Training of Highly Qualified Specialists in Gerontology and Geriatrics: Operation Experience of Dissertation Council no. D 601.001.01

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Abstract—This article provides basic information on the establishment and operation of the Dissertation Council on Gerontology and Geriatrics of the St. Petersburg Institute of Bioregulation and Gerontology, which has played an invaluable role in the training of highly qualified personnel in this field of science, which has rapidly developed in Russia in recent decades. In the period from June 2001 to December 2013, 41 doctoral dissertations were defended (32 in medicine and 9 in biology). In the same period, 186 candidate’s dissertations (152 in medicine and 34 in biological sciences) were defended. The defenders were from different regions of Russia and foreign countries. The defense-representative trend data acquired over the period of activity of the Dissertation Council suggests that the number of defended doctoral dissertations was relatively small in 2002–2008 and then significantly increased in 2009–2013. The number of candidate’s dissertations defended during this period also increased significantly. Many dissertations considered by the Dissertation Council were dedicated to basic research in gerontology and geriatrics. The priority topics of many dissertations performed in both St. Petersburg and other Russian cities are the age-related pathology mechanisms, geroprotective effects of regulatory peptides, and the efficiency of their use in clinical practice.

Keywords: gerontology, geriatrics, training of specialists

DOI: 10.1134/S2079057014040158

Among the criteria of maturity of any scientific discipline, which in the modern scientific community include the presence of research institutions (institutes and laboratories), specialized scientific journals, departments in universities training professional staff, professional scientific societies (associations) uniting professionals, and holding scientific conferences and congresses, one of the most important criteria is the presence of dissertation councils at which dissertations in a relevant scientific field are defended. The history of the development of Russian gerontology and geriatrics indicates that this field has definitely become an independent scientific discipline in modern Russia [1–4]. The organization of the Leningrad Scientific Society of Gerontology and Geriatrics in 1957 and the gerontological section of the Moscow Society of Naturalists, the organization of the Research Institute of Gerontology of the Soviet Union in Kiev in 1958, the holding of the I All-Union Conference (Congress) of Gerontology and Geriatrics (1963), and the establishment in the same year of the All-Union Scientific Medical Society of Gerontologists and Geriatricians gave a strong impetus to the development of gerontology and geriatrics in the Soviet Union. However, although the question about the introduction of gerontology and geriatrics into the range of scientific disciplines was repeatedly raised at the All-Union Congress (Kiev, 1976; Chisinau, 1982; Tbilisi, 1988), it remained open in those years. In view of this, it is not surprising that, after the collapse of the Soviet Union, the St. Petersburg Municipal Society of Gerontology and Geriatrics, the Institute of Bioregulation and Gerontology (SPbIBG) newly created in 1992, and the Municipal Geriatric Medical and Social Center organized in 1994 initiated the establishment of the Gerontological Society (1994), which set a number of priorities for the publication of a scientific journal in gerontology and preparation for the introduction of the scientific specialty “gerontology and geriatrics.” With the direct participation of SPbIBG, which has done a great part of the organizational work, the new specialty “14.00.53—Gerontology and Geriatrics” (Medical and Biological Sciences) was introduced into the “Range of Specialties” of Scientific Personnel of the Higher Attestation Commission in 2000 (Order no. 17/4 from January 25, 2000) [5]. In 2009, the specialty code was changed to 14.01.30.

In June 2001, by the Order of the Higher Attestation Commission of the Russian Ministry of Education and Science, Dissertation Council D 601.001.01 was established at the Institute for the defense of doctoral and candidate’s dissertations in this specialization. The Council consisted of 25 people, including two academicians, one corresponding member of the
Russian Academy of Sciences, and two corresponding members of the Russian Academy of Medical Sciences. The Dissertation Council was registered by order no. 798-743/88 of the Higher Attestation Commission of the Russian Federation from April 6, 2007 (25 people), and order no. 105/nc on April 11, 2012. The term of office of the Dissertation Council is set for the duration of the range of specialties. In October 2001, SPbIBG for the first time in Russia received a license from the Ministry of Education of the Russian Federation for the right to perform professional education activities in the specialty “gerontology and geriatrics.” In December 2005, a similar license was received from the Federal Service on Supervision in Education and Science. In accordance with the licenses, a system of postgraduate and postsecondary professional training in this specialty (including retraining and further training of personnel) was created, with the issuance of standard certificates, functioning on the basis of the Institute.

