar company from Oslo, Norway. These meetings paved the way for the preparation of a number of joint research activities.

October 26-28th eight Ukrainian scientists attended



a "Program on Innovation and Innovative Environments", organized by the Swedish Institute as part of its Baltic Sea Regional Program. During this visit, a matchmaking exercise of CIS scientists took place with Swedish Universities and Science Clusters/Industries. The last day was dedicated to Thematic/Study Visits in selected companies and laboratories.

Finally, on December 6-7th, the European Centre for Diseases Prevention and Control (ECDC) and Swedish Institute for Communicable Disease Control (SICDC) hosted in Stockholm a round table entitled "Ukrainian Anti-Plague Station Conceptual Design Phase" aimed at gathering external additional expertise on the Conceptual Design for the new UAPS facility which is planned to be constructed under the framework of the EU-funded STCU project "Bio-safety and bio-security improvement at the Ukrainian Anti-Plague Station in Simferopol".

In total, the 2011 missions used 19,5 thousand dollars and made possible the participation of twelve scientists from Ukraine in meetings, offering them a chance to establish contacts with qualified experts from Sweden and further network access to the European Union research area.

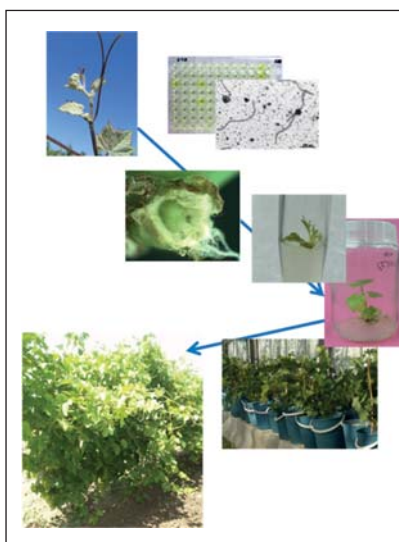
Creation of virus-free grapevine collection from local cultivars with resistance to environmental stress factors

### STCU Project #4073



Total funds allocated: 136.319 EURO

Under project # 4073 “**Creation of grapevine virus-free collection of local cultivars with resistance to environmental stress factors**”, developed by the scientists of the Institute of Genetics and Plant Physiology of the Academy of Sciences of Moldova and National Institute for Viticulture and Oenology, was created a virus-free Depository-Collection of grapevine varieties with high quality and productivity, resistant to environmental stress factors, as a contribution toward strategic sustainable and durable development of viticulture in the Republic of Moldova.



After preliminary evaluations of the biodiversity of presented genetic resources 11 genotypes were selected and studied.

Of the selected genotypes the presence of eight economically important viruses were evaluated using serologically test enzyme-linked immunosorbent assay (ELISA), immunosorbent electron microscopy (ISEM) or negative staining (NS). Using the developed algorithms of the 11 genotypes 1417 plants and ex vitro adapted 857 plants were identified. In order to increase multiplication rates a new treatment procedure based on application of millimeter waves of low intensity was proposed, which supports the increase of the value of the index in dependence of plant genotype by 1.3 to 3 times.

Virus-free plants were preserved in vitro and ex vitro conditions assuring complete purity, authenticity and sanitary state of material. This will be a source for in vivo adaptation and rapid multiplication in the future.

Development of fluorescent dyes for detection of oligomeric amyloid intermediates in neurodegenerative diseases

### STCU Project #5281

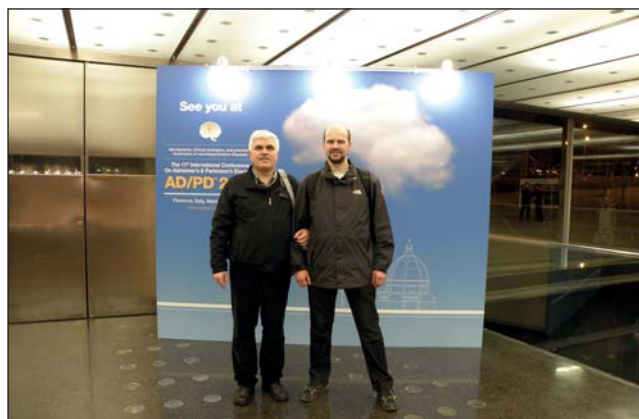


Total funds allocated: 28.178 EURO

The development of alpha-synuclein protein aggregates has been linked to Parkinson's disease. Their formation and accurate detection is thus of importance for understanding the progression of this debilitating neurodegenerative disease.

