Viral myocarditis as a model to clearly demonstrate the impact and role of the human endomicrobiota changes into the development of chronic autoimmune diseases

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Myocarditis is a chronic disorder with an autoimmune component which characterized by inflammation, decrease in myocardial function and damage of the heart muscle. In the case of no treatment, this process may lead to end-stage cardiac failure and death. Several thousand patients per year are diagnosed with this condition. Understanding that myocarditis is a disease of adult and pediatric patients make the situation worse. Experts believe that 5% to 20% of all cases of sudden cardiac death in children and young adults are due to myocarditis. Although inflammatory cardiomyopathy is more common among men, there is no convincing evidence of a genetic predisposition to the development of this disease. Moreover, the biomarkers which certainly predict myocarditis development before manifestation are still unknown. Although, the exact causes of an individual case of myocarditis are not identified, it is possible to conclude that the main case of the myocarditis development is an infection while molecular mimicry is a mechanism of autoimmunity progressing and therefore development of chronic disorders. Consequently, the question “Could the changes in the human endomicrobiome be an inducing factor in the myocarditis development?” is still open. The PIFAS (post-infectional autoimmune syndrome) conception can throw light on the mechanism of viral myocarditis progressing. But only creating and clear understanding with bioinformatics instruments, full pathologic pathways maps enable to find biomarkers of novel generation, determine targets and discover high-efficient drugs based on personalized features.

Biography
Mandrik Mark is a student of I.M. Sechenov First Moscow State Medical University. He is a member of Young Research Team under the aegis of EPMA (Brussels, EU) and ISPM (Tokyo, Japan). He is an author of serial articles about PPPM. He is also a Developer of several multimedia guides to Chemistry and Microbiology. His sphere of interests is meta-genomics, microbiology & immunology, autoimmune and chronic diseases.

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