

Letter

From Classical to Personalized Psychoneurology

Nikolay G. Neznanov*, Regina F. Nasyrova, Natalia A. Shnayder

V. M. Bekhterev National Research Medical Center for Psychiatry and Neurology, Saint-Petersburg, Russian Federation; spbinstb@bekhterev.ru

* Correspondence: spbinstb@bekhterev.ru; Tel.: +7-812-670-02-20 (N.G.N.)

Citation: Neznanov, N.G.; Nasyrova, R.F.; Shnayder, N.A. From Classical to Personalized Psychoneurology. *Personalized Psychiatry and Neurology* **2022**, *2* (1): 1-3. <https://doi.org/10.52667/2712-9179-2022-2-1-1-3>

Chief Editor: Nikolaj G. Neznanov,
D Med Sci, Professor

Publisher's Note: V. M. Bekhterev NMRC PN stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © 2022 by the authors.



Dear colleagues, we are glad to welcome you again to the pages of our journal "Personalized Psychiatry and Neurology". This Special Issue, dedicated to the 115th anniversary of the V.M. Bekhterev National Medical Research Centre for Psychiatry and Neurology and the 165th anniversary of Vladimir Mikhailovich Bekhterev, presents the publications of scientists from a new promising division of our center - the Institute of Personalized Psychiatry and Neurology, and our scientific partners.

The history of the Institute's organization begins in October 2016, when the Department of Personalized Psychiatry and Neurology was opened on the basis of the Center under the leadership of Doctor of Medical Sciences, Leading Researcher Regina F. Nasyrova. The purpose of the organization of this department was the progressive development and improvement of the psychiatric service in accordance with the implementation of the "Strategy for the Development of Medical Science in the Russian Federation for the period up to 2025" and the "Concept of predictive, preventive and personalized medicine" approved by the Ministry of Health of the Russian Federation. The main tasks assigned to the staff of the department were the development of advanced medical science technologies in psychiatry and neurology and the development of innovative personalized approaches to improving the quality (safety and effectiveness) of medicines used for the treatment of mental disorders and neurological diseases.

The expansion of scientific research in the field of personalized neurology has occurred since April 2018 with the arrival of a neurologist, Doctor of Medical Sciences, Professor Natalia A. Shnayder to the staff of the department. In January 2019, the Department of Personalized Psychiatry and Neurology established a clinical unit - the Department of Molecular Genetic Diagnostics. In October 2020, the department was reorganized into the Center for Personalized Psychiatry and Neurology. Since that period, the staff has been expanding, the number of young scientists (doctoral students, postgraduates, research doctors, residents) has been increasing, and scientific groups have been organized, including: Personalized Psychiatry Group (head of the group is Regina F. Nasyrova, MD, Chief Researcher); Personalized Addiction Psychiatry Group (head of the group is Azat R. Asadullin, MD, Leading Researcher); Personalized Neurology Group (head of the group

is Natalia A. Shnayder, MD, Professor, Leading Researcher); Cellular and Molecular Neurobiology and Psychiatry Group (head of the group is Olga E. Savelyeva, MD, Leading Researcher). The activities of the scientific groups of this institute contribute to the expansion of research topics within the framework of state tasks of the Ministry of Health of the Russian Federation, initiative topics, and also contributes to the expansion of scientific cooperation with research educational and medical institutions of the Russian Federation, CIS countries and foreign countries.

The International English-language journal "Personalized Psychiatry and Neurology" was organized as a result of the work of the initiative group of the Center's staff and with the support of the Director of the V.M. Bekhterev National Medical Research Center of Psychiatry and Neurology, Professor Nikolay G. Neznanov and the Deputy Director for Science, Professor Evgeny M. Krupitsky. The first issue of the journal was published on May 15, 2021.

In January 2022, the Center was reorganized into the Institute of Personalized Psychiatry and Neurology. The progressive development of the Institute continues. The structural unit of V.M. Bekhterev National Medical research Centre for Psychiatry and Neurology is the first specialized Institute of personalized psychiatry and neurology in Russia, where they began to conduct comprehensive pharmacogenetic studies, the purpose of which is to translate into clinical practice pharmacotherapy of mental disorders and neurological diseases modern achievements of fundamental and applied psychiatry, narcology, neurology, pharmacology, medical genetics, clinical laboratory diagnostics and related disciplines.