Two new dyes (SL-631 and SH-299) developed by the **STCU Project #5281 “Development of fluorescent dyes for detection of oligomeric amyloid intermediates in neurodegenerative diseases”** team showed great promise in the detection of oligomeric and fibrillar alpha-synuclein in solution. The dyes may be used for monitoring fibrillogenesis reaction that is associated with the early stages of Parkinson's disease and thus provide an opportunity for a better understanding of the molecular basis of the disease.

In addition, a model for the quantitative prediction of fluorescent response of the dyes on addition of alpha-synuclein aggregates was developed with the help of QSAR-analysis. It is postulated that the model could provide a cost effective approach for the development of novel amyloid-sensitive fluorescent probes.



# 2011 Highlights and Accomplishments

## Science Excellence Department



STCU received a donation from the INTAS program which is partially leveraged by other donor matching funds and was to implement two projects: one with the National Technical University of Ukraine "Kyiv Polytechnic Institute" and the second one with the State Space Agency of Ukraine.

International Training System for Scientists in the Area of Technology Transfer Management

STCU Project #5560



Total funds allocated: 177,600 EURO

Under **STCU Project #5560 "International Training System for Scientists in the Area of Technology Transfer Management"** a system of professional development of experts in the field of innovation management, commercialization of R&D results and technology transfer will be created in Ukraine for the first time. This international educational program for Technology Transfer Management will be developed, tested and implemented in the National Technical University of Ukraine "Kyiv polytechnic Institute" that has an accredited master's program in Innovative Technology Management.

Training programs, methodological and training materials will be prepared based on advanced foreign and domestic experience. An extensive application of Information and Communication Technology (ICT) will support training in different combined forms – classroom instructions, distance learning within short-, medium-, and long-term modular training programs. It will enable participants to select an individual training trajectory. All method-



Project Manager: Inna Maliukova

ological and training materials, as well as the project web-environment will be accessible in 3 languages (Ukrainian, Russian and English) that will allow training services to be offered to interested persons and organizations from GUAM, CIS and other countries.

Implementation of this international educational program through the KPI will increase research capacity of the University and help to transform it into a regional center for knowledge transfer.

Experimental study of dynamic processes in the ionosphere using space and ground based instrumentation

## STCU Project #5567



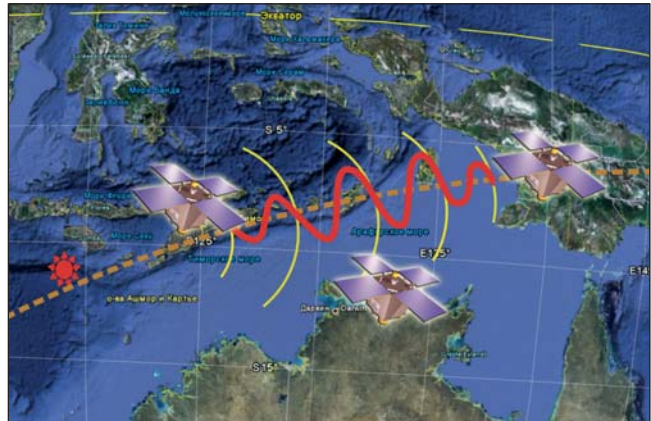
Total funds allocated: 300.000 EURO

The aim of the **STCU Project “Experimental study of dynamic processes in the ionosphere using space and ground based instrumentation”** is the comprehensive preparation of the first Ukrainian satellite mission for ionosphere exploration. The implementation of the project will facilitate the growth of fundamental understanding of Solar-Terrestrial relations, developing of Space Weather diagnostic methods and monitoring methodology of serious disasters coming from space.

The Project consortium is confident that the project implementation will have positive effects on and complement the following international activities:

- "Blue-sky" fundamental researches supported by national and international space agencies and research programs.
- Development of models of Sun-Earth connections and Space Weather;
- Research on earthquake precursors monitoring methods and technologies. National and international programs in Europe and other regions. Examples of principle stakeholders: LPCE/CNES, France; IZ MI RAN and SRI RAS, Russia; University of Electro-Communication, Japan.
- Development, preparation and more effective planning of new space projects in the field of Global Earth Observation (GEO Initiative) and space monitoring. Examples: Satellite mission "SWARM" coordinated by European Space Agency's Living Planet Program; International satellite project "IONOZOND" coordinated by ROSKOSMOS, Russia.

The project will be executed by a team of four science organizations: Space Research Institute NASU-NSAU (SRI) which is the main institution that coordinates space researches in Ukraine, Lviv Center



of Institute of Space Research NASU-NSAU (LC ISR) and Institute of Technical Mechanics NASU-NSAU (ITM), which are the Ukraine's leaders in scientific space instrument engineering, and "Yuzhnoye" State Design Office (YDO).

