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Abstract

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

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Abstract:

Traditionally a disease has been defined by its clinical presentation and observable characteristics, not by the underlying molecular mechanisms, pathways and systems biology-related processes specific to a particular patient (ignoring persons-at-risk). A new systems approach to subclinical and/or diseased states and wellness resulted in a new trend 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 biomarkers and targets to have a unique impact for the implementation of PPM model into the daily clinical practice and pharma. In this sense, despite breakthroughs in research that have led to an increased understanding of PPM-based human disease, the translation of discoveries into therapies for patients has not kept pace with medical need. 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 and persons-at-risk resulting in improved outcomes and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc. Translational researchers, bio-designers and manufacturers are beginning to realize the promise of PPM, translating to direct benefit to patients or persons-at-risk. For instance, companion diagnostics tools and targeted therapies and biomarkers represent important stakes for the pharma, in terms of market access, of return on investment and of image among the prescribers. At the same time, they probably represent only the generation of products resulting translational research and applications. So, developing medicines and predictive diagnostic tools requires changes to traditional clinical trial designs, as well as the use of innovative (adaptive) testing procedures that result in new types of data.

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, 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, 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. At present, Sergey Suchkov is Professor, Director, Center for Personalized Medicine, I.M.Sechenov First Moscow State Medical University and Dept of Clinical Immunology, A.I.Evdokimov Moscow State Medical and Dental University.

Recent Publications:

1. Sergey Suchkov, et al Biomed Res Int, 2020.
2. Sergey Suchkov, et al Mol Ther, 2018.
3. Sergey Suchkov, et al Opt Lett, 2017.
4. Sergey Suchkov, et al J Am Heart Assoc, 2016.
5. Sergey Suchkov, et al Opt Lett, 2015.

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