

# PREDICTIVE, PREVENTIVE AND PERSONALIZED MEDICINE & MOLECULAR DIAGNOSTICS

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## Screening diagnostics of human health using the IT- Technologies is the base of preventive medicine

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On the basis of modern IT technologies, we have developed the computer versions of programs for screening diagnostics of physical and mental health of all subjects of the educational process (pupils, students, teachers, athletes). According to the experts, there are no similar electronic passports of health in one country of the world. These programs allow to provide personal quantitative assessment of the level of physical health based on anthropometric and physiometric parameters; the level of physical fitness; the mental status and neurodynamic processes of the central nervous system; the psychophysiological and personal properties defining a probability of a professional route choice and the characteristic of the educational institution conditions influencing the health of all involved humans. On the basis of received findings the integral personal characteristics, so called the electronic passport of health, is automatically formed, all parameters which are compared with the age and sex standards for this region. These data are reserved in the database that allows to comparing the results in the dynamics of surveys, between separate groups, institutions, regions, etc. The advantages of these electronic passports of physical and mental health are the ability to make quick and inexpensive diagnosis of human status, to involve the subject itself in the process of diagnosis, to control and monitoring their personal results in the development dynamics, to find out the different health disorders at the early stages and therefore, to get expert advice and timely correction of the revealed deviations start. These programs can be used on CD as well on-line. The electronic passports of health were supported by the regional administration and were implemented in 123 schools of the Novosibirsk region and 13 higher educational institutions of the Siberian region, about 100000 students of different ages were surveyed.

### Biography

Aizman Roman Idelevich is a Doctor of Biological Sciences, Professor, Honored Member of Science of Russia, Head of the Department of Human Anatomy, Physiology and Safety and the Director of the Institute of Health and Safety. He has published more than 27 books and chapters, 80 textbooks and 300 papers on developmental physiology, health and safety in reputed journals and has been serving as an Editorial Board Member of 3 scientific journals.

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