SRI was the leading organization for realization of the "Variant" experiment onboard satellite Sich-1M (launched on December 24, 2004), experiment "Potential" on satellite Sich-2 (launched on August 17, 2011), and for space mission "Ionosat" (launch scheduled after 2013). In addition SRI participates in the preparation of the international project "Environment" on International Space Station, Russian space missions "Chibis" and "Radioastron".

The consortium represents a balanced mix of matching and complementary experienced experts – scientists, instrument engineers, and space system designers – the main Ukrainian research players in the area of ionosphere physics with decades of experience in the realization of space experiments.



# 2011 Highlights and Accomplishments

## Technology Advancement Department

Following on from the successes of the nuclear forensics Targeted Research Program (TRP), launched in 2009, and the Targeted Initiatives (TI), launched in 2005 the department in 2011 focused on two new initiatives:

Development of a new TRP on environmental forensics.

Development of a new model for attracting the Private Sector to undertake S&T activities in countries of the former Soviet Union.

## New Targeted Research Program

The concept is based on partnering between scientific institutions, the private sector & government organizations in the Donor and Recipient States. Co-funding also underpins the initiative. The overarching objective is the development of the new initiative that is able to address the needs of new stakeholders in the Funding States, without deviating from STCU's primary mandate. In such an approach, engagement of scientists and institutions in the Recipient States remains central to the program.

In 2011, the Western Funding Parties signaled their interest in environmental forensics. Given the increasing concern for environmental damage and with escalating costs for "clean-up", it is not surprising the overwhelming positive response from the Recipient States to endorse the initiative. In response, the STCU in partnership with the International Science & Technology Centre (ISTC) in the Russian Federation, Canada's Department of Foreign Affairs & International Trade and Environment Canada organised an "Experts Workshop". The event



brought together regional and international experts and showcased new and emerging techniques that are being used to identify the source of a contaminant, when the release occurred, and the extent and impact on human, animal and plant life. The workshop also addressed some legal aspects, including new and emerging legislation.

Quantum interference effects and thermoelectricity in semimetal nanowires

### STCU Project #5050



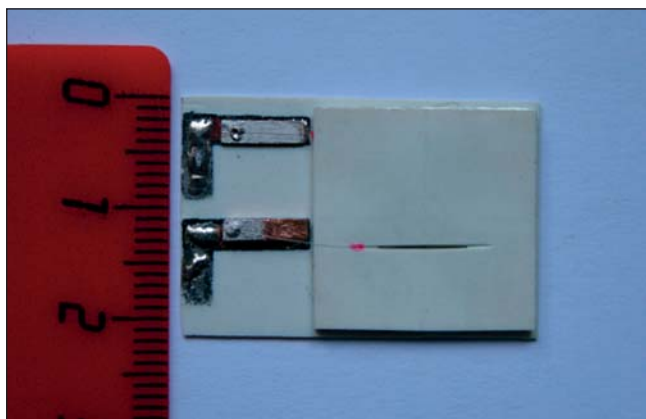
*Total funds allocated: 25.000 USD*

TI project #5050 „**Quantum interference effects and thermoelectricity in semimetal nanowires**” determined that nanowire arrays and composites based on nanowires of conventional Bi, BiSb, and other TE materials that exhibit a topological insulator behavior, that may be of practical interest for cooling and energy sensing.

The possibility to obtain single-crystal wires up to ten meters long with high elasticity makes them a promising material for the preparation of low-power anisotropic thermoelectric microgenerators.

In developing a experimental model of an anisotropic thermogenerator with a small current consumption based on glass-insulated microwires, a number of technical problems were solved including the preparation of a case with high heat conductivity and winding a wire up to 7 meters long with a common diameter of 30-40  $\mu\text{m}$ .

Also constructed was an experimental model of an anisotropic thermoelectric generator based on glass-insulated wires converting heat of the human body to electric power, which can be used, for example, in hearing aids.



Implementation of the International Laboratory Biorisk Management Standard CWA 15793:2008 in the Laboratory of Especially Dangerous Infections (EDIs)

### STCU Project #5139



*Total funds allocated: 61.350 USD*

The management of laboratory biosafety and biosecurity (biorisk management) is becoming an integral part of the overall performance of laboratories around the world. The risk of accidental or intentional release of highly pathogenic organisms and laboratory-acquired infection are real and will need to be addressed by laboratories worldwide. Consequently, in 2008 the international community developed the first standard CWA (15793:2008) specifically for laboratory biorisk management. One of the strategic directions outlined by the MoH in Ukraine is implementation of this standard. The Laboratory of EDIs of CSES, which operates according to the international biosafety level 3 (BSL3) classification can be a model laboratory for the implementation of the CWA 15793:2008. The results of a successful implementation of the standard by this laboratory within **STCU Project #5139 “Implementation of the International Laboratory Biorisk Management Standard CWA 15793:2008 in the Laboratory of Especially Dangerous Infections (EDIs) of the Central Sanitary Epidemiological Station of MoH of Ukraine”** will be used for improvement and implementation of efficient mechanisms for the management of biorisks in the field, connected with pathogenic microorganisms.



