

Tissue and Organ Culture

RECOOP HST Research Activity Inventory	
Please complete the template for each selected project your organization would like to share with the partners of the RECOOP HST Consortium and would like to invite other organizations to write FP7 or NIH proposals.	
Organization	Institute of Molecular Biology and Genetic of National Academy of Science of Ukraine
Area of the Research	Biotechnology
Title of the Research Activity	Development of technology of cryo-conservation of <i>Gentiana</i> tissue cultures
Department (complete address)	Principal Investigator or Head of the Research Group
Department of genetics of cellular populations Ukraine, 03143, Kyiv, Akad. Zabolotnogo str.,150.	Name: Prof. Kunakh V.A.
	Title: Institute of Molecular Biology and Genetic of NAS of Ukraine
	Tel: 5260798
	Fax: 5260759
	E-mail: kunakh@imbg.org.ua
Abstract	Maximum 500 characters
Partner: Dr. Smetanska, Department of Methods of Food Biotechnology, Berlin University of Technology, Germany Prof. Knorr, Department of Food Biotechnology and Process Engineering.	
a. Development of gentle cryo-conservation technology for preservation of genetic potential of rare and disappearing plants.	
b. It is important to develop gentle process for recovery of intracellular metabolites (xanthonenes, flavonoids), based on the principle of increasing membrane permeability under the different treatments (high intensity pulsed electric fields, high hydrostatic pressure or osmotic stress).	
Methods used	Maximum 300 characters
1. Cryo-conservation technology;	
2. Method of increasing membrane permeability under the different treatments (high intensity pulsed electric fields, high hydrostatic pressure, ultrasound or osmotic stress)	
Related references (max 3)	Indicate the impact factor of the cited reference
Smetanska I, Schonhof I, Krumbein A, Knorr D, Schreiner M. accepted on 10.2006. Dynamic of glucosinolates in <i>Brassica rapa</i> under the influence of elicitors. <i>Journal of Biotechnology in Horticulture</i>	
Страшнюк Н. М., Леськова О. В., Мельник В. М., Кунах В. А. Отримання та біохімічний аналіз культури тканин тирличу безстеблевого (<i>Gentiana acaulis</i> L.) // Вісн. Укр. тов-ва генетиків і селекціонерів. – 2006. – 4, № 1. – С. 89-95.	
Smetanska I, Krumbein A., Knorr D., Schreiner M. Submitted on 01.2007. Impact of elicitors on glucosinolates in exudates of turnip. <i>Journal of Agricultural and Food Chemistry</i> .	
Related Inventions Disclosures and Patents	
Smetanska I., Schreiner M., Knorr D., Schonhof I., Krumbein A., Maikath K. 2.08.2005. "Receiving of glucosinolates from exudates of <i>Brassicaceae</i> "	
Кунах В.А., Музика В. І., Можилевська Л. П., Колоніна І. В. Спосіб одержання біологічно активних речовин унгернії Віктора <i>Ungernia Victoris</i> Vved. Ex Artjushenko // Деклараційний патент на винахід № 42982 від 15.11.2001. – Бюл. № 10.	

RECOOP HST Research Activity Inventory						
Please complete the template for each selected project your organization would like to share with the partners of the RECOOP HST Consortium and would like to invite other organizations to write FP7 or NIH proposals.						
Organization	Palladin Institute of Biochemistry of NAS of Ukraine					
Area of the Research	BIOTECHNOLOGY, GENERIC TOOLS AND MEDICAL TECHNOLOGIES FOR HUMAN HEALTH (molecular biology of coenzymes)					
Title of the Research Activity	Development of active complex for correction of bioenergetical status under cardiovascular disease					
Department (complete address)	Principal Investigator or Head of the Research Group					
Palladin Institute of Biochemistry of NAS of Ukraine Coenzymes' Biochemistry Department 9, Leontovicha str., Kyiv, 01601, Ukraine Head of department, Doc. Sci., Professor, Corresponding member of NAS of Ukraine Georgiy Donchenko	Name: Olena Kuchmenko					
	Title: Ph.D.					
	Tel: (+38044) 2347178					
	Fax: (+38044) 2796365					
E-mail: <i>kuchmeh@yahoo.com</i>						
Abstract	Maximum 500 characters					
During pathological conditions such as cardiovascular disease, decrease in important bioenergetical characteristics (e.g. coenzyme Q content, activity of electron-transport chain enzymes, and activity of antioxidant enzymes) is observed. This effect may be counteracted by complexes of precursors and modulators of coenzyme Q biosynthesis. The results of the proposed project may constitute a significant advancement in understanding of regulation of coenzymes' biosynthesis and coenzymes' action under pathological conditions, and may have broad practical application.						
Methods used	Maximum 300 characters					
TLC and HPLC separation and purification, spectroscopic detection, cellular fractioning, centrifugation/ultracentrifugation, measurement of expression (PCR)						
Related references (max 3)	Indicate the impact factor of the cited reference					
Donchenko G.V., Kuhmenko O.B., Petukhov D.M. Biochemical properties and functional role of ubiquinone (Coenzyme Q). Aspects of practical use // The Ukrainian Biochemical Journal.-2005.- V. 77, No 5.-P.24-36						
Kuchmenko O.B., Petukhov D.M., Donchenko G.V. Parameters of bioenergetical exchange in normal animals' cells under effect of precursors and mediators of ubiquinone biosynthesis // Medical Chemistry.-2004.-V.6 No 3.-P.88-90						
Petukhov D.M. Changes in ubiquinone content and activity of mitochondrial enzymes under effect of certain ubiquinone precursors // The European Journal of Biochemistry. - 2004. - V. 271, Suppl. 1. - P.176.						
Related Inventions Disclosures and Patents						
Patent A61K31/192, 31/355, A61P3/00 UA (15.07.2005): "Method for Improvement of Intracellular Energetic Exchange of the Organism", Donchenko G.V., Kuzmenko I.V., Petukhov D.M., Klimenko K.P.						
Patent announcement No. A 2006 10264 from 26.09.2006 ""Energovitam"" complex preparation for improvement of intracellular energetical exchange of the organism". Donchenko G.V., Kuzmenko I.V., Kuchmenko O.B., Petukhov D.M.						
Planning grant application (please mark your selection with X)			FP7	X	NIH	X
Only participating in projects (please mark your selection with X)			FP7	X	NIH	X