

Metabolic

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	Slovak Medical University - Department of Clinical and Experimental Pharmacotherapy
Research Groups in the Department	
Group	Head (name and e-mail address)
Nephrology	Prof. MUDr. Viera Spustová, DrSc. Viera.spustova@szu.sk MUDr. Adrian Okša, PhD. Adrian.oksa@szu.sk
IR, MS	Doc. MUDr. Martin Gajdoš, PhD. Martin.gajdos@szu.sk
Osteoporosis	Prof. MUDr. Viera Spustová, DrSc. Viera.spustova@szu.sk RNDr. Zora Krivošíková, PhD. Zorka.krivosikova@szu.sk MUDr. Kornélia Štefíková, PhD. Kornelia.stefikova@szu.sk
AGEs	MUDr. Katarína Šebeková, DrSc. Katarina.sebekova@szu.sk
Hypertension, dyslipidemia, cardiovascular risk factors	Doc. MUDr. Martin Gajdoš, PhD. Martin.gajdos@szu.sk
2. Main areas of ongoing research in the Department	
<ul style="list-style-type: none"> • Clinical and experimental nephrology • Insulin resistance, metabolic syndrome • Osteoporosis • Hypertension, cardiovascular risk factors, dyslipidemia • Advanced glycation end products • Oxidative stress, microinflammation 	
3. Methods used in the Department	
<ul style="list-style-type: none"> • Routine and special (ELISA, RIA) methods of blood chemistry and hematology • Molecular biology – SNPs, gene expression • Bone densitometry • Standard diagnostic methods (USG, holter monitoring,...) • Animal (rodent) models of renal diseases • Phase I-IV clinical trials 	

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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	Danylo Halytsky Lviv National Medical University		
Area of the Research	Diabetes Diagnosis		
Title of the Research Activity	The role of NOS, COX-2, CCK-2 gastrine receptors and antioxidant enzymes in the development of diabetic exocrine dysfunction of pancreas		
Department (complete address)	Principal Investigator or Head of the Research Group		
Department of Biochemistry, Danylo Halytsky LNMU Lviv National Medical University, Pekarska str., 69 Lviv, 79010, UKRAINE	Name: Olexandr Sklyarov		
	Title: prof., PhD, MD.		
	Tel: 8 10 322 757602		
	Fax: 8 10 322 757602		
E-mail: sklyarov@meduniv.lviv.ua			
Abstract	Maximum 500 characters		
Elevated levels of glucose induce oxidative stress and shift in the activity of antioxidant enzymes, NOS, COX-2. Pathogenic relationships between the severity of diabetes, peculiarities of metabolic shift and status of pancreatic exocrine function are poorly understood today. Significantly higher activities of antioxidant enzymes were found in diabetic patients at the different stages of the disease. Special attention should be paid to the oxidative stress development and its interaction with main regulatory enzymes such as NOS and COX-2 and screening of possible sites of therapeutic influence on these processes.			
Methods used	Maximum 300 characters		
Experimental model of streptozotocine-induced diabetes in Wistar rats; clinical material; spectrophotometric methods: NOx estimation, L-arginine, MDA and diene conjugates, protein oxidative modification, catalase activity, SOD activity, reduced glutathione, glutathione-cycle enzymes activity.			
Related references (max 3)	Indicate the impact factor of the cited reference		
1. Sklyarov O.Ya., Fedorovych I.P., Fartushok N.V., Kolinkovskyy O.M., Fedevych Yu.M., Fedorenko V.P. Lipid peroxidation and shift in the fatty acid spectrum in the blood serum in patients with diabetes// 3 rd Western Ukraine Symposia of Absorption and Chromatography. – Lviv. – "Spolom". – 2003. – P. 185-187.			
2. Boyko R.L., Fartushok N.V., Kolinkovskyy O.M., Markevych Yu.O. Fibrinogen and nitric oxide as markers of acute inflammation in the diabetic patients with diabetic foot// Acta Medica Leopoliensa. – 2001. – Vol. 7. – №2. – P. 59-61.			
3. Fartushok N.V., Fedorovych I.P., Kolinkovskyy O.M., Markevych Yu.O., Gluschuk R.V. Nitric oxide estimation (NO ₂ ⁻) in the diabetic patients with necrotic-inflammatory complications of the foot// Praktychna Medytsyna. – 2001. – №1. – P. 51-54			
Related Inventions Disclosures and Patents	Sklyarov O.Ya., Fedorovych I.P., Fartushok N.V., Kolinkovskyy O.M., Fedevych Yu.M. Information letter: "Estimation of nitrite-anion in the saline as non-specific marker of the inflammation". – Kiev 2004. – №118		
Planning grant application (please mark your selection with X)		FP7	NIH