# 2011 Highlights and Accomplishments

## Technology Advancement Department

Development of Novel Nanophotonic Technologies and Devices For Detection of Dangerous and Toxic Organic Substances in Surrounding Water Objects

### STCU Project #5067



Total funds allocated: 159.361 EURO

Using the latest advances in micro- and nano-technologies, electro-chemistry and photo-electrochemistry the team of **STCU Project #5067 “Development of Novel Nanophotonic Technologies and Devices For Detection of Dangerous and Toxic Organic Substances in Surrounding Water Objects”** of Kharkiv National University of Radioelectronics is engaged in the development of technologies and associated devices for the detection and



characterization of ecological pollutants. This combination of methodologies and technologies represents a novel approach to the analyses of environmental pollutants.

Investigation of channels of Cs-137 and K transfer from the soil to plants under natural conditions

### STCU Project #5439



Total funds allocated: 49.801 USD and 34.894 EURO

**STCU Project #5439 “Investigation of channels of Cs-137 and K transfer from the soil to plants under natural conditions”** of Kyiv Taras Shevchenko National University, addresses remediation of agricultural land contaminated by the Chernobyl nuclear accident. The main objective is an understanding of the mechanisms of transfer (removal) of radio-nucleotides from the soil to plants. Results to date suggest the transfer channels with low- or high affinity for cesium and potassium



maybe effective in the removal of radioactive nucleotides from the soil. The expected results will assist in standardizing methods for evaluation of transfer of <sup>137</sup>Cs from soils to plants. The research is of particular interest given the recent nuclear accident at the Fukushima nuclear power plant in Japan.

## «Ukrainian Training Center on Biosafety and Biosecurity »

### STCU Project #4440



*Total funds allocated: 360.000 USD*

The first in Ukraine modern Training Center in Biosafety and Biosecurity has been established at the Ukrainian Anti-Plague Research Institute (Odessa) under the framework of the **STCU project #4440 “Biosafety and biosecurity Training Center organization”** supported by the Global Partnership Program (GPP) of Foreign Affairs and International Trade of Canada.



Under the project a modern training base has been created in accordance with international standards in biosafety and biosecurity. The laboratory complex contains a training hall with 20 working places with high quality technological and safety equipment. All glass laboratory items were completely replaced by plastic vessels, trainees were provided with protective clothing.

Eleven Center's instructors have been trained by the Project Collaborators – biosafety experts of the GPPP (Canada). These instructors besides professional received training in modern methods of interactive education.

Pilot courses in the Center were conducted with programs developed for specialists and technical medical staff: "Laboratory work biosafety with pathogens of especially dangerous infection: national and international criteria," "Problems of biosafety and biodefense in the laboratory diagnosis of especially dangerous infections (plague, tularemia, listeriosis)", "Fundamentals of biosafety and biosecurity in BSL laboratories of Level 3", "Approaches to biorisk managing in laboratories of mobile teams".

## Elaboration of electronic catalogue of freshwater algal flora in Moldova

### STCU Project #5052

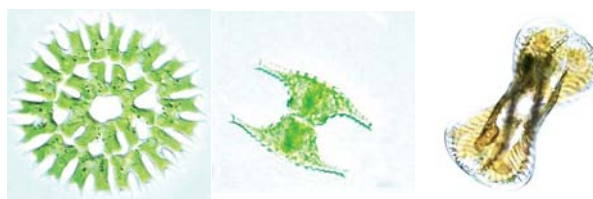


*Total funds allocated: 24.987 USD*

Scientists from the State University of Moldova under the **TI project #5052 “Elaboration of electronic catalogue of freshwater algal flora in Moldova”** demonstrated that in the Republic of Moldova conditions exist to obtain 1 hectare of water surface from 120 to 150 tons of dried waterweeds, rich with nutritive protein.

The project was developed an electronic catalogue of freshwater algal flora of Moldova with Web-access, which is of interest to experts working in the fields of taxonomy, ecology, physiology, biochemistry and biotechnology of algae, and to those who work in the food, pharmaceutical and medical industry.

