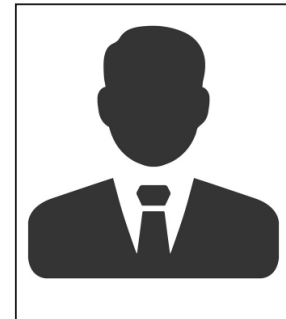


Title: Personalized and Precision Medicine (PPM) as a Unique Healthcare Model to Be Set Up via Translational Applications and Upgraded Business Modeling to Secure the Human Healthcare, Wellness and Biosafety



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A new systems approach to diseased states and wellness result in a new branch in the healthcare services, namely, personalized and precision medicine (PPM). To achieve the implementation of PPM concept, it is necessary to create a fundamentally new strategy based upon the recognition of biomarkers and thus the targets to secure the grand future of drug design and drug discovery.

Each decision-maker values the impact of their decision to use PPM on their own budget and well-being, which may not necessarily be optimal for society as a whole. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients resulting in improved patient outcomes, reduced adverse events, and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc.

PPM, genomics and AI are those of the most rapidly emerging areas of biomedical research and the most promising technologies for improving health care and health outcomes. Examples include the use of AI for improved DNA sequencing and SNP analysis to target specific cell and tissue types, biosensors for

specific molecules in vivo, and point-of-care molecular diagnostic devices enabled by genomics- and AI tools.

The enormous development of genomics research has raised great expectations concerning its impact on PPM aiming to customize medical practice with a focus on the individual, based on the use of genetic tests, identification of genomic biomarkers, and development of targeted drugs. Personal genomics is an area of genomics focusing specifically on the sequencing and analysis of one person's genome, and then giving them their genomic information.

PPM is a developing trend for the future of intensive care medicine. In this sense, the impact of physiology and pathology allows a modular approach, as its various aspects are under development in sometimes unrelated areas of PPM. Integration of the concepts will provide a true challenge for the future, requiring collaboration between clinicians, physiologists, pathologists, bio-designers and bioengineers and remaining a real challenge to bioindustry.

Pathology and Physiology are the central specialties of PPM. It is pathology that provides the skills, infrastructure, and scientific vision we need to lead the way in science-driven biobanking, and it is pathology that can help to ensure optimal research use of

human biosamples, In this sense, molecular diagnostics has a long tradition in pathology, especially in clinical one, where various OMICS-analyses of cancers are being incorporated into diagnostic and decision-making algorithms to secure a way where the pathologists continue to play an essential role in developing and implementing molecular profiling tests in practice and communicate the results and their relevance with clinician

Although “the next-generation pathologists” have already been launched, further and continuous educational efforts must fully implement the paradigm shift into diagnostic molecular pathology practice and reinvent it as a leading diagnostic discipline in the PPM era. Most of the approved and validated predictive biomarkers in PPM still require further optimization and standardization.

The combination of comprehensive biobanking and the next wave of theranostic pathology technologies provides a natural, externally visible infrastructure that now allows pathology as a discipline – to engage directly with the biotechnology and pharma sector. We’re at an exciting junction in pathology’s growth as a medical specialty, and pathology-driven biobanking is becoming both central to our core expertise and, even more importantly, a powerful enabler for many of the most promising growth areas of our discipline: PPM healthcare, clinical trials and drug development, theranostics, and functional assessment and monitoring of disease. In the context of these changes and challenges, the pathology can play a fundamental role in both clinical practice and research.

We stress that implementation of PPM thus requires a lot be-

fore the current model “physician-patient” could be gradually displaced by a new model “medical advisor-healthy person-at-risk”. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch. In short, PPM will transform the way doctors practice and will shake up the entire pharmaceutical value chain.

Biography

Biography: Sergey Suchkov was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov maintained his PhD as a PhD student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology. In 2001, Suchkov maintained his Doctor Degree at the National Institute of Immunology, Russia.

From 1989 through 1995, Dr Suchkov was being a Head of the Lab of Clinical Immunology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004 - a Chair of the Dept for Clinical Immunology, Moscow Clinical Research Institute (MONIKI). In 1993-1996, Dr Suchkov was a Secretary-in-Chief of the Editorial Board, Biomedical Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry,UK.