



Evolution of Predictive Medicine

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Abstract:

Achievements in deciphering of human genome, identification of many thousands of genes responsible for genetic disorders expanded a lot of our knowledge in monogenic, oligogenic & multifactor diseases thus launching the era of “predictive medicine (PM) also to 3 PM (predictive, preventive, personified) (Baranov et al 2000, Baranov, Baranova, 2018) and somewhat later in 2008 after inclusion of “participatory” by Prof. L. Hood into 4PM. Further progressive development of 4PM was in line with spectacular achievements in molecular genome studies. Sophisticated identification of “predisposition” genes by means of whole genome testing (GWAS, NGS) of huge healthy and affected patient cohorts enriched with system genetic approach and relevant omics technologies significantly increased the practical value of PM thus gradually converting it into translation medicine (2010) which later (2015) gave a birth to “precision, individual molecular medicine”. Since the origin of PM its “sine qua non” (dry extract) has been represented by so called Personal Genetic Pass (GP)-the individual DNA data bank incorporating personal genetic information amenable for direct practical application in clinic. The major steps, problems and advances of PM in prediction, prevention, individual treatment and prognostic genetic testing as well as their contribution in evolution of GP to its modern electronic counterpart are briefly discussed.

Biography:

Vladislav S. BARANOV –born 1940, professor Member



of Russian academy of Sci. Chief Collaborator Department of Genomic Medicine, Ott's Institute of Obstetric, Gynecology, Reproductology. Interested in genetic and cytogenetic aspects of early development, gene testing of inherited predisposition to common disorders, personalized predictive medicine, gene therapy, The author and co-author of 29 books and over 400 scientific papers St Petersburg.

Publication of speakers:

1. Epigenetic landscape of endometriosis
2. The evolution of ideas on the biological role of 5-methylcytosine oxidative derivatives in the mammalian genome
3. New technologies and trends of prenatal diagnostics
4. Molecular association of pathogenetic contributors to pre-eclampsia
5. Reproductive History of a Woman With 8p and 18p Genetic Imbalance and Minor Phenotypic Abnormalities

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