The catalogue includes more than 1500 species and intraspecific taxons of freshwater algae and includes attributes, necessary to construct an information model of each species, it also supports the unambiguously identificatio of a taxon and its position in a system. It provides taxonomic structure of each division detected in Moldovan waters as a tree diagram, which makes easier the task of defining the location of a taxon of any rank lower than division in the system. For each taxon a checklist was prepared, which contained taxonomic characteristics, biologic, physiologic, and ecologic distinctive features and degree of quantitative development, its role in the ecologic system and in human life. The catalogue also provides extensive characteristics of all these strains with indications for the necessary technology for their industrial growth and areas of use of the obtained biomass. This system was developed on the basis of the database management system Inter-Systems Cache (USA).



**Fig. Some of the species of intraspecific taxons of freshwater algae**

# 2011 Highlights and Accomplishments

## Sustainability Promotion Department

The Sustainability Promotion Department seeks to increase the ability of recipient former weapon scientists to enhance their self-sustainability in civilian research employment by developing long-term partners within the private and government sectors, securing intellectual property rights, guiding scientists in commercial licensing negotiations, and building experience in technology transfer and strategic growth planning.

The Department also assumed management responsibility for the Nuclear Forensics Targeted Research Program in September 2010, and in 2011, the Department supported working meetings between experts from Lawrence Livermore National Laboratory and four (4) Ukrainian institutes. During the meetings, the western and Ukrainian experts finalized the work plans and budgets of four (4) Nuclear Forensics projects, visited laboratories and discussed future activities with the scientists who plan to participate in the projects.

The Department continued activities to help CTCOs and SMEs improve their marketing strategies and promotional capabilities. Two (2) additional CTCO Memorandum of Understanding for collaboration in the framework of the CTCO program were signed with the Institute for Space Research in Lviv, and the Institute of Applied Physics in Sumy. The Department worked jointly with CTCO, ISP, SME groups, including Association of Professionals for Commercialization of Ukraine (APCU). Consultations and matchmaking services to Georgian, Azeri, and Moldovan CTCOs, ISPs and SMEs were conducted regularly by Department staff and invited experts in order to help scientists in making presentations to investors, prepare effective promotional materials, and conduct effective negotiations with potential western licensees.

For all of 2011, 38 new US Partner Projects and Partner Project Amendments were approved by the STCU Governing Board, all totaling approximately \$ 7,844 million.

For Moldovan CTCO institutes STCU prepared and printed the first booklets and CDs of Institute Profile Forms and Technology Profile Forms to promote Moldovan institutes and their scientific developments and opportunities for licensing and joint ventures. This was the first such comprehensive booklet of science opportunities that was developed for Moldova.



The Department used the Nerac search firm to conduct Marketing Analysis Reports for several CTCO institutes, focusing on those in non-Ukrainian Recipient Parties. The Marketing Reports helped institutes to assess their projects that may be suitable for licensing and to identify companies that could be interested in CIS scientists' technologies.

The Department also continued to organize many Tech Transfer round-table workshops, attended by former weapon scientists, CTCOs, and other interested scientific personnel throughout the CIS Recipient countries.

These round-tables have been conducted by the Department since 2006, but this year with a more targeted audience of STCU recipients, focusing on the IPR and commercialization issues they are facing in their STCU work and in their institutes.

## Ukrainian scientist wins first prize at the International Symposium on Gnotobiology

### Mission to Yokohama



**Prof. Nadezhda Kovalenko from the Institute of Microbiology and Virology, National Academy of Sciences of Ukraine reported on the development of probiotic preparations and functional food products on the basis of lactic acid bacteria and won the first prize for the best poster presentation at the XVII International Symposium on Gnotobiology.**

On 19-22 November, 2011 a team of 4 scientists from the Institute of Microbiology and Virology of Ukrainian National Academy of Sciences and Uzhhorod National University participated in the Joint Meeting of the XVII International Symposium on Gnotobiology (ISG) and the XXXIV Congress of the Society for Microbial Ecology and Disease (SOMED) in Yokohama, Japan. The event was sponsored by the U.S. Department of Energy/ National Nuclear Security Administration's Global Initiatives for Proliferation Prevention (GIPP) Program.

The symposium program's objectives were to share knowledge, techniques, and solutions of each Institute in the field of biotechnologies and health, and promote further collaboration between Japan, US and CIS countries. Studies, projects, technological solutions and real-life examples tangible results were presented.

During the mission Ukrainian scientists established useful contacts for possible future partnerships.

## STCU delegation visits American Geophysical Union Fall Meeting 2011

### Mission to San Francisco

December 5-9, 2011, a delegation from the Department of Nuclear Physics and Power Engineering of Ukrainian Academy of Sciences participated in American Geophysical Union Fall Meeting 2011 in San Francisco, California. The trip was arranged by STCU with the financial assistance of the U.S. Department of Energy/ National Nuclear Security Administration's Global Initiatives for Proliferation Prevention (GIPP) Program. The event was an opportunity for scientists from Ukraine to present their research, to learn about the latest breakthroughs in geophysics, and to connect with their colleagues.

