

**UW College of Agriculture and Natural Resources
Global Perspectives Grant Program
REPORT**

Award Period (e.g. Spring 2012): Fall, 2013

Principle Investigator(s) Dr. Valtcho Jeliaskov

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Project Title from Application: Development of Research Collaboration and Exchange with Eastern Europe: Slovakia and Serbia

Amount spent: \$5,007.69

Note: Additionally, around \$2,000 will be spent to cover the visit of Dr. Salamon from Presov University to UW in Oct, 2014

SUMMARY

This project had two goals: (1) to encourage faculty and graduate students exchange between the University of Wyoming (UW) and Presov University (PU) in Slovakia, (2) to expand existing research collaboration between Dr. Jeliaskov's program at UW and similar research program of colleagues in Eastern Europe. To meet the project's goals, Dr. Jeliaskov visited Slovakia and Serbia in the summer of 2014, while Dr. Salamon will be visiting UW in October, 2014. During his visit to Slovakia and Serbia, Dr. Jeliaskov had presentations at PU and at the Agricultural University in Nitra on: (1) Overview of the UW, College of Agriculture and Natural Resources, and (2) Overview on Jeliaskov's research program and opportunities for collaboration. In Slovakia, Dr. Jeliaskov visited several commercial companies and institutes dealing with high-value medicinal plant products, and with ecological agriculture. A Memorandum of Understanding between the two universities was developed and signed by the PU administration. In Serbia, Dr. Jeliaskov visited the Institute for Medicinal Plants in Belgrade, and the Institute for Field and Vegetable Crops in Novi Sad and in Backi Petrovac. In both countries, Dr. Jeliaskov collected material for writing a textbook for his classes he is teaching at the UW: AECL 4190/PLNT 5190 Herbs, Spices & Medicinal Plants, and discussed collaborative research with his colleagues. Colleagues and students from PU in Slovakia will be visiting Dr. Jeliaskov's laboratory and working on the planned research projects; Slovakian graduate student will be in Dr. Jeliaskov's lab for 4 month, while a Slovakian researcher will be coming for 3 months. This project is expected to help with the development of international linkages and improving the international exposure of the University of Wyoming.

REPORT

Main results of activities planned in the proposal.

The **goal** of this project was two-fold: (1) to foster faculty and graduate students exchange between UW and Presov University (PU) in Slovakia (2) to further existing research collaboration between Dr. Jeliaskov's program at UW and similar research program of colleagues in Eastern Europe.

Specific Project Objectives:

(1) Developing of Memorandum of Understanding between the University of Wyoming and Presov University in Slovakia.(2) To further existing research collaboration between Dr. Jeliaskov's program and Dr. Salamon's program and other similar programs. (3) To explore prospects for faculty and graduate student exchanges between the above mentioned universities and countries.

Major Results could be summarized as follows:

1. A Memorandum of Understanding (MOU) was developed following several draft exchanges between the two universities facilitated by Dr. Jeliaskov and Dr. Salamon. The MOU was signed by the Rector (President) of PU in Slovakia, and by the President of UW.
2. Dr. Jeliaskov and Dr. Salamon visited experimental sites with medicinal and aromatic plants and discussed further development of their research collaboration. Dr. Jeliaskov and Dr. Salamon and his associates worked on a joined manuscript, which was submitted for publication to a refereed journal (Industrial Crops and Products) in Sept. 2014.
3. Dr. Jeliaskov and Dr. Salamon visited several private and government owned companies and institutes dealing with medicinal plant production, herbal teas development and production, the production of secondary metabolites such as anthocyanins, pharmaceuticals, and cosmetics.
4. During his visit to Slovakia, Dr. Jeliaskov had presentations at PU and at the Agricultural University in Nitra on: (1) Overview of the UW, College of Agriculture and Natural Resources, and (2) Overview on his research program and opportunities for collaboration.
5. In Serbia, Dr. Jeliaskov visited several different facilities. First he visited the Institute for Field and Vegetable Crops (Department on Medicinal Plants and Products) in Backi Petrovac and in Novi Sad, a subdivision of Novi Sad seed company (<http://www.nsseme.com/en/>), with arrangements organized by Prof. Jan Kisgeci. In Novi Sad, we visited meetings with important members of Serbian Academy of Sciences. In Belgrade and in the surroundings, Dr. Jeliaskov visited 3 different sites of the Research Institute for Medicinal Plants Research "Dr. Josif Pancic" for two days. These were arranged by Dr. Dragoja Radanovic, director of the Institute. We visited the analytical laboratories, the field production and processing facility, and final product packaging facility. There were exciting discussions about the development of future collaborative research.
6. In both countries, Dr. Jeliaskov discussed potential collaborative projects with other researchers, administrators, and graduate students.
7. In both countries, Dr. Jeliaskov collected information materials necessary for the development of a manual or a textbook for his classes he is teaching at the UW: AECL 4190/PLONT 5190 Herbs, Spices & Medicinal Plants. Such textbook would greatly facilitate the delivery of this hybrid course to the UW and other undergraduate and graduate students.

