FAFB Topics of Interest*

Name of the country	Kazakhstan

Research topic	Application of culture of cells of human fibroblasts combined with collagen membranes for curing the burns, wounds and trophic ulcers	
Main representative of the topic in the country	Name of scientist	Kaulambayeva Marzhan
	Institution	Antigen RPE
	Contact data	+7 701 7398356, +7(727)3 89 04 68, marzan61z@mail.ru
Results related to the topic achieved by the country's scientists	It has been separated the diploid strain of fetal human fibroblasts. The cultural and morphologic properties of that strain have been studied. It has been created the low temperature conservation bank. The diploid strain of fetal human fibroblasts is described and deposited in Republican Collection of Microorganisms and Cell Cultures. It has been made the experimental study of use of diploid strain and collagen membranes of fetal human fibroblast for curing the bone defects and parodontosis. The technology of collagen production from the cattle calves' tendons and skin has been developed. The production of collagen membranes and tubes is implemented.	
International contacts in the topic's area	No	
Why is the topic important for the country?	Human fibroblasts and collagen medicals may be used for curing the burns, wounds and trophic ulcers. Application of fibroblast cells and collagen leads to regeneration of the skin and avoids the healing scar tissue forming. Thus, developing and implementation in clinical practice the methods of cell technology and tissue engineering for curing the bone defects is a very important factor for improving the population health.	
Does this topic match the national S&T priorities/strategy?	Application of human fibroblasts and bone collagen for curing the burns, wounds and trophic ulcers as well as further development of cell technologies and tissue engineering in medicine corresponds to National scientific and technical priorities of the country.	

*topics in the area of food, agriculture, fisheries and biotechnology which can be of mutual interest for the European Union and the country

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Research from Academia and Industry - Profile form

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International contacts in the topic's area	No	
Why is the topic important for the country?	Human fibroblasts and collagen medicals may be used for curing the bone defects caused by traumas, destructive and oncological diseases of the bones. Application of fibroblast cells and collagen leads to regeneration of the bone tissue on the place of defect. Thus, developing and implementation in clinical practice the methods of cell technology and tissue engineering for curing the bone defects is a very important factor for improving the population health.	
Does this topic match the national S&T priorities/strategy?	Application of human fibroblasts and bone collagen for curing the bone diseases as well as further development of cell technologies and tissue engineering in medicine corresponds to National scientific and technical priorities of the country.	

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Research from Academia and Industry - Profile form

Name of the country	Kazakhstan

Research topic	Improvement and development of the methods of selective separation of mesenchymal stem cells into cardiomiocytes in vitro for curing the cardiac insufficiency.	
Main representative of the topic in the country	Name of scientist	Kaulambayeva Marzhan
	Institution	Antigen RPE
	Contact data	+7 701 7398356, +7(727)3 89 04 68, marzan61z@mail.ru
Results related to the topic achieved by the country's scientists	Separation, cultivation, cryoconservation and phenotyping of cord blood and bone marrow stem cells according to international protocols. Establishing the bank of stem cells of cord blood and bone marrow in cooperation with Scientific Center of Gynecology, Obstetrics and Perinatology. Separation of cultures of mesenchymal stem cells with osteogenic differentiation. Experimental and clinical tests proving of use the stem cells for curing the bone defects and parodontosis have been made.	
International contacts in the topic's area	No	
Why is the topic important for the country?	Invalidity and death levels caused by cardiac system is the most frequent at the present time in Kazakhstan. The selective separation of mesenchymal human stem cells into cardiomiocytes allows proving both experimentally and clinically the application of cardiomiocytes cultures in curing the cardiac insufficieny. Thus, development and implementation into clinic practice the methods of cell technologies for curing the hepatocirrhosis is very important for the country.	
Does this topic match the national S&T priorities/strategy?	Selective separation of mesenchymal stem cells into cardiomiocytes in vitro for curing the cardiac insufficiency and further development of cell technologies in medicine corresponds to scientific and technical priorities of the country.	

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ORGANISATION LOGO

Research from Academia and Industry - Profile form

Name of the country	Kazakhstan

Research topic	Improvement and development of the methods of selective separation of cord blood and bone marrow stem cells into hepatocytes in vitro for curing the hepatocirrhosis.	
Main representative of the topic in the country	Name of scientist	Kaulambayeva Marzhan
	Institution	Antigen RPE
	Contact data	+7 701 7398356, +7(727)3 89 04 68, marzan61z@mail.ru
Results related to the topic achieved by the country's scientists	Separation, cultivation, cryoconservation and phenotyping of cord blood and bone marrow stem cells according to international protocols. Establishing the bank of stem cells of cord blood and bone marrow in cooperation with Scientific Center of Gynecology, Obstetrics and Perinatology. Separation of cultures of mesenchymal stem cells with osteogenic differentiation. Experimental and clinical tests proving of use the stem cells for curing the bone defects and parodontosis have been made.	
International contacts in the topic's area	No	
Why is the topic important for the country?	One of the most promising ways of curing the hepatocirrhosis is application of cell technologies. The selective separation of human stem cells for further manipulations is one of the most promising directions of 21st century's biotechnology. The selective separation of human stem cells into hepatocytes allows proving both experimentally and clinically the application of hepatocytes cultures in curing the hepatocirrhosis. Thus, development and implementation into clinic practice the methods of cell technologies for curing the hepatocirrhosis is very important for the country.	
Does this topic match the national S&T priorities/strategy?	Selective separation of cord blood and bone marrow stem cells into hepatocytes in vitro for curing the hepatocirrhosis and further application in medicine corresponds to scientific and technical priorities of the country.	

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