The scientists from three Ukrainian research institutes exhibited poster presentations and established useful business contacts with potential partners from around the world.

After the meeting the delegation visited Lawrence Livermore National Laboratory for additional consultations on three S&T projects in the field of Nuclear Forensics that were approved for funding by GIPP. In addition to this a new possible National Nuclear Forensics Library Project was discussed in order to support Ukraine to strengthen accounting of radiological material, advance knowledge of nuclear forensics, and provide a framework for international collaboration for investigating and prosecuting smuggling incidents.

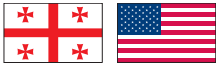


# 2011 Highlights and Accomplishments

## Sustainability Promotion Department

Fabrication of novel nanostructural Cu-W compositions with improved electronic properties

### STCU Project #P446



Total funds allocated: 110.000 USD

**STCU partner project #P446, “Fabrication of novel nanostructural Cu-W compositions with improved electronic properties”** started October 01, 2010 and continued through 2011. The participating Institutions were Lawrence Livermore National laboratory (LLNL) from USA and two Georgian Institution: Andronikashvili Institute of Physics and Tsulukidze Mining Institute. The project was financed by U.S. Department of Energy/ National Nuclear Security Administration’s Global Initiatives for Proliferation Prevention (GIPP) Program.



The view of HEC Cu-W billets fabricated at 900°C at intensity of compression 5 GPa.

The developed hot explosive consolidation technology (HEC) of nanoscale Cu-W precursors allows the fabrication of nanostructural high density composites with improved electronic properties and wide



Manager of project #P446 from TMI Dr. Elguja Chagelishvili (left), partner from LLNL Dr. Don Lasuer (center) and team members in process of preparing joint HEC experiment at underground chamber.

range of characteristics depending on content of nanoscale tungsten. It was established that the Cu-W composites containing nanometer-scale W have a stronger diamagnetic susceptibility response and are characterized with a lower dependence of susceptibility to the applied magnetic field than composites containing micrometer grain size W or pure copper.

It was established that HEC technology has advantages in contrast to static consolidation and allows fabricating highly dense long body cylindrical billets with high value strength characteristics.

These important results show that this technique allows fabrication of Cu-W compositions for: Optoelectronics, Heat dissipation materials in the microelectronics field, Diverter plates in fusion reactors and High voltage releases.

New treatment strategies against cancer have been detected

## STCU Project #5148



Total funds allocated: 246.724 USD

Within the **STCU Project#5148 “Development of a novel bacterial preparation for immunotherapy of cancer”** the newly constructed preparation obtained from gram-negative bacteria has been tested against cancer growth. Experiments were carried out on non-purebred and C57BL/6J laboratory mice at Ehrlich adenocarcinoma growth. The obtained results demonstrates encouraging and promising results:

- *Safety of administration and good tolerance of preparation in experimental animals;*
- *Inhibition of cancer growth;*
- *Decrease in rate of cancer development;*
- *Complete regression of small cancers;*
- *Prolongation of lifespan of experimental animals;*
- *Almost equally expressed anti-tumor treatment efficacy of preparation as is shown by conventional mono-chemotherapy;*
- *Well expressed adjuvant anticancer treatment effect in combination with chemotherapy (vaccination vividly increased efficacy of chemotherapy).*

According to the results of immunological and morphological investigations it was discovered that anti-cancer efficacy of preparation along with expected immunoregulatory properties, could be related also with anti-angiogenic activity.

The developed preparation demonstrates dual action: Immunoregulatory and Anti-angiogenic. So, two major and powerful treatment strategies against cancers have been detected.

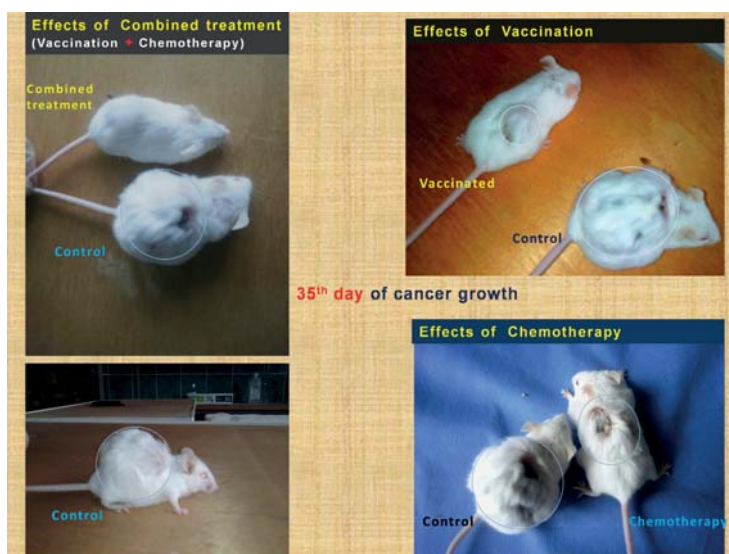
\* A novel immunotropic preparation (prospective treatment alternative/supplement at cancer therapy) will be developed;



