

# Predictive, Preventive and personalized Medicine & Molecular Diagnostics

October 05-06, 2017 Chicago, USA

## The role of omics technology in the formation of personalized medicine and research of metallom

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Medicine of the XXI century is inseparably linked and more often uses data of omics technologies for the diagnosis and treatment of different diseases. The using of multi omics technology in biomedicine contributes to the formation of innovative concept of individual approach to each patient, i.e. personalized medicine. In the development of personalized medicine, we not only use genomic technologies and genotyping, but other omics technologies such as metabolome research, methabonome, metallom, etc. Metallom – is a quantitative measurement of metallom components (products of interaction of ionic and atomic forms of metals with endogenous ligands). Nowadays the role of many chemical elements is established in processes of growth, differentiation, regeneration, cell apoptosis and necrosis, as well as, in the pathogenesis of some diseases, which is accompanied by significant changes in the element status of body. In our research's, we determined the content of metallom component in more than 25 chemical elements including, vitally important in people's hair and improved personalized approach to each patient based on identified regularities of quantitative changes in the body. As would be expected element gramma of examinees people were mostly in the normal range, and some deviations had multidirectional nature. Deviation of essential and trace elements from norm was more specific (for such elements as cobalt, zinc and copper downward and for silicon upward, that might indicate or lead to certain orphan diseases in the future or disturbing signal comprehensive study and personalized approach). Thus, we can conclude that a personalized approach to increase the effectiveness of treatment for each patient with myltuomics technology and specific therapeutic effects, reduces the risk of unwanted side effects, precludes mistake assignment ineffective drugs, reduces the cost of treatment and develops predictive and preventive medicine.

### Biography

Kamalidin Sharipov graduated from the Pharmacy Faculty of Almaty State Medical Institute in the year 1990. He completed dissertation of Chemical Science in Institute of Chemical Science of Kazakhstan Republic in the year 1994. He completed Doctor's dissertation of Biological Science in the year 2003 and from 2004, he is a Full Professor. He has published more than 100 articles in reputed journals and has given presentations on scientific reports in different international conferences and seminars (Russia, France, Germany and China). He is the Editorial Board Member of 2 journals: "Trace Elements in Medicine" Moscow, Russia and "Actual Problems Transport Medicine" Odessa, Ukraine.

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