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	
Organization	Lviv National Medical University
Area of the Research	TRANSLATIONAL RESEARCH IN OTHER MAJOR DISEASES or DISEASE PREVENTION
Title of the Research Activity	Glucose level and cholesterol level monitoring research and manufacturing
Department (complete address)	Principal Investigator or Head of the Research Group
Endocrinology Department: Ostrozsky Str., Lviv, 79010, Ukraine	Name: <u>Olesya Kikhtyak</u> , M.D., Ph.D
	Title: Associate Professor
	Tel: +380-322- 72 26 60
	Fax: :+380-322-76 79 73
E-mail: <u>olesya66@mail.ru</u>	
Abstract	Maximum 500 characters
<p>Our interest is directed toward type 2 Diabetes Mellitus (DM2), namely searching new treatment approaches regarding DM2 alone or DM2&overweight. We pay special attention to development criteria for good prescribing regarding drugs which are able to influence insulin resistance. Recent aim of our study is to find criteria for adequate pathophysiological treatment of insulin resistance in patients with DM2&overweight with regard to what kind of insulin resistance markers prevails.</p>	
Methods used	Maximum 300 characters
<p>We conduct following laboratory investigations: 1.FFA, LDLP, HDLP, ALAT, total cholesterol, triglycerides, HbA1c, fasting and postprandial glucose levels, urine analysis. Instrumental investigations (ECG, EchoCG) also will be realized by our efforts. Providing patients with drugs (Glucophage[®], Pioglar[®], Amaryl[®], Micardis[®]) during all period of investigation.</p>	
Related references (max 3)	Indicate the impact factor of the cited reference
Kikhtyak O.P. Kikhtyak A.T. Pathochemical mechanisms of diabetes mellitus angiopathies development. Heart & Vessels. 2005; 3: 105-109	
Kikhtyak O.P., Safonova O.V., Urbanovich A.M., Skrypnik N.V., Kikhtyak C.A. Early alterations in pathogenesis of diabetes mellitus and perspective of their improvement. Bulletin of scientific investigations. 2004; 4 (37): 66-67.	
Kikhtyak O.P., Zimenkovsky A.B. Conceptual pharmacotherapy in lecture notes. – Lviv, 2006. – 152 p.	
Related Inventions Disclosures and Patents	Taking part as investigator in a Multi-Center, Multi-national, Non-interventional Study (<i>Micardis[®] Non-interventional Study B I no 502.465</i>) assessing the safety and efficacy of Micardis [®] in patients with mild-to-moderate Essential Hypertension, Step I

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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 NAS of Ukraine			
Area of the Research	TRANSLATIONAL RESEARCH IN OTHER MAJOR DISEASES Metabolic - diabetes and obesity			
Title of the Research Activity	Development of a new preparation for treatment of diabetes complications			
Department (complete address)	Principal Investigator or Head of the Research Group			
9, Leontovicha str., Kyiv, 01601, Ukraine O.V. Palladin Institute of Biochemistry NAS Ukraine, Coenzymes Biochemistry Department. Head of Coenzymes Biochemistry Department, Doc. Sci., Professor, corresponding member of NAS Ukraine Georgiy Donchenko	Name: Mykola Veliky			
	Title: Doctor of Science, Professor			
	Tel: 8 044 2347178			
	Fax: 8 044 2976365			
				E-mail: veliky@biochem.kiev.ua
Abstract	Maximum 500 characters			
Diabetes mellitus is one of the widely spread endocrine disease. To promote efficiency of insulin therapy of Type 1 diabetes and its complications by application of new preparation developed on the basis of the augmented doses of naturally occurring biologically active compounds is the primary objective of our research. Beyond the classic treatment for diabetes, we propose a new therapeutic strategy by using agents affecting energy metabolism, AGEs formation, exerting directly and/or non-directly antioxidative properties for treatment of diabetic complication. Since hyperglycemia is an underlying cause of chronic complication in insulin-dependent diabetes mellitus, substantial benefits are associated with "tight" glycemic control. Therefore our investigations should either enhance glycemic control per se or add benefit to an established degree of glycemic control.				
Methods used	Maximum 300 characters			
Determination of antioxidant enzyme activities: superoxide dismutase, glutathione peroxidase, glutathione reductase; accumulation of conjugated dienes and malondialdehyde; glucose flux through polyol pathway; aldose reductase and sorbitol dehydrogenase activities; the level of lipid peroxidation and non-enzymatic glycation.				
Related references (max 3)	Indicate the impact factor of the cited reference			
1. Veliky M.M., Zarytska M.V. Biochemical mechanisms of peripheral diabetic neuropathy development // Bukovinsky medical visnyk. – 2005.- 9, № 2.- C. 38-39.				
2. Sybirna N.O., Vovk O.I., Veliky mM.M. Role of phosphoinositide 3-kinase in platelet aggregation under Type 1 diabetes mellitus // The Ukrainian Biochemical Journal. – 2004, 76, № 5, C. 96-101.				
3. Shymanskyy I.O., Kuchmerovska T.M., Donchenko G.V., Veliky M.M., et al. Oxidative stress correction by nicotinamide and nicotinoyl-GABA in diabetic neuropathy// The Ukrainian Biochemical Journal. – 2002, 74, № 5, C. 89-95.				
Related Inventions Disclosures and Patents				
Planning grant application (please mark your selection with X)			FP7	NIH
Only participating in projects (please mark your selection with X)			FP7	NIH

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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	2 nd Department of Medicine and Nephrology Centre Medical School University of Pécs
Area of the Research	Diabetic nephropathy, atherosclerosis, oxidative stress, advanced glycation end products, renin-angiotensin-system, metabolic syndrome, end-stage renal failure
Title of the Research Activity	Metabolic syndrome
Department (complete address)	Principal Investigator or Head of the Research Group
2 nd Department of Medicine and Nephrology Centre Medical School University of Pécs H-7624 Pécs, Pacsirta út. 1, Hungary	Name: Prof. Dr. WITTMANN, István
	Title: Prof. Dr
	Tel: + 36 72 536050
	Fax: + 36 72 536051
	E-mail: istvan.wittmann@aok.pte.hu Web: http://medicine2.aok.pte.hu/
Abstract	Maximum 500 characters
Research area	
<ol style="list-style-type: none"> 1 One of our fields of research is the study of the connection of kidney diseases with oxidative stress and with serum level of glycation end products. 2 We are dealing with the importance of biomarkers in diabetes mellitus and in kidney diseases. 3 We are extremely interested in the role of metabolic syndrome and in kidney diseases in the development of atherosclerosis, and so, in the development of cardiovascular morbidity and mortality. 4 Proteinuria, especially albuminuria, is the marker of endothelial dysfunction in diabetes mellitus. For its appropriate detection, we are developing a new method. 5 Blood glucose level oscillations seem to play a crucial role in the development of diabetic vessel impairment. We are detecting blood glucose level oscillations with continuous glucose monitoring system (CGMS) and we are trying to draw inferences of its regulation. 6 Smoking has an exceptional role in the damage of endothelium. In our Western blot analyses we are measuring intracellular protein phosphorylation changes as a result of cigarette-smoke. 7 We have also the ambition to investigate the French-paradox. The essence of this phenomenon is that moderate red wine consumption protects against the development and progression of atherosclerosis. We are also dealing with the research of the molecules playing role in the French-paradox. 8 Nitrogen-monoxide (NO) production caused by insulin treatment is likely to improve the status of the endothelium. We measure simultaneously NO production induced by insulin therapy, its kinase system and the changes of the arterial stiffness. 	
Human resources	
researchers (11), professor (1), associate professor (1), assistant lecturers (2), medical doctors (2), PhD students (5)	

Special instruments	
Western-blot, HPLC with UV and fluorescent detector, ELISA, light microscopy, immunohistology, electronmicroscopy, continuous glucose monitoring system (CGMS), intracellular fluorescent functional measurements	
Methods used	Maximum 300 characters
Related references (max 3)	Indicate the impact factor of the cited reference
Related Inventions Disclosures and Patents	