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Regenerative medicine and its armamentarium in promoting personalized pediatric healthcareVladimir Sukhorukov^{1, 2} and Valeria Glinkina¹¹I.M. Sechenov First Moscow State Medical University, Russia²Pirogov Russian National Research Medical University, Russia

The development of regenerative medicine is one of the most effective trends in personalized healthcare of the future to come. In turn, one of the most important fields of the activities is Personalized Pediatric Healthcare Services (PPHCS) to be developed as key predictive, diagnostic, preventive, therapeutic and rehabilitative tools to ensure healthy and wealthy life. The development of the pediatric aspects of regenerative medicine would include a number of features drastically distinguishing this segment of PM from the other ones: (1) Chronic disease often starts up as being asymptomatic in the early childhood. Accordingly, in this period namely, which would initiate with the marked efficiency preventive and prophylactic interventions, including those related to the direct applications of tools to be rooted from the regenerative medicine, (2) Childhood is a period to be opened for developing and flowering of most (including orphan and hereditary) of the diseases, because of their severity canonical healthcare services would not combat the latter. And it would thus be an area to suit the goals of regenerative medicine-related measurements. Potential progress in this direction can significantly reduce mortality and improve quality of life among those patients. It should be noted that those gains, particularly in the treatment of monogenic diseases, as occurring commonly in children, can be models for the development of new methods to illustrate regenerative potential of treatment as applicable to a scope of disorders mentioned, (3) An important feature of the trend and thus the tools is the high-level regenerative and plasticity-related potential of children's tissues. This capacity greatly strengthens regenerative efficacy, both in terms of tissue and intracellular regeneration. As an example of the later, we will present our data on the compensatory origin of mitochondria proliferation, counterweighing clinical manifestations of some of the hereditary diseases.

Biography

Vladimir Sukhorukov is the Head of the General Pathology Department at N.I. Pirogov Russian National Research Medical University and Professor of the Center for Personalized Medicine in I.M. Sechenov First Moscow State Medical University, Russia. Currently he is associated with an organization of investigations in different aspects of pediatric pathology (mitochondrial diseases, other inherited metabolic diseases, neuromuscular diseases, etc.) with use of chromatography, mass-spectroscopy, molecular-genetic, immunohistochemical studies and other.

vsukhorukov@gmail.com

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