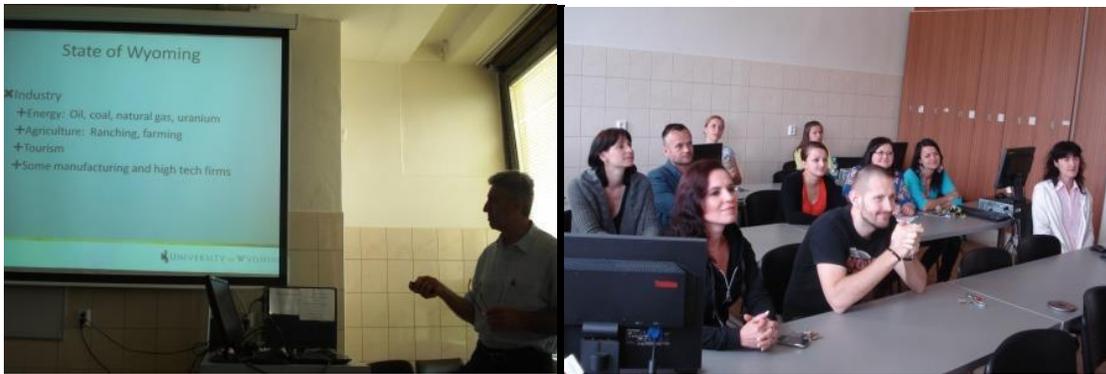
Future plans

1. Dr. Salamon will be visiting Dr. Jeliaskov's program at UW for one week in October, 2014.
2. Dr. Salamon will participate in some of Dr. Jeliaskov's laboratory and field projects.
3. The two teams will be writing additional joined manuscript for refereed journal publication.
4. Dr. Jeliaskov will be visiting Slovakia again in 2015 to offer a short course on Organic Food Production at Presov University.
5. Colleagues and students from PU in Slovakia will be visiting Dr. Jeliaskov's laboratory and working on the planned research projects; in 2015, a Slovakian graduate student will be in Dr. Jeliaskov's lab for 4 month, while a Slovakian researcher will be visiting for 3 months. These visits will be financed by the European Union project awarded to Slovakian researchers.
6. Work on further faculty and student exchange between universities and institutes in Slovakia and in Serbia and UW.
7. Work on joined project proposals with colleagues from Slovakia and Serbia.

Outline of the potential impacts to a) the College of Agriculture and Natural Resources, b) the University of Wyoming, and c) the State of Wyoming

1. This project is expected to help with the development of international linkages and improving the international exposure of the UW and the COANR.
2. The presentations Dr. Jeliaskov made in Slovakia and subsequent discussions with administrators, (deans, associate deans), faculty and students may stimulate foreign students to apply to UW, and may foster cooperation that addresses common issues between the COANR and Slovakian universities.
3. The visits and discussions with colleagues in Serbia open the possibilities for joined project proposal and collaboration and possibly for exchange of faculty and students.
4. The materials collected in Slovakia and in Serbia will help to update UW classes with textbook and additional materials, which may benefit the UW students, COANR, UW, and Wyoming.
5. Dr. Salamon and Dr. Jeliaskov are discussing potential collaborative project on Junipers that will be submitted for consideration to industrial entities (manufacturers) in Europe. Dr. Salamon will be visiting UW in October to continue our work on Junipers and other native plants.
6. Development of collaborative international projects and exchange of faculty and students between universities in Slovakia and Serbia and UW is expected to increase the capacity of faculty and academic professionals to value cultural differences, to understand current global issues, and work with global partners.
7. The collaborative research with Dr. Salamon may result in new cultivar development and patenting in both Slovakia and in the United States. New cultivars may have a positive impact not only on the two universities, but also on the essential oil industries in Slovakia and in the United States. This may offer benefits to potential producers of medicinal and aromatic crops in Wyoming.

Photos from Dr. Jeliaskov's visits to Slovakia and Serbia:



Dr. Jeliaskov's presentations at Presov University in Slovakia.



Slovakia: Dr. Jeliaskov's visit at Mediproduct in Lipany, Slovakia (left). Factory outlet featuring the production of Agrocarpaty Ltd in Plavnica Slovakia. (right).



Slovakia: Visits at the Research station at Nova Lubovna (left) and a Research and breeding station on wheat and oilseeds at Maly Saris (right).



Serbia: Visits at the Institute for Field and Vegetable Crops (Department on Medicinal Plants and Products) in Backi Petrovac, a subdivision of NS SEME Novi Sad. Prof. Kisgeci explaining the distillation equipment (left), and beer making equipment (right).



Serbia: Visits to the Research Institute for Medicinal Plants Research "Dr. Josif Pancic" production fields and facilities (photos above and below).