Project manager Prof. Ketevan Gambashidze and team (Staff members of the project GE#5148)

\* Considering the low cost of the product (in comparison with other immunotropic preparations and chemo-/radiotherapy) the social benefit of the treatment will be highly competitive.

The immunological changes developed in organism and cancer microenvironment of vaccinated animals suggests that along with cancers the developed preparation could be promising for other diseases related to malfunctioning of the immune system and similar pathogenesis. The developed preparation could have potential to be incorporated into conventional treatment methods against Tuberculosis and HIV infections.





# 2011 Highlights and Accomplishments

## Public Outreach Department

### Targeted Initiative Activity

In total for 2011, 23 Targeted Initiative projects (totaling approximately \$1.7 million USD) were approved and jointly funded by the STCU and the Recipient Parties.

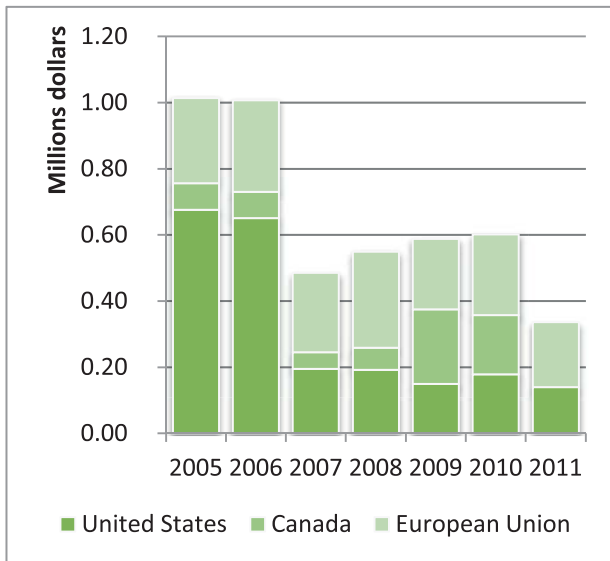
- For the seventh completed STCU-Ukraine Targeted Initiative cycle, 12 Targeted R&D Initiative projects were approved. The total amount of funding for these 12 projects was approximately \$840,000: \$139,981 + €196,173 – funded by STCU and \$420,000 provided by the National Academy of Sciences of Ukraine.
- For the fourth completed STCU-Azerbaijan Targeted Initiative cycle, 7 Targeted R&D Initiative projects were approved. The total amount of funding for these 7 projects was approximately \$700,000: \$122,768 + €166,192 – covered by STCU and \$350,000 USD - from the National Academy of Sciences of Azerbaijan.
- For the fifth STCU-Georgian Targeted Initiative cycle, it was decided to postpone the funding decision until the next TI meeting (June 2012), in order to re-establish the usual project review cycle, when funding decisions are taken jointly for Ukrainian and Georgian projects, and Moldavian are awarded at the same Board as Azeri projects.
- For the third STCU-Moldovan Targeted Initiative cycle, 6 Targeted R&D Initiative projects were approved. The total amount of funding for these 6 projects was approximately \$300,000: USD \$12,500 + €102,726 - covered by STCU, approximately \$150,000 USD - from the Academy of Sciences of Moldova.

Those Projects which were approved for funding by the Parties at GBM31 (November 2010) and GBM30 (May 2010) are in process of implementation in accordance with the approved schedule. They will be completed in Feb 2013 (Azerbaijan, 24 months duration), March 2013 (Moldova, 24 months duration), April 2012 (Georgia, 18 months duration) and September 2012 (Ukraine, 24 months duration).