In the period from June 2001 to December 2013, a total of 41 doctoral dissertations (32 in medicine and 9 in biological sciences) were defended. The doctorate degree was awarded to 30 scientists from St. Petersburg, 19 of which were members of the St. Petersburg Institute of Bioregulation and Gerontology, and 11 applicants represented other scientific institutions of the city. The table shows the data on defenses for different years starting from 2001, when the first candidate’s dissertation was defended at our Council.

The regional distribution of doctoral dissertations was as follows: Moscow 2, Arkhangelsk 1, Belgorod 1, Petrozavodsk 1, Rostov-on-Don 1, Samara 1, St. Petersburg 30, Chelyabinsk 1, Belarus 2, and Kazakhstan 1. During the same time, 186 candidate’s dissertations (152 in medicine and 34 in biological sciences) from different regions of Russia and adjacent countries were defended. Of these, 128 dissertations were prepared in St. Petersburg and 50 in other cities of Russia (Moscow 5, Arkhangelsk 2, Belgorod 9, Yekaterinburg 2, Yoshkar-Ola 4, Krasnodar 1, Magadan 1, Murmansk 1, Novosibirsk 1, Petrozavodsk 4, Petropavlovsk-Kamchatskii 1, Rostov-on-Don 9, Samara 3, Sochi–Adler (Research Institute of Medical Primatology, Russian Academy of Medical Sciences) 3, Syktyvkar 5, Yakutsk 1) and eight in foreign countries (Belarus 2, Ukraine 1, Georgia 1, Kazakhstan 1, Syria 1, Sweden 1, and Ecuador 1).

Many dissertations considered by the Dissertation Council are representative of the basic studies in gerontology and geriatrics: over 100 papers meet this criterion. Many dissertations prepared in both St. Petersburg and other Russian cities are devoted to the priority topic of SPbIBG—investigation of the mechanisms of age-related pathology, the geroprotective effects of regulatory peptides, and the effectiveness of their use in clinical practice. Among them, first of all, we should mention the doctoral dissertations by G.A. Ryzhak “Geroprotectors Based on Nucleoprotein Complexes in the Prevention of Age-Related Pathology” (2003), I.A. Vinogradova “The Effect of Light Regimen, Melatonin, and Epithalon on the Biomarkers of Aging, Age-Related Pathology, and Life Expectancy (Experimental Study)” (2009), L.S. Kozina “Antioxidant Effect of Geroprotective Peptide Bioregulators” (2009), S.V. Anisimov “The Use of Stem Cells in Age-Related Neurodegenerative Disease (Experimental Study)” (2011), A.V. Trofimov “Methodology of the Study of the Biological Activity of Geroprotective Peptides” (2011), and others. A large number of candidate’s dissertations are also devoted to this topic. The authors of seven of them studied the effect of oligopeptides and amino acids on tissue cultures of young and old animals.

A large number of doctoral and candidate’s dissertations were devoted to studying the neuroimmunoenocrine mechanisms of involution of organs and signaling molecules of the neuroimmunoenocrine system during aging, including the doctoral dissertations by S.S. Konovalov “Neuroimmunoenocrine Mechanisms of Aging” (2005), V.O. Polyakova “Molecular and Cellular Mechanisms of Aging of the Human Thymus” (2007), P.N. Zezyulin “The Role of Neuroimmunoenocrine Mechanisms in the Development of Somatic Pathology in the Elderly” (2009), S.V. Filipov “Clinical Neuroimmunoenocrinology of Age-Associated Pathology of the Prostate” (2010), N.I. Zhernakov “Clinical Neuroimmunoenocrinology of Peptic Ulcer Disease in the Elderly” (2010), and D.S. Medvedev “General Pathological and Neuroimmunoenocrine Aspects of Using Extremely High-Frequency Therapy in Complex Treatment of Elderly and Senile Patients” (2011), as well as ten candidate’s dissertations.

The results of the study of premature aging markers and clinical models of premature aging were presented in the doctoral dissertations by T.V. Ketnaya “Melatonin...