In 2015, the research group prepared the first monograph in Russia "Introduction to Psychopharmacogenetics" (Regina F. Nasyrova, Mikhail V. Ivanov and Nikolay G. Neznanov), and in 2020 - the monograph "Clinical psychopharmacogenetics" (edited by Regina F. Nasyrova and Nikolay G. Neznanov). In 2022, the monographs "Pharmacogenetics of antipsychotic-induced extrapyramidal disorders" (Natalia A. Shnayder, Elena E. Vayman, Nikolay G. Neznanov and Regina F. Nasyrova) and "Pharmacogenetics of direct oral anticoagulants" (edited by Natalia A. Shnayder, Marina M. Petrova and Regina F. Nasyrova). This became possible thanks to the scientific research carried out at the Institute. They are primarily devoted to the development of new methods for predicting individual (personalized) assessment of the effectiveness and safety of pharmacotherapy of mental disorders and neurological diseases, as well as personalized risk assessment of adverse drug reactions and approaches to their correction, genetic predisposition to the development of mental disorders and neurological diseases.

Currently, the main goal of the Institute's activities is the planning and implementation of fundamental, experimental, preclinical and clinical research in the field of personalized psychiatry and neurology and the translation of the results into real clinical practice. The objectives of the Institute are the concentration of resources on priority areas of personalized medicine, the integration of research and education with Russian and international partners, the intensification of participation in grant activities, the expansion of international cooperation, the expansion of scientific competition, the priority development of biomedical research as a technological base of modern fundamental and clinical psychiatry and neurology, the interdisciplinary nature of scientific cooperation, the development of translational medicine aimed at creating a single innovation chain "idea – laboratory – production – clinic".

The main topic of scientific work of the Institute of Personalized Psychiatry and Neurology are: 1) the association of single-nucleotide variants (SNVs)/ polymorphisms of genes encoding drug and nutrient transporter proteins with the efficacy and safety of drugs and nutrients for the treatment of mental disorders, addiction diseases and neurological diseases; 2) the association of SNVs/polymorphisms of genes encoding enzymes of metabolism and elimination of drugs and nutrients with the efficacy and safety of pharmacotherapy and nutritional support for mental disorders, addiction diseases and neurological diseases; 3) the association of SNVs/polymorphisms of genes encoding target

proteins of drugs and nutrients with the effectiveness and safety of pharmacotherapy and nutritional support for mental disorders, addiction diseases and neurological diseases; 4) SNVs/polymorphisms of genes encoding key pathways of pathogenesis of mental disorders, addiction diseases and neurological diseases; 5) SNVs/polymorphisms of genes encoding immune factors responsible for idiosyncrasy on drugs and nutrients used in psychiatry and neurology; 6) new pharmacogenetic panels, decision-making algorithms and new personalized approaches to pharmacotherapy and nutritional support for mental disorders, addiction diseases and neurological diseases; 7) a personalized approach to assessing the risk of adverse drug reactions associated with pharmacotherapy and nutritional support for mental disorders, addiction diseases and neurological diseases; 8) drug-drug interaction and the relationship between drugs and nutrients used in psychiatry and neurology, from the point of view of personalized medicine.

The staff of this Institute continues the scientific traditions formed since the foundation of the Department of Personalized Psychiatry and Neurology. The staff of the Institute has published more than 2000 publications, including articles at the international and Russian levels, monographs, educational and methodological manuals, patents. The number of publications in international high-ranking journals is growing.

Also, the scientific staff of the Institute take an active part in the organization and are invited lecturers of scientific conferences at the international, Russian and regional levels. One of the directions of the Institute's work is the organization and holding of Schools on Personalized Psychiatry and Neurology for young scientists (St. Petersburg, Suzdal, Krasnoyarsk). Since 2019, the School of Personalized Psychiatry and Neurology has been held on the basis of the V.M. Bekhterev National Medical Research Center of Psychiatry and Neurology and the P.P. Kashchenko St. Petersburg City Psychiatric Hospital No. 1. This school attracts an increasing number of young scientists from all regions of the Russian Federation and CIS. From 2019 to the present, the All-Russian Conference with international participation "Personalized Psychiatry, narcology and Neurology" is held annually.

The editors of the journal *Personalized Psychiatry and Neurology* hope that this special issue will help you get acquainted with the main scientific interests of the Institute of Personalized Psychiatry and Neurology and invite all interested colleagues to fruitful scientific cooperation and further development of the journal.

Editor-in-Chief

Nikolay G. Neznanov, MD, Prof.

Deputy Editor-in-Chief for Personalized Psychiatry

Regina F. Nasyrova, MD

Deputy Editor-in-Chief for Personalized Neurology

Natalia A. Shnayder, MD, Prof.