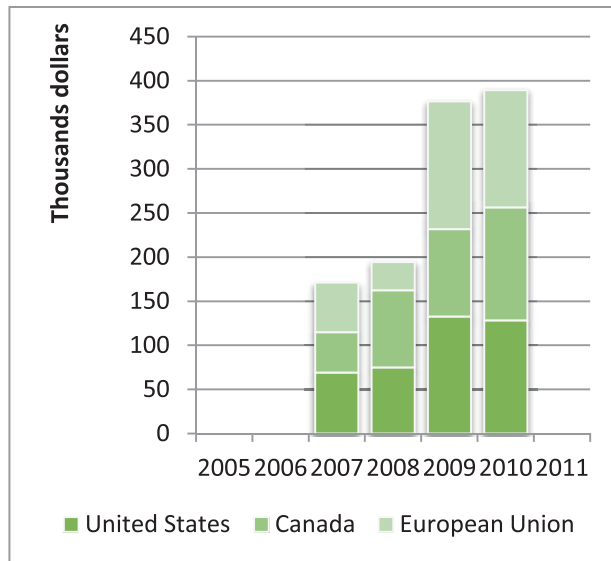
In addition to the TI projects mentioned, a joint Project with the State Space Agency of Ukraine was approved using the funds donated to STCU by the liquidated INTAS Program. Currently, the Project is underway in accordance with the approved Work Plan. Total amount of funding is 600,000 Euro, with co-funding from STCU (300,000 EUR) and the State Space Agency of Ukraine (300,000 EUR).

2005-2012 STCU TI Program funding distribution by the Funding Parties (United States, Canada and EU) in:

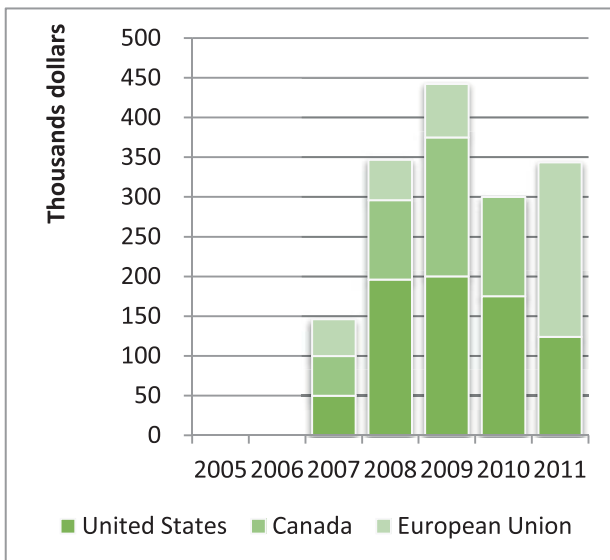
Ukraine:



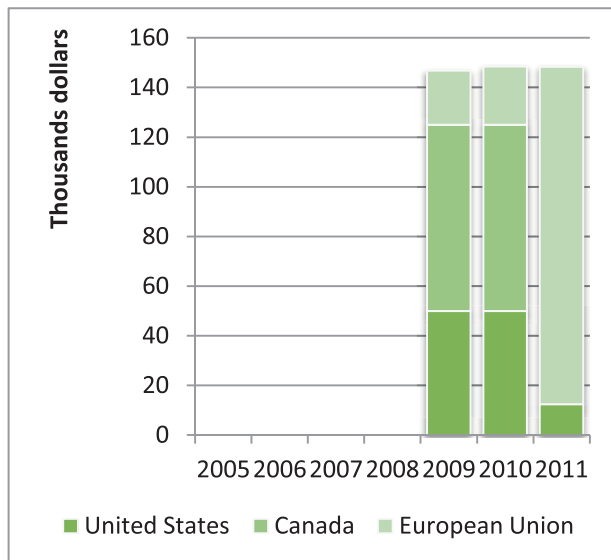
Georgia:



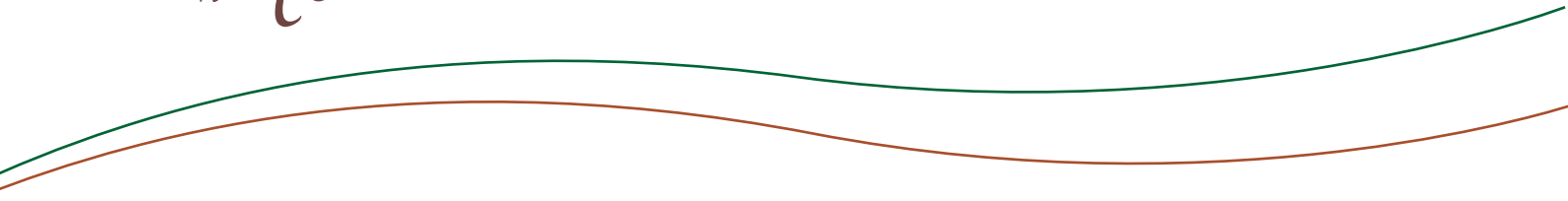
Azerbaijan:



Moldova:



# Notes



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# STCU Points of Contact

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