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### *Predictive, Preventive and Personalized Medicine (PPPM) as illustrating biomarkers and biopredictors and as being an integrative part of healthcare services to move ahead*

A new systems approach to disease to pay its crucial attention on the trend would result in a new branch in the healthcare services, namely, *predictive, preventive and personalized medicine* (PPPM). Meanwhile, all chronic disorders develop gradually over a period of time to take years for a process to reach a level where it could be diagnosed definitively and treatment initiated properly and in time before changes are irreversible! And to achieve the implementation of PPPM concept, it is necessary to create a fundamentally new strategy based upon the *subclinical* recognition of *biomarkers* and *biopredictors* of hidden abnormalities long before the disease clinically manifests itself. PPPM is thus a medical model being tailored to the individual and dictates a construction of PPPM algorithms to *diagnose, to predict, and to prevent* in time whilst following a concept of biomarkers impact into the daily practice! The key benefits of PPPM include new abilities: (i) to detect disease at a *subclinical* stage, when it is easier and less expensive to treat effectively; (ii) to stratify patients into groups that enable the selection of optimal *preventive* treatment; (iii) to reduce adverse drug effects by more effective early assessment of individual drug responses; (iv) to improve the selection of new *molecular targets* for drug discovery; (v) to shift the emphasis from illness to wellness. *The first discriminatory step illustrating the PPPM-oriented survey is estimating of the correlation strength between genetic polymorphism and risks of the disease, and subsequent construction of the groups at risks. Those goals can be solved by using of BioChip methodology (each disease has specific biomarkers and thus the individual fingerprints). As a result, a patient becomes a data carrier, i.e., he/she knows about possible risks of a disease, and the physician can reasonably select of preventive protocol, proceeding from the assays made. Individuals, selected at the first stage, undergo the second phase of the survey, which uses a panel of phenotypic biomarkers and biopredictors. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment. So PPPM whilst utilizing a highly promising concept of biomarkers and biopredictors, would offer great and real challenge for the future, and next generations will speak about the XXI century as a time, when healthcare services became predictive and preventive, and its outcomes – secured and guaranteed!*

### Biography

Sergey Suchkov graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov obtained his Ph.D. He is the Ph.D. student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology, USSR Academy of Medical Sciences, Moscow, Russia. In 2001, Suchkov finished the PostDoc Research Fellowship Program and maintained his Doctor Degree at the National Institute of Immunology, Russia. From 1987 through 1989, Dr. Suchkov was a senior Researcher, Lab of Developmental Immunology, Koltzov Institute of Developmental Biology, USSR Academy of Sciences to deal to developmental immunology. From 1989 through 1995, Dr. Suchkov was being a Head of the Lab of Clinical Immunology and Immunobiotechnology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004, Dr. Suchkov was being a Chairman of the Department for Clinical Immunology, Moscow Clinical Research Institute (MONIKI) and the Immunologist-in-Chief of the Moscow Regional Ministry of Health. At present, Dr Sergey Suchkov, MD, Ph.D., is Professor in Immunology, Department of Pathology, School for Pharmacy, I.M. Sechenov First Moscow State Medical University, Dean of the Department (Faculty) of The PPPM Development, and the First Vice-President of the University of World Business, Politics and Law and Secretary General, United Cultural Convention (UCC), Cambridge, UK.

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