

Modern healthy nutrition need to be based on omix data and meet 3P medicine expectations

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Abstract

Modern nutrition is a multidisciplinary and complex subject combining the approaches of the epidemiology, biochemistry, chemistry, behavioral science, biology, food science and medicine. Thus we need to use all the available complementary data in order to construct "next generation functional foods".

The demands to these foods one might list: 1) be natural of origin, 2) be safe, 3) contains minimal or zero chemical / genetically modified additives, 4) be simple in preparation with minimal cooking efforts, 5) be fermented in order to be rich on biological active compounds and beneficial microbes 6) be prepared from naturally cultivated edible plants, 7) be clearly labeled of all the ingredients and 8) better be recognized by brand or at least by codes of food composition data bases. Ideally will be to have a data about these products exact influence on human health, based on the results of clinical approbation: 1) of their different components or 2) whole meal / diets. To meet this goal from first glance complicated (bio) technologies should be exploited. Interestingly that the majorities of these requirements are typical for the traditional well-known ethnical dishes that are 1) mostly accepted by nations, 2) can be easily prepared, 3) imagined as food with healthy impact on human health.

The challenges to make these new generation foods widely used are 1) short shelf life, 2) packing and transportation' difficulties, 3) varieties of recipes 4) (bio)technological gaps. Recently we developed a line of such a novel traditional functional modern foods of new generation Ediens™. These products had been recently created particularly with unique microbial starters which are sequenced and preliminary selected / investigated in numerous in vitro, in vivo, ex vivo models. These products had been recently created particularly with unique microbial starters which are sequenced and preliminary selected / investigated in numerous in vitro, in vivo, ex vivo models. In addition the synergetic properties of these strains of different phylogenetic groups with most popularly used plant originated biological active compounds isolated from local edible plants and berries had been carefully detected.

Person-specific efficacy to regulate human gut microbiome had been detected for individually prescribed foods via limited controlling diet studies. In order to promote the implementation of newly developed functional foods relevant databases and AL for the calculation of personalised nutrition needs had been established.

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Biography

Boyko Nadiya is: 1) Head of the Department of Clinical and Laboratory Diagnostics and Pharmacology, 2) Director of the RDE Centre of Molecular Microbiology and Mucosal Immunology at Uzhhorod National University, Ukraine.

She took a PhD degree in 1994 and D.Sc. degree in 2010, both Degree work were devoted to Microbiology. The total work experience within Uzhhorod National University is 31 years. She is the author of about 300 scientific works, including 100 papers in professional scientific journals, more than 50 publications in the peer reviewed journals, and

Chapter in Elsevier press, index H=11. Her research field particularly is personalised nutrition in regulation of human [gut] microbiota for prevention of noncommunicable diseases. Specialist with expertise in life sciences, participated in international projects like BaSeFood, JSO-ERA EU – FP7, CAPINFOOD (SEE), BacFoodNet (COST), ODIN (FP7), FoodWARD (Erasmus) and H2020 (SKIN) projects. She is actively and systematically participating in national and international symposiums, conferences, seminars; often as invited speaker.