

Stem Cell

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	Emergency Hospital of Bucharest			
Area of the Research	Stem cell therapy in cardiovascular diseases			
Title of the Research Activity	Autologous transplant of bone marrow stem cells in patients with acute myocardial infarction			
Department (complete address)		Principal Investigator or Head of the Research Group		
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Abstract	Maximum 500 characters			
Modern reperfusion strategies (stent implantation and aggressive inhibition of platelet aggregation) have been shown to increase myocardial salvage, but heart failure that develops remains a major cause of morbidity and mortality. Intracoronarian administration of bone marrow stem cells has been proved to contribute to the regeneration of infarcted myocardium and enhance neovascularization. In our study the patients will be divided in 2 groups, a group receiving stem cell therapy and a placebo group. All the patients will get standard therapy for ischemic cardiovascular disease.				
Methods used	Maximum 300 characters			
The 2 groups of patients will be periodically evaluated using clinical (full clinical examination, NYHA class evaluation, 6 minutes walking test) and paraclinical methods (blood analysis, ECG, ECG Holter monitorization, stress testing, echocardiography, angiography scintigraphy and MRI-in the future).				
Related references (max 3)	Indicate the impact factor of the cited reference			
Volker Schachinger et al., Intracoronary Bone Marrow-Derived Progenitor Cells in Acute Myocardial Infarction, NEJM September 21, 2006, impact factor 44				
Janssens S et al., Autologous Bone Marrow-derived Stem Cells Transfer in Patients with ST-segment Elevation Myocardial Infarction: Double-blind, Randomized Controlled Trial, Lancet 2006 January 14, impact factor 23,4				
Ketil Lunde et al., Intracoronary Injection of Mononuclear Bone Marrow Cells in Acute Myocardial Infarction, NEJM September 21, 2006, impact factor 44				
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	X	NIH X

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Organization	Institute of Molecular Biology and Genetics of National Academy of Sciences of Ukraine (IMBG NASU)
Area of the Research	Biotechnology, Generic Tools and Medical Technologies for Human Health. Stem Cells, Adult. Cellular Cardiomyoplasty
Title of the Research Activity	DEVELOPMENT OF THE TECHNOLOGY FOR CELLULAR CARDIOMYOPLASTY WITH USING ADULT MESENCHYMAL STEM CELL LINES AND EXPERIMENTAL MODELS OF MYOCARDIAL INFARCTION
Department (complete address)	Principal Investigator or Head of the Research Group
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Abstract	Maximum 500 characters
The purpose of the project is the development of novel technology of cellular cardiomyoplasty with a help of new methods of stem cell biology and tissue engineering in vitro and appropriate experimental models in vivo (mice and pigs) for further usage in surgery for treatment of cardiac pathologies. As a result of completion of this project effective method for cell therapy of acute myocardium infarction in experimental model with big animals have been developed. This should give the basis for further establishment of protocol for clinical trials	
Methods used	Maximum 300 characters
At the first stage of this work it will be done cultivation and differentiation of human cells in vitro. The second stage is the injection of cell probes into damaged myocardium of experimental animals (mice, pigs), observation and analysis. The third stage is the characterization by immunophenotyping the probes of parental cells and their derivatives before and after the injection into the organism. The fourth stage is optimization of the method of cell therapy and design of the application for the patent	
Related references (max 3)	Indicate the impact factor of the cited reference
McGregor W.G., Chen R-H., Lukash L., maher V.M., McCormick J.J. Cell Cycle-Dependent Bias for UV-Induced Mutations in the Transcribed Strand of Excision Repair-Proficient Human Fibroblasts but Not in Repair-Deficient Cells // Molecular and Cellular Biology.-1991.-11, N 4.-P.1927-1934.	
Lukash L.L., Boldt J., Pegg A.E., Dolan M.E., Maher V.M., McCormick J.J. Effect of O6-alkylguanine-DNA alkyltransferase on the frequency and spectrum of mutations induced by N-methyl-N'-nitro-N-nitrosoguanidine in the HPRT gene of diploid human fibroblasts // Mutation Research.-1991.-250.-P.397-409.	
Lukash L.L., Bazika D.A., Belyaeva N.V., Kovalenko O.A., Pidpala O.V., Yatsishina A.P. Myogenic differentiation of adult human mesenchyme stem cells in vitro // The International Journal of Artificial Organs.-2006.-29, N 5.- P. 509.	
Related Inventions Disclosures and Patents	There are planned two patents: 1) the method of cellular cardiomyoplasty and 2) human